hanging-bowls found in Britain is such that this is very much a provisional opinion. The anchor-point remains the three very different and technically complex bowls found in the mound I burial at Sutton Hoo, Suffolk, deposited in the 620s. What we do not know is how long the British tradition of enamelling in this style persisted up to and beyond 700, by which date the production of polychrome enamelling had also become established in Ireland.

CONCLUSION

The items discussed above were both formerly components of complex luxury vessels. They add to the interest and variety of the cultural components of this prosperous Anglo-Saxon settlement in northern Lincolnshire, a unique survival under layers of wind-blown sand. Apart from their contribution to artefactual knowledge they provide evidence for the continuing presence in the daily life of this community of culturally distinct artefacts, one a Northumbrian or Irish piece, the other a product reflecting the former taste and technology of a native aristocracy.

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SUSAN YOUNGS

BATTLE AND TRIAL: WEAPON INJURY BURIALS OF ST ANDREW'S CHURCH, FISHERGATE, YORK

In 1985–6, York Archaeological Trust excavated St Andrew's church in Fishergate. During the course of the excavation 402 articulated skeletons were discovered and assigned context numbers, along with a large amount of disarticulated bone.¹ One sub-group of twenty-nine skeletons was noticeable because they had evidence of trauma caused by interpersonal violence (hereafter referred to as 'weapon injuries') consistent with the effects of projectiles such as arrows and crossbow bolts, or blades. In the earliest archaeological phasing of the church, dated to the late 11th century, there were twelve males who had evidence of weapon injuries. The phasing, the evidence of weapon injuries, and the number of examples, have led to the conclusion that these men died as a result of a single event, such as a battle.² There were, however, a further seventeen burials, also with weapon injuries, within the church and cemetery that ranged in date from the 12th to the 14th centuries. These later burials are difficult to explain, but a strong possibility is that the weapon injuries occurred as a result of trial by combat.

The history of St Andrew's church provides no explanation for the high incidence of weapon injuries. Its early history is confused, although it is known it went through many

¹ R. L. Kemp and P. C. Graves, *The Church and Gilbertine Priory of St Andrew, Fishergate* (The Archaeology of York, 11/2, York, 1998).

² G. Stroud and R. L. Kemp, *The Cemeteries of St Andrew, Fishergate* (The Archaeology of York, 12/2, York, 1993), 127.

changes of ownership from its origins c. 1050 to its demise at the Dissolution.³ The original founder is not known, but in 1086 the Domesday Book gave the owner as Hugh FitzBaldric. From Hugh it passed to Robert de Stuteville I, then to Nigel d'Aubigny, and then to his son, Roger de Mowbray. Roger de Mowbray gave the church to Hood Priory, which later became Newbrugh Priory, in 1142–3. There is no evidence that the canons of Newbrugh had any political, liturgical or architectural impact on St Andrew's, and to confuse matters further the church was also granted to St Mary's Abbey, York, although again, this does not seem to have had any significant influence here. Eventually the church passed into the hands of Hugh Murdac⁴ (how is uncertain) who gave the church to the Gilbertine order. Such a complex history was not unusual for small churches of the 11th and 12th centuries. Today the church is notable for being the first Gilbertine house to have been extensively excavated using modern archaeological methods, as well as for the prevalence of weapon injury burials.

One burial in particular, no. 7053, had several unusual features compared to the others in the group. Firstly, cuts to the fifth and sixth cervical vertebrae probably meant that death was caused by decapitation. Secondly, the body was buried with the head at the E. end of the grave — the diametric opposite to the normal Christian alignment of the head to the West. The archaeological phasing dated the burial to the late 13th or early 14th century. The decapitation and orientation are difficult to explain, but indicate that this male was treated differently to others in the group. One interpretation may be that he was a criminal, whose burial in the middle of the monastery might have been intended as a way of containing the evil within layers of monastic holiness, although no evidence for this theory has been found elsewhere, either archaeologically or historically. An additional problem with this interpretation is the location of the burial in the cloister garth. The cloister garth was a prestigious area: St Cuthbert was buried for a while in the cloister garth at Durham. There were four other burials in the cloister garth at St Andrew's. Two of these also had weapon injuries. Burial 7050 had a minimum of six cuts about the face, and injuries to the ribs and femur, as well as having similar spinal trauma (C5, C6) to burial 7053, which may indicate an attempt at decapitation. The remaining burial in the cloister garth with weapon injuries (7052) had weapon injuries to the spine, ribs, scapula and femur. The two remaining burials, 7015 and 7016, were of a sub-adult (aged 13-15 years) with no injuries, and a male aged 30-40 with a healed fracture of the metacarpal and periostitis.

As well as three burials in the cloister garth with weapon injuries, twenty-six other skeletons had weapon injuries.⁶ All the weapon injuries were found on male skeletons and only seven out of twenty-nine skeletons had a single cut: all the others had multiple cuts with the most common locations being the ribs (on nineteen skeletons), skull (sixteen) and spine (fifteen). In particular two burials, numbers 1487 and 7050, each had at least six separate skull wounds and cuts about the face. Table 1 shows the chronological distribution of the weapon injuries.

Within Period 4 there were in total five double graves, which contained eight skeletons with weapon injuries. Period 4b, Phase 110 had three double graves and Period 4d Phase 208 had two double graves. The double burials involved skeleton numbers 1886/1873 (both with weapon injuries); 1893/1894 (only 1893 with weapon injuries); 1902/1887 (both with weapon injuries); 2351/2363 (both with weapon injuries) and 2371/2392 (only 2371 with weapon injuries). When the similar archaeological phasing, the weapon injuries,

³ The historical evidence here summarised is taken from J. E. Burton, 'Historical evidence', in Kemp and Graves, op. cit. in note 1.

¹ Hugh was the prebendary of Driffield, rector of Bamburgh, king's justice and, from 1201–4, disputed archdeacon of Cleveland (Burton, op. cit. in note 2, 50).

⁵ Kemp and Graves, op. cit in note 1, 157.

⁶ Stroud and Kemp, op. cit. in note 2, 225-41.

Table 1

THE DATE AND THE POSITIONS OF THE WEAPON INJURY BURIALS.

(The table is grouped by period, with the donation to the Gilbertines forming the cut-off date between archaeological periods 4 and 6. The source is Table 50 and the Catalogue of Skeletons from Stroud and Kemp, op. cit. in note 2.)

Sk = skull - numbers following show the number of injuries, Sp = spine (C = cervical vertebrae, T = thoracic vertebrae, L = lumbar vertebrae).

Burial	Period	Phase	Date	Weapon injuries	Other injuries
Period	4 (pre-G	ilbertine)			
1872	4b	110	mid-11th c – late 11th c	Sp (T12, L1, L5), ribs, pelvis, femur	None
1873	4h	110	mid-11th c late 11th c	Sp (L2, L3), ribs, pelvis (pointed weapon injury), femur (pointed weapon injury)	None
1874	4b	110	mid-11th c late 11th c	Sp (Ť12, L4, L5), ribs, lower arm/hand, pelvis (pointed weapon injury), femur	Healed fracture of rib; exostoses, tibia
1886	4p	110	mid-11th c late 11th c	Sp (T1, T2, T3, T6, T11, L2, L3), scapula, humerus, lower arm/hand (old injury?), femur (pointed weapon injury?, old?)	Ostcoma on parietal
1887	4b	110	mid-11th c late 11th c	Sk 1, ribs	Mesiodens (small unerupted supernumerary tooth)
1893	4.b	110	mid-11th c late 11th c	Sk 2, mandible, ribs	None
1902	4b	110	mid-rith c – late rith c	Ribs	None
1903	4b	110	mid-11th c late 11th c	Sk 2, scapula, humerus (pointed weapon injury?), pelvis	Ankylosis, right sacroiliac joint; periostitis, tibiae and fibulae
1931	4b	110	mid-11th c late 11th c	Lower arm/hand	None
2264	$_4\mathrm{b}$	110	mid-11th c late 11th c	Sk 1, ribs	None
6411	4b	110	mid-11th c · late 11th c	Sk 2, Sp (T6, L4, L5), ribs, lower arm/hand, femur (?old damage)	Incompletely healed fracture, hand phalanx
6448	4b	110	mid-11th c late 11th c	Sk 1, Sp (C ₅ , C6), ribs, scapula	Cribria orbitalia
2351	4d	208	12th c	Sk 2	None
2363	4d	208	12th c	Humerus, pelvis	Swelling on tibia (trauma?), cribria orbitalia
2371	4d	208	12th c	Ribs	
6291	4d	113	12th c	Ribs, clavicle	None
6321	4d	113	12th c	Sk (mandibular ramus), Sp (C5, C6, T2, T3, T4), ribs, pelvis (pointed weapon injury), femur (old?)	None
1589	4z	112	late 10th c - 12th c	Sk (mandibular ramus), Sp (C2, C3, C4, T7, T8, T9, T12, L1)	Cribria orbitalia
6191	4z	115	late 10th c 12th c	Sk 1, ribs, femur	Traces of periostitis, rib fragment, fibulae

Period	6 (Gilbe	rtine)				
1592	6a	120	1195 – late 13th / early 14th	South cemetery	Sk I	None
5354	6a	5^{17}	1195 late 13th / early 14th	Crossing	Sp (T11, T12), ribs, femur	None
5356	ба	517	1195 late 13th / early 14th	Crossing	Sk 1, Sp (C1, C2, L3, L4), ribs, lower arm/hand	? Dislocated hip; fractured talus, metatarsal; Cribria orbitalia
2325	6a/b	213	1195 – late 13th / early 14th	Nave	Ribs, pelvis (pointed weapon injury?)	None
5720	6a/b	320	1195 - late 13th / early 14th	Chapter House	Sk 1, ribs, lower arm/hand	None
1585	6b	126	late 13th / early 14th	South cemetery	$Sp\left(T11,T12\right)$	None
1.487	6z	132	late 13th / early 14th	South cemetery	Sk (minimum six cuts including face), Sp (C7, T1), clavicle, humerus	None
7050	6z	708		Cloister Garth	Sk (minimum six cuts, including face), Sp (C5, C6), ribs, femur	None
7052	6z	708		Cloister Garth	Sp (T6, T8), ribs, scapula, femur	None
7053	6z	708		Cloister Garth	Sp (C5, C6)	None

and five double burials with weapon injuries are all taken together, there is a strong likelihood of a single violent event. The most likely documented event was the Battle of Fulford Gate, fought in 1066 shortly before the Battle of Stamford Bridge. St Andrew's church, which lay only a mile or so from Fulford Gate, would have been an appropriate burial place for the dead after the battle. An alternative scenario is for men who died in this battle to have been carried to their own local churches for burial. The practice of burying the dead after battle is well documented and the normal procedure was for the victor to allow burial by the defeated side. Few cemeteries containing groups of battle victims have been excavated, though a late example is that at Towton where the battle dead were placed in a large pit. Given the documented frequency of fighting in the Anglo-Saxon period both between the kingdoms and against the Vikings, it is surprising that more groups of battle victims have not been discovered.

Whilst the late 11th-century burials can be attributed to a battle or single event, the burial of men with weapon injuries continued at St Andrew's through the 12th century and into the late 13th/early 14th centuries. The unusually high incidence of weaponinjury burials at St Andrew's is highlighted by comparisons with two other York cemeteries, namely St Helen's on the Walls, and the Jewish cemetery of Jewbury, both excavated by York Archaeological Trust. St Helen's on the Walls was a small parish church operational from the 11th century to the Reformation, a time-span similar to that of St Andrew's Fishergate. The St Helen's excavation in the 1970s revealed at least 1,041 individuals of whom eighteen had wounds (1.7%). Of the eighteen, thirteen (72%) had wounds to the skull. Of these, only two head wounds did not show signs of healing and both were found on the only women in the group. Their injuries have been explained by falls or blows.⁸ Eleven men from this group had head wounds but, in contrast to the women, none was the

⁷ V. Fiorato, A. Boylston and C. Knüsel (eds.), Blood Red Roses: The Archaeology of a Mass Grave from the Battle of Towton AD 1461 (Oxford, 2000).

⁸ J. D. Dawes and J. R. Magilton, *The Cemetery of St Helen's on the Walls, Aldwark* (The Archaeology of York, 12/1, York, 1980), 56.

instant cause of death as all they showed considerable signs of healing. Four injuries were caused by sword cuts, whilst five skulls had depressions consistent with being hit with a blunt instrument — one of which may have been a mace. The second cemetery, Jewbury, contained 482 bodies, buried from the early 12th century to 1291. The cemetery contained six individuals (1.2%) who suffered weapon injuries: five had cuts to the head, and one had damage to the tibia. The most serious injuries were found on the skeleton of a female of between 15–20 years of age at death, who had suffered five cuts to the head. Three of these may have been attempts at decapitation as the blows fell on the left and right mastoid areas and 'the assailant clearly went beyond merely ensuring immediate death'. Further afield, in London, the cemetery of St Nicholas Shambles had 234 burials, of which three (1.2%) had wounds to the head: one from an edged weapon, one by a 'missile' and one which was a puncture wound to the skull. However, the small number of weapon injuries from these sites (ranging in percentage from 1.7% to 1.2%) stands in contrast to the twenty-nine (7.2%) recorded at St Andrew's.

A comparison between the Period 4 burials at St Andrew's and those of Period 6 (the Gilbertine period) is revealing. The following percentages, however, can only be indicative, for the statistics make the assumption that both Period 4 and Period 6 burials were equally affected by the lack of a complete cemetery excavation. It is possible that Period 4 weaponinjury burials are under-represented in the statistics for two reasons: firstly because later burials would cut through earlier ones, and secondly because the cemetery to the South of the church was not completely excavated and it was in this part of the cemetery that most of the Period 4 weapon-injury burials were discovered. Even so, there are strong similarities between Period 4 and Period 6 in terms of the injuries inflicted and the ages of the victims. Out of the nineteen individuals in Period 4 eleven had skull injuries (of a total of 19, giving 58%), thirteen had rib injuries (68%) and there were twenty-four other weapon inflicted injuries to other parts of the body. In Period 6, out of a total of ten individuals, five had skull injuries (50%), six had rib injuries (60%) and there were ten other weapon inflicted injuries to other parts of the body. The percentages between the Period 4 and Period 6 burials are therefore remarkably similar.

There are, however, some significant differences between the groups. The Period 6 burials were buried in highly prestigious locations, including the chapter house, nave, tower crossing and the cloister garth, indicating that the individuals had a high status. The dispersed nature of the burials also suggests that the deaths of these individuals can be attributed to separate incidents rather than a single event which claimed many lives. This was in contrast to the Period 4 burials of which only four were buried in the church whilst the other fifteen were buried in less prestigious locations in the cemetery outside the church. The second significant difference is the double-grave burials. There were five double graves in Period 4 all of which contained young males, eight of whom had weapon injuries. In Period 6 each double grave contained a man and a woman, interpreted in the site report as a family group. The only males buried at the same time (as determined by archaeological phasing) in Period 6 were the five males buried in the cloister garth, three of whom (7050, 7052, 7053) had serious weapon injuries and there was no indication of a communal grave. All the other weapon-injury burials in Period 6 were buried apart or at different times.

There are also significant differences between the types of injury within the weaponinjury burials of Periods 4 and 6. In Period 4 seven out of nineteen individuals (36%) had projectile injuries, suggestive of an arrow or cross-bow bolt. In Period 6 only one individual (10%) had such an injury. Furthermore there were wide differences in the number of spinal injuries: eight out of nineteen in Period 4 (42%) and seven out of ten (70%) in Period 6.

J. M. Lilley, The Jewish Burial Ground at Jewbury (The Archaeology of York, 12/3, York, 1994), 481.
W. White, Skeletal Remains from the Cemetery of St Nicholas Shambles, City of London (London, 1988), 44.

The combination of different injuries seems to indicate a different type of fighting, with the spine being more frequently attacked in Period 6. Furthermore, there is a difference between the Periods in terms of older injuries. In Period 6 there was one man with an older injury (10%), whereas in Period 4 there were nine (47%) with older injuries or pathological conditions. Many of the nine injuries were very minor, but the difference between the periods may show that in times of panic, such as an approaching force, choice was more indiscriminate rather than in a more controlled procedure such as a duel.

The significance of the difference of the age ranges between the groups of Period 4 and 6 is difficult to assess with certainty as ageing skeletons is an inexact science. In Period 4 there were twelve men (63%) aged under 30, six men (32%) aged 30–40, and one man (5%) aged over 40 at death. In Period 6 there were eight men (80%) under 30 and two men (20%) between 30–40 at death. Therefore, weapon injury burials in both Period 4 and Period 6 were of mostly of young, and presumably active, males, but there seems to be a broader cross-section of age in the Period 4 skeletons than in the younger males of Period 6

Whilst the similarities and differences can be analysed at an archaeological level, it is not at present possible to account definitively for the Period 6 burials within a historical framework. There are three possibilities — feud, medical attention to the injured or trial by combat — though none of these is entirely satisfactory. The 'feud' theory relies on the hypothesis that there was a long-running (unrecorded) feud by patrons of the Priory. This would explain the prestigious locations of burial. It is unfortunate that so little is known about the patrons, though 12th-century patrons included the Stutevilles and Mowbrays who were elevated enough to command burial in the most prestigious locations. The continuing connection of the Stuteville family was shown by Nicholas Stuteville who entered the house in 1233, where he died.¹¹

The second possibility is that the Gilbertine Priory might have had had a specialist infirmary which helped people with weapon injuries, which in turn meant that injured people were brought to the Priory for treatment. Evidence was discovered of an experimental technique undertaken at the priory, for skeleton number 10266 had two copper-alloy plates attached to an injured knec. It was suggested in the site report that 'these plates were used for support and/or therapeutic treatment combining the cleansing or suppurative effect of the copper with a herbal poultice'. So far this is a unique discovery in cemetery archaeology. Apart from this skeleton, there is no other evidence of any medicine or surgical operations being practised at the Priory, either archaeologically or through historical documentation.

The third possibility is that the men died as a result of trial by combat and were then buried by the Gilbertines. However, there are some significant problems associated with this theory, notably that trial by combat would have usually resulted in submission or wounding rather than outright death. This is shown by a miracle at St William's shrine in York Minster, probably dated to the late 12th century. Radulphus had fought a duel and survived, but during the fight had lost an eye and then had his other eye taken out as a punishment. After some days had passed he went to St William's shrine with a boy called Hugo who carried his eyes. It was at the shrine that his eyes were restored. Radulphus is described as 'a certain man' and there is no indication that he, or his opponent, called Besing, were trained soldiers or had any military training. On the Period 6 weapon-injury skeletons at St Andrew's there is a marked lack of older, healed, injuries which may in turn indicate that the men were not professional soldiers. The only older injury in Period 6 amongst the weapon-injury skeletons was a possible dislocated hip on skeleton number

¹¹ Burton, op. cit. in note 2, 9.

¹² Kemp and Graves, op. cit. in note 1, 216–17.

¹³ J. Raine (ed.), The Historians of the Church of York and Its Archbishops, Vol. II (London, 1886), 539.

5356. The incidence of trial by combat is unknown in York, but trial by combat was by its nature a last resort and was rare from the early 13th century onwards. Even if the contestants were ready to fight, the fight could be cancelled if one fighter tried to influence the result. Such an occurrence was depicted on the memorial brass of Robert Wyvil, Bishop of Salisbury. The bishop set about recovering Sherborne Castle by trial by combat in 1337:

... the champions appointed by the two sides met, but did not fight, because it was discovered that the Bishop's, Robert (or Richard) Shawell, was wearing charms under his clothing, and a cash settlement eventually ensued. [On the brass] Shawell is depicted in the gateway, with the equipment laid down for such contexts, that it without metal armour, carrying a shield and a cowhorn-headed double pick.¹⁴

The depiction of the champion on the brass shows him without metal armour and carrying a pick. The lack of metal armour is consistent with the severity of injuries upon the men buried at St Andrew's but, if the use of the 'cowhorn-headed double pick' was universal in trial by combat then, because the York injuries were predominantly weapon injuries, an alternative explanation has to be found. Another problem with the trial by combat theory is the high mortality rate presumed. If a low mortality rate is envisaged there were a much larger number of trials by combat than has been supposed previously.

However, whilst there are problems with the trial by combat theory, the archaeological evidence and general historical framework do give it some credibility. Trial by combat fits the observable trends: it was predominantly young men who died; the wounds, and therefore the style of fighting, were different between Period 4 and Period 6 (one-to-one combat would presumably have fewer projectile injuries); there was one body per grave in Period 6 rather than double graves as in Period 4; and the dead were given prestigious burial locations (plausible if they were fighting for the reputation of the Gilbertines).

The history of trial by combat also fits the chronological pattern of the burials. 'Until the thirteenth century trial by combat was a common judicial procedure for the freeborn . . . [but by the] later Middle Ages . . . the duel was frequently aristocratic'. 'This pattern fits the cemetery evidence well, as archaeologically the weapon-injury burials probably stopped in the mid-14th century. A logical conclusion follows that the usual location for trial by combat in York was near the priory. The alternative is that the Gilbertines buried the combat victims. At present the Gilbertine priory of St Andrew's Fishergate is the only Gilbertine cemetery excavated using modern excavation techniques. Comparison with other, future, excavations of Gilbertine cemeteries elsewhere may cast further light on the extraordinary nature of the weapon injuries at St Andrew's church.

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CHRIS DANIELL

THE ORIGIN OF THE CHESTER ROWS: A MODEL

The preparation of a review of the recent publication of the Chester Rows Research Project¹ (p. 416) has led to the suggestion of a model for the creation of the Rows which

1 Andrew Brown, The Rows of Chester, 1999 (London).

¹⁴ J. Alexander and P. Binski (cds.), Age of Chivalry: Art in Plantagenet England 1200-1400 (London, 1987), 231.

¹⁵ R. Bartlett, Trial by Fire and Water: The Medieval Judicial Ordeal (Oxford, 1986), 125-6.