

Spirals in Time: Morwick Mill and the Spiral Motif in the British Neolithic

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'It is surely better frankly to own that we know not what these markings mean (and possibly may never know it), rather than wander off into that vague mystification and conjecture which in former days often brought discredit on the whole study of archaeology'.

J. Y. Simpson, 1864, 261.

'.....there is no proof that a given symbol has a specific significance. Our guesses only become more sophisticated, and, perhaps, more satisfying'.

Jean McCann, 1980, 150.

Introduction

This paper stems from a desire to explain the occurrence of spiral motifs, more normally associated with Irish passage grave art than Northumbrian rock art, on the river cliffs by Morwick Mill, near Warkworth, Northumberland. In order to approach an understanding of this apparently unique site, it was necessary first of all to examine all other occurrences of the spiral motif in the rock art of northern England and southern Scotland. It soon became clear that there are very few examples in comparison with the huge number of 'cup and ring' marked rock art sites, and this is made all the more interesting when the variety of contexts displayed by the rock art spirals is considered. The analysis was then expanded to consider all examples of Neolithic spirals in the British Isles (fig. 1), covering rock art and portable artefacts (pottery, maceheads and carved stone balls). The discussion section of the paper follows a number of leads towards a better understanding of both the origin and the significance of the spiral in Neolithic Britain, in the light of which the conclusion then attempts to offer something approaching an interpretation of the Morwick Mill site.

While recent moves to integrate the study of rock art with 'mainstream' archaeological research are to be welcomed, we must guard against any tendency to consider rock art as a single phenomenon: just as there are different forms of Neolithic 'monument', so there may be different forms of rock art. Neither the function nor the chronology of British rock art are well understood, and there is a growing body of evidence to suggest that the significance of certain rock art motifs changed considerably through time. There may even have been separate traditions of rock art from a very early stage, although there is no

denying that it was the cup and ring style that became the dominant tradition throughout those areas of northern England and Scotland where open air carvings remain for us to study today.

Other papers in this volume discuss various aspects of cup and ring art, but in this paper we will restrict ourselves to the examination of rock art sites which include spirals. While accepting from the outset that there is a danger in isolating one particular motif for special attention, I believe that the spiral is sufficiently distinct and 'special' to justify such treatment. It had initially been intended to include a comprehensive illustrated gazetteer of spirals within this paper, but an inventory of spirals at rock art sites in Britain and Ireland, together with some statistical analysis, has recently been published by Van Hoek (1995a). Consequently, the proposed gazetteer has been dropped from this paper and the emphasis here is on the contexts and possible significance of spirals rather than on the detailed description of individual sites and motifs. Van Hoek's paper is an important contribution to this subject, as will be evidenced by the number of references to it in the following pages.

While the basic motif under consideration here is the spiral, this occurs in a number of different forms, and a brief note on the terminology employed should help to avoid confusion. The single spiral is self explanatory, and this can be either clockwise or anti-clockwise depending on the direction of the coils from the centre outwards. More complex motifs include 'horned' spirals (e.g. fig 9c; plate 5) or 'S' (or reverse 'S') shaped spirals (e.g. figs. 3h, 13b). Where three spirals are joined together (e.g. figs. 11a, 13c) the term 'triple spiral' is used. Where concentric spirals are wrapped around each other with a common centre (e.g. figs. 10a, 11b) these are

Key

- O** Open air rock art
- G** Galloway
(12 open air rock art sites & 1 decorated slab)
- T** Chambered tomb(s)
- B** Other burial monument
(including probable cist slabs)
- C** Stone circle
- S** Standing stone
- O** Other rock art
(original context unknown)
- p** Pottery
- m** Macehead
- b** Carved stone ball
(excluding one example from 'Buchan',
one from 'Aberdeenshire', and four
with no recorded locality)

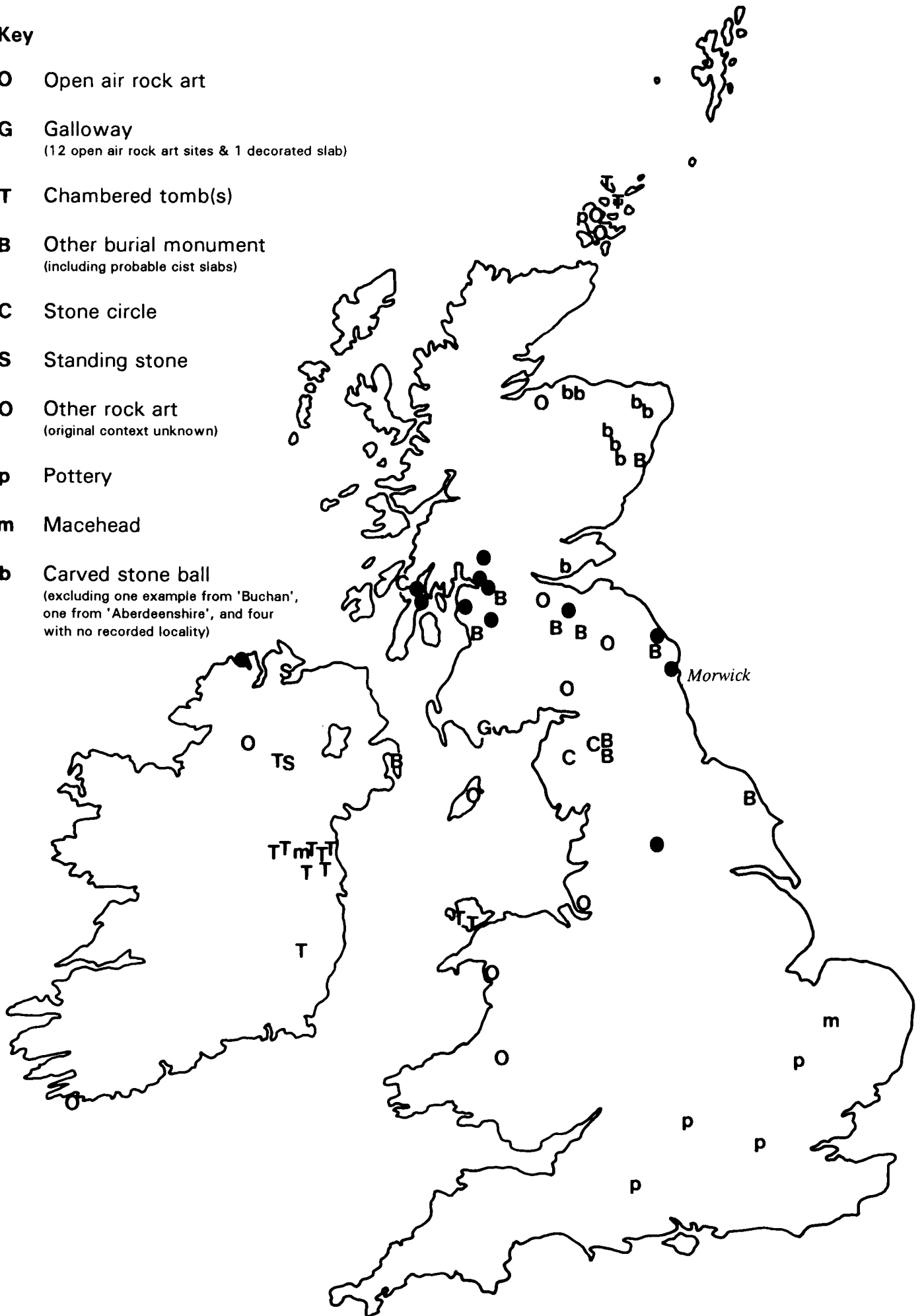


Fig. 1. Spirals of certain or probable Neolithic date in the British Isles (excluding 'hybrid' and 'possible' spirals).

termed 'interlocking spirals' (in previous publications such motifs have been described as double spirals, which can be confusing). These interlocking spirals form a flowing motif in which a continuous route can be traced from the outside to the centre and back out again. This continuous route is usually formed by the ridge left between the interlocking carved spirals, but it can also be formed by the actual carving itself, leaving the two interlocking spirals in relief (e.g. at Hawthornden, fig. 3a). The final type of spiral considered here, which is exclusive to rock art, is the 'hybrid' spiral recently identified by Van Hoek (1995a, 1995b) which seems to be a combination of a spiral with a cup and ring (e.g. fig. 7i).

A brief explanation of the illustrations in figs. 3, 4, 7, 9, 10, 11 and 12 is necessary. These illustrations are in effect no more than simple diagrammatic representations of the art in question, presented here for comparative purposes, as it is impossible to adequately depict a complex three-dimensional figure in a drawing. Readers who wish to gain a better appreciation of the art should follow up the references given throughout the paper, many of which contain excellent photographs and detailed drawings. However, a full appreciation of the art can only really be approached through a first-hand examination of the actual sites and artefacts in question. Many of the illustrations here are drawn from photographs, but several are redrawn from existing drawings and in all such cases the source is acknowledged within the caption.

Morwick Mill, Northumberland

This is a relatively little known site which deserves considerably greater prominence than it currently enjoys in the literature. The site has been described in detail by Beckensall (1983 and 1992), and consists of a variety of spiral based motifs on a vertical sandstone river cliff (NGR: NU 23350445) on the south bank of the Coquet about 5km upstream of Warkworth Castle. From the outset it should be made clear that there is no hard evidence on which to assign a Neolithic date to the Morwick carvings, and even if a Neolithic origin is considered most likely (which it certainly is by this author) there is no clear basis on which to decide at which point during the Neolithic they originated.

The site was first described by James Hardy (1884). The motifs are best appreciated by reference to plates 1 and 2, and fig. 2. They include single spirals, 'S' shaped spirals, horned spirals, a triple spiral, a spiral largely surrounded by a 'rosette' of cupmarks, and a wholly unique design consisting of three spirals linked to concentric circles. Many of the motifs are very badly eroded and more are occasionally discovered (Beckensall 1995, 19). Others may have fallen into the river as several large blocks litter the river bed where they have fallen over the centuries. The carvings are hard to reach, being located up to twenty feet above the river on a vertical cliff

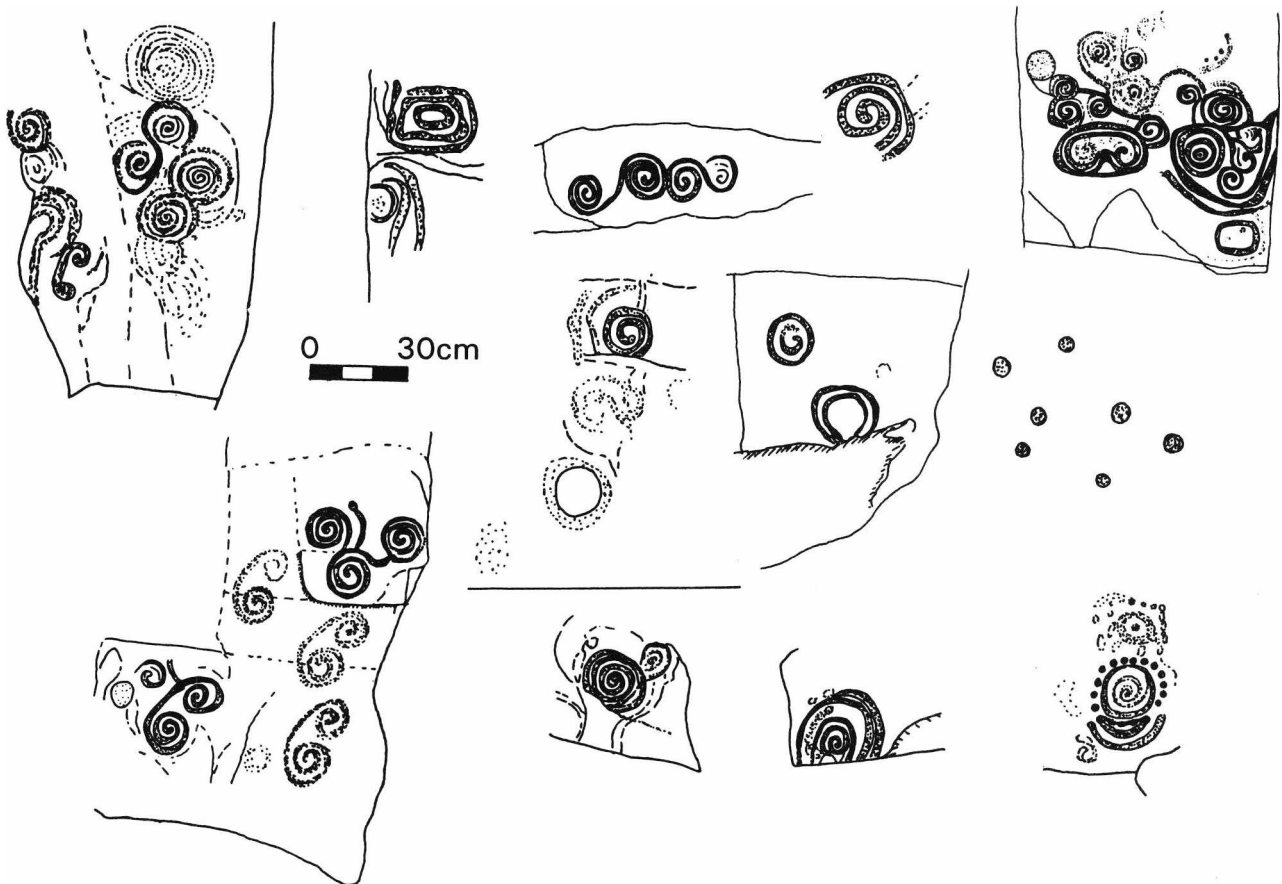
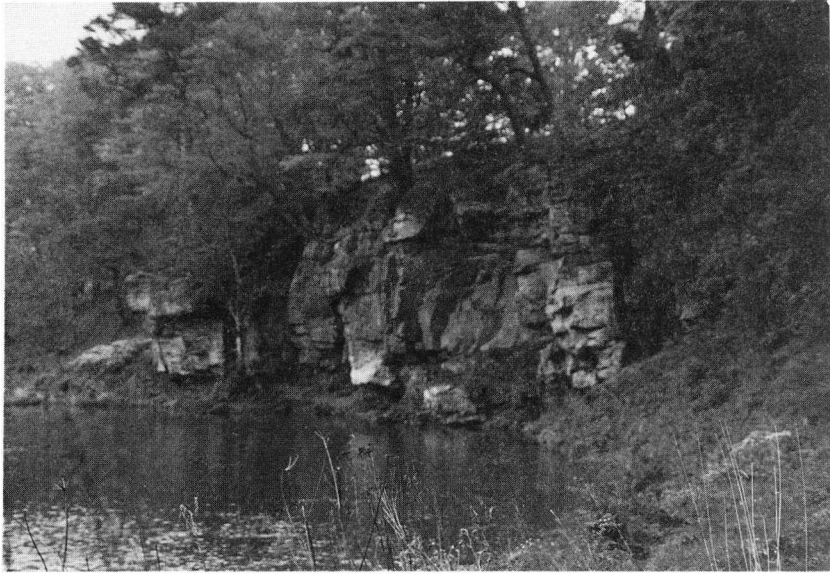
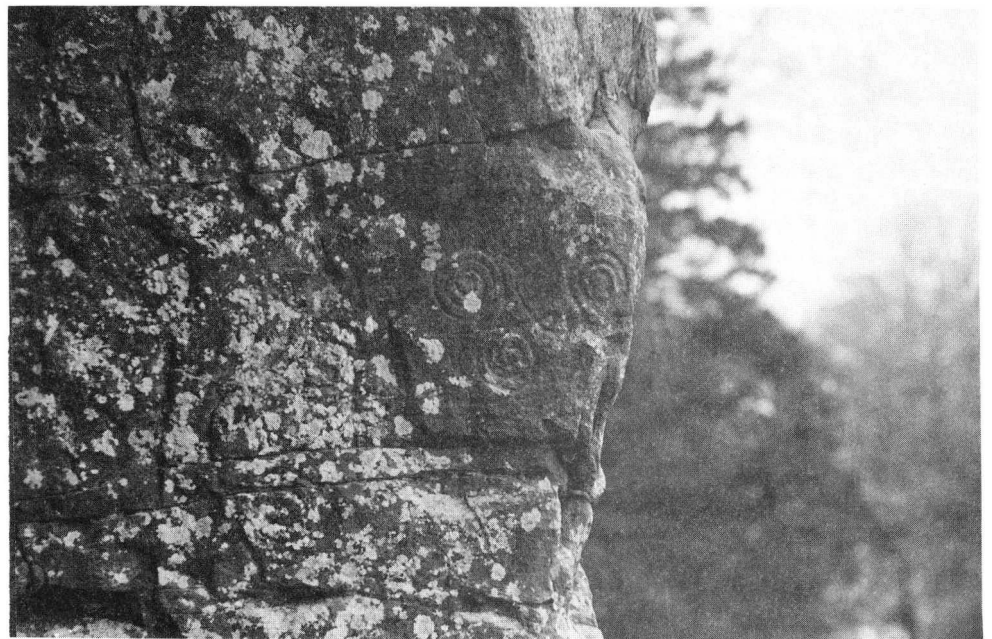


Fig. 2. Spiral motifs at Morwick, drawn by Stan Beckensall. (Note: no attempt has been made to show these in their relative positions as they are located on different faces of the rock outcrop).



*Plate 1. General view of the river
cliffs at Morwick.
(Photography by Stan
Beckensall).*



*Plates 2a and 2b.
Spiral motifs at Morwick.
(Photography by Stan
Beckensall).*

face. The sandstone on which the spirals are carved is rusty red in colour and this becomes potentially very significant in view of the number of other sites discussed in this paper which appear on red rock.

The site is located about 7km upstream of the mouth of the Coquet. During the Neolithic the river must have been navigable well beyond this point, although the water is sufficiently shallow here to allow a natural fording place (known as Pomfret's Ford) a few metres to the east of the carvings: this may well have been a natural crossing place from early times and the depth of the hollow-way approaching the ford from the south certainly suggests that it has been a popular route for a long time. At the time of the discovery of the carvings it was noted that a number of mounds could be seen on the north side of the river, but it was not clear whether these may have been barrows or whether they were due simply to erosion by traffic approaching the ford. The wide pool beneath the carved cliffs is a popular spot with fishermen, and may always have been so. Unfortunately no fieldwork has yet been done in the immediate environs of Morwick to assess the levels of Mesolithic or Neolithic occupation, and no Neolithic monuments of any kind are known for several miles around the site. However, Coquetdale is well known for its prehistoric remains and a glance at Burgess' (1981, 8) stone axe distribution map should be sufficient to demonstrate the importance of the region, and, by implication, of the river itself, in Neolithic times. Out of a total of 215 axes from the whole of Northumberland and Durham, Burgess' map records over thirty stone and three flint axes from Coquetdale (the three flint examples are all from within 10km of Morwick), and he notes that 'the whole length of Coquetdale offers considerable tracts of lighter soils and dry sites for settlement' (1984, 135). Many burial cairns, conventionally dated to the Bronze Age, have been 'dug' in Coquetdale (Dixon 1902, 110-154), and several hillforts fringe the uplands to either side of the valley. Davies (1983) records four Mesolithic sites upstream of and within about 10km of Morwick, and the important Mesolithic coastal site of Hauxley (excavated by Clive Bonsall in 1983 but currently unpublished) is only some 3km south of the mouth of the Coquet. Further inland, major complexes of 'cup and ring' rock art have been recorded to the south of the river at Lordenshaws and to the north around Cartington (Beckensall 1992, 13-40). In spite of this wealth of remains, the valley remains understudied and offers great potential for future fieldwork. Until this work is begun, we have no real basis on which to attempt to place the Morwick carvings into a local Neolithic landscape. Although the wealth of later prehistoric remains in Coquetdale could lead some to question a Neolithic date for the Morwick carvings, the following account would seem to support a Neolithic origin, and the question of chronology will be returned to in the discussion section of the paper.

The rust coloured sandstone cliffs on the south bank of the Coquet at Morwick contain a greater variety of spiral motifs than any other open air rock art site in Europe. The site is an example of a special place which was transformed through the addition of these symbols, and it is the aim of the following account to suggest some

reasons why this transformation may have occurred. In order to ensure that the speculation which follows is as informed as possible, we will begin by briefly examining all known Neolithic spirals in the British Isles.

Neolithic spirals in the British Isles

Sites in northern England and southern Scotland (excluding Galloway and Argyll)

Excluding Morwick, spirals have been recorded at eleven open air rock art sites, on four cist slabs and three probable cist slabs, on five other 'burial' monuments and two 'ceremonial' monuments throughout this area. In terms of location, the site which bears the closest relationship to Morwick is Hawthornden (Childe and Taylor 1939, 316-318; Morris 1981, 147) eleven kilometres south of Edinburgh. Hawthornden is a curious site, similar in some ways to Morwick but including a range of motifs which are unknown elsewhere and which may not be contemporary with the spirals here. The motifs are located on a very impressive near-vertical red sandstone cliff face which rises some 50 metres above the River Esk. They are found about 8m above the current river surface, in a natural angle in the rock 2.5 metres deep and 3 metres wide at its mouth, and are particularly hard to reach: Morris' observation that 'you will almost need a climbing rope' (1981, 178) is certainly no exaggeration. The sloping floor of the recess suggests that it probably never functioned as a rock shelter, although Child and Taylor record that 'up to 2' 9" of earth had accumulated on the floor' and that one motif was 'covered with earth when we arrived'. It is therefore possible that the floor may have been more horizontal at the time some of the carvings were created. It will have become obvious to anyone who has waded across the river to inspect them that the water immediately beneath the carvings is considerably deeper than that over much of this section of the river bed, a fact which may not be of total irrelevance to the location of the carvings.

Morris describes the motifs on the south wall of the angle (fig. 3a) as 'a double spiral 30cm diameter, an 'S' shaped spiral with 'tail' above, and a small spiral, each with two convolutions'. Using the terminology of this paper, Morris's double spiral is actually an interlocking spiral motif which is unusual in that it is formed of a single continuous groove, leaving the two spirals standing out in relief: this is the opposite of the more normal tradition for interlocking spirals (for example at New Grange or on the Towie stone ball) where the individual spirals are incised into the surface of the stone. Below these spirals are other carvings, including ten rings and other grooves, which are badly weathered: there may once have been many more spirals here. The motifs on the north wall include a set of three concentric circles along with the unusual motifs referred to above.

Spirals have been recorded at four cup and ring marked outcrops in Strathclyde. The cup and ring site of **Blackshaw** includes an unusual double spiral motif and

one single spiral (fig. 3b), and 'it is noteworthy that the spiral figures stand alone, no other markings within two and a half feet of them' (Cochrane-Patrick 1886, 150). This outcrop is recorded as sandstone (*ibid*) but no colour is given. Ronald Morris considers the spirals at Blackshaw to be later than the cup and ring marks, noting that the spirals are 'carved on a steeply sloping part of a flat rock previously covered with cup-and-rings' (1989, 47). However, the reasoning behind this conclusion is unclear, and the relative dating of the spirals and the cup and ring motifs here does not appear to this writer to have been so clearly resolved as Morris suggests.

The **Cochno Stone**, described by Morris (1981, 124) as 'one of Scotland's finest collections of petroglyphs', is recorded in detail by Harvey (1888) who records a number of circles 'with spiral volutes, more or less complex, proceeding from them'. These spirals vary from one 'very beautiful example' to one which looks 'like a rat's tail' (*ibid*, 133). The rock is described as sandstone, but again no mention is made of its colour.

The carved rock at **Greenland**, 'one of the finest examples of these carved rock surfaces in Scotland' (Morris 1981, 103) was originally recorded as 'white sandstone' by Bruce (1896, 205). However, Mackie and Davis (1988, 129) explain the geology of the site in some detail and describe the decorated rock as a metamorphosed 'large tilted block of... Upper Old Red Sandstone'. Mackie and Davis also note that the site overlooks the Clyde, which would have been broader (and therefore, presumably, closer to the site) before dredging. The site has not been inspected by the writer, but the combination of red sandstone and proximity to water recalls the situation at both Morwick and Hawthornden. However, the spiral decoration at Greenland appears to consist solely of 'a single worn example of what seems to be a spiral carving, probably with four complete turns' (*ibid*, 139) set amongst numerous cups and cup-and-ring marks amongst which Van Hoek (1995a, 30) claims to have noticed further hybrid spirals. Bruce's drawing, which Morris (1981, 103) describes as 'not very accurate' shows a second spiral, but if this ever truly existed it has now flaked away. It is important to note, though, that this site underwent a long and complex history, with much of the original surface having been quarried in prehistory, possibly as early as the later Neolithic although Mackie and Davis (1988, 143-145) favour a later date. While it will probably never be proved, there may well have been more spirals on this outcrop in its earliest phase.

The profusely decorated cup-and-ring marked outcrop at **Ballochmyle** was only discovered in 1986 and has been very carefully surveyed. For such a complex cup-and-ring site this is unique in being on a vertical surface. The site is described as 'pink desert sandstone bluff' (Stevenson 1992, 33), and the possible parallels with the red sandstone sites of Morwick and Hawthornden are intriguing. The motifs at Ballochmyle do appear to belong to more than a single phase, but no detailed discussion of the possible chronological development of this site is attempted here. What is important to note, however, is that despite the badly weathered nature of the rock face in many places, Van Hoek (1995a, 18) has

recorded three spiral motifs amongst the cups and rings, concentric circles and other motifs. Stevenson describes Ballochmyle as 'remarkable', and notes that it 'constitutes one of the most extensive areas of rock art so far discovered Britain' (1992, 33). The subsequent recognition of spirals at the site should not perhaps have come as a surprise in the light of the other sites discussed here: once again a particularly complex cup-and-ring site has been demonstrated to contain a few spirals.

These are four of the most complex examples of cup and ring art in southern Scotland. While it could perhaps be argued that these sites have been paid more attention in the past precisely because of their complexity, thus leading to the recognition of spiral motifs that may also exist in several other places, this is not considered likely as many other cup-and-ring sites have, in fact, been recorded just as carefully without any spirals having been recognised. However, the recent discovery of a single 'rather coarse' spiral surrounding a cupmark, apparently in association with cup and ring marks at **Menteith**, Central Region (Van Hoek 1995a, 30) should serve to warn us that further spirals could still await recognition or discovery amongst other Scottish rock art sites.

Although Van Hoek lists several possible spirals in his list of sites in Northumberland (1995a, 31-32), after Morwick only two open air sites have 'certain' spirals, and one of these (Hare Crag) is considered not to have spirals by Stan Beckensall (pers. comm.). The other example, at **Horton**, has not been inspected by either Beckensall or the writer, but appears from Van Hoek's illustration (1995a, 26) to be an S-shaped spiral with one end surrounding, but not joining, a ring.

The final open air rock art sites to consider here are from Rombalds Moor in West Yorkshire. Two spirals have been recorded here: one certain example on the Panorama Stone (fig. 3c) and one possible on the Badger Stone (figs. 3d, 3e). The **Panorama Stone**, now located opposite Saint Margaret's Church in Ilkley but originally from a plateau to the south-west of the town, is now badly weathered but a variety of motifs including cups and rings and ladders can still be discerned upon it. A rubbing of part of the stone by Haddingham (1974, 47) clearly shows a spiral around one of the cupmarks which is linked to other cup and ring motifs by 'ladders': this spiral is also illustrated, though not specifically commented upon, in the Ilkley Archaeology Group gazetteer of the rock art on Rombalds Moor (1986, 44). Prior to Van Hoek's (1995a) publication no spirals had been recognised at the **Badger Stone**, but re-examination of photographs does suggest that one of the central cup and ring motifs here may incorporate a spiral, although Beckensall (1983, 15) clearly shows the motif in question as a standard cup and ring (fig. 3e). The significant thing to note here is that the Panorama Stone and the Badger Stone are two of the most complex rock art panels in the Rombalds Moor complex and are the only two at which spirals have been recorded. While it could be argued that these two examples are not true spirals, and it has even been suggested that they could have been produced by accident during the attempted production of cup and ring marks, the existence of similar motifs in Galloway and elsewhere suggests that the

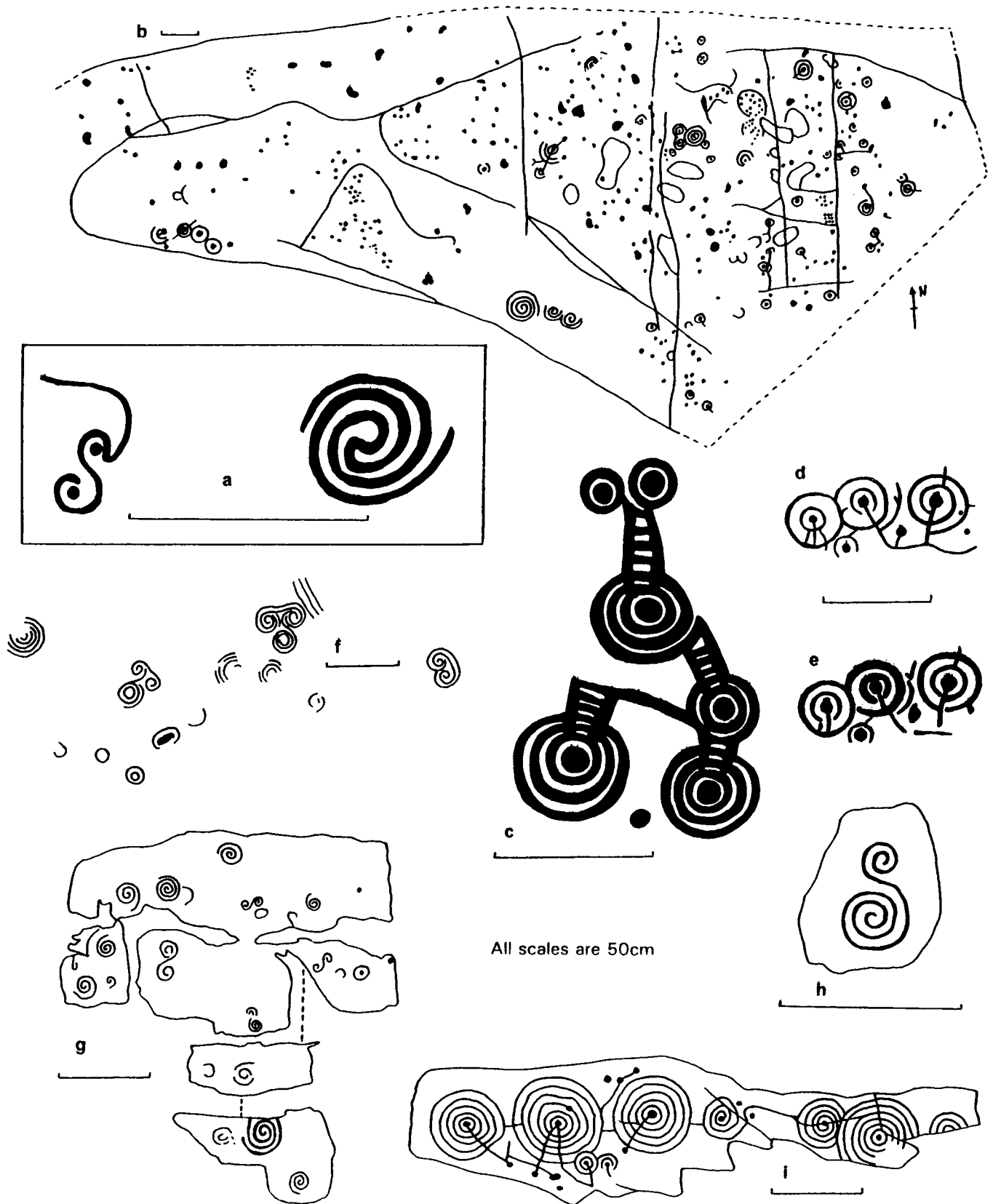


Fig. 3. A selection of spirals at open air rock-art sites: a, two of the spiral motifs at Hawthornden; b, Blackshaw (after Morris 1981, 26); c, detail from the Panorama Stone, Ilkley (after Haddingam 1974, 47); d & e, alternative interpretations of the central area of the The Badger Stone, Ilkley Moor (d, after Van Hoek 1995a, 26; e, after Beckensall 1983, 15); f, Achnabreck, the possible early phase (after RCAHMS 1988, 97); g, Eggerness (after Van Hoek 1995b, 69); h, Gallows Outon (after Van Hoek 1995b, 47); i) Drumtroddan, detail (after Van Hoek 1995b, 64).

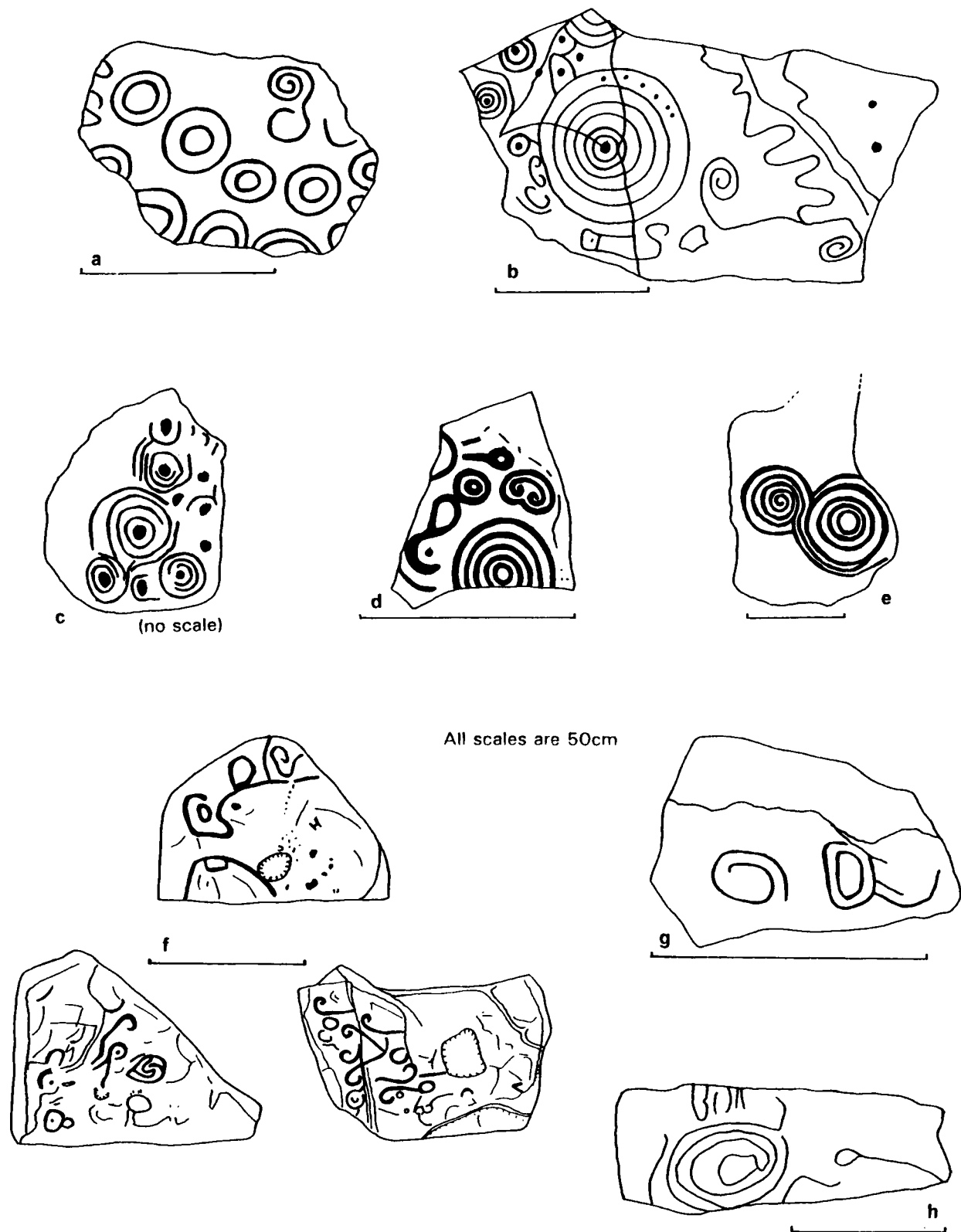


Fig. 4. Spiral decoration on burial monuments: a, Lamancha - probable cist slab (after Simpson 1867, plate XIV); b, Coilsfield - cist slab (after Simpson 1867, plate 12); c, Ravenhill - cist slab (after Simpson 1867, plate XI); d, Lilburn - stone from cremation trench (after Beckensall 1991, 43); e, Little Meg - possible kerbstone (after Beckensall 1992b, 15); f, Old Parks - standing stones within cairn (after Beckensall 1992b, 22-24); g, Catterline - cist cover (after Reid and Fraser 1924); h, Ferniegair - cist slab (after Morris 1981, 97).

deliberate inclusion of spirals within cup and ring panels was a rare but nevertheless significant practice. The existence of such motifs has led Van Hoek (1995a) to introduce the concept of the 'hybrid spiral', which is considered further in the section on Galloway, below.

Childe and Taylor (1939, 317), in their discussion of Hawthornden, observe that 'the Esk Valley lies rather outside the regular range of typical 'cup and ring marks'. The nearest parallel, both in space and time is the cist cover from **Lamancha** on the Esk-Tweed watershed in Peeblesshire. And the latter by its good spiral seems to be connected with art slightly earlier than the classical cup and ring marks and better represented in Ireland than in Scotland'. We may add to this observation that the Lamancha slab (fig. 4a) is also of red sandstone, that it was certainly broken off a larger decorated block (quite possibly a decorated outcrop of living rock), and that it contains concentric ring motifs (not conventional cup and ring marks) in addition to its irregular horned spiral. The exact findspot of this slab is no longer known, but it is fair to suggest that it may have functioned as a cist slab (either side or capstone) at some stage.

Another red sandstone slab displaying spiral decoration, as yet unpublished, has recently been discovered at **Bloomfield** near Ancrum (NGR NT 594239). I am indebted to John Dent for information about this stone (fig. 7a), which is now in Hawick Museum. The unusual design consists of a spiral surrounded by and linked to a penannular ring. Penannular rings are commonly found in cup and ring art, but this author is not aware of another example of such a ring occurring around a spiral: is this perhaps a unique type of hybrid deliberately incorporating elements of both spiral and cup and ring art? The stone was recovered from a clearance cairn at the edge of a field, and may once have been part of a burial cairn although no such monuments are known in the vicinity. The motif may well have been created when the stone was part of a larger boulder, or perhaps an outcrop of bedrock. As already noted, the design is on red sandstone, outcrops of which occur on the banks of the Jedwater some seven kilometres east of the findspot (John Dent, pers. comm.).

The **Coilsfield** slab (fig. 4b), which is now missing, was discovered in the eighteenth century during gravel digging near Coilsfield House, Strathclyde. It formed part of a cist, in which was found a food vessel, in a tumulus known as Old King Cole's Grave (Morris 1981, 27). The gritstone slab has evidently been detached from a larger decorated rock, quite probably an outcrop, and displays an interesting array of motifs including two spirals linked by a wavy line and one cup with six rings. Assuming that these were all on the slab prior to its removal from a decorated outcrop then evidently this outcrop was decorated with both spirals and cup and ring motifs.

The greywacke cist side-slab from **Ferniegair**, Strathclyde (Morris 1981, 96) is, intriguingly, carved on both faces. On the inner face (as now reconstructed in Hamilton Museum) is a four convolution spiral with its outer ring broken off at one side, along with other grooves which pass off the edge of the stone. This was apparently also once part of a larger decorated stone, although the

presence of concentric circles and 'wavy lines' on its other face complicates the issue: could it once have been part of a decorated standing stone?

A further possible cist slab is now built into a doorstep in **Gilnockie Tower** (Morris 1981, 70). This stone, known locally as 'the Curly Stone', is 'evidently only a fragment of a larger block once containing more figures' (Hardy 1884, 346). It displays at least four spirals, including a probable horned spiral and various other 'wavy lines' (fig. 7c). The original context of the stone is unknown, although the tower does overlook some impressive river cliffs from which the stone could perhaps have been quarried. No decorated outcrops have been recorded in the vicinity of the tower.

Another possible cist slab, 'a rough sandstone, about 6 feet long by perhaps two and a half broad, ... was raised by the plough at a place called Annan Street, upon the farm of **Wheathope**... about half a mile from the church of Yarrow' (Wilson 1863, 483). Wilson (*ibid*) states that 'little doubt can be entertained that it had formed the cover of a cist, though few probably will now be inclined to attempt a solution of the enigmatic devices rudely traced on its surface'. These 'enigmatic devices' (fig. 7j) bear a closer resemblance to Irish passage grave art than to any known rock art sites in Scotland. Although some doubt has been cast on its authenticity (*ibid*) this stone must be included in any corpus of rock art spirals. The writer is not aware of the current whereabouts of this stone, or, indeed, whether it still survives.

One of the decorated cist slabs from **Ravenhill**, Yorkshire, illustrated by Simpson (1887, plate XI) appears to show a spiral in association with cups and rings (fig. 4c). If this illustration is accurate then this is the only known English example of a spiral on a cist slab. Also from a Yorkshire funerary context are the three Folkton Drums, one of which incorporates a motif which could be interpreted as a crude horned spiral but which is probably related to the 'eyebrow' motifs on the other two drums and so is not considered here as a spiral.

Although the original excavation report for Tillocoultry (Robertson 1894, 190-197) refers to 'a series of concentric circles, and spirals springing from one of these groups', the accompanying photograph clearly shows linked sets of concentric circles and no spiral: the site, while of considerable interest, cannot therefore be considered further here. The red sandstone cist slab from Wester Yards (Clarke *et al* 1985, 259) contains arcs rather than spirals, in association with concentric circles and very rare triangular motifs. However, this is another example of re-use of carved red sandstone, the decoration on which bears no relationship to conventional cup and ring art.

Two boulders found in a field at **Crosswood** (Van Hoek 1995a, 18) on the northern slopes of the Pentland Hills bear spiral decoration: one has two spirals while the other has a single example (fig. 7b). It is not known whether these ever formed part of a burial cairn or other monument, but again it is interesting to note the colour of the rock, described from photographs held by the Royal Commission on the Ancient and Historical Monuments of Scotland as a 'course grained pinkish gritstone' (Jack Stevenson, pers. comm.).

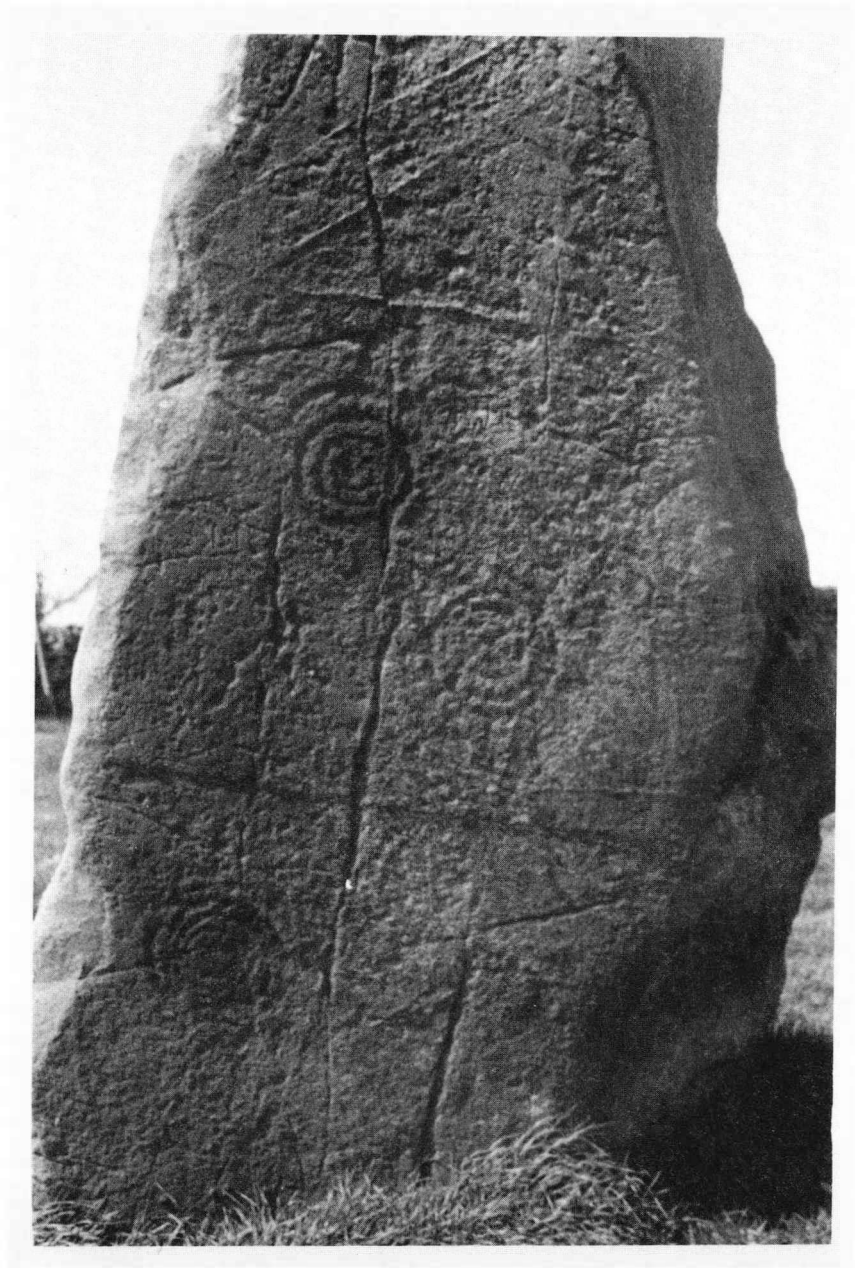


Plate 3. The south east face of Long Meg.

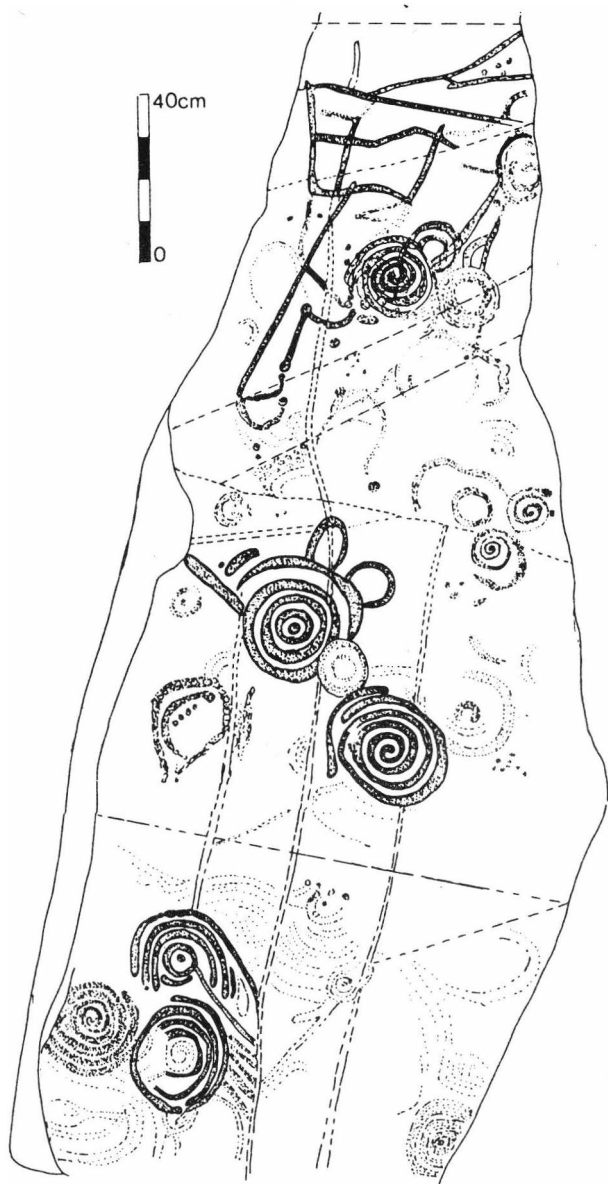


Fig.5. The south east face of Long Meg, drawn from a rubbing by Stan Beckensall.

The next site to consider is an unusual form of burial monument from **Lilburn Hill Farm**, Northumberland (Moffat 1883; Beckensall 1983, 152). This appears to have consisted of two layers of shallow cremation pits, a lower layer of five pits being overlain by an upper layer of seven. Each cremation pit contained cremated bone, and was capped by three small whinstones (except the pit at the north end of the lower line of pits which had five whinstones). The Lilburn monument is apparently of unique form, but on the basis of its contextual associations it is generally thought to be Neolithic and may once have been buried beneath a long barrow although no sign of any such structure survives. Moffat records that a 'thick massive stone, shaped like the apex of a pyramid, and carved on each side but one, which had suffered partial demolition at some previous period' was found at the west side of the south end of the cremation pits. Unfortunately this stone had been broken up by workmen prior to inspection, and when seen by Moffat it was 'lying in fragments upon the surface of the field'. It is tempting to suggest that the 'partial demolition' he refers to may represent the breaking up of a larger decorated menhir or the removal of this portion from a decorated outcrop, although this cannot be ascertained from Moffat's account or the surviving fragments of the stone. An alternative view is proposed by Burgess (1991, 24) who believes that the decorated stone was apparently 'purpose made for the job', and interprets the 'pristine freshness of the Lilburn markings' (in direct contrast to the weathered nature of many obviously reused fragments in Bronze Age contexts) as clear evidence of the Neolithic date of the carvings.

One face of the Lilburn stone (fig. 4d) displays a horned spiral motif in association with a four-ringed cup and other curvilinear motifs, while another face has a set of three concentric rings and a single ring. Two fragments of this sandstone block are now in the Museum of Antiquities at Newcastle University, but the rest of it is missing. The exact site of the monument has recently been confirmed, using air photography, by Ian Hewitt (Stan Beckensall, pers. comm.) and there may well be sufficient remaining deposits here to justify further investigation, hopefully enabling a better understanding of the monument to emerge. For the purposes of this paper the important things to note are that the monument is of a unique form and is the only prehistoric monument in Northumberland to include a spiral motif (the only other spirals are found at the open air rock art sites of Morwick and Horton, discussed above).

While the possible reuse of decorated rock from an earlier context remains unproven at Lilburn, many of the examples discussed above do appear to be slabs broken off previously decorated outcrops. It is, therefore, important to note that if these did originate as spirally decorated rock outcrops, then the occurrence of such outcrops must once have been more widespread than the few surviving examples would suggest.

The stone circle of **Long Meg and her Daughters** is one of the best known Neolithic monuments in northern England. It lies in the Eden Valley, the pivotal north-south communication route west of the Pennines which

has long been recognised as a particularly significant area by those investigating the Cumbrian Neolithic. The stone circle (Burl 1976, 89-92; Waterhouse 1985, 99; Barnatt 1989, 349) is by far the largest such monument in northern England (and the third largest in Britain after Avebury and Stanton Drew), measuring 109 by 90 metres and including sixty-nine surviving stones, each of which weighs up to 28 tons, set in a low bank. The interior of the circle is now featureless, although two cairns were recorded within it by Camden in 1586. These cairns are usually dismissed as probably the result of relatively recent field clearance, but they could, in fact, have originated as burial cairns, perhaps later enlarged through the addition of field clearance stones.

The carvings which particularly interest us here are to be found on the south-east face of the 3.65m high red sandstone monolith of Long Meg, which stands outside the entrance to the circle of 'her Daughters' (Beckensall 1992b, 10-13). It is surely no coincidence that this monolith marks the midwinter sunset when viewed from within the circle, and the notch in the top of the stone may also be of significance in this respect. The carved face of the stone does not face towards the circle, but is placed at such an angle that the carvings are, even today, thrown into sharp relief at times when the sun is low in the western sky, such as at midwinter sunset. Although many of these motifs become particularly clear in low sunlight (plate 3), a full appreciation of their complexity is only possible by reference to Stan Beckensall's drawing (fig. 5). The association between midwinter sun and spiral motifs may suggest a link between the two, but this may not have been the case when the motifs were originally produced. The rock must have been quarried from the red sandstone cliffs of the Eden about a kilometre to the west, and if the motifs were already *in situ* prior to the quarrying of the rock then this should lead us to envisage a Morwick-like site at these cliffs. A preliminary search of the river cliffs in this area has failed to uncover a single remaining carving, but this is not surprising as the area has been much disturbed in more recent times in addition to the natural erosion which must have been in constant progress here. Although there is no clear evidence to support the suggestion, the fact that there are rapids beneath these cliffs may have led to this becoming an important place in Mesolithic and Neolithic times, and the fact that they can also be reached by boat from the Solway must also be significant. Higher stretches of the river are also navigable, but it is unlikely that boats of any kind ever passed this spot without having to leave the river to rejoin it a few hundred yards upstream. Such a situation lends itself to any number of different interpretations, but for now all we need to note is that it was a special place from which Long Meg was probably quarried prior to her eventual erection outside the stone circle of her Daughters. If we accept that Long Meg was probably quarried from an existing decorated river cliff, perhaps very similar to that at Morwick, then the reason was presumably so that the power associated with the carved motifs could be appropriated by those in control of the stone circle. Such reuse may be impossible to prove, but it would account for the existence of carvings on only one face of the rock, coupled with the fact that some of the

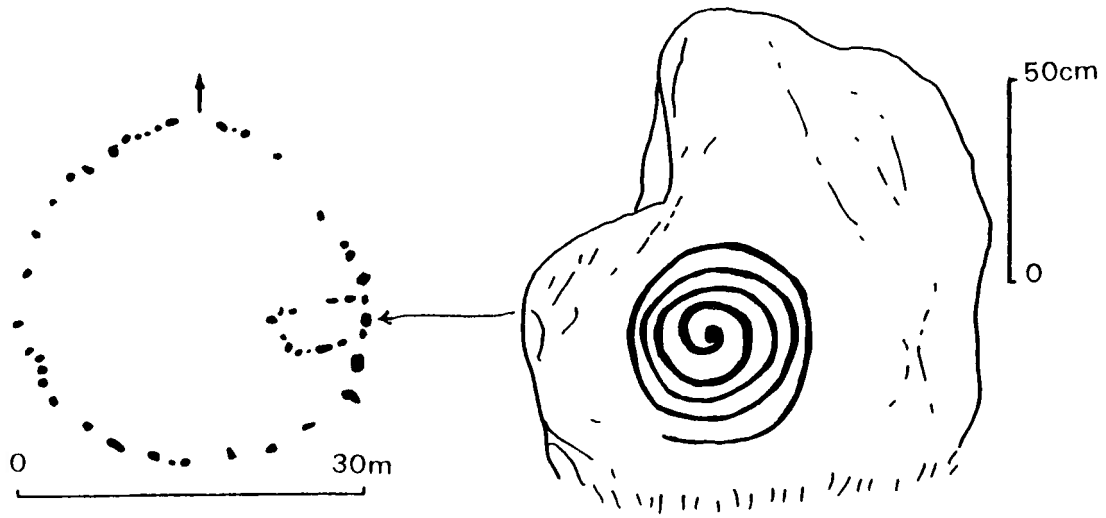


Fig. 6a (left). The Castlerigg stone circle, showing the location of the decorated stone.
 Fig. 6b (right). The spiral at Castlerigg, based on a sketch by Helen Tyrie.

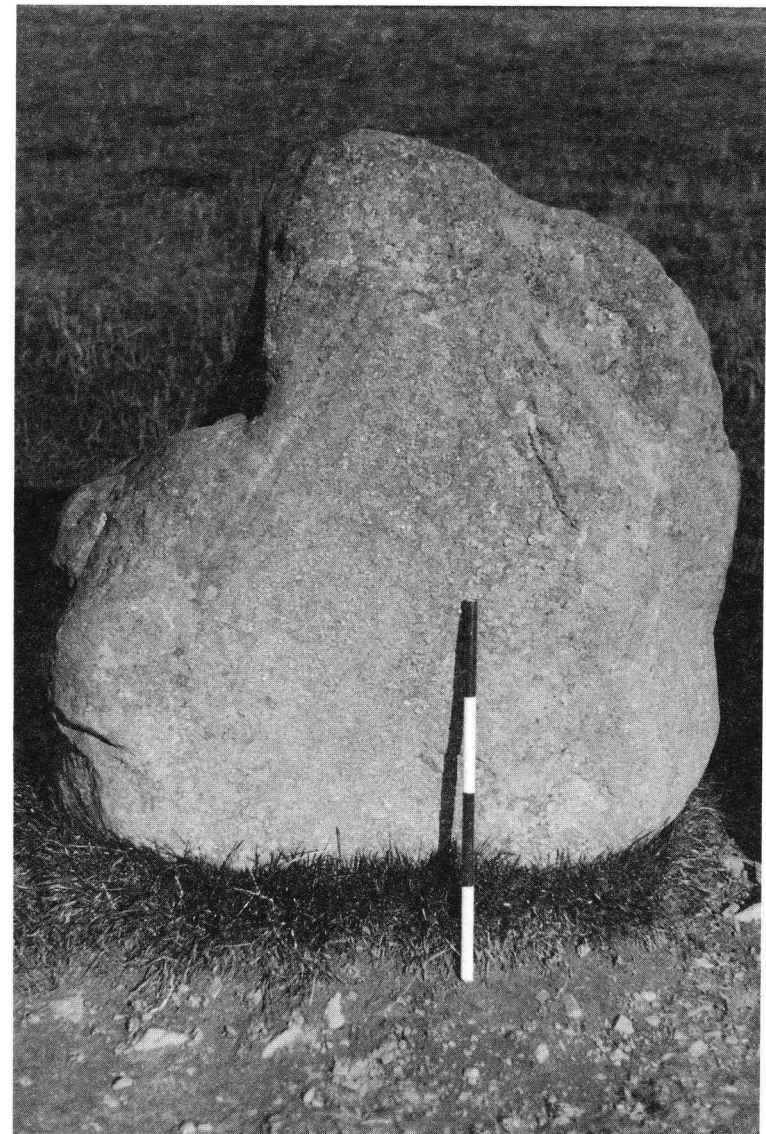
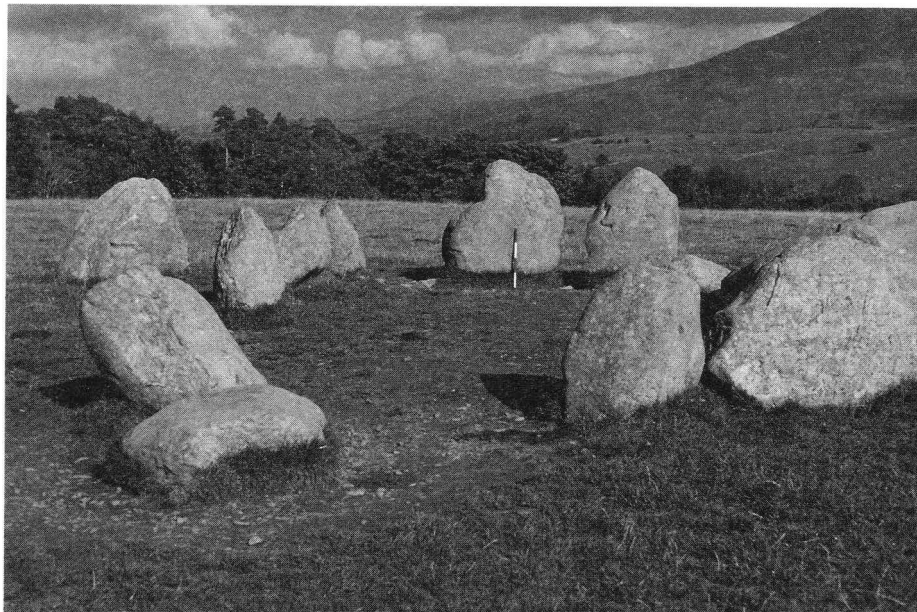


Plate 4a (left). The rectangle within the Castlerigg stone circle, seen from within the circle. The spiral is adjacent to the ranging pole.
 Plate 4b (right). The spiral at Castlerigg. Photography by Nick Best and Neil Stevenson.

motifs appear to have been cut by the quarrying. The best evidence for reuse may lie on the currently buried portion of the stone: if this contains carvings which are partially eroded, though not as eroded as those on the currently exposed portion, then this would prove some form of reuse. Regardless of this, we still need to speculate about the time that the monolith was incorporated into the architecture of the circle. Could this have been associated with the construction of burial mounds within the circle? Or could Long Meg have been erected on site prior to the construction of the circle? (for example, she may have been linked with the recently discovered, but undated, ditched enclosure immediately adjacent to the stone circle (Soffe and Clare 1988)). The Long Meg complex as a whole may have much to tell us about Neolithic society on both sides of the Pennines, and it would certainly repay a programme of investigation (see Harding *et al* this volume).

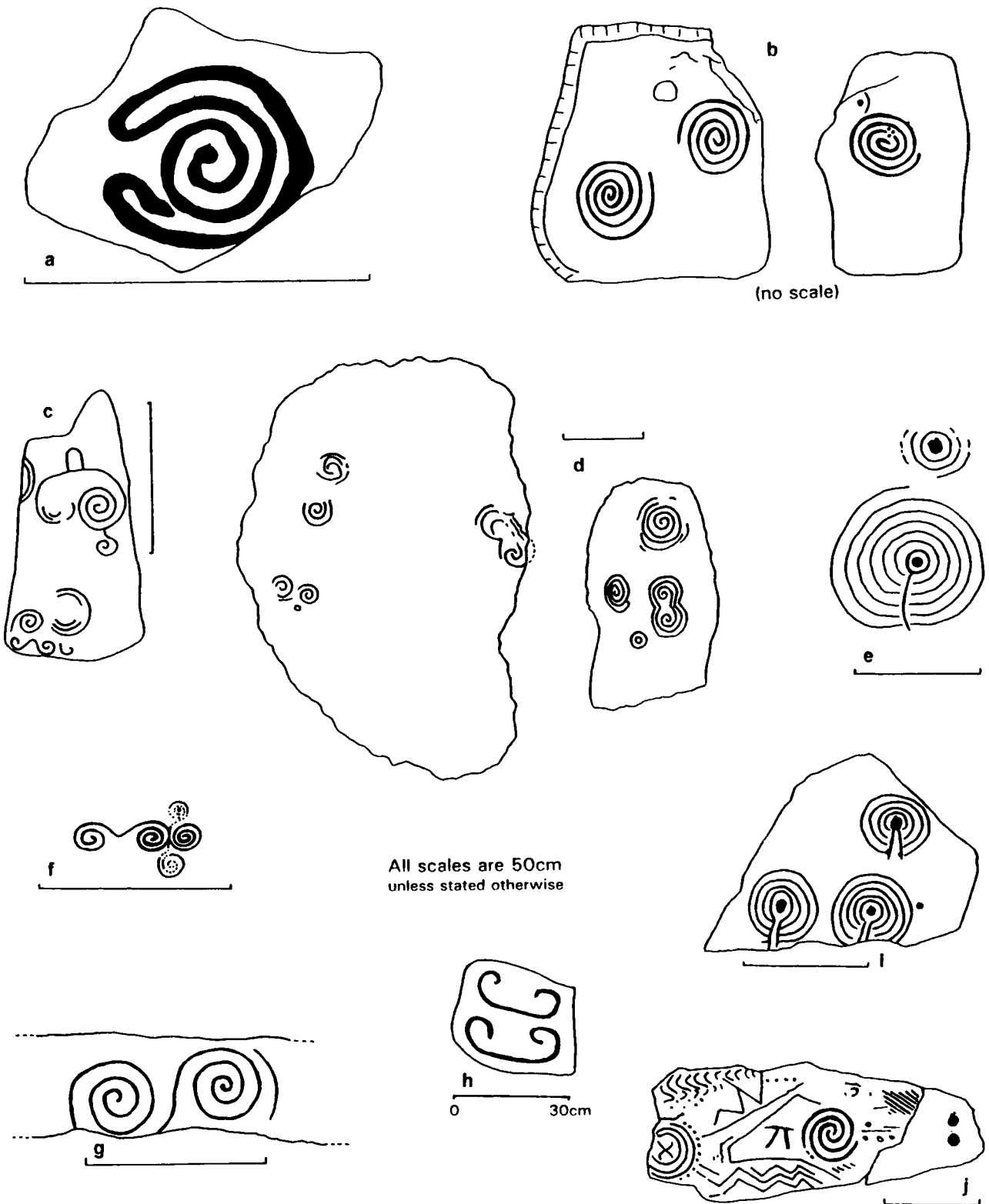
Only some 500m north-east of Long Meg and Her Daughters is the aptly named site of **Little Meg**, or **Maughanby**, sometimes referred to as one of the smallest 'stone circles' in Cumbria but actually a kerb cairn which contained an interment in a central cist. There appear to have originally been eleven stones around the cist, although most are now tumbled and the site is further complicated by the amount of field clearance stone within and around it. It is impossible to tell from surface observation alone how many of the stones currently lying on the site may once have been upright, or how closely their current positions relate to their original places within the monument. The date of this structure is debatable, and while re-excavation may provide some evidence it may be that its chronological relationship to Long Meg will never be fully established.

Two cup and ring marked slabs came from the central cist at Little Meg, but the stone which interests us here is one of the kerbstones to the north-north-east of the cist (Thornley 1902; Beckensall 1992, 14). This is inscribed with a spiral linked to a set of five concentric circles (fig. 4e). Waterhouse (1985, 104) notes that 'when the stone was vertical, the carving would have been very strikingly placed on the sloping upper surface'. It is intriguing to note that a line drawn through the centre of Long Meg to Fiend's Fell on the eastern horizon corresponds to the rising point of the sun on two of the quarter days in Thom's 16 month megalithic calendar (Thom 1967, 144), and that the Little Meg circle sits astride this line. To be exactly on this line the spiral decorated stone at Little Meg would have to be north-east of the cist (the presumed centre of the monument). It currently lies slightly north of this point, but if it has fallen from a standing position, and possibly been subsequently further disturbed, then it may once have stood exactly on this alignment. The spiral decorated stone gives the impression of having been carved specially rather than being a re-used fragment of some larger whole. However, given our poor understanding of the site there is unfortunately little more that we can say about the carving except to suggest that its existence presumably relates in some way to the presence of the spiral decoration on nearby Long Meg.

It is an extraordinary fact (whatever the explanation)

that if the straight line referred to above from Long Meg through Little Meg to Fiend's Fell is extended a little over 30km westwards it passes through the **Castlerigg** stone circle at Keswick (Waterhouse 1985, 95-98). This fact is rendered even more intriguing by the recent discovery of an impressive spiral at Castlerigg. This was first recorded by Neil Stevenson and Nick Best in late afternoon sunlight in September 1995, and although it is only visible under suitable lighting conditions it is nevertheless amazing, in view of the popularity of the site, that it had not been noted previously. The Castlerigg circle is one of the most dramatically sited prehistoric monuments in Britain, and incorporates a host of interesting features (Barnatt 1989, 343) of which space precludes detailed discussion here. In addition to the 38 surviving stones of the circle perimeter, ten others survive of a rectangular arrangement (approximately 3.5 x 7.5 metres) sited within the circle, abutting the eastern arc of the circumference (fig. 6a). The recently discovered spiral (fig. 6b; plates 4a and 4b) is on the flat inner face of the circle stone which forms the eastern side of this rectangle. The spiral is 48cm in diameter and consists of four clockwise turns with a possible cupmark at the centre. The upper half of the motif is clearly visible on photographs taken by Stevenson and Best, although the lower half is noticeably fainter, probably due to erosion by sheep rubbing up against the stone (these photographs also show a distinct reddish tint on the decorated stone in contrast to the cold grey of the surrounding circle stones, but this may be simply a trick of the light). The relationship of the rectangle to the circle is unknown: although the layout of the site initially suggests that the rectangle must post-date or be contemporary with the circle, it is nevertheless possible that the rectangle was the earliest construction on the site. Waterhouse (1985, 97) records that 'In 1882 Mr. Kinsey Dover excavated within the rectangle of stones in order to find evidence for its use; but to this end he was unsuccessful. All he discovered was a pit, about 1m deep, filled with earth, stones, and pieces of charcoal'. Three stone axes have been recovered from Castlerigg over the years, but the chronology of the monument remains poorly understood, as indeed does that of the Cumbrian circles generally.

Also of relevance to a discussion of the Cumbrian spirals are the monuments of Glassonby and Old Parks, both in the Eden Valley within a few kilometres of Long Meg. The kerb of the **Glassonby** (or Grayson Lands) cairn includes one stone marked with concentric arcs and chevrons (Beckensall 1992, 16: once again we are indebted to Stan Beckensall's powers of observation - the current writer had recorded this carving as apparently no longer visible in 1989). This design has very close parallels in Irish passage grave art, and the occurrence of chevrons with concentric rings is of particular interest. The reason Glassonby warrants mention here, however, is due to the previous existence (recorded in 1875) of a red sandstone block 'with a spiral or concentric circles, like the figure on Long Meg, incised on its side' (Collingwood 1901, 298). This block, which measured about three feet by two feet and was six inches thick, cannot now be traced so it is impossible to say whether it did contain spirals.



All scales are 50cm
unless stated otherwise

Fig. 7. Rock art spirals from various contexts: a, Bloomfield, Ancrum; b, Crosswood boulders (after Van Hoek 1995a, 16); c, Gilnockie Tower; d, two of the Calderstones (after Forde-Johnston 1957, figs. 4 & 6); e, Cambret Moor/Cauldside Burn (after Van Hoek 1995b, 94); f, Ballaragh, Isle of Man (after Morris 1979, 183); g, Blackhills; h, Arsdale, Orkney (after RCAHMS record card HY32NW, 4); i, hybrid spiral at Laggan (after Van Hoek 1995b, 35); j, possible cist slab from Wheathope (after Wilson 1863, 482).

However, the possible significance of this stone will not be lost on any readers who have read the above discussion of Long Meg. The cist within the Glassonby cairn is also built of red sandstone slabs, but no motifs have been noted on these. The **Old Parks** cairn is a particularly interesting, but rarely discussed monument (Ferguson 1895; Frodsham 1989; Beckensall 1992). Within an oval cairn 24 by 19 metres and well over a metre high stood a line of five erect slabs, three of which were decorated on their vertical faces in a most unusual style. Some of the motifs could be considered as crude spirals (fig. 4f). The site contained a number of interesting features and finds, including 32 deposits of burnt bones in hollows scraped out of the ground, two incense cups, a large burial urn full of burnt bones and fragments of many similar urns (all to the west of the line of stones) and (to the east of the alignment) two trenches or graves which were considered by the excavators to have held the primary burials on the site. It may never be possible to reconstruct the detailed history of the Old Parks cairn with any certainty, but it must have functioned as an important site over a lengthy period which probably extended well back into the Neolithic. The decorated stones were not much weathered, and appear to have been fashioned specially for the monument although it was noted at the time of their discovery that the designs extended below the old ground level into which they were set so the motifs must have been on the stones prior to their erection.

The final site to consider here is that represented by the decorated stones now preserved in a greenhouse in **Calderstones Park**, Liverpool (fig. 7d). These stones were recorded as a boundary point in 1568, but the earliest recorded reference to the carvings dates from 1825, when Edward Baines referred to them in an account which also described the discovery of pottery at the site in 1765. The carvings, which include spirals and human feet, were described by Simpson in 1864. The spirals bear a close resemblance to those at Morwick, including horned spirals and one probable S-shaped spiral. Simpson (1864, 259) notes that 'the stones consist of slabs and blocks of old red sandstone, all different in size and shape'. It would seem reasonable to assume that the carved stones had formed a tomb of some kind, and the usual assumption is that this was a chambered tomb of Irish form, similar to those at Barcloddiad y Gawres and Bryn Celli Ddu on Anglesey. This may well be the case, but it is also possible that the stones could have formed some other form of monument rather than a chambered tomb. Unfortunately, when the site was visited during the research of this paper the stones were entombed within wooden crates during restoration of the surrounding greenhouse, but previous cursory examination of the motifs had suggested to the writer that the Calderstones may well have been quarried from an already decorated outcrop. This is suggested by the way the motifs are located on the stone faces with no relevance to the shape or size of the stones and the fact that several motifs at the edge of the stones appear to have been damaged, perhaps during quarrying. The spiral motifs are very weathered in comparison to the foot carvings so they may have been carved much earlier: Simpson (1867, 184) considered the feet to be 'too sharp in their outlines to be

ought than idle, modern carvings'. Could it be that the feet were added at the time that the stones, already displaying their weathered spirals, were incorporated into the burial monument in which they were later to be rediscovered? Whatever the form and date of this monument, if the stones were taken from an existing decorated outcrop then this may have been a red sandstone river cliff above the Mersey: the possible links with Morwick, Hawthornden and Long Meg are obvious.

Argyll

In spite of the wealth of rock art sites and other monuments in this region, spirals have only been recorded at two rock outcrops (Achnabreck and Blairbuie) and one monument (Temple Wood). At **Blairbuie**, on a sheet of outcrop rock overlooking the glen 3km north-east of Lochgilphead, now in a forestry plantation, Campbell and Sandeman (1961, 31) record two spirals in association with cup and ring marks. Morris (1977, 61) records only a single, rather crude spiral here. This site has not been examined by the current writer, and from the published information it is difficult to offer an explanation for the occurrence of a spiral here rather than at any of the other cup and ring sites in the area. The **Achnabreck** site, in contrast, is of particular interest for a number of reasons. Here, three horned spirals, one of which is linked to a single spiral to form a type of triple spiral, and one of which is similarly linked to two concentric circles, are found on one of the most extensive and complex cup and ring marked outcrops in Britain. It may be that the spiral motifs and concentric circles here predate the cup-and-rings, perhaps by many centuries, as suggested by RCAHMS (1988, 113) on the basis of apparent differential erosion and some superimposition (fig. 3f), but the highest of the horned spirals (plate 5) appears fresher than most of the other 'early' motifs so the issue of relative chronology is far from resolved. What is beyond doubt, however, is that the spirals cluster together at a significant position on the upper section of the outcrop, with most of the other motifs spread out beneath them to the south. On balance it would seem that at least some of the spirals were executed here long before most of the cup and ring motifs were added. In view of what has already been stated above with regard to spiral motifs on red sandstone, it may well be significant that the Achnabreck outcrop (described by Morris (1971, 33) as 'tremolite-chlorite-schist') is rusty red in colour. This fact gains further possible significance when the lack of spirals at other decorated outcrops in Argyll, several of which are highly complex, is considered. Van Hoek (1995a, 15) observes that a number of other motifs at Achnabreck, previously considered as cups and rings, may in fact be hybrid spirals. Therefore, although fig. 3f contains all the motifs which can be considered as true spirals, the distinction between spirals and cup-and-rings at this very important site may not be as clear cut as had previously been thought. Van Hoek also re-interprets a cup and ring motif at Poltalloch as a possible hybrid spiral, although this classification is open to question.

The **Temple Wood** stone circle (RCAHMS 1988, 138; Scott 1988) is a complex monument, located at the



Plate 5. Achnabreck: showing one of the horned spirals adjacent to a cup and ring motif. (Photography by Stan Beckensall).

heart of the concentration of prehistoric monuments in the Kilmartin Glen: when first constructed it may well have been of supreme importance within this region. Two stones of the circle bear clear decoration, and small cupmarks on two others may also be artificial. Of the two clearly decorated stones, one is in the north-east arc of the circle and displays two concentric rings while the other, which most concerns us here, is a slab of metamorphosed igneous basic rock (Scott 1988, 112) which is set due north of the centre of the circle. The motif (fig. 8; plate 6) is unique in that it appears to represent one set of three interlocking spirals (the outer and inner of which are joined at the centre) linked to a set of two interlocking spirals joined together to form a complex horned spiral: the closest parallel for such a design is to be found on the Knowth macehead (discussed below). The spirals are on separate faces of the stone, with the lines linking them together crossing the angle of the stone, and they are apparently of two phases, suggesting that the first phase may have been executed while the stone was part of a different monument, or perhaps while it was still bedrock. The motif is only a few centimetres above ground level and would never have been a prominent feature of the monument: indeed it may well have been buried within a rubble bank and completely hidden from view after modifications were made to the monument in a later phase. Nevertheless, the incorporation of such a motif, possibly reused from an earlier structure and perhaps embellished at the time of its incorporation into the circle, in such an important place within the circle (due north of the centre) again suggests that the spiral motif itself was

of considerable importance. Scott (1988, 108) dates the production of the spiral decoration at Temple Wood to between 3,000 and 3,500 calendar years BC.

Galloway

A recent comprehensive survey by Van Hoek (1995b) provides an excellent basis for the study of Galloway's rock art, and this study has confirmed that the area has the highest concentration of open air rock art spiral sites in Britain. Many of these sites are badly weathered so that in some cases even the experts cannot agree on whether a motif was originally a spiral or a cup and ring. However, clear spirals are present at a dozen sites, and a number of certain and possible hybrid spirals add to the concentration.

A rock sheet on top of a low hill at **Eggerness** (*ibid*, 67) is decorated with at least sixteen spiral motifs (fig. 3g). This site was discovered by Wendy Ronan as recently as 1986 and has now been re-turfed to ensure its conservation. The decorated sheet slopes from 12 to 34 degrees to the west-north-west, and currently enjoys splendid views over Wigtown Bay although we cannot be certain that such views would have been open at the time the carvings were produced (the site is about a kilometre from the present day shore). Of the sixteen certain spiral motifs on this outcrop, all but one are somewhat smaller than most rock art spirals elsewhere: three are double spirals (two S-shaped and one reverse S-shaped) and the rest are single spirals (of which seven are clockwise or right handed, with only two anticlockwise). The horned



*Plate 6. Temple Wood stone circle: spiral decoration.
(Photography by Stan Beckensall).*

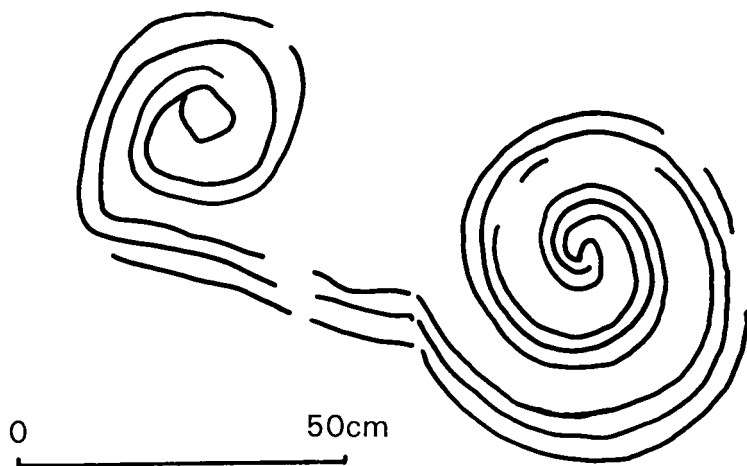


Fig. 8. The spiral decoration from the Temple Wood stone circle (after Scott 1988, 72).

spiral is unrepresented here. At the time of its inspection by the writer the rock sheet on which these spirals are found had a clear reddish tint which is not apparent on most other outcrops in the area. However, this may have been due at least in part to the fact that it had only recently been stripped of soil. It may be significant that a spring is located at the base of the hill beneath the decorated outcrop, but no direct relationship between this and the carvings can be demonstrated. A separate outcrop just a few metres south-west of the one just described has two spirals in association with an unusual 'ring and cross' motif. Some 140m north-north-east of this is an outcrop with a single anticlockwise two-convolution spiral in association with what may be a carving of an animal. Other carvings may well await discovery in this area. Several cup and ring marked outcrops are known in the immediate vicinity, as are carvings of deer and horses which may be Pictish but which could be much older. Significantly, no known spirals are incorporated into the surrounding cup and ring carvings, suggesting that the spiral decorated panel described above may have been an altogether different phenomenon from the local cup and ring designs.

Two spirals have been recorded about 1500 metres west of the Eggerness complex, at sites which Van Hoek (*ibid*, 72-73) has named **Penkiln 3** and 5. Both are simple right-handed spirals, with the Penkiln 3 example enclosing a small cup. These two outcrops are between one and two kilometres away from the other decorated outcrops at Penkiln, all of which consist of more conventional cup-and-ring marks.

Five kilometres inland from Eggerness are the rock art sites of **Broughton Mains** (*ibid*, 77), including some highly complex cup and ring panels. The panel labelled '1C' by Van Hoek includes one certain spiral and one possible example, in association with a 'keyhole' motif, and his panel '1A' includes a spiral around a cup on the same outcrop as further 'keyhole' motifs. There are no classic cup and ring marks on either of these outcrops, although the site of Broughton Mains 2, less than a kilometre away to the south-west, has many complex cup and ring motifs. Broughton Mains 1 and 2 are very different in character, and may perhaps be equally different in terms of chronology and function.

The site at **Gallows Outon** (*ibid*, 45) is located 3km from the east coast of the Whithorn peninsular, about 7km south-west of the Eggerness site. It consists of an S-shaped spiral (fig. 3h), one end having three-and-a-half convolutions and the other just two. Other slight and perhaps unfinished curvilinear motifs which may have been spirals were noted in this area on a flat pinkish slab of bedrock where the turf had been eroded.

A small slab displaying a single spiral (*ibid*, 45), previously recorded as concentric rings (Morris, 1979, 179) is now kept at **Whithorn Priory Museum**. The original context of this is unknown: it may simply be a slab of decorated bedrock, or it may have formed part of a monument of some kind.

About 15km south-west of Eggerness, on the cliffs above over Monreith Bay, are the spiral sites of **Knock**. The first site to be discovered here is recorded by Morris

(1979, 127) and consists of a single spiral in association with an unusual grid pattern (note: the spiral in Morris's (1979, 128) photograph has been incorrectly chalked in). The decoration is on a small ledge of what Morris describes as 'a greywacke mass about 15m by 3m'. This rock has now been turned into a memorial to the local author Gavin Maxwell, through the addition of a model otter and a plaque. The little bay beneath this rock would have provided a sheltered landing stage for any craft using the Irish Sea, and it is interesting to note that a holy well and old church are sited here: the area has clearly been significant for a very long time.

About 500 metres north-north-east of this, immediately south of the modern road, is an untidy mixture of outcrop rock and field clearance boulders which Van Hoek (1995b, 53) has classified as **Knock 3**. Several carvings have been noted here, including one simple right-handed spiral (possibly including an unfinished attempt at a second, interlocking spiral) adjacent to a cup with single ring and wavy line which ends in a simple spiral. The other carvings here include a number of cups with concentric rings and no groove or gap, a form suggesting closer links with some Irish passage grave art than cups and rings elsewhere where the groove or gap through the rings to the cup is usually an essential element of the design.

About a kilometre north-east of the Knock 3 is the rock art complex of **Blairbuy**, consisting of seven separate decorated outcrops described by Morris (1979, 60-66) and three further examples subsequently discovered by Van Hoek (1994, 15; 1995, 57) and classified as Blairbuy 7B, C and D. Site 7B, on a near horizontal outcrop, includes at least two simple and two complex spiral motifs in association with four cupmarks (two of which have a single ring) and a set of concentric rings which may or may not have had a central cup. Site 7C includes two simple spirals. The Blairbuy complex offers wide sea views, including views over the Knock sites described above, and it may not be unreasonable to consider all the Knock and Blairbuy sites as elements of a single rock art complex.

The well known cup and ring site at **Drumtroddan Farm** (fig. 3i) is illustrated in many publications as a classic example of its type. What had apparently not been noted prior to Van Hoek (1995a, 64), however, is that this site also incorporates two linked spiral motifs. The part of the outcrop on which these are situated is now largely buried, so examination of it by the writer was limited to just one of the spirals. There can be no doubt, though, that this particular motif is a spiral, and interestingly it appears to respect the edge of the adjacent cup and ring mark as part of a single integrated design: this would appear to be the clearest known example of spirals and cups and rings being united within a single phase design on outcrop rock. One further possible spiral in association with cup and ring motifs has been recorded at Drumtroddan, on outcrop 3C (Van Hoek 1995b, 67).

Away from the Whithorn peninsular, spirals have been recorded at **Senwick** (an S-shaped spiral, each end of which surrounds a simple cup, in association with several cups four of which are ringed: *ibid*, 103), at

Townhead site 1B (where a cup and single ring are surrounded by a simple spiral, in association with conventional cup and ring marks: *ibid*, 127), and at **Cauldside Burn/Cambret Moor**. This last example, which is within 300m of the Neolithic Cauldside Cairn (Morris 1979, 79), consists of a fine six-convolution single spiral surrounding a simple cup and ring mark, adjacent to a cup with three concentric rings (fig. 7e). The cup and ring mark has a groove which passes from the cup out through the arms of the spiral: this motif therefore incorporates the basic symbolism of cup and ring art within the spiral. Morris (*ibid*) observes that although both motifs are much weathered, the cup with three rings appears more so than the spiral. However, it is not safe to attempt the relative dating of the motifs on the basis of this alone.

Also at Townhead, but on a different outcrop from the one mentioned above, is a classic example of what Van Hoek has termed 'hybrid spirals'. These hybrids 'can also be viewed as cup-and-ring designs' (Van Hoek 1995b, 33). In effect they are cup and ring designs with the rings arranged in such a way that they appear to form a broken spiral, with the break occurring at the tail or groove which

leads to/from the central cup. While some hybrid spirals may simply be cup and ring marks with slightly mis-aligned rings (and erosion often makes it impossible to be exactly sure of the nature of some rings), the occurrence of clear hybrids such as those at **Laggan** (fig. 7i) and Townhead (and, arguably, the main motif at Cauldside Burn) does suggest that this 'mis-alignment' of the rings was a deliberate element of the design. Other examples occur in Galloway and elsewhere.

Morris (1979) considers three other sites in Galloway at which spirals or possible spirals have been recorded: Balcraig, Bombie and Nether Linkens. Spirals cannot now be seen at any of these, and they may never have existed.

Before leaving Galloway, a couple of general points may be noted with regard to these spiral carvings. Firstly, although the area contains well in excess of 100 rock art sites only those described here contain certain spirals. Secondly, the overall distribution recorded by Morris extends in a 15km wide belt along about 75km of jagged coastline, with a few scattered examples further inland, but most of the groups of carvings with certain spirals are concentrated on the Whithorn peninsular:

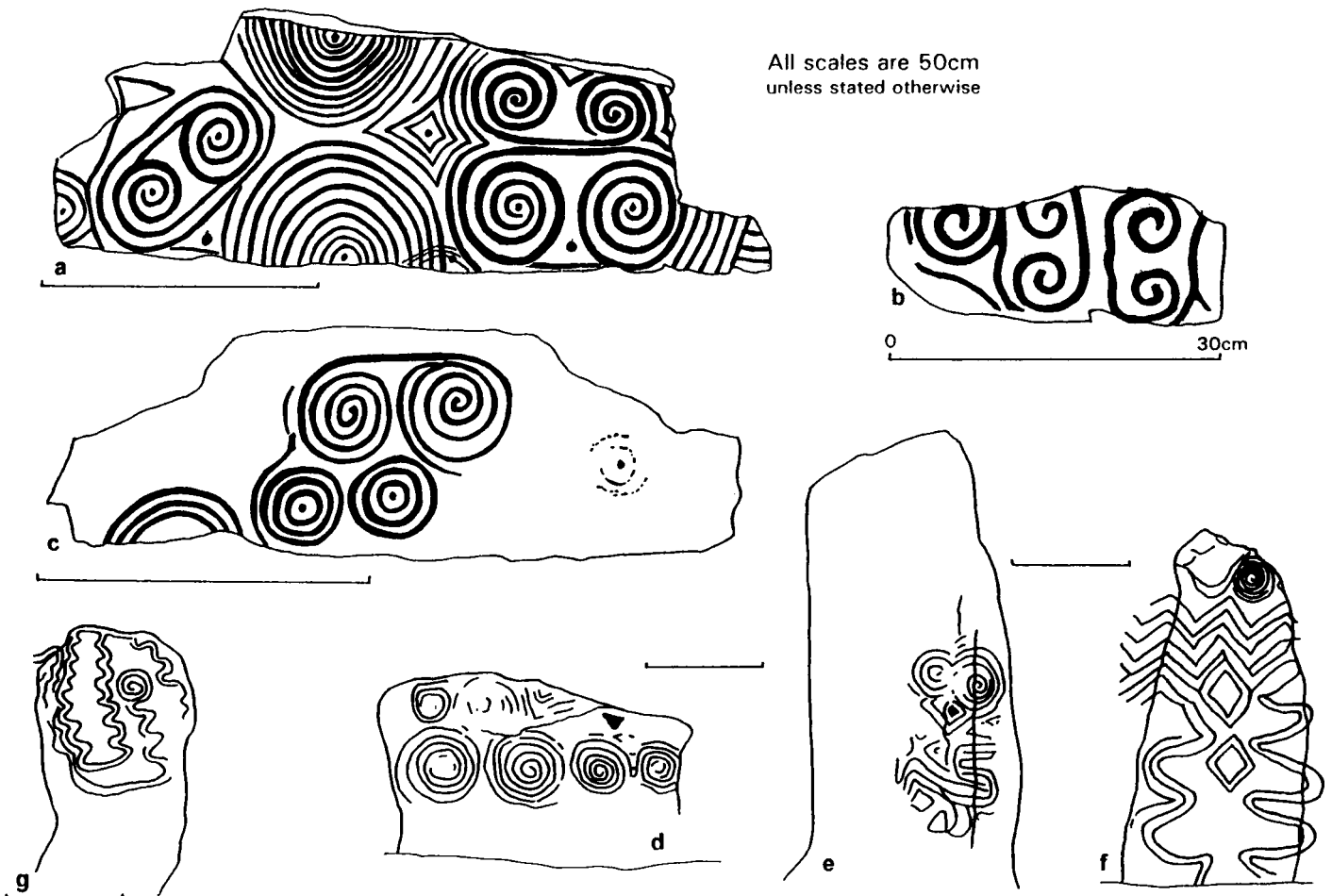


Fig. 9. Spirals in chambered tombs (see fig. 11 for Irish passage grave art): a & b, Pierowall, Orkney; c, Eday Manse, Orkney; d, e & f, Barcloddiad y Gawres, Anglesey (after Shee Twohig 1981, figs. 266-268); g, Bryn Celli Ddu, Anglesey (after Shee Twohig 1981, fig. 269).

Knock/Blairbuy on the west coast, Eggerness and Penkiln on the east, and Broughton Mains, Gallows Outon and Drumtroddan inland. Although many 'conventional' cup and ring marked outcrops (defined as those with cup and rings with a groove or gap) occur in the surrounding area, Drumtroddan is the only one of these sites at which spirals are apparently associated with conventional cup and ring marks as part of a single design: this relationship between spirals and cup and ring art is considered further in the discussion, below. The relative abundance of spirals in Galloway has been used to suggest links with Ireland, but as shown below the spiral was never a common element of Irish open air rock art so this argument may be invalid. To sum up, if the rock art of Galloway is all relatively contemporary then it forms a distinct local tradition, incorporating a variety of motifs which include the spiral in greater profusion than elsewhere. However, until the dating issue can be resolved it remains possible that most of the decorated outcrops with spirals could belong to an entirely different tradition than those with cup and ring decoration.

Isle of Man

If the spirals found in Galloway were closely linked with those on chambered tombs in Ireland then we might expect to find further examples on the Isle of Man, midway between the two. However, only one spiral motif is known here, a complex motif on a granite slab now built into a roadside wall at **Ballaragh** (Morris 1979, 182). This differs from most other known examples in the British Isles in view of its small size. The carving (fig. 7f) measures only about 25 by 20cm. It is much weathered, but appears to consist of a horned spiral linked to at least one and possibly as many as three further spirals. The motifs are unusual in that they appear to have been incised rather than pecked. Morris notes that the decorated slab was 'said to have been one of a group of stones which had to be moved in road construction' (*ibid*), so it may have been part of a megalithic structure. Unfortunately, little more can be said about it and we cannot be sure how, if at all, it relates to the wider distribution of spiral rock art.

North-East Scotland

Neolithic spiral motifs from northern Scotland (defined as the area north of a line drawn from Edinburgh to Oban, but excluding Orkney) are, with only two or three exceptions, confined to those on carved stone balls from the north-east (Marshall 1977; Edmonds 1992). These objects remain poorly understood. Of the 411 known stone balls, Marshall (1977, 70) lists only fourteen with spiral decoration. Of these, ten have a known provenance and nine of these are from the area between the Moray Firth and the River Tay: the single exception being one from near Angus (see fig. 1). Although a few decorated balls have been recovered from cists, and those from Skara Brae were from a later Neolithic context, none of the spiral decorated balls are securely dated.

The spirals on these objects range from exquisite designs such as those on the Towie (fig. 10a) or the Elgin balls to relatively simple and apparently hastily executed motifs such as those from New Deer or Glasterlaw (fig. 10b). In this respect they mirror the variety of spirals found in rock art. The similarity between the spirals on the Towie ball and those on the entrance stone at New Grange is particularly noteworthy, both consisting of interlocking spirals joined together to form complex, flowing motifs. In fact, a glance at the illustrations in Marshall's 1977 paper will demonstrate that interlocking spirals are relatively common on the spirally decorated stone balls, with even the more crudely decorated examples, such as the Glasterlaw ball, having interlocking rather than simple spirals. However, given our lack of knowledge about the function and chronology of these balls, the question of why spirals appear on so few of them, and in such a range of forms, must remain unanswered for the time being. Whatever their exact function, and we should remember that this may have changed through time, the degree of workmanship involved in the production of the more complex examples certainly suggests that they were of considerable importance. The main points to note are that spirals are known on only fourteen balls out of a total of over four hundred, and that throughout the distribution of the ten spiral balls with a known provenance there are no more than two or three spirals of possible Neolithic date on any other media. It would appear that the balls represent a regional tradition which employed a range of motifs found elsewhere in different contexts, and this idea of regionalisation within the British Neolithic is one which demands much further study.

Three rock art sites must be considered here, although as will be appreciated from fig. 1, none of them actually impinge on the main concentration of spiral decorated stone balls. A cist cover discovered in 1923 in a cultivated field belonging to Upper Mains Farm of **Catterline** (Reid and Fraser 1924) displays a simple, rather crude spiral motif. This was an unusual cist in certain respects. The excavators note that 'the roof or covering was roughly 914mm (3 feet) thick and it was peculiar...in that instead of being formed of one layer of stones it consisted of many such stones arranged in three layers. The uppermost was formed of two large flat stones lying about 102mm (4 inches) below the surface of the ground' (*ibid*, 28). It is one of these two stones which bears the decoration (fig. 4g), consisting of a single spiral and two concentric circles: there may have been more decoration on the stone but much of its surface had flaked away by the time it was excavated. It is also noted in the excavation report that the decorated stone 'had all the appearance of being an erratic boulder': it is therefore unlikely that these carvings were first executed on a living outcrop. However, neither were they produced specially for this cist as 'it seems likely that these sculptured markings had been exposed to atmospheric weathering for a considerable period of time before the stone was utilised as a top covering for the cist' (*ibid*). Although the excavation report makes no specific reference to the colour of the decorated stone, it does record that 'all the stones which formed the sides and roof of the cist were of

local origin, belonging to a belt of flaggy sandstones and conglomerates of Lower Old Red Sandstone age'. The cist contained an inhumation, a beaker, and a 'conical implement of quartzite'.

The second site to consider is a block of quartzite, about 150cm long, which now stands cemented into a circular pedestal at **Blackhills**, Moray (Coles 1907, 172; Gordon 1956) although its original context is unknown. On the east face of this stone 'an area 30 inches long has been hollowed out into a shallower concave surface dressed to a rough level by pocking. On it a double spiral of three convolutions is traced by a pocked groove. The two parts of the spiral are joined by a single line and form as S-shaped figure' (Gordon 1956, 444) (fig. 7g). A short arc exists above the upper spiral, a feature which could easily be ignored but which may be significant given that it occurs elsewhere, for example at Eday (Orkney). Another face of the stone is covered in cupmarks, while a third is decorated with a crescent motif, five cupmarks and three short lines (two of which are joined together). Gordon (*ibid*) considers the spiral, crescent and a ring which surrounds one cup on the north face to represent a later phase than the cupmarks. However, given our lack of knowledge regarding the original context of this stone there is unfortunately little else that we can say about it.

Finally in this section, Van Hoek (1995a, 30) has recorded a couple of his hybrid spirals on a boulder from a souterrain at Letham Grange, Forfarshire, which is now in the National Museum of Antiquities in Edinburgh. Whether or not these motifs should be considered as spirals is open to question, but regardless of this the stone is of little value to this discussion as its original context is unknown: 'the stone, in fact, was an old stone, and had served a different purpose before the Pict built it into the foundations of his dwelling' (Simpson 1867, 45).

Orkney

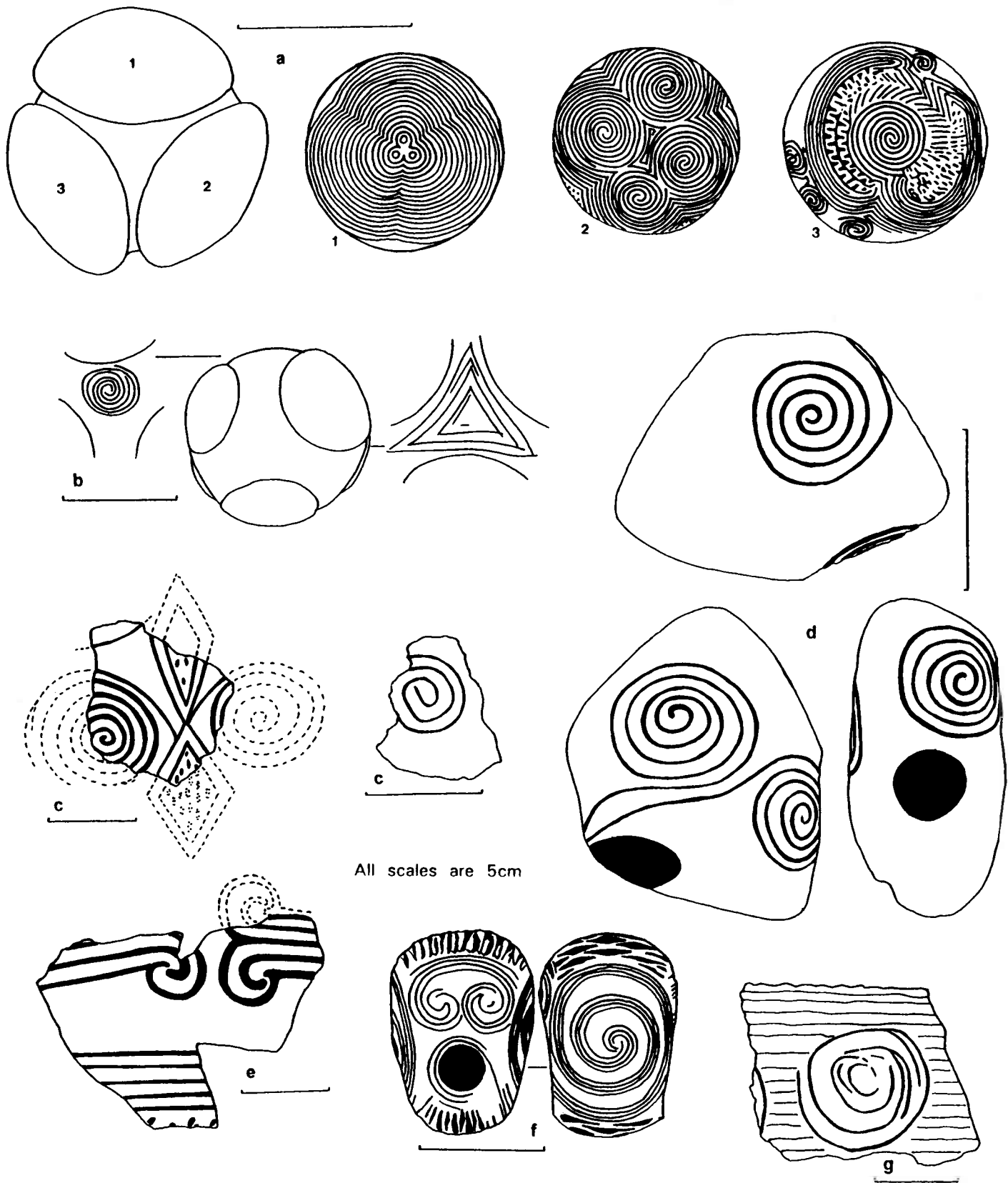
Spiral motifs have been recorded on monuments and pottery of Neolithic date on Orkney, although it is important to note that no decorated outcrops have been recorded here. Three stones with spiral carvings have been recovered from the probable Maes Howe type tomb at **Pierowall** (Davidson and Henshall 1989, 181). Unfortunately, this tomb and its overlying later prehistoric settlement remains were severely damaged by quarrying before the importance of the site was recognised, and the decorated stones were recovered from quarry dumps rather than through careful excavation. The exact position of the carved stones within the original structure of the tomb is therefore unknown, but it is not unreasonable to suppose that the most elaborate of the decorated stones (fig. 9a) may have functioned as a lintel. This stone was found in two separate pieces, and it is not possible to be sure of its original size. However, the complexity of the design (and especially the integration of spirals and lozenges) and the quality of workmanship suggest clear links with the Boyne Valley tombs, although the nature of any such links remains a matter for conjecture. This stone contains three examples of horned spirals (which are not

an element of Irish passage grave art), two of which are placed back to back, along with a possible fragment of another spiral motif most of which has been lost. Each of the spirals has a central 'dot', which is not a feature noted in horned spirals elsewhere. The second decorated stone from Pierowall (fig. 9b) also has a 'back to back' pair of horned spirals, but one of the pairs is linked to a further spiral motif which extends over the broken edge of the stone, suggesting that the surviving fragment may be only a portion of the original design. The quality of workmanship doesn't compare with that of the previously described stone and the original relationship between the two is unclear. The design on the third decorated stone from Pierowall appears to represent half of a pair of roughly pecked back-to-back linked spirals (*ibid*, 83).

The spiral decorated stone from **Eday Manse** (*ibid*, 116), probably another Maes Howe type chambered cairn, also displays a horned spiral, in this case in association with two sets of three concentric circles with central cups and a portion of a further motif with three concentric arcs (fig. 9c). Davidson and Henshall (*ibid*, 83) note that this design appears to have been unfinished as further very lightly pecked motifs are also visible on the stone.

Two further examples of stones with spiral decoration, which may be Neolithic, are known from Orkney. The first of these, from **Arsdale Farm**, is 'a carved stone, eleven and a half by ten inches, much weathered but evidently bearing two very indistinct spirals, each about eight and a quarter inches high' (information from RCAHMS record card HY32NW/4). This is now built into the wall of a workshop on the farm, having originally been recovered from a mound of stones of uncertain origin which has now been levelled by cultivation. The illustration on the RCAHMS record card depicts two relatively simple horned spirals (fig. 7h). The other example is the only case of a single spiral from Orkney, and consists of an 'elongated stone sculptured on one end... The sculpturing consists of a volute or spiral line making four turns' (Simpson 1867, 43). This stone was found in the base of a ruined wall at the 'ancient broch or burg at **Redlands**' (*ibid*) which was presumably not its original context.

In addition to these decorated stones, spirals are also present on three Grooved Ware sherds from the Neolithic settlement of **Skara Brae** (fig. 10c) (Clarke *et al* 1985, 56 and 197; Clarke 1976, 20). One of these has spirals in association with lozenges, and another has a single, relatively simple spiral. These sherds have enjoyed considerable prominence in the literature, and have in the past been used to support the suggestion that passage grave motifs, having been adopted here from Ireland, were then transferred onto portable artefacts and somehow exported as part of a cultural package (including Grooved Ware, henge monuments and associated ritual knowledge) down the east coast and eventually to the rest of mainland Britain. This argument could be used to account for the existence of many of the spirals discussed in this paper, but it is actually based on very little hard evidence and will be considered further in the following discussion.



All scales are 5cm

Fig. 10. Spirals on portable artefacts: a, carved stone ball from Towie (after Marshall 1977, 45); b, carved stone ball from Glasterlaw (after Marshall 1977, 48); c, Grooved Ware from Skara Brae (possible reconstructions shown as dotted lines); d, antler macehead from Garboldisham (drawn from Edwardson 1965, plate 32); e, Grooved Ware from Barrow Hills, Radley (after Barclay, forthcoming); f, flint macehead from Knowth (after Eogan 1986, 142); g, Grooved Ware from Durrington Walls (after Wainwright & Longworth 1971, 140).

Southern England

No rock art spirals are known in England south of Merseyside, and only five examples of spiral motifs on Neolithic artefacts, all but one of which are on pottery, are known. The one non-ceramic object is the carved antler macehead with linked spiral decoration from **Garboldisham**, Norfolk (fig. 10d) (Edwardson 1965). This is a unique object which, while not of the same quality of workmanship, does bear comparison with the well known flint example from Knowth (see below). Unfortunately, too little is known of its original context to allow meaningful discussion, but it is worth noting that it was discovered in association with 'burnt animal bone', and was perhaps from a pit.

Although several Grooved Ware sherds from a number of sites display curvilinear decoration which might have formed spirals, there are only two certain examples of spiral decorated Grooved Ware from England. Neither of these bear close comparison with the quality of spirals on some of the passage grave art or the stone balls. Both examples, however, come from particularly significant locations. A single sherd from **Durrington Walls** (fig. 10g) displays a relatively crude spiral motif incised by a finger tip (Wainwright and Longworth 1971, 141). A few other sherds from Durrington Walls display curvilinear decoration, but none are demonstrably spirals and most appear to be concentric circles. The spirally decorated sherd from Durrington is one of the least intricate motifs discussed in this paper, but its occurrence at this particular site, one of the most important in Wessex, is of relevance to our discussion.

A Grooved Ware sherd with unique and complex decoration, apparently based on the horned spiral but incorporating curvilinear features more correctly described as 'crook-shaped' than as true spirals (fig. 10e), has recently been recovered from a pit at **Barrow Hills**, Radley, Oxfordshire (Alistair Barclay, pers. comm.; Cleal, forthcoming). Significantly, Barclay (forthcoming) notes that the vessel represented by this sherd had a rim diameter in excess of 0.4m and may have been one of the largest Grooved Ware vessels to be manufactured in the region. The particular pit from which this sherd was excavated is one of a group, but it was the largest within the group and the variety and quality of finds from it are exceptional in comparison to those from any of the other pits. The pit has been dated to 2570-2030 cal BC (BM-2706: 3830 +/- 90BP), and included 1200 struck flints, bone tools (including an awl made from the ulna of a white tailed eagle), animal bones (mostly pig), utilised antler, and sherds from two other exceptionally high quality Grooved Ware vessels.

Two recent, and as yet unpublished, discoveries of spiral decorated pottery which apparently date from the mid fourth millennium BC (Kinnes, forthcoming) are particularly important to the discussion which follows. The first of these is a single sherd of a standard shouldered Mildenhall bowl, recovered from the lower fill of the causewayed enclosure ditch at **Great Wilbraham** (Ian Kinnes, pers. comm.). This sherd has spirals, carefully incised and each no more than a centimetre across, in a

row along the interior rim bevel. The second example is from **Runnymede**, where at least one vessel displays large spirals on the lower body and several other sherds seem to have parts of a spiral motif in a lightly incised technique (Stuart Needham, pers. comm.). These sherds, which are yet to be analysed in detail, were recovered from a rich spread of occupation debris, the vast majority of which is considered by Needham to be of middle Neolithic character.

No spirals are known on rock art in southern England, either on bedrock or incorporated within monuments. However, it may be worth noting the presence of the undated mazes on the vertical river cliff at Rocky Valley, Tintagel, Cornwall, which bear a remarkable similarity to the maze on the Hollywood stone from County Wicklow, Ireland (Haddingham 1974, 98-104). While these may be of early Christian date, the possibility of an earlier origin cannot currently be dismissed. The fossil ammonite incorporated into the entrance structure at the Stoney Littleton chambered tomb (Avon) is also of potential relevance. Although not an artificially produced design, this must have been placed here deliberately by the tomb builders and the spiral pattern must have been significant: perhaps it mirrors the re-use of carved rocks elsewhere. Finally, the curvilinear designs scratched onto the sides of the ditches of the Flagstones enclosure, Dorset (Woodward 1988) although not incorporating spirals, demonstrate that curvilinear decoration was applied to at least one southern English causewayed enclosure, although the exact date of the decoration remains unconfirmed.

Wales

The only spirals of certain Neolithic date from Wales are found at the decorated passage graves of Barcloddiad y Gawres and Bryn Celli Ddu on Anglesey. There are five decorated stones at **Barcloddiad y Gawres** (Powell and Daniel 1956), four of which display spirals. The end stone of the east side cell has a complex design of five or six spirals, two of which appear to be joined as a form of horned spiral (fig. 9d). In contrast the end stone of the west cell displays a single, simple spiral, although the surface of the stone is much weathered and there may originally have been further decoration (*ibid* 29). The other three decorated stones stand at the junction of the passage and central chamber. These are decorated in a different style based on lozenges, zig-zag and wavy lines (figs. 9e, 9f). One of these incorporates a single spiral, and another has two anti-clockwise spirals which are linked together although the exact nature of this link is unclear due to weathering. It would seem reasonable to account for Barcloddiad y Gawres as an outlying 'Irish' passage grave.

The decorated slab at **Bryn Celli Ddu** (fig. 9g) (Lynch 1991, 93-101) is unusual in that its decoration runs continually over the top of the stone from one face to the other: it may once have stood as a decorated menhir, perhaps as part of an earlier monument at this site which obviously underwent a complex history prior to the



All scales are 50cm

Fig. 11. Selected examples of Irish passage grave art. a, Newgrange, triple spiral from the tomb interior; b, Newgrange, the entrance stone; c, Knowth, kerbstone 56; d, Loughcrew, well executed spiral design on a sillstone from cairn H (after Shee Twohig 1981, fig. 216); e, Loughcrew, stone from the passage in cairn T (after Shee Twohig 1981, fig. 232); f, Clear Island, stone from unknown context (after Shee Twohig 1981, fig. 257); g, King's Mountain, stone from possible passage grave (after Shee Twohig, 1981, fig. 254); h, Sess Killgreen, the standing stone (after Shee Twohig 1981, fig. 209); i, Tara, the decorated stone - the single, simple spiral is towards the top (after Shee Twohig 1981, fig. 245); j, Knockmany, stone from the chamber displaying a motif (top centre) which could be interpreted as a horned spiral (after Shee Twohig 1981, fig. 212).

construction of the passage grave. Interestingly, Lynch (1992, 166) observes that Brittany provides better parallels than Ireland for both the plan of the monument and the form of decoration at Bryn Celli Ddu.

There are two other Welsh spirals which may be Neolithic, although neither has much to offer our discussion. The slab from **Llanbedr** and the fragment built into the church wall at **Llanafan Fawr** (Morris 1912; Lynch 1992) may once have been part of decorated 'Irish' passage graves, but they may also be remnants of carved panels of living bedrock.

Ireland

A paper much longer than this one could be constructed solely around the spiral in Neolithic Ireland, so we will restrain ourselves here to a few general observations. Only one certain site where clear spirals exist on outcrop rock is known in Ireland (Van Hoek 1995, 13). This is at **Mevagh**, overlooking Mulroy Bay in Donegal, where up to five simple spirals have been recorded at a site which Van Hoek believes 'must rank with the finest examples of rock art' (1988, 27). It is interesting to note again, just as with the Scottish examples discussed above, the correlation between the complexity of the cup and ring outcrop and the presence of the spiral motifs. Most of the cup and ring motifs here have no gap or groove, and a number of other motifs such as crossed circles and one complex rosette pattern are also present. The site is therefore far from a typical cup and ring outcrop. Of the other spiral sites listed in Van Hoek's (1995a) inventory, none are unequivocal examples of spirals on outcrops and some may never have been spirals at all.

A faint single convolution spiral enclosing a cup and ring has been recorded on an impressive 2.3 metre high standing stone at **Ardmore**, Co. Donegal (Van Hoek 1988, 23) in association with several cup and ring marks. Spiral decoration is also present at the complex and unique multi-period site of **Millin Bay**, where one of sixty-four decorated stones bears an 'opposed crooks' motif reminiscent of the decoration on the Grooved Ware sherd from Barrow Hills, Radley (Oxfordshire). Spirals and a circle have been recorded on a stone at **Pubble**, Co. Fermanagh (Wier 1980, 146), the original context of which is unrecorded. The spiral decoration on the monuments of Clover Hill and Malin More may eventually prove to be Neolithic, but as it is thought to be Iron Age by a number of authorities (Shee Twohig 1981, 235) these sites are not considered here.

The best known spirals in Neolithic Ireland are, of course, those from the Boyne Valley Passage Graves (O'Kelly 1982; Eogan 1986). George Eogan (1986, 170-172), in a discussion of the origins and chronology of Irish passage grave art with particular reference to Knowth, notes that 'it is one of the most common of the Irish motifs, the spiral, that presents problems' and that 'the spiral's abundance in Ireland is an unexplained surprise'. Certainly the spiral was adopted by the passage grave builders, although whether it need necessarily have been introduced from elsewhere rather than simply chosen

from an existing decorative repertoire of motifs not previously applied to stone is yet to be resolved.

It is important to bear in mind, when considering Irish passage grave art, that of a total of about 230 known passage graves Shee Twohig (1981, 112) records spiral decoration at only six sites in addition to the well known complexes of the Boyne Valley and Loughcrew. Of these six sites, only **Baltinglass** has two spirally decorated stones: the other five (**Fourknocks 'A'**, **Knockmany**, **Tara**, **Clear Island** and **King's Mountain**, of which the last two are probable rather than certain passage graves) have only a single example each. In addition, the tomb of **Sess Kilgreen** may include spirals, and the impressive standing stone 200 metres north-west of the tomb certainly includes one spiral in association with concentric circles, 'stars', cupmarks and other motifs (fig. 11h). In addition to its single undisputed spiral, the decoration at Knockmany incorporates a small motif described by Shee Twohig (*ibid* 205) as an 'arc with interring ends at the top': this is the only motif in any of the Irish tombs which could be interpreted as a horned spiral, but whether it was originally intended as such may never be known (fig. 11j). It is important to note that the spiral decoration at Fourknocks, Tara (fig. 11i) and Sess Kilgreen, along with most of that at Loughcrew (e.g. fig. 11e), is very simple in form and relatively poorly executed: some of these spirals appear almost incidental, and they certainly do not bear comparison with the quality of much of the workmanship at the Boyne tombs. Decoration at some other sites is too worn to permit accurate identification of the original motifs, but while spirals may have been present at a few such sites (e.g. Killin) it is considered unlikely that this could greatly effect the observed distribution described here. Published sources frequently fail to mention the nature of the rock of which tombs are built, but Shee Twohig (*ibid*, 203) notes that the stones of the Sess Kilgreen tomb are 'conglomerates and red sandstones', while the chamber of the Knockmany tomb 'rests directly on the solid Old Red Sandstone bedrock' (Collins and Waterman 1952, 28) and at least one of the decorated stones at this site is also a red sandstone (Coffey 1898, 102).

In contrast to the above sites, the main tomb at **Newgrange** (figs. 11a, 11b) has a total of 29 stones with spiral decoration (in addition, two small cairns in the Newgrange complex have one each), **Dowth** has 9, and the **Knowth** tombs have a total of 38 (with 32 of these in the main tomb: fig. 11c). The **Loughcrew** tombs have a total of 17 stones with spiral decoration (figs. 11d, 11e). Shee Twohig (1981, 114) notes that 'At Newgrange some of the most sophisticated decoration is based on the spiral' and that 'the only comparable use of spirals outside the Boyne Valley is on the King's Mountain stone and to a lesser extent on the Clear Island stone' (figs. 11f, 11g). It is therefore important that we should recognise, in spite of the spectacular nature of the decoration from the Boyne Valley and Loughcrew tombs, that spiral decoration was not necessarily a widespread phenomenon within the Irish passage grave tradition. Of course, other tombs may have contained spiral decoration of a type not preserved in the archaeological record (whether painted onto stone, carved

in wood, or woven in textiles), but, even if this were so, the effort involved in the production of rock art spirals renders the sites at which this occurred as somehow special.

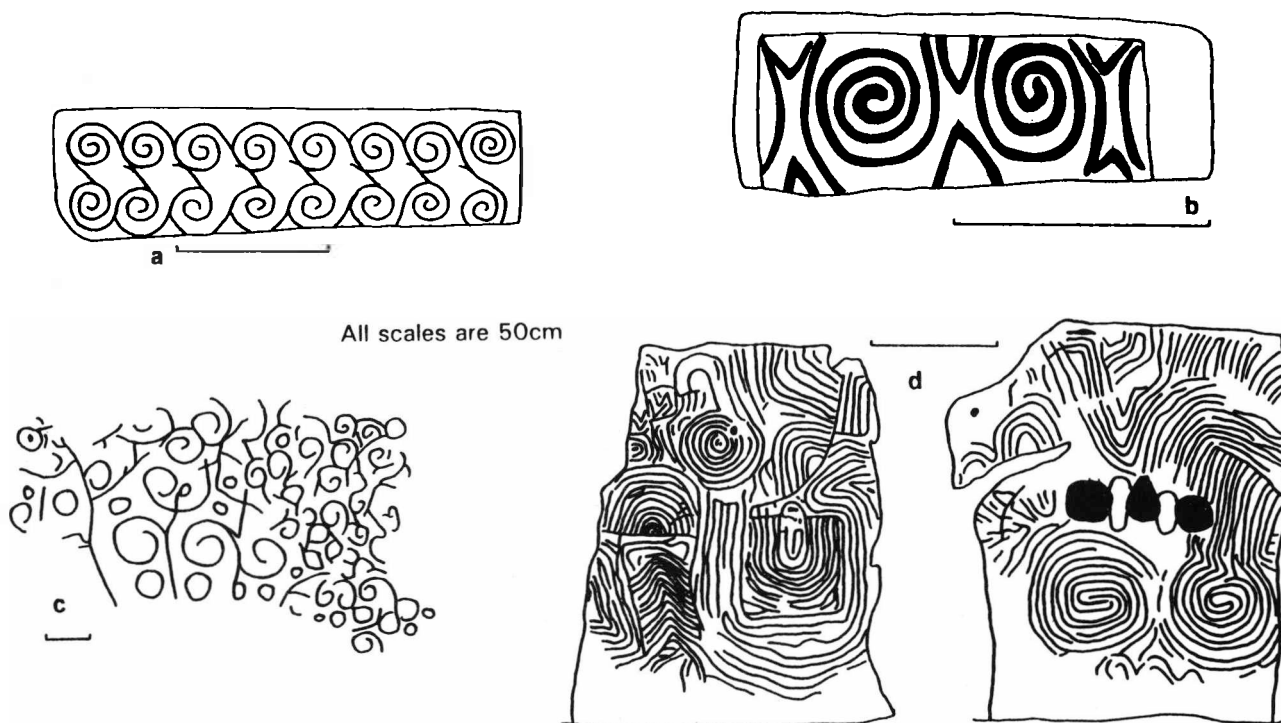
Much, if not all, of the spiral decoration in the Boyne Valley and Loughcrew passage graves appears to have been designed specially for the tombs. The location of the most complex decorated panels within New Grange has recently been examined by Andrew Powell (1994) who concludes that these occupy particularly significant places within the structure of the mound. Even within a monument as important as Newgrange, therefore, the most complex spiral decoration was apparently reserved for only a few particularly special places. The presence of the 'hidden' art at Newgrange, much of which also includes spirals, is also an important point to consider, although a detailed discussion is not attempted here. O'Kelly (1984, 149) notes that 'the positioning of many of the hidden stones seems meaningful' and asks 'can it be that the policy of decorating important slabs obtained whether the ornament was to be seen or not?'. There is no evidence to suggest that these stones had been re-used from an earlier decorated monument, although some 'may have begun their career as standing stones' (Bradley 1993, 41). It may well be that the actual act of producing the designs was, in some cases at least, the most important process: once incorporated within the structure of the tomb it didn't appear to matter that these designs would never be seen again, at least not by the living. In addition

to the hidden panels of rock art, one single cairn stone, maximum length 28cm, with a crudely executed spiral motif on one face was found amongst material removed from above the passage roof at Newgrange: this presumably relates to the hidden art discussed above, and is not considered here as a significant portable artefact.

The only spirally decorated portable object known to the author from Neolithic Ireland is the exquisite flint macehead from the right-hand recess of the eastern tomb chamber at **Knowth** (fig. 10f) (Eogan 1986, 141-142). This object is particularly significant not only because of the quality of workmanship involved in its production, but also because it renders the Boyne Valley one of only two areas in the British Isles (the other being Orkney) from which spiral ornament is known on both monuments and portable artefacts of proven Neolithic date.

Europe

It is beyond the scope of this paper to consider in detail the occurrence of Neolithic spirals outside the British Isles, and no direct link between the British art described above and any of that in continental Europe is suggested here. However, a brief overview of the spiral in Neolithic Europe is necessary. Spirals are known on a variety of artefacts from proven Neolithic contexts throughout Europe, including on early Neolithic pottery and figurines, which suggest that the spiral was adopted in several



All scales are 50cm

Fig. 12. Spirals from Neolithic Europe. a, Tarxien Temple, Malta; b, Bugibba Temple, Malta (after Ridley 1976, 44); c, painted decoration from the Hal-Saflieni Hypogeum, Malta; d, Gavrinis, Brittany (after Shee Twohig 1981, figs. 111, 119).

different contexts and for a variety of different purposes. However, with the exceptions of Ireland and Orkney, the spiral was never common motif in megalithic art anywhere other than on Malta (figs. 12a, b, c). The Maltese Neolithic temples seem to have been an insular development, and complex spiral carvings have been found at five of these sites (Ridley 1975; Trump 1990). The most complex examples are from **Tarxien** (fig. 12a) where they are mostly on vertical surfaces, and spiral decorated pottery has been recovered from this site. In view of the number of British spirals on red rock it is interesting to note that Ridley (1976, 50) considers that the interiors of at least some of the Maltese temples may have been painted red. In addition to the five temples with carved spirals, painted spirals are found at the unique **Hal-Safflieni Hypogeum** - an extraordinary system of underground chambers and passages carved out of the solid rock beneath the present-day village of Pawla - which appears to have functioned as both a temple and as a place of burial (over 6,000 bodies were interred here). The spiral decoration (fig. 12c) which adorns the ceilings and walls at several places within the complex is all executed in red ochre. As well as providing another example of a link between Neolithic spirals and the colour red, the Hypogeum reminds us that painted spirals may have existed in many other places during the Neolithic in addition to those carved examples which survive in the archaeological record.

In spite of the wealth and complexity of Breton megalithic art, the only three spirals found here are almost lost within two of the complex decorated panels at the altogether extraordinary site of **Gavrinis** (fig. 12d) (Le Roux 1985; Shee Twohig 1981, 172-175). While it would be foolish to consider these two stones in too much detail without reference to the other decoration in the tomb, a few points are worthy of note here. The slab with two spiral motifs, which forms part of the south-west wall of the chamber, may be a particularly significant element of the tomb due to the presence of three large hollows between which 'the stone has been cut away, so that the spaces between the cups project like handles' (*ibid* 174). Several of the Maltese tombs include similar features, the purpose of which is unknown although the most likely explanation would appear to be to enable something to be tied to the rock. The only other spiral at Gavrinis is located halfway along the passage, on the left hand side as one faces the chamber. It is on a slab on which two distinct phases of decoration have been identified by Shee Twohig (*ibid* 172), with the spiral possibly belonging to the earlier phase: it is therefore possible that this stone could have formed part of an earlier monument prior to being incorporated within the structure of Gavrinis.

If we exclude Gavrinis, the spiral does not appear to be an element of Breton megalithic art, and no spirals are recorded in Iberian tomb art although one open air example has been recorded at **Monte do Eiro** (*ibid* 231). Open air spirals, with concentric circles, are also known on vertical rock faces near the **Fuente de la Zarza** on the northern tip of La Palma in the Canary Islands. At the southern tip of La Palma is the 'pale salmon coloured outcrop high above the sea' known as the '**Roque de**

Teneguia' which is carved with a number of spiral designs, 'many almost too worn to be discerned now' (McCann 1980, 91). The rock may be 'salmon coloured' rather than 'rusty red', and the site may overlook the sea rather than a river, but the occurrence of spiral carvings on reddish coloured rock close to water does provide a reminder of the situation at Morwick. Several spirals are known in association with cup and ring art in Galicia (Sobrinho Buhigas, 1935), for example at **Santa Tecla** (*ibid*, fig. 188) and **Laxe da Portela de Rozas Vellas** (*ibid*, fig. 51). Richard Bradley (pers. comm.) has observed that spirals seem to be restricted to the most complex cup and ring sites in Galicia, sometimes occurring in association with carvings of animals. However, this writer is not sufficiently familiar with the Galician data to attempt any detailed analysis, so the extent to which the distribution of spirals here mirrors that in British rock art must await further work. It is fair to note, though, on the basis of Sobrinho Buhigas' illustrations, that spirals appear to be very rare in comparison to the thousands of cup and ring motifs recorded in Galicia.

Although a few spirals have been recorded in Scandinavian rock art (e.g. Kuhn 1956, figs. 118, 123) these belong to a different tradition based on images of ships, ploughs, animals and human figures (Malmer 1981) the detail of which cannot concern us here. However it is interesting to note that Kuhn's illustrations include double spirals, including at least one classic 'reverse-S' shaped example from **Jarrestad**, Scania (Kuhn 1956, 171) which would not appear out of place at Morwick or Hawthornden.

In general the spiral does not appear to figure in the open air rock art of Italy and Switzerland. For example, Anati's (1961) extensive account of Val Camonica doesn't mention a single spiral, although a number of 'labyrinths', some of which he considers to be Neolithic, do incorporate spirals. Without doubt, some spirals will have escaped the writer's rapid trawl of the literature (occasional photographs appear to show spirals which are not commented in the accompanying texts, for example Paturi 1979, plate 78, at **Carschenna**, Switzerland, in association with star and concentric circle motifs) and others may remain undiscovered or unpublished. However, it is considered unlikely that these will substantially alter the pattern outlined here, which can be summarised by stating that the spiral was never a common element in the rock art of mainland Europe.

Discussion

The following section, while by no means comprehensive, seeks to expand upon a few themes relating to the distribution of spirals as described above.

The occurrence and associations of spirals

In one of the earliest works on British rock art, Sir J Y Simpson (1867, 7) noted that 'the volute or spiral is perhaps the rarest of the forms of circular ring-cuttings in Great Britain', and despite several discoveries since Simpson's time the database with which we must work is still very small. However, the small size of this database is in itself of interest. Of the thousands of Neolithic monuments, open-air rock art sites, pottery sherds, mace heads, stone balls and other artefacts discovered to date, only the few described in this paper have been embellished with spiral motifs.

Although there are a few exceptions which do not fit readily into the following categories, we may classify the contexts of the vast majority of spirals in the Neolithic of the British Isles as follows:

1. On pottery, from southern England and Orkney.
2. On maceheads, from Knowth (Boyne Valley) and Garboldisham (Norfolk).
3. On carved stone balls, exclusively from north-east Scotland.
4. On fragments of decorated rock reused in burial monuments (often as cist-slabs, the cists usually dating from the Early Bronze Age) throughout central Britain.
5. On ceremonial monuments at Castlerigg, Long Meg and Temple Wood (in the latter two cases probably as re-used fragments).
6. On Irish passage graves, including two examples on Anglesey, and at two Orkney chambered tombs.
7. On decorated rock outcrops, sometimes associated with cup and ring designs but often with other motifs such as concentric circles, often on red coloured rock. Examples include Morwick, Hawthornden, Eggerness, the possible early phase at Achnabreck, and possible original contexts of Long Meg and the Calderstones.

Obviously, 'the widespread occurrence of spirals does not necessarily argue for widely shared symbolic systems' (Kinnes 1994, 94), and it is highly probable that 'simplistic adherence to decoration classification masks a considerable complexity of beliefs and practices' (*ibid*, 94). Indeed, the geographical distribution of the above contexts (best appreciated by reference to fig. 1) is interesting in that it shows clear regional variations. For example, the stone balls, passage grave art and open air rock art all have restricted distributions, although they all display spiral decoration which in many cases is strikingly similar. While it is perhaps possible that the spiral could have been adopted independently as a suitable form of decoration for

each individual context, certain conventions can be identified in the use of spiral decoration (most notably the use of the three forms of double spiral identified in this paper: horned, S-shaped and interlocking) and these suggest that there must have been links of some kind between the various contexts.

The horned spiral occurs at most of the site types discussed in this paper (open air rock art, burial monuments, ceremonial monuments, maceheads and pottery). An assumption from this is that the motif must have had a wider circulation than that preserved in the archaeological record (e.g. it may have been more common on wooden artefacts, clothing or body painting/tattoos), but regardless of this the importance of those contexts in which it does survive is remarkable. At Achnabreck we have horned spiral motifs incorporated within what became, possibly much later, one of the most impressive cup and ring art sites in Britain. Not far from Achnabreck, a complex and possibly two-phase horned spiral motif is incorporated into the Temple Wood circle, a focal point in the spectacular Kilmartin landscape. The poorly understood and apparently unique cremation trench at Lilburn similarly contains a clearly defined horned spiral, as do slabs from the Calderstones, Lamancha and Gilnockie Tower. Passage grave art on Orkney was apparently dominated by the horned spiral, as evidenced by the surviving stones from Pierowall and Eday Manse. Beckensall has recorded at least five horned spirals at Morwick. From Radley we have an unusually large and impressively decorated Grooved Ware vessel which comes from a particularly rich pit deposit and incorporates unique decoration apparently based on the horned spiral. These sites could hardly differ any more in character, yet all are linked by the use of the horned spiral motif: it is hard to deny that this particular motif must have been widely understood, if not necessarily in the same way, by communities throughout Britain. Significantly, despite the wealth and variety of spiral decoration at the Loughcrew and Boyne tombs, the horned spiral does not feature at all in Irish passage grave art (although it appears to be present at Barcloddiad y Gawres on Anglesey, and a case could be made for a crude example at Knockmany). However, the horned spiral is incorporated into the design of the Knowth macehead, proving that the motif was known to the users of the passage graves who chose, for some reason, not to include it in the tomb art.

The use of triple spirals at Morwick, Achnabreck and Newgrange is also interesting. While the quality of workmanship at Newgrange far surpasses that at the other two sites, the linking of three spirals (even allowing for the fact that the effect is achieved in a different way at each site to form 'triples') is striking. The similarity between the interlocking spiral decoration on the Newgrange entrance stone and that on the Towie stone ball has been commented on by several authors (e.g. Bradley and Edmonds 1993, 193), and the form, if not the quality of workmanship, of the concentric spiral motif at Hawthornden bears comparison with these. As with the horned spiral, the use of interlocking spirals in open air rock-art, on monuments and on portable artefacts cannot be entirely coincidental, and it is fair to assume that all

these examples may have belonged to the same tradition. The use of motifs incorporating two spirals, whether horned, S-shaped or concentric was certainly widespread, but it is currently impossible to be sure of the extent to which these may have been related.

Three further general points may be made at this stage. Firstly, the tendency of spirals to occur on vertical surfaces (whether on open air rock art sites, on monuments, pottery or maceheads) contrasts with the occurrence of cup and ring decoration which tends to occur on more horizontal surfaces. Secondly, while there is not scope for detailed statistical analysis within this paper, it is noticeable that spirals often occur with concentric circles rather than 'classic' cup and ring motifs. While there are, of course, exceptions to this trend (e.g. Long Meg, Achnabreck, Blackshaw), it is only perhaps at Drumtroddan that spirals (other than hybrid spirals) have demonstrably been executed contemporaneously with cup and ring marks as part of a single planned design. An in-depth statistical analysis of the associations of the different forms of spiral motif (perhaps incorporating a comparison between left- and right-handed spirals) may prove to be of considerable interest. Finally, the link between spiral decoration and the colour red is intriguing, and this is considered further below. It has not been possible to visit all the rock art sites discussed, and unfortunately several sources fail to mention the colour of the rock on which carvings are found, so a more detailed analysis of the relationship between spiral motifs and red rock must await someone with the time and the inclination to follow up this lead. It is hard to believe, however, that this relationship is not of considerable significance.

Spirals in the landscape

A number of recent accounts (e.g. Tilley 1994, Thomas 1992, Bradley 1993) have discussed the origins of monuments in terms of a 'neolithisation' of society. Monuments, it is argued, could serve to emphasize the importance of significant places in the landscape: places which may have been given names and mythological associations long before anyone thought up the idea of building monuments. Once the monuments were constructed, perhaps to contain bones of the ancestors, the relationship between people and landscape had changed irreversibly. The Neolithic landscape came to be dominated by artificial structures, whereas earlier landscapes had been experienced essentially in terms of natural places. What evidence there is, however, increasingly suggests a high degree of continuity between later Mesolithic and early Neolithic communities in a number of respects, with people continuing to move around the landscape on a seasonal basis in association with animals. The basic change in economic practice is the perceived degree of control which human communities exerted over these animals: in the Mesolithic they followed the natural herds around the landscape, but in the Neolithic the animals were 'herded'. Similar routes were probably taken, and the same significant places visited during the seasonal cycle. However, as time progressed an increasing

proportion of these significant places were endowed with monuments.

So what does all this have to do with our discussion of spirals? Put simply, if the 'special places' discussed above really existed, then they could be imbued with extra significance through the addition of rock art in much the same way as through the construction of monuments. It may well be that Morwick was precisely the sort of place that would have been visited regularly by Neolithic and/or Mesolithic communities, sited as it is at the junction of the east-west route up Coquetdale, whether by river or on foot, and the north-south land based track which crosses the Coquet at the adjacent Pomfret's Ford. This process of adding rock art to significant places in the landscape is supported by the distribution of cup and ring marks throughout north-east England and parts of Scotland, but as already noted the incidence of spirals at such sites is rare. Could it be that the spiral belonged to an earlier phase than the cups and rings? This is possible, but perhaps unlikely given its obvious importance in a variety of clearly later Neolithic contexts such as the Boyne, Orkney and Radley. The evidence at Achnabreck, where at least some of the spiral motifs appear to be somewhat earlier than the cups and rings, could be used to support the argument for two distinct phases of art, perhaps separated by several centuries. The issue of dating is considered further below, but the relationship between spirals and cup and ring art, which is of course far more common in open air contexts, requires further discussion here. If we accept Morris' and Van Hoek's observations as correct (which they surely are in the majority of cases, although it has not been possible to check them all as several sites are now (justifiably) buried on conservation grounds) then an interesting pattern emerges: at the few outcrop sites on which spirals have been recorded in association with cup and ring decoration, these are almost without exception particularly complex examples of the latter. This situation is possibly complicated by the recent recognition of hybrid spirals (Van Hoek 1995a, 1995b), but this is an area which requires further research and is not considered in detail here.

The cup and ring outcrops at Achnabreck, Greenland, Blackshaw, the Cochno Stone, Ballochmyle and Drumtrodden are six of the most extensive and complex of their kind in Scotland, and at least one spiral has been recorded at each. Similarly, the decorated outcrop at Mevagh is 'the best site in Ireland' (Van Hoek 1993, 11) and contains four spirals in addition to its cup and ring motifs. Such a pattern cannot be due solely to chance, and we must assume that either the spiral was present prior to the execution of the cup and ring marks, or that the spiral was an element (perhaps a primary element) of several of the most extensive cup and ring complexes. In each of the above examples there are far fewer spirals than cup and rings, and in many cases the spirals appear to be placed in a special location in relation to the rest of the decoration (e.g. on a separate face of the rock at Blackshaw, and clustered together on the upper portion of the rock at Achnabreck). The majority of spirals in Galloway occur on sites without cup and ring marks, although cup and ring marked outcrops are common

throughout the general area. This suggests that there may have been two traditions and, perhaps, two phases of carving in this area even though cup and rings and spirals are present together at Drumtroddan. The distribution of fragments of decorated outcrops would seem to support this general observation, as most of the cist slabs with spiral decoration include concentric circles or other motifs characteristic of Irish passage grave art in preference to cup and rings. However, Long Meg and Lilburn provide further examples of spirals in association with cup and rings, although the chronology of the art at these sites remains poorly understood.

Several authors over the years (e.g. Haddingham 1974) have considered the question of 'cup and ring art' on the one hand versus 'Irish passage grave art' on the other. Morris (1989, 47) acknowledges this distinction but considers spirals to be 'common to both traditions'. Van Hoek discusses this issue from the point of view of the spiral motif, and he argues (1995a, 28) that 'there never existed a separation in *two* different Neolithic rock art traditions'. This is an important observation: there were never two entirely separate traditions, but rather a variety of motifs were adopted in different areas and employed in a range of contexts, presumably for a variety of reasons. Hence, spirals can occur on their own at Eggerness, with other motifs but not cup and ring marks at Morwick or Hawthornden, or with cup and ring marks at Long Meg or Drumtroddan. What is beyond doubt, however, is that the spiral never became a dominant motif in open air rock art as it did in the art of the Boyne Valley tombs.

The incorporation of spirals within monuments also demands some comment at this stage. Although the example at Temple Wood was apparently hidden at some point during the monument's history, those at Long Meg and Castlerigg would have been accessible (or at least visible) to the community at large from the moment that they were added to the monuments and would presumably have figured prominently in communal rituals. The same can be said of the decorated kerbstones of the Boyne Valley passage graves, but this is in marked contrast to decoration within passage grave interiors which could only ever be seen by those permitted to enter the tombs. When decorated stones were sealed within burial monuments (e.g. the hidden art of the passage graves, or in cist burials) they became completely invisible (at least to the living), and may no longer be considered as elements of 'the landscape', even if their existence in the tombs may have been known to certain individuals. In these cases the spirals were perhaps only intended to be seen by the dead, a point which is considered further in the section on reuse, below.

Despite the differences between the art of the stone circles and the passage tombs outlined above, one point of similarity is worthy of comment. In all three of the stone circles the spiral has been placed at what must have been a particularly important position within the structure (due north of the circle centre at Temple Wood, outside the entrance marking the midwinter sunset at Long Meg, and within the rectangle at Castlerigg). Similarly, the most complex spirally decorated kerbstones at Newgrange

appear to mark particularly important points within the architecture of the monument. Given the scale of these monuments the spiral was employed very sparingly within them. It would appear that the spiral was used to embellish the most important points within what must have been some of the most important monuments of the time.

The dating of spirals

When discussing the examples quoted in this paper we must remember that their dating is very poorly understood, and that decorated rock surfaces in particular are notoriously difficult to date. However, it is worth noting at the outset that, with the single exception of reused fragments of decorated rock, no spirals are known (at least, not to this writer) from any certain Bronze Age contexts in Britain. Therefore, if a general Neolithic/Bronze Age date is accepted for all the open air rock art, then a Neolithic date would surely appear most likely for at least those examples which include spirals.

The fact that cup-and-ring marks often occur in areas where natural erosion results in 'natural cupmarks' suggests that the first such carvings may have been simply to mimic natural patterns: indeed, some cupmarks built into the structure of monuments such as those at Dour Hill long cairn, Northumberland (Beckensall 1995, 25) are probably natural in origin. The production and use of simple cupmarks may therefore be of considerable antiquity, and the rarely quoted 'large limestone gravestone bearing small pecked depressions' (Delluc *et al* 1992) from the Mousterian site of La Ferrassie, while not of direct relevance to the origin of British rock art, is perhaps worthy of mention. While cupmarks could have such an origin, and a relatively straightforward case could be made for the subsequent elaboration of such sites by the addition of rings, the occurrence of the spiral in rock art poses an altogether different problem as the first spiral to be carved must have been carved specifically as a spiral (it could not have 'evolved' out of anything else). Unfortunately, unless we manage to perfect a method of scientifically dating carvings through rates of exposure, we must continue to rely largely on comparison with datable sites elsewhere for a chronology of the rock art. The presence of spirals on datable monuments is not necessarily of help here. As already noted, Scott (1988, 108) dates the Temple Wood spirals to 3,500-3,000 calendar years BC, although it is impossible to be certain of their absolute or relative chronologies. Similarly, the spirals at Castlerigg and Long Meg could have been added at any point after (or, indeed, before) the construction of the monuments.

The decoration on the Boyne tombs dates from the late fourth millennium BC, and the final deposition of the Knowth macehead had presumably occurred by not long after 3,000BC. None of the spirally decorated stone balls come from securely dated contexts, so neither the date of their production nor the currency of their use are clear, although the similarity between their decoration and that at Newgrange suggests that at least some of them may also be of late fourth millennium BC date. The Grooved Ware

sherd from Radley has been dated to the second half of the third millennium BC, and the sherd from Durrington Walls is of similar date while those from Skara Brae may be slightly earlier. The Garboldisham macehead would also appear to be most at home in a mid third millennium BC context. All of these examples can be considered as later Neolithic, but we cannot assume from this that the spiral was not in widespread use before then. The recent discovery of spiral decoration on middle Neolithic pottery from Runnymede and Great Wilbraham, in both cases apparently dating from the mid fourth millennium BC, provides clear evidence that the motif was in use well before the adoption of Grooved Ware in southern England and the development of possible associated long distance exchange networks.

There was certainly variation in the use of the spiral motif between different regional traditions, and the importance of many of the contexts in which it was employed suggests that it had become a particularly powerful symbol by the later Neolithic. Edmonds (1995, 95) notes that 'it does seem that exotica - objects, motifs and ideas derived from distant sources - played an important role in moulding the social and political contours of the Later Neolithic'. However, the origins of the spiral motif, and the mechanisms by which it became so important, still remain unresolved. In his recent consideration of the spiral motif in Neolithic Britain, Kinnes (forthcoming) notes that 'Because Boyne mural art is durable and visible, and has been in the literature for at least three centuries, we are still faced with a circumstance that it must be, if only numerically, the inspiration for other media which have been recognised more recently. So, Boyne to Orkney (subconsciously from Brittany), orthostats to pottery and other portables. This is not very clear thinking. Central to this is one motif, the spiral. It is held to be archetypal and is certainly, within the often complex Boyne designs, easy of identification and isolation'. When the variety of spiral motifs is considered, rather than lumping all examples together and analysing the distribution, then the situation becomes far more complex and demands a more detailed explanation than a simple process of diffusion.

A detailed analysis of the chronology of the reuse of decorated slabs, and not only those displaying spirals, would be of considerable interest. Is this a phenomenon that can be tied down to a particular period? Can it be related to other recently recognised phenomena such as the building of cairns on top of panels of rock art, or the construction of round barrows directly on top of long mounds, or even the placing of burials in long established ceremonial monuments such as henges? As noted at the beginning this paper, much further work is still required to integrate rock art studies with 'mainstream' archaeology, and as part of this work the development of an acceptable chronology for the rock art should be regarded as a priority. For now, the dating of open air rock art spirals still remains largely unresolved

The reuse of spirals

The main decorated stones at Newgrange must have been produced specially for the monument, and indeed the entrance stone was apparently decorated *in situ* prior to the construction of the tomb. It would appear that the stones for many decorated passage graves were carefully designed, with the artist producing a design that dominates the stone on which it is placed, in many cases by completely covering the face of the stone. However, this is clearly not the case at the Calderstones, or at any of the cist slabs described above, where the decoration, in terms of the motifs present and their relative distribution, mirrors much more closely that on the rock surface at Morwick.

In an important paper published almost a quarter of a century ago Simpson and Thawley (1972, 86) observe, in relation to decorated cist slabs, that 'Except where a single motif is present the symbols appear to be scattered haphazardly over the surface of the stone and in at least one case.....the surviving fragments may only be part of a larger design. Another shared feature is the generally irregular form of the stones themselves when used either as capstones or side slabs. These could only have been used in graves of very poor construction. In view of this feature it might be argued that the majority represent the re-use of stones originally decorated for some other purpose, later to be incorporated, somewhat clumsily, into a burial structure; in some cases this involved the breaking of the original slab to fit it in'. Simpson and Thawley list 56 sites which have produced rock art in association with single burials. Many of these include motifs which the authors consider as 'passage grave' rather than 'Galician' art, but only half a dozen actually include spirals: once again the spiral is significant through its apparent rarity. If, as is argued here, the cist slabs represent re-use of decoration originally applied to open air sites, then all of these spirally decorated stones must once have formed elements of such open air sites. It is significant that the cases of spirals on cist slabs mostly fall within the general distribution of surviving spirals in open air contexts. It is also important to stress the relative rarity of the spiral within surviving open air sites, and on re-used cist slabs, in comparison to the numbers of 'cup and ring' motifs found in both contexts.

Bradley (1992) has recently considered this phenomenon of reuse, citing a number of factors which taken together clearly suggest that carved stones were re-used within burial cists or cairns *because* of the presence of the decoration, rather than because they represented a convenient source of building material (for an alternative argument see Burgess 1991). Bradley (1992, 169) traces the history of the rock art from its inception at open air sites through to its incorporation within burial structures: 'What we tend to speak of as landscape is really a system of places, each of which has its own significance. Some of those places were created or embellished as monuments, but others were unaltered features of the natural world. Rock art falls in between these two extremes, for in this case elements of the natural topography were enhanced by 'cultural' designs. In turn, those carved surfaces were to

be deployed in the commemoration of the dead.'

Most of the cists including reused stone are conventionally dated to the Early Bronze Age, but it is important to note that the reuse of carved stone was already well underway in some places during the Neolithic. Perhaps the best documented cases are the early/middle Neolithic Breton monuments which incorporate earlier decorated menhirs. The decoration here, including naturalistic motifs such as axes, crooks and horned animals, is completely different from that in British open air art, but the parallels for reuse are significant. The classic example is the single decorated menhir broken into three to form the capstones of the chambered cairns of Gavrinis, Table des Marchands and Er-Vingle, but there are several other cases (Patton 1993, chapter 3; and p156-157 for later Neolithic examples). It seems inconceivable that the reuse of such enormously significant decorated stones can be accounted for simply by the fact that they were nice big slabs of a convenient shape which happened to be readily available. As noted by Bradley (1993, 39), 'Quite simply, these patterns of reuse must be more than a coincidence'. The reuse of decorated rocks in central Britain must relate in a similar way to the importance of the motifs on them: the erection of Long Meg or the incorporation of the spiral decorated stone within the Temple Wood circle may be classic examples of such reuse in a later Neolithic context, while the cist slabs described above may represent a development of the same tradition.

The 'meaning' of spirals

Early this century, in a discussion of the spiral in prehistoric rock art, Rupert H. Morris (1912, 255) suggests that 'it is quite possible that the markings on stones may have had some religious significance'. In the same year, George Coffey (1912, 89) asks 'what is the meaning of the markings at Newgrange? This question has exercised the minds of many fanciful archaeologists for a long time, but little more than absurd guesses have been the result'. Coffey concludes his discussion (*ibid* 125) by quoting Colonel Mallery (1889), who observes from his studies of American petroglyphs that 'perhaps the most important lesson learned from these studies is that no attempt should be made at symbolic interpretation, unless the symbolic nature of the particular characters under examination is known, or can be logically inferred from independent facts. To start with a theory, or even a hypothesis, that the rock-writings are all symbolic, and may be interpreted by the imagination of the observer, or by translation either from or into known symbols of similar form found in other regions, were a limitless delusion.'

Colonel Mallery's defeatist argument has a point, as does that of Simpson quoted at the beginning of this paper, but while accepting that it is unlikely that we will ever be able to fully understand the significance of the spiral to Neolithic communities, this should not prevent us from seriously considering a number of possible alternatives, with a view to some informed speculation.

Both Coffey and Morris attempt to account for the existence of the spiral in Neolithic Britain and Ireland by a straightforward process of diffusion from continental Europe, and quite correctly such simplistic accounts would not be given much credence today. Rather, the evidence would seem to suggest that the spiral was adopted independently in a number of different regions throughout the world, and its occurrence in entoptic imagery may have a lot to do with this widespread distribution. Indeed, the further study of entoptic imagery and shamanic practices may still have much to tell us about Neolithic ritual, and the place of rock art within it, throughout Europe (Sherrat 1991; Devereux, 1992 chapter 3). Recent work by Jeremy Dronfield quoted in the Sunday Times ('Raves in the Caves: Stone Age Britons took drugs', 28th January 1996, page 5) compares shapes drawn by drug-takers in controlled experiments in the 1960s and 70s with the elements of Irish passage grave art. The mathematical analysis of the dimensions and curvature of the symbols suggests to Dronfield that the passage grave symbols bear a close relationship to the drawings of 20th century consumers of fungal hallucinogens, but not of other drugs. This is a field which cannot be covered in any detail here, but it certainly seems likely that it is of relevance to the use of the spiral in Neolithic Britain. Other writers have considered the possibility that 'spirals, parallel lines, circles and arcs may symbolize a 'force' which has not only a mythic reality (as in the Polynesian concept of mana, a life force) but is closely connected with forces now acknowledged in modern physics - sub-atomic electromagnetic particles which transcend newtonian laws and the precepts of nineteenth-century scientific thought.....As yet, connecting the Neolithic spiral with electromagnetic forces is pure speculation. Perhaps modern physics, as it advances along what seems to be a path away from traditional scientific logic towards a paradoxical 'poetic' description of a world of particles which are neither mass nor force yet both, will explain these spirals to us one day' (McCann 1980, 149-150). While it may be tempting for some to dismiss such suggestions as nonsense, the proven effectiveness of dowsing and divining should lead us to at least consider them with an open mind

Barrett (1994, 136) describes two concepts of temporality in prehistoric Britain: the idea of human existence as a process of 'becoming', and that of being. He suggests that the former belongs to the third millennium (the period in which most of the spirals discussed here probably originated), and describes it as 'a movement towards a future state which was described by reference to ancestors or gods and where life itself might be spoken of as ephemeral, as a series of movements through or as a journey through the world. Perhaps that future was a return to the origin of time, a beginning and an end revealed in the timeless values of the rituals themselves'. The rituals he refers to are those undertaken at the great Neolithic monuments of Wessex, but it is not unreasonable to extend this to cover contemporary societies throughout Britain. Is this concept of value when considering the importance of the spiral motif? I believe that it is, and an ethnographic example will help to illustrate the point. Even if we accept the point that 'ethnographic analogies

continue simply to broaden our horizons as to the range of possible interpretations' (Megaw and Megaw 1994, 297) then such analyses should still be sought, providing that we bear in mind that they also 'demonstrate the enormity of the task of learning to 'read' art' (*ibid*). Rather than superficially covering a number of ethnographic cases, the following example, which illustrates a number of possibilities with regard to the interpretation of the British spirals, will be considered in some depth.

In a fascinating book, entitled '*Messages from the Ancestors: Zuni Cultural Symbolism and Perceptions of Rock Art*', M. Jane Young (1988) provides much food for thought for the student of British rock art. Zuni rock art includes a wide variety of motifs, including abstract symbols and readily identifiable figures such as animals and people, all of which relate to a complex cosmology and cultural symbolism. The figures reproduced in fig. 13 bear a striking resemblance to some of those at Morwick, although any direct relationship between the two is clearly impossible. Contemporary Zunis, when asked about these motifs, refer to them as 'messages from the ancestors'. Statements such as 'I don't know what it means, but I know it's important' (*ibid*, 6) show how the symbols are still regarded as important even though their original 'meaning' is no longer understood. The following observations (*ibid*, 136) are particularly relevant to this discussion and deserve quoting in full: 'The spiral figure in particular has a number of related meanings..... The most frequent interpretation of this figure I heard at Zuni was 'journey in search of the Center'; less often the figure was described as representing snails or snakes. Those who identified the spiral figure in rock art as representing the 'search for the Center Place' referred the figure back to the myth time, frequently narrating the part of the origin myth that describes the travels undertaken by the Zunis as they searched for that location as well as its discovery by

the Water Skate. The center place, then, is represented by the central point of the spiral. The spiral could be described as referring to this event from two different perspectives. The central point of the spiral is itself a condensed symbol, but so is the rest of the figure; years of travel and hardship are encoded in the inward-turning coils. It is of interest that the Zunis with whom I worked perceived a figure that could be seen as 'opening out' as 'turning inward' instead. They described the journey in search of the Center as motion through time directed inward, often following the coils of the spiral in towards the center point with their fingertips. This perspective is quite consistent with the inner- or center-directed ethos of the Zuni people'.

The possible link between this understanding of the spiral motif and Barrett's view of life in Neolithic Britain as a 'process of becoming' is intriguing. Young makes the further observation (*ibid*, 138) that the Zuni 'see these mysterious signs, carved by their ancestors but now unintelligible, as important messages demonstrating the direct involvement of the ancestors in the present day, even if that involvement cannot be precisely articulated. One might contrast this view with that of Westerners who see Stonehenge in England as the work of ancestors, mysterious and powerful, but having no particular meaning for contemporary society'. This contrast between the meaning associated with the motifs when originally produced, and later interpretation of the same designs, is important. Much of the power associated with the spiral motif may well derive from its very ambiguity: it could represent a number of different things at any one time, and could be reinterpreted in any number of different ways through time. Another example from Young's account is worth quoting. Following visits from various individuals to enquire about the possible astronomical significance of spiral petroglyphs to present day Zunis, one Zuni individual became convinced that certain spiral motifs represented the motion of the sun during the year, and were therefore connected directly with a concept of time. Young records that 'when I visited Zuni in 1984 he said "maybe those spirals are supposed to be the travels of the sun during the year. There are two of them - maybe they're the two halves of the year." Yet, when I reminded him that three years earlier he had said that the same spirals depicted the 'journey in search of the Center', he replied, "They mean that too".' (*ibid*, 226-228). The symbol had taken on a new meaning, but also retained its original significance.

The concept of the centre is also associated with concentric circles in Zuni rock art, and it is tempting to suggest that a similar understanding may lie behind the use of concentric circles and cup and ring marks in Neolithic Britain. In his recent discussion of Walbiri cosmology, Tilley (1994, 49) notes that 'In the art of the Walbiri the circle is the locus out of which the Dreaming emerges and finally returns. The circle and the line provide a kind of spatial and conceptual model linking the dreamtime with the present'. Such models are of considerable potential to the study of British rock art sites, whether conventional cup and ring sites or others such as Morwick or Hawthornden. It is tempting to interpret these sites as belonging to a very similar type of

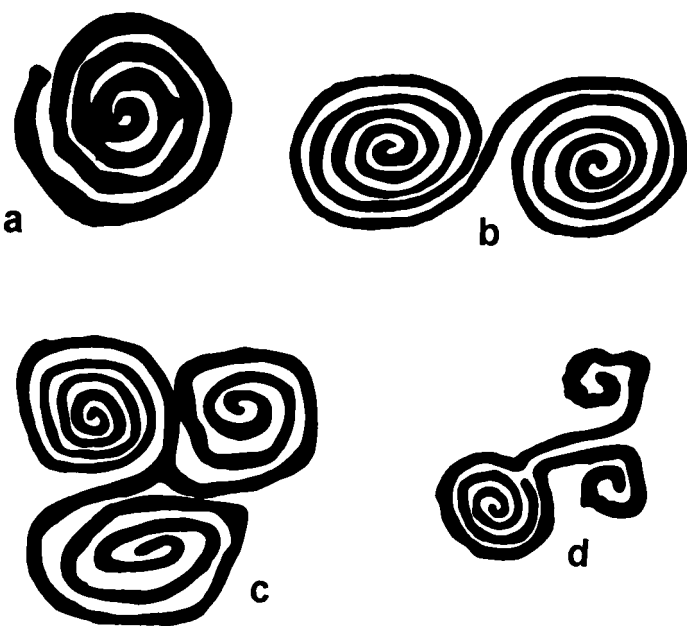


Fig.13. Spiral decoration in Zuni rock art: a, 30x30cm; b, 25x50cm; c, 30x30cm; d, 30x30cm (from Young 1988, 77).

cosmological model, relating cyclical movement around the landscape to the mythological activities of the ancestors. Such a system could have had roots firmly back in the Mesolithic, but may not have been physically inscribed upon the landscape through the use of rock art until much later.

One final form of motif which is worthy of mention in this discussion of movement to or from a central point is the maze or labyrinth. While accepting that their dating remains problematic, the occasional presence of such designs in possible Neolithic contexts from as far apart as Rocky Valley (Cornwall), Hollywood (Co. Wicklow), Val Camonica (Italy) and San Jorge de Mogor (Galicia) continues to defy explanation (Haddingham 1974). It is interesting to note in the context of the above discussion that the significance of the maze must relate in some way to the idea of movement to or from a central point. It is therefore possible that the symbolism of the maze could relate to that of the spiral discussed above, a suggestion which is supported by the presence of hybrid 'maze-spiral' designs such as that illustrated by Anati (1961, 216) at Val Camonica.

In considering the possible 'meaning' of the spiral we must consider briefly the work that has been done on its possible astronomical or calendrical significance. The work of Brennan (1983) at Newgrange and Loughcrew, in which spiral motifs are variously interpreted as of solar and calendrical significance depending on certain attributes, is certainly persuasive, and the location of Long Meg in relation to the midwinter solstice provides further ammunition for such theories. Brennan (*ibid*, 189) notes that 'In archaic astronomy the heavens were usually viewed as spiralling', and he quotes Ptolemy: 'I search with my mind into the multitudinous revolving spirals of the stars'. In fact, there can be little doubt that at least some of the spiral motifs at Newgrange do incorporate meanings relating to particular solar events, and the spiral was evidently adopted by the passage grave-builders to express whatever they wanted it to express in relation to their own particular cosmology.

While accepting the probable calendrical significance of the spirals in the Irish passage graves, we must remember that time was probably comprehended as cyclical rather than finite, and this may provide a link with Barratt's 'return to the origin of time' referred to earlier. This archaic belief in cyclical time, whereby time itself was regenerated in a cycle relating to the 'death' and 'rebirth' of the sun and moon, may well be central to an understanding of Neolithic cosmology. Our modern understanding of history and the finiteness of time must be set aside if we are to truly approach an appreciation of the Neolithic art.

The inclusion of spirals within passage graves, whether within the interior of a monument or as part of its external structure (for example as kerbstones) or as hidden art invisible once the tomb had been constructed, is obviously quite a different phenomenon from the addition of motifs to natural rock surfaces. However, the basic symbolism of the spiral within the tombs may well have been essentially similar to that of spirals on outcrops. As noted by Thomas (1992, 146) in his consideration of

symbols in the Loughcrew tombs, 'as very explicitly symbolic media, they would contribute to the production of a 'reading' of the tomb space, and, in their distribution about the walls of the tomb, might be expected to be drawn upon in various ways in the performance of ritual. These are exclusively non-representational symbols. The very ambiguity which makes them difficult for the archaeologist to interpret would make them supremely suitable as elements of ritual discourse: having no one fixed meaning, they might become caught up in the production of quite different meanings at different stages in the ritual process'. The frequent use of the words 'ambiguous' and 'ambiguity' in this account may be regarded by some as something of a cop-out in so far as our search for a 'meaning' is concerned, but the available evidence does suggest that this is a major factor underlying the use of the spiral and other non-representational symbols in a variety of contexts. Whether or not certain other examples of spiral decoration, such as on the most complex of the stone balls, relate directly to the Boyne Valley in terms of meaning or chronology must, for now, remain a matter for conjecture.

Given the problems encountered in the attempt to interpret single spirals, it would seem ambitious in the extreme to attempt a detailed interpretation of the double or triple spirals. However, the double spirals (whether horned, S-shaped, or interlocking) do clearly depict two separate entities bound together within a single whole, and it may not be unreasonable to see within them representations of a symbolic structure based on a series of oppositions (culture:nature, domestic:wild, male:female, life:death, day:night, *etc*) which may have been central to Neolithic cosmology (Hodder 1990). Similarly, the triple spiral could represent any number of trinities (e.g. past:future:present, man:woman:child, sun:moon:earth, positive:negative:neutral, *etc*), as well, perhaps, as the three dimensions (Barnatt 1978, 189). In addition, it is tempting to relate the triple spiral to the significance of the number 'three' in later Celtic society: 'Three was a sacred or auspicious number in the ancient world. It is hardly surprising therefore that triplism recurs, to some extent, as an element in the Celtic supernatural' (Cunliffe 1992, 70). The number three represents strength in Celtic society, so deities were frequently depicted in triple form, albeit in a variety of representations (e.g. as triple headed). Could this aspect of Celtic mythology have roots back in the Neolithic? Given the continuity of some sacred sites, such as Tara and the Boyne tombs, in Irish prehistory this would certainly seem plausible. Indeed, the detailed study of spiral decoration in pagan Iron Age and early Christian contexts may yet prove to be of relevance to our understanding of the Neolithic motifs.

It would be possible to speculate at length on the possible significance of the colour red in Neolithic mythology. A link with blood, and perhaps especially human blood, would seem highly likely, and may account in part for the use of red ochre in ritual contexts from Palaeolithic times onward. The links between human fertility, the menstrual cycle and the cycles of the moon must surely have been central to any Neolithic cosmological

system, and if an 'earth mother' concept was at the heart of Neolithic cosmology, as suggested by many authors, then it is not difficult to see how visually striking, natural outcrops of red rock could have taken on particular significance. If outcrops of red rock were special places with mythological associations then they may also have become liminal places within the cultural landscape: dangerous places forming an interface between this world and another, with the redness of the rock symbolising the risk and power associated with these places. The presence of spiral carvings at such locations would add still further to their significance, and if the spirals really did represent 'the journey in search of the centre', as suggested above, then they would certainly not be out of context in such places. The full story must have been considerably more complex than this, but these ideas may help to explain the presence of spirals on outcrops of red rock as described in the first half of this paper.

To conclude this consideration of the 'meaning' of the Neolithic spiral, it is important to remember that the designs probably 'contain meanings which could not be translated precisely into our own language, even if we had a Neolithic symbols Rosetta Stone' (McCann 1980, 152). McCann stresses the important distinction between esoteric 'symbols' and exoteric 'words': 'that is, symbols imply without specifying exactly. They refer to an innate or intuitive knowledge without formulating (and thus limiting) a concept.... The symbol, by its powers of evocation, can serve as a synthesizer. It can exist outside time, representing an abstract reality which can be comprehended intuitively, but never objectively expressed' (*ibid* 148).

Summary

Those who have read this far may be forgiven for thinking that a lot of suggestions are being made on the basis of very little evidence. However, the fact remains that the observed patterns do exist, and that they require explanation. There can be no doubt that the spiral was a powerful motif which was appreciated, though not necessarily within the same symbolic systems, throughout much of Neolithic Britain. Given this widespread distribution and apparent importance (and even allowing for the likelihood of its use on clothing, tattoos or body painting, or on other perishable artefacts which do not survive) it does seem strange that so few examples are known on rock art sites or portable objects: is it reasonable to conclude that its power was such that its use was somehow rigidly controlled throughout the land over several centuries? This would appear to be the most likely explanation for the observed pattern, with spirals often being reserved for only the most important sites and the most complex artefacts. While occasional new discoveries will be made from time to time, there is no reason to believe that this observed pattern will change dramatically.

It would appear that the spiral, and various composite motifs incorporating spirals, were used in a variety of contexts from at least as early as the middle Neolithic. It may be that the first spirals were executed

upon natural places, as an extension of a Mesolithic system of naming sacred places within the landscape and imbuing these with an ancestral presence and mythological significance. This certainly seems to be the logic underpinning many of the more common cup and ring marked outcrops, but the relationship between these and spiral decoration remains unproven.

Close analysis of some motifs in different contexts, such as the widespread occurrence of the horned spiral on open air rock art sites, on monuments, pottery and maceheads, suggests that long-distance contact of some kind was maintained between different communities, and such a conclusion would seem to tie in with other evidence for long-distance interaction such as the 'trade' in stone axes and other exotic artefacts from the middle Neolithic onwards. However, it is important to stress that the 'origins' of the spiral in Neolithic Britain remain obscure, and it is certainly not safe to account for the presence of spirals in rock art or on portable artefacts simply by reference to Irish passage grave art.

As the Neolithic progressed, the spiral was appropriated for other purposes, most obviously for incorporation into monuments (both by physically reusing carved stone and by copying and embellishing the motifs), but also by the transference of the motifs onto portable artefacts. The power of the spiral motif must to a large extent have lain in its very ambiguity, enabling it to represent both specific and general concepts at the same time. Indeed, the re-use of carved stones suggests that the carvings themselves could be appropriated and their 'meanings' transformed by certain groups on certain occasions. The 'meaning' of the spiral to the Neolithic mind is probably irrecoverable, as modern processes of thinking are different in so many ways. 'What has been lost to humanity with the invention of writing is the archaic capacity for explaining the world around us by establishing analogies between nature and human life. Intuitive 'mythic' logic and observation of nature made the world comprehensible in a different way from the rational abstract modes of thinking we now use' (McCann 1980, 147). Neolithic people understood and explained their world in their own particular way, 'an inherent 'poetic wisdom' ordered their responses to the world and cast these responses into a 'metaphysics' of myth, symbol and metaphor' (*ibid* 147). We will never fully understand this Neolithic world, but the symbols which survive from it probably offer the best insight into it which we are ever likely to get. Raftery (1994, 163) in a discussion of Pagan Irish La Tene art notes that 'through the art...we can glance fleetingly into the Celtic soul.' The same may well be true of the Neolithic art and the Neolithic soul.

Conclusions: Morwick Mill Revisited

In conclusion, what else can we now say about Morwick? It would seem reasonable to place the initial production of the Morwick motifs in the Neolithic, but we are still unable to say with any degree of confidence at which stage of the Neolithic. They may have been added to over

centuries, or may be the result of a single event. The question of whether Morwick functioned in some way as a ceremonial site, perhaps occupying a liminal position at the edge of a particular territory in a similar way to that suggested for the causewayed enclosures of southern England, must also remain unresolved. It certainly seems, on the basis of the limited available evidence that the spirals were produced to mark a significant place in the contemporary landscape, presumably relating to the junction of the major east-west route through Coquetdale and a north-south route which forded the river at this point. Ethnographic studies suggest that the spiral itself may often have been an ambiguous motif, but that it may have been linked in some way to a concept of life as a journey within a cosmological system which placed a constant ancestral presence into the contemporary landscape. This cosmological system was linked to a concept of cyclical time, in which the sun, moon, life and the seasons all faded away to be reborn at some later point in the cycle. It seems probable that this concept of time is embedded within the form of the spiral motif. It also seems likely that the concept of the shaman may have been central to this cosmological system. The reddish colour of the rock outcrop may have been of particular mythological significance, and the addition of spiral decoration to red sandstone river cliffs may at one time have been a relatively widespread, though never a common, practice.

It seems reasonable to account for the spirals as motifs which had a particular significance at the time they were produced, but awareness of their original significance may well have faded over time. As demonstrated by our discussion of the Zuni art, the motifs may well have retained considerable power as 'symbols from the ancestors' long after their original 'meaning' had been forgotten. The existence elsewhere of double and triple spirals similar to those at Morwick certainly suggests that these were 'special' motifs the significance of which was appreciated, if not necessarily understood in the same way, over much of Neolithic Britain. However the existence of virtually identical motifs in Zuni art proves that societies far removed from each other in both space and time can adopt and assign significance to the same designs quite independently.

While a major change in the significance of certain motifs over time, manifested in the reuse of carved stone within monuments, has been suggested for sites as far apart as Orkney and Brittany, there is no such evidence at Morwick. While it may be largely a result of the lack of local fieldwork, the apparent absence of later Neolithic and Bronze Age activity in the vicinity of Morwick does suggest that the carvings here somehow became abandoned and forgotten: they were certainly not removed and incorporated into later monuments, and no cup and ring art is known in the immediate vicinity. Detailed fieldwork in the surrounding landscape may provide further clues as to the significance of Morwick, but until such work is undertaken there is little more that we can say about it. 'Here we must leave the subject for the present' (Morris 1912, 262).

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