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The Moon and the Bonfire.

An Investigation of Three Stone Circles in North-East Scotland

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Chapter 5

THE IMPLICATIONS OF THE PROJECT

Richard Bradley

5.1 FEATURES SHARED BETWEEN THE EXCAVATED SITES

One of the starting points for this study was Burl's suggestion that there was considerable regional variation among the recumbent stone circles of north-east Scotland and that it could be explained by differences in the adoption of this kind of monument over time (Burl 2000, chapter 12). In his view the classic examples were to be found on Donside and later variants of the form on Deeside and in Buchan. Although the only radiocarbon dates from primary contexts come from Tomnaverie, his hypothesis does not seem to be supported by the results of this project. In fact all three of the sites described here have a number of structural features in common. The cairns at Tomnaverie and Cothiemuir Wood have almost the same external diameter as the walled enclosure at Aikey Brae and in two cases there is also evidence for the careful selection of red and grey or white stones. Again each structure was replaced by a recumbent stone circle, but at Aikey Brae this was superimposed on the earlier wall whilst at the other sites it enclosed the existing monument.

There are also more subtle relationships to consider. It may be that each of these monuments had a 'front' and a 'back': a possibility significantly increased by the evidence from a number of monuments near Alford which seem to have been approached by a causeway leading into the stone circle from the north east (*ibid*, 225). It was on that side of the monument at Tomnaverie that Beaker sherds had been deposited at the foot of the kerb, and a concentration of pieces of quartz occupied the equivalent position at Cothiemuir Wood.

These effects are enhanced by the local topography. The circle at Tomnaverie cannot be seen from large parts of the hill. It only becomes visible close to the highest point. On nearing the summit from the north east, the flankers are the first features to come into view. Then the other monoliths appear and, finally, the recumbent stone. In the background the landscape opens out, with a far horizon framed between the tallest pillars. The view includes the summit of Lochnagar. A similar effect is created on all three sites. In each case the immediate foreground is concealed from view, but a vast expanse of middle ground can be seen beyond the monument. The vista emphasises areas some distance away from the sites themselves and also frames a segment of the sky.

When the monuments were intact, other features would have enhanced these visual effects. Someone standing on the north-east side of these monuments would not be able to perceive the subtle variations in the height and spacing of the monoliths. To some extent these would be obscured by the effects of perspective so that the upright stones might look as if they were of about the same heights as one another. This arrangement would emphasises the circularity of the monument as it appeared to an outside observer. On entering the circle, however, the grading and spacing of the monoliths would have had a different effect, for the internal area might seem bigger than is actually the case. The distinction between the flankers and the two 'halves' of these circles could also be disorientating, and that would help to focus attention on the recumbent stone where both arcs of upright stones converged.

At Tomnaverie these effects were made still more explicit by the radial divisions that were visible in the surface of the monument. They cluster in two symmetrical groups towards the north-east side of the cairn and draw the eye to the centre of the site where so much burning took place. From there they open out again and lead towards the pillars on either side of the recumbent stone. In passing across the monument from 'front' to 'back', the eye

is drawn first to the summit of the hill and then to the view beyond the monument itself.

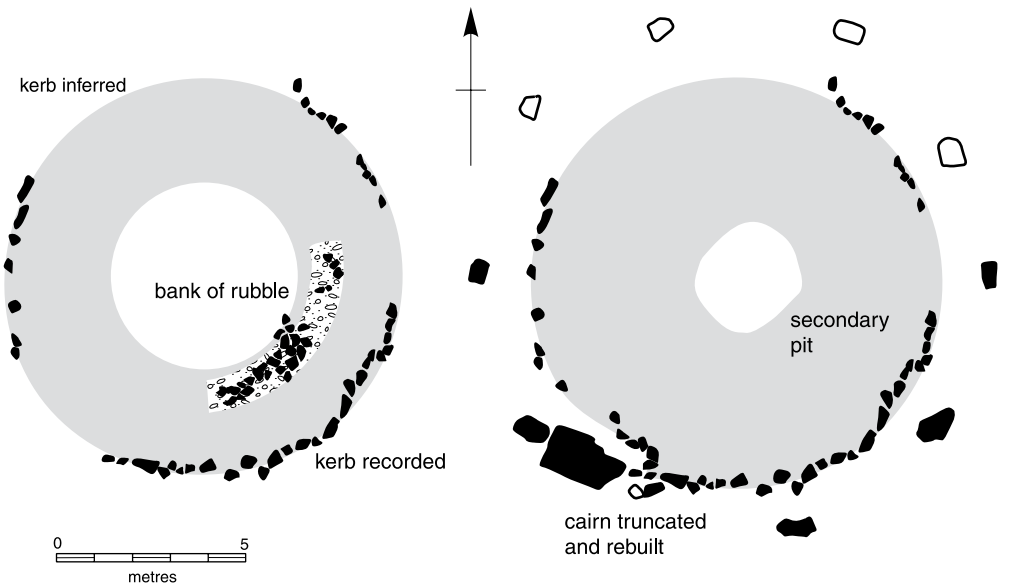
5.2 THE SEQUENCE IN THE NORTH-EAST

The results of this fieldwork suggested that the monuments in different parts of north-east Scotland may have more in common than many writers had suggested, but are these findings consistent with our knowledge of other sites?

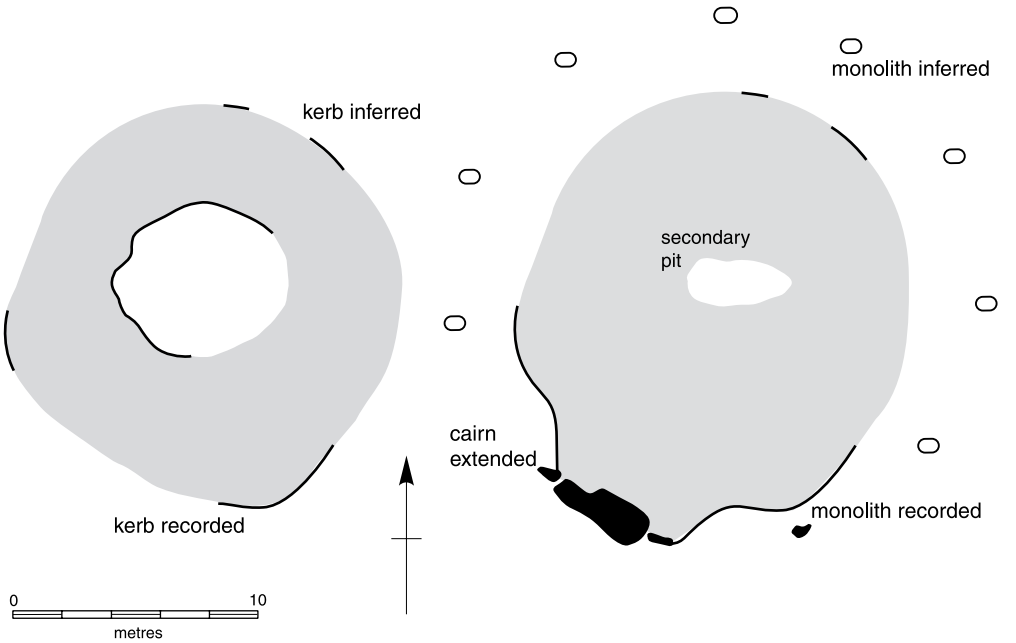
We must consider their sequence and chronology. In one respect, all the projects produced similar results. Two sites began as circular enclosures and the third as a rubble platform. In every case the stone circle was a later development. This might seem at variance with the evidence from other excavations. At Berrybrae, Burl concluded that the stone circle was earlier than a rubble wall like that at Aikey Brae (*ibid*, 220). There is no reason to question this, but he also showed that the circle itself had been built on 'a levelled clay and rubble platform' (Aubrey Burl, pers comm). It is worth considering whether that might have been equivalent to the first structure at Tomnaverie. There was a small ring cairn inside the circle at Berrybrae but its chronological position is not clear, although it was damaged when the wall was built.

Again at Loanhead of Daviot, the excavator argued that the stone circle was an early development (Kilbride-Jones 1935). The recumbent was directly linked to a setting of slabs which was overlain by the edge of a low ring cairn. The sequence is not as straightforward as that suggests, for the circle and the cairn are not concentric with one another and the recumbent and flankers seem to cut into its perimeter. The nearest section of kerb was built in a quite different style from the rest. Kilbride-Jones's sequence could be reversed, in which case the stone circle would be later than the cairn. When the south-west sector of the circle was erected it truncated the edge of the existing monument and, as a result, part of the kerb was reconstructed (illus 97). The development of the site could have been similar to that at Tomnaverie.

A similar development may have taken place at Old Keig where a still more massive stone circle enclosed the remains of a ring cairn. Childe published the excavation in two successive reports and it is not easy to integrate their findings (Childe 1933 and 1934). The earlier article suggests that the ring cairn was a roughly circular structure, with a surviving section of its outer kerb running parallel to the recumbent. The second paper suggests that the same kerb changed direction to join each of the flankers in the way that happened



97 An interpretation of the structural sequence at Loanhead of Daviot, showing the original ring cairn on the left and, on the right, its transformation into a recumbent stone circle. Information from Kilbride-Jones (1935).



98 An interpretation of the structural sequence at Old Keig, showing the original ring cairn on the left and, on the right, its transformation into a recumbent stone circle. Information from Childe (1933 and 1934).

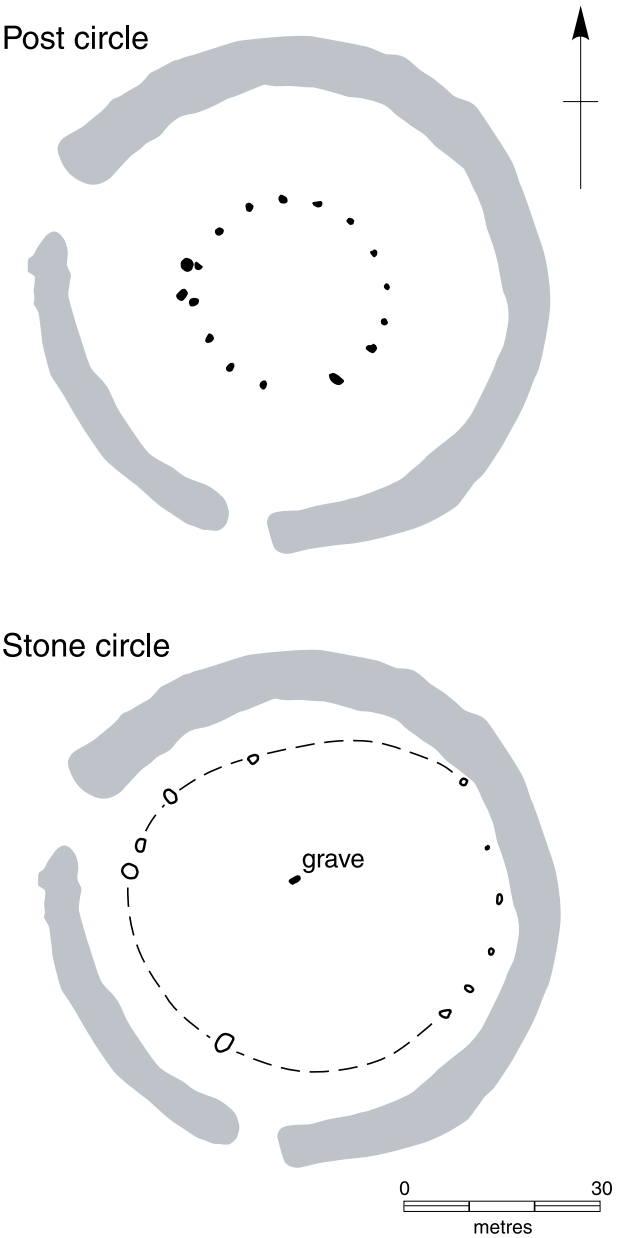
at Tomnaverie. Successive plans of the excavation depict two quite different arrangements. Again the cairn may have been extended in a later phase (illus 98).

These arguments run counter to the excavators' own interpretations of Old Keig and Loanhead of Daviot, which refer to the existence of hard trampled layers beneath the cairns on both sites. They thought that these might have formed during the transport and erection of the monoliths. On the other hand, comparison with the evidence from Cothiemuir Wood suggests that such deposits may result from podsolisation: a natural process which was little understood when work at these monuments took place.

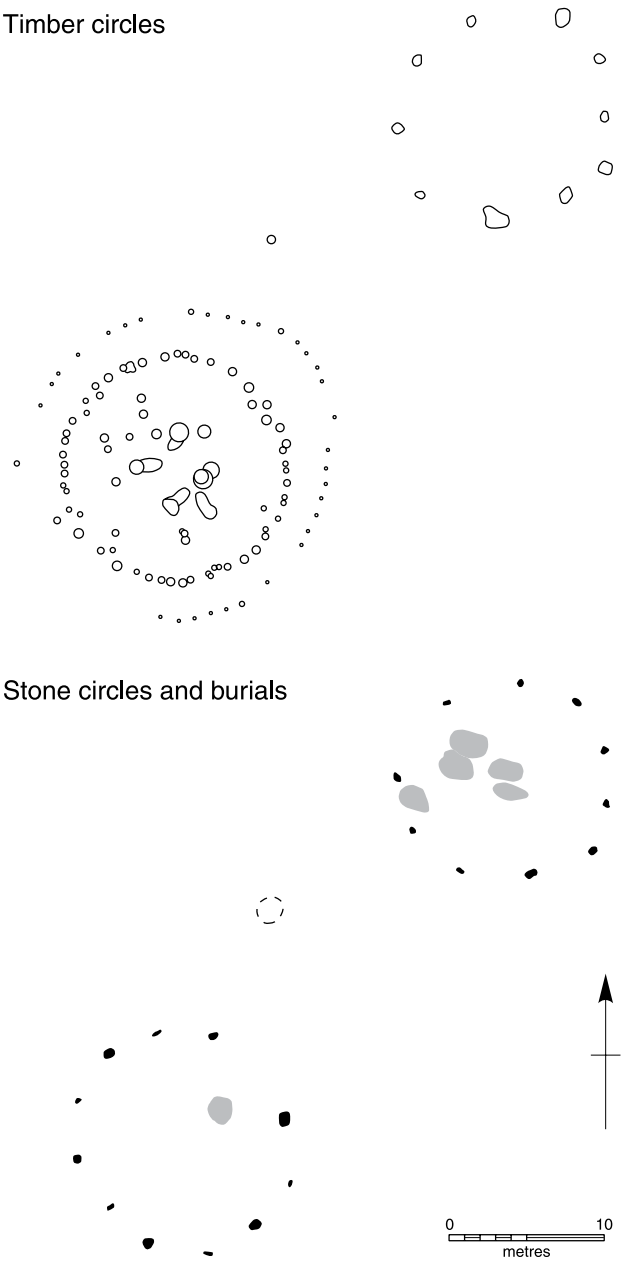
A second question concerns the dating of these developments. The platform at Tomnaverie has a *terminus post quem* in the mid to late third millennium BC and the stone circle at Berrybrae a *terminus ante quem* between about 1900 and 1550 BC (Burl 2000, 376). Beaker pottery was associated with construction of the platform at Tomnaverie and with the enclosure wall at Berrybrae (*ibid*, 220). If my interpretation of the sequence at Loanhead of Daviot is correct, Beaker pottery may be associated with the building of the recumbent stone circle there.

The dates from Aikey Brae present a problem. They are much later than those associated with a similar structure at Berrybrae and compare better with dates for the re-use of Tomnaverie. It seems unlikely that these samples were intrusive, but it was noted that only some of the kerbstones at Aikey Brae were set in a trench and that others had rested on the ground surface. It may be that one section of the kerb had been reset during a subsequent phase and this may account for the radiocarbon dates associated with this part of the monument. A cremation at Strichen had a similar date (*ibid*, 376), and, to judge from the associated pottery, Old Keig and Loanhead of Daviot could have been reused during the same period (Kilbride-Jones 1935; Childe 1933 and 1934; Sheridan 2003).

Having said that, it seems possible that stone circles were still being built in the Later Bronze Age. One example may be a stone setting orientated toward the south-west at Croft Moraig in Strath Tay (Bradley and Sheridan in prep; Piggott and Simpson 1971). The distinctive stone circles of south-west Ireland also belong to that period (O'Brien 2002) and these have sometimes been compared with sites in Aberdeenshire (Burl 2000, 225), although the similarities between these two groups can be overstated. These points need more



99 The structural sequence at Balfarg according to Mercer (1981).



100 The structural sequence at Machrie Moor according to Haggarty (1991).

investigation in the future. For the moment, the exact date of Aikey Brae must remain in question.

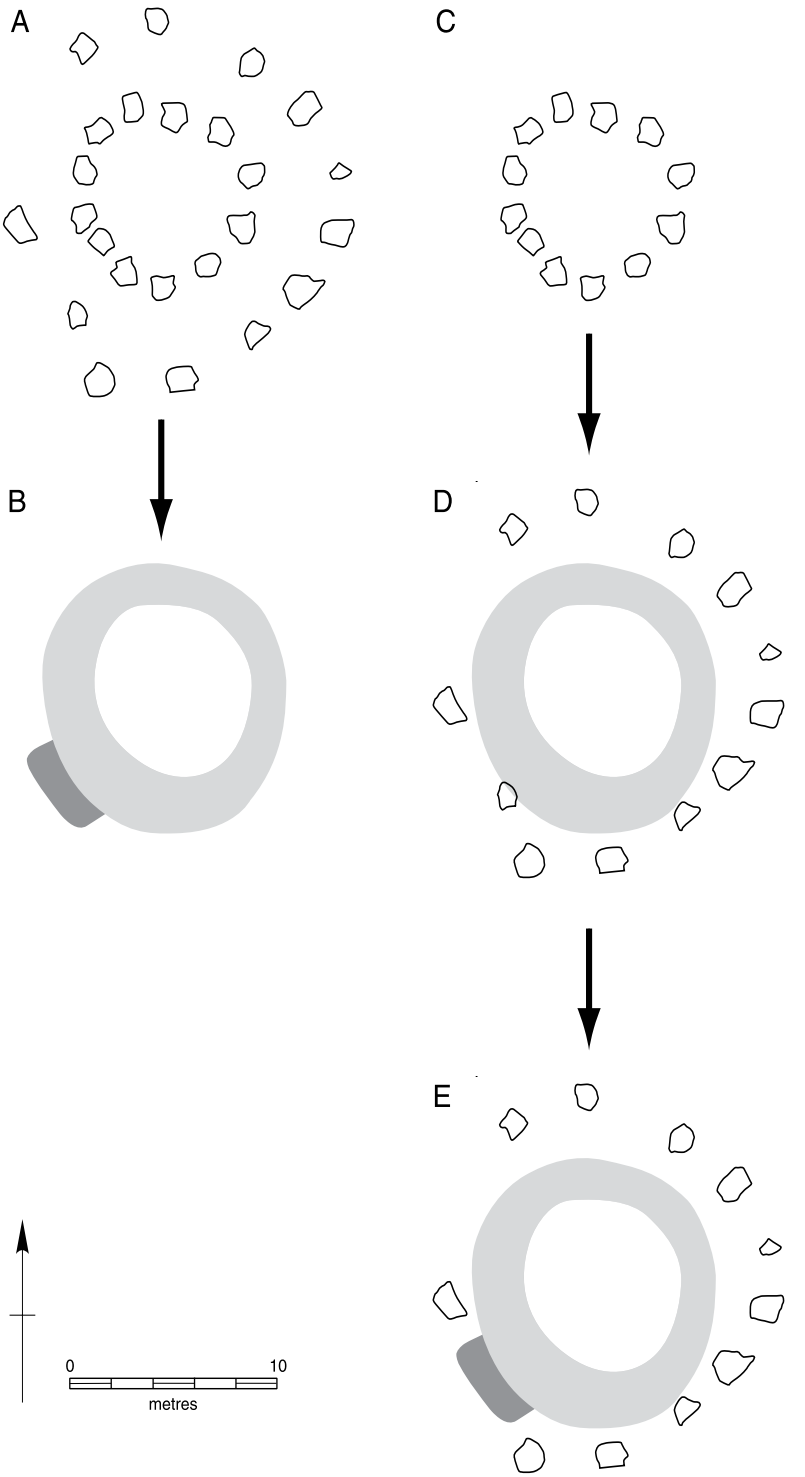
5.3 THE SEQUENCE IN ITS WIDER CONTEXT

Recumbent stone circles share some attributes with other kinds of monument. This is not the place to consider them at length, but it is worth pointing out that the sequence described here is consistent with what is known from other parts of Scotland and northern England. This account is restricted to a few well excavated sites. Apart from the presence of the recumbent, the stone circles of north-east Scotland have a number of features in common. They are often graded by height and orientated between the south and the west. In many cases the monoliths enclose a ring cairn.

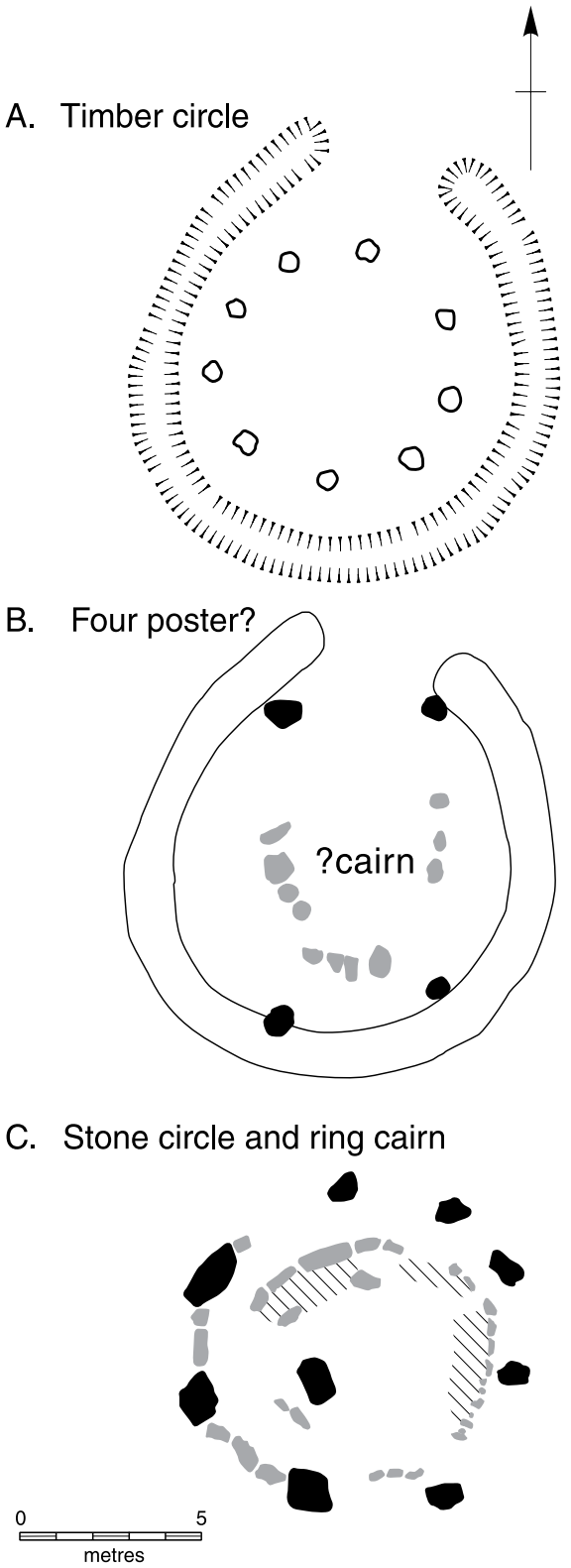
Some of these elements were already important during the Late Neolithic period. The timber setting inside the henge at Balfarg seems to have been graded in height towards the west (Mercer 1981), and two similar structures on Machrie Moor had much the same orientation. This may be significant as all three were replaced by stone circles (Haggarty 1991). Like its predecessor, the example at Balfarg increased in height towards the west (illus 99), and at Machrie Moor the stone circles were built side by side, perpetuating the axis of their wooden predecessors (illus 100). This alignment extended from the tallest stone in one circle to the highest monolith in its neighbour. At Balfarg and Machrie Moor the change may run in parallel with that between Grooved Ware and Beakers.

Some of the same elements were recognised during excavations at Oddendale in Cumbria (Turnbull 1997). The excavator suggested that there were two main periods of activity on this site: first, a double circle of upright posts and then a ring cairn whose position overlay the inner setting of timbers. In a later phase the cairn was supplemented by an approximately rectangular platform to its south-west, a feature which Turnbull compared with the recumbent stone in the Scottish monuments. The timber setting provided radiocarbon dates between about 2850 and 2350 BC, but these were based on samples of oak charcoal and may be rather too early. The stone phase, on the other hand, was loosely associated with Beaker pottery, and a burial in the centre of the ring cairn contained a few sherds of similar character.

These developments are broadly comparable with those described so far, although it is possible to suggest an alternative reading of this evidence (illus 101). The inner timber circle was precisely circular, whilst the outer



101 Alternative interpretations of the structural sequence at Oddendale, based on information from Turnbull (1997). A and B summarise the excavator's sequence: two circles of posts are replaced by a ring cairn (lighter tone) with an external rubble platform (darker tone). C, D and E present a different reading of the same evidence, in which a single circle of posts is replaced by a ring cairn with an external timber setting. The rubble platform is added during a subsequent phase.



102 The structural sequence at Montcreiffe according to Stewart (1985).

setting was flattened towards the south-west where the spacing of the uprights was uneven. Although the infilled sockets of the smaller circle were overlain by the cairn, there was no stratigraphic relationship between that structure and the remaining post-holes. The sequence could be interpreted in a different way. At Oddendale a free-standing timber circle might have been replaced by a cairn enclosed within a ring of upright posts. That outer timber setting was flattened on the south-west side of the monument as if to anticipate the position of the platform that was to be built there. If so, the unusual monument at Oddendale would recall the configuration of recumbent stone circles not only in the distinctive form of the stone setting but also in possessing an outer ring of uprights. Certain difficulties still remain, for the radiocarbon dates from both the rings are identical to one another and the sockets had clearly held posts rather than monoliths. The latter arrangement may seem rather unusual, but it is also found on an Early Bronze Age monument at Brenig 44 in North Wales, with a construction date of about 2170–1880 BC (Lynch 1993, chapter 11).

At the Scottish site of Moncreiffe events followed yet another course (Stewart 1985). In this case the orientation of the monument changed during its period of use (illus 102). The original construction was a henge with its entrance to the north. It may have enclosed a ring of posts, although this cannot be proved. It may have been replaced by a setting of monoliths associated with a small cairn. The monument maintained the alignment of its predecessor and could be interpreted as an elongated 'four poster'. It was superseded by a stone circle with an internal ring cairn. In contrast to the earlier structures, this was graded in height towards the south-west. The uprights in that sector were linked by horizontal blocks which overlay sherds of Beaker pottery.

At Oddendale it is not clear whether the ring cairn was the last development on the site, but at Moncreiffe a similar structure was attributed to the same phase as a stone circle, whose monoliths increased in height towards the south-west. The same combination occurs among the Clava Cairns where two of the excavated examples, Newton of Petty and Balnuaran of Clava, have radiocarbon dates between about 2350 and 1750 BC (Bradley 2000, 160–1). Like Tomnaverie, the monument at

Clava had a graded kerb, which is a feature that it shares with the ring cairn at Raigmore, which dates from about 2300–1800 BC (Simpson 1996), and Sketewan, whose date falls between 2050 and 1850 BC (Mercer and Midgley 1997). Other ring cairns may be rather earlier. For example, one structure at Balfarg was built on a surface associated with Impressed Ware (Barclay and Russell-White 1993, 110–19). This is particularly relevant as its kerbs were composed of lengths of red and white stone. It seems as if some of these architectural devices were extremely long lived.

That may even explain the later re-use of these sites. It also applies to a number of the Clava Cairns, and to monuments in other parts of Scotland. This is demonstrated not only by the radiocarbon dates from the circles at Balnuaran of Clava and Newton of Petty, but also by those from Balbirnie, Temple Wood, Strichen, Castle Fraser, Fullerton and Old Keig (Burl 2000, 376–7; Sheridan 2003).

5.4 THE NATURE OF RECUMBENT STONE CIRCLES

When Burl wrote about recumbent stone circles in 1970, he drew attention to a feature that has assumed a growing importance ever since: 'Altogether, of the fourteen sites for which there are excavation accounts, eleven had signs of fire' (Burl 1970, 72). Since then, that total has increased with excavation at Strichen, Tomnaverie and Cothiemuir Wood. Burl also drew attention to the accounts of cremated bones from these monuments. In such cases, it is difficult to decide to which phases they belong. Nonetheless it is interesting that both Childe (1933 and 1934) and Kilbride-Jones (1935) considered that they had found the remains of pyres. It may be unwise to extend this interpretation too far as the direct dating of cremated bones from a variety of sites in Scotland suggests that this way of treating the dead may have developed after recumbent stone circles were first built (Sheridan 2003). The use of some of these sites as pyres could have been a secondary development, and at Loanhead of Daviot an enclosed cremation cemetery developed alongside the recumbent stone circle (Kilbride-Jones 1936).

In any case Burl was careful to point out that not all the deposits of burnt material were associated with cremated bones. The finds of human remains were generally confined to the central area of each site. This was probably the case at Tomnaverie where the first stone structure overlay a deposit of burnt soil; that may also have happened at Old Keig, although most of the burnt deposits there were probably later in date. Much clearer evidence comes from Loanhead of Daviot where a similar deposit of burnt soil and cremated bone was sealed beneath the inner margin of the ring cairn in a position not unlike that of the higher magnetic values at Cothiemuir Wood. There are two points to make here. Since many monuments were open at the centre, not all the burnt material may belong to a primary phase. This is clearly shown by the dates from Tomnaverie. At the same time, it is not necessary to suppose that all the burnt material was associated with cremations. As Lynch has pointed out, ring cairns in other regions of Britain and Ireland are associated with deposits of charcoal and in some cases bones are absent. At the Brenig in North Wales, she could show that these deposits contained different species of wood from the cremation burials on the same site (Lynch 1993, 136).

Some pyres did exist, however, and at Sketewan on Tayside a ring cairn had been constructed around one (Mercer and Midgley 1997). At Tomnaverie it seems possible that the platform enclosed the position of another, although this cannot be proved, and the same could have happened elsewhere. That sequence continued until the centre of the ring cairn was filled with rubble. This process is clearly documented at Cothiemuir Wood, but it has not been possible to link the closing of these cairns with the building of stone circles around their perimeter, although the idea has obvious attractions. Nevertheless at six of the seven sites where an outline sequence can be suggested the circle was apparently the latest structure to be built. In most cases, then, the raising of the monoliths brought the building programme at an end. The same seems to have been true at Balnuaran of Clava, where stone circles were built around the passage graves as access to those monuments was restricted (Bradley 2000, 166–8). Again it seems likely that the evolution of these structures followed a prescribed path.

It looks as if the building of recumbent stone circles was the last act in constructing these sites. That may explain the symbolism of the recumbent and flankers, for, as Burl has noted, they look like

a blocked entrance (2000, 218). This has been compared with the closing of Irish passage graves, but the two groups of sites are too distant in time from one another for this to be entirely convincing. Even if the sites were symbolically closed, it seems clear that many of them were still visited and used. That is certainly suggested by the burials found within a number of recumbent stone circles, which include a range of artefacts that date from every part of the Bronze Age. It also seems likely that fires went on being lit inside these monuments. This was clearly demonstrated at Cullerlie. That site did not have a recumbent stone, but excavation demonstrated that the bases of the monoliths had been burnt *after* they had been erected (Kilbride-Jones 1935, 217). The implications are clear. Activity may have continued, with or without interruption, even when the building programme was complete.

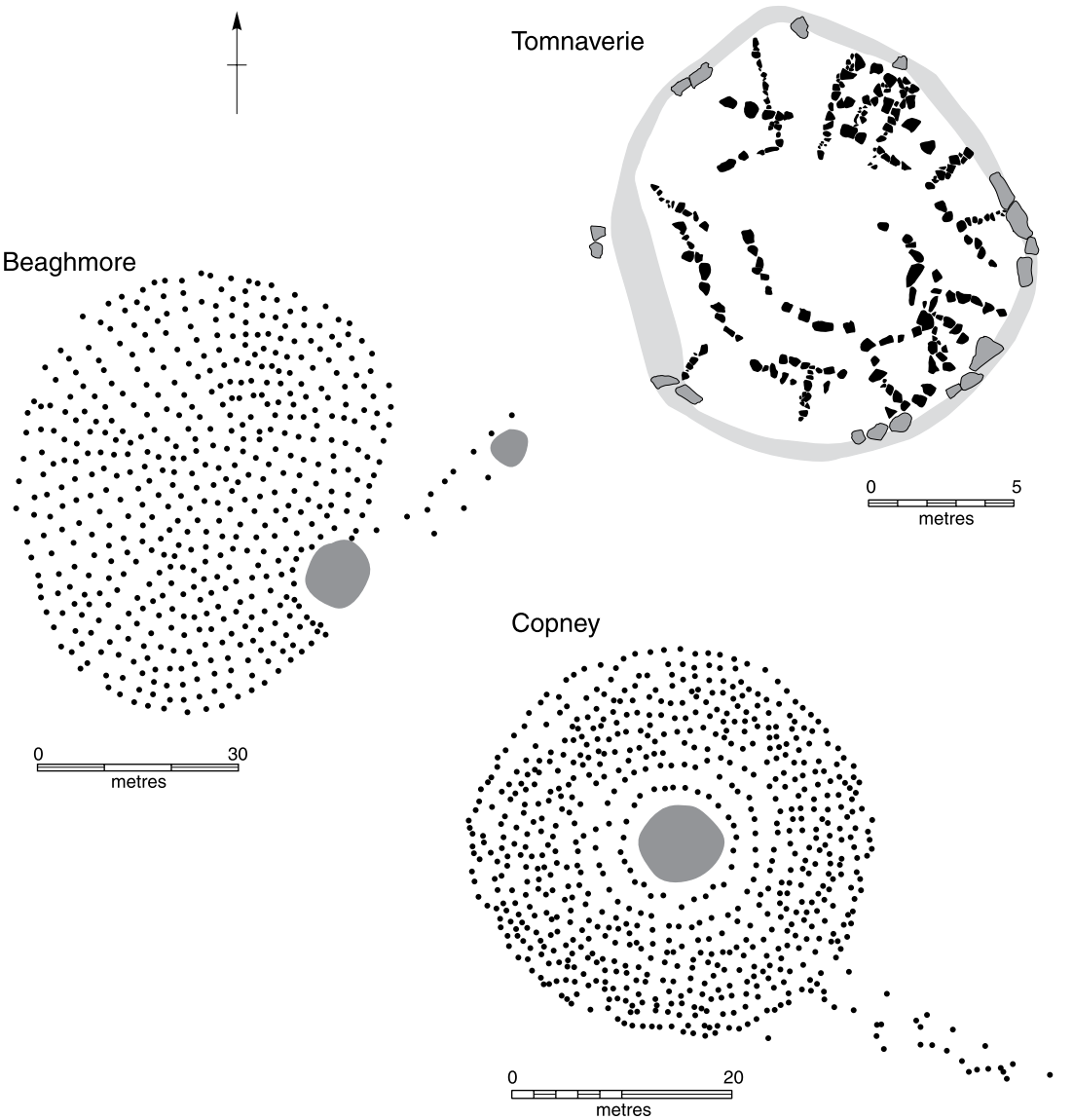
Burl has suggested that the recumbent and flankers were the first parts of the north-eastern circles to be built (2000, 221). This raises problems, for the remaining components of these monuments seem to have been laid out with greater care. They show an emphasis on axial symmetry, they often employ the same number of uprights, and their architecture was organised around raw materials of different sizes, shapes and colours. Even the spacing of the monoliths could be governed by strict conventions. It is the stone setting towards the south or south-west of the site that can be more irregular. It frequently departs from the perimeter of the circle and may be incorrectly aligned in relation to the rest of the monument. It can also be set well inside the circumference of the ring so that in extreme cases it abuts the outer edge of the cairn. The largest stones would have been difficult to manoeuvre over the loose rubble and this might account for the difficulty of locating them precisely. In other cases they may have been set back from the other parts of the circle so that the flankers would look like a door leading directly to the cairn. Had the recumbent stone been in position already, it would have been easy to construct an accurate circle, using it to lay out a baseline, but that does not seem to have happened. The implication is that the erection of the recumbent and the flankers was the final act in constructing these monuments. That is aptly symbolised by the image of a closed door.

5.5 THE WIDER CONNECTIONS OF THE SITES

Before discussing recumbent stone circles in more detail, it is important to emphasise a point made in Chapter 1. Although these monuments form one of the most obvious regional types in Northern Britain, they were constructed out of elements that have a much wider distribution. Two features may be especially important in considering their broader context: the grading and orientation of the circles, and the evidence of patterned stonework. It is necessary to compare the evidence from Aberdeenshire with sites distributed across most areas of Britain and Ireland.

I begin with the orientation of these monuments. Among the key sites in the north is Kintraw in Argyll, for here a massive round cairn was defined by a graded kerb which rose in height towards the south-west, where a small stone setting resembled the focal point of a recumbent stone circle (Simpson 1967). Similarly at Beltany in County Donegal a rubble platform was enclosed by a ring of uprights, with the tallest monolith to the WSW where it was located diametrically opposite a triangular cup-marked stone (Lacey 1983, 72–3). Long Meg, on the edge of the Pennines, shares some of the same characteristics. In this case the effect was enhanced because the monument was built on sloping ground so that its entire perimeter increased in height towards the same direction, where a decorated standing stone was directed towards the midwinter sunset (Burl 1994). The Ring of Brodgar was also constructed on sloping ground, and this might have created a rather similar impression, especially as the tallest surviving monolith is on the west side of the circle (J N G Ritchie 1988).

Certain of these features are also found in southern England, for even Stonehenge is graded in height towards the south-west. It is well known that it faced the midsummer sunrise but it was also aligned on the setting sun at midwinter (Cleal, Walker and Montague 1995, chapter 3). That site echoes the Scottish evidence in its use of materials of different colours. More massive stones were placed towards the south-west of the outer circle at Avebury (Pollard and Gillings 1998, 155–6), and yet another variant on the basic pattern is provided by a monument at St Neots on the edge of Bodmin Moor (Wainwright 1965). In this case a cairn which was originally open at the centre



103 Patterned stonework in the cairn at Tomnaverie, compared with the plans of stone settings at Beaghmore and Copney, Northern Ireland. Beaghmore and Copney after Pilcher (1969) and Foley and MacDonagh (1998).

was bounded by a circle of low monoliths. The uprights were of approximately the same heights as one another, but in the middle of the monument there was a grave whose long axis faced south-west. Some of the same ideas extend to timber monuments. The best known of these, the circle at Holne next the Sea, was also graded in height towards the south-west, where a narrow entrance was orientated on the sunset (Brennand and Taylor 2003). Other timber circles in East Anglia faced in the same direction (Clark 1936; Ashwin and Bates 2000, 86). These are not the only examples of this distinctive phenomenon, but they are sufficient to illustrate its wide distribution.

The second element is the use of patterned stonework in the construction of these monuments. There are a number of features which are echoed on other sites. The careful attempt to match the monoliths of the stone circle to the components of the existing kerb at Tomnaverie is found at Balnuaran of Clava (Bradley 2000, chapter 2). At Cothiemuir Wood and Aikey Brae it seems that the use of coloured stones was more important and this feature is repeated at Clava, Balfarg

(Barclay and Russell-White 1993, illus 41) and Sketewan (Mercer and Midgley 1997, illus 25), as well as some of the stone circles on Machrie Moor (Haggarty 1991). In each case there was a special emphasis on the use of red, white and grey.

At Tomnaverie, the platform cairn also featured a series of radial divisions which seem to have been a primary feature of the monument. They are also found as stone alignments in the central ring cairn at Balnuaran of Clava and as fence lines in the earthwork enclosure buried beneath the round barrow at North Mains, Strathallan (Barclay 1983, 189–212). In southern England, field survey suggests that similar features may have been incorporated in the design of Silbury Hill (Field 2002). The arcs of boulders in the surface of the cairn at Tomnaverie are more unusual, but both these kinds of patterning have been identified at sites in Northern Ireland (illus 103). These monuments consist of circles defined by a low kerb within which there are numerous rings or radial alignments of small stones. The best known examples are at Beaghmore and Copney and are assigned to the Early Bronze Age (Pilcher 1969; Foley and MacDonagh 1998). At the centre of the three well-preserved structures at Copney there were the remains of robbed cist burials, whilst examples at both these sites are approached by small stone rows. Some lead directly to the main body of the monument, while others approach them at a tangent. Those at Beaghmore follow the now-familiar alignment from north-east to south-west.

These features have been compared with the stone rows of Caithness, but a more appropriate comparison might be with sites in Aberdeenshire. It is possible that something similar was found during the 19th century at a number of recumbent stone circles near Alford. According to antiquarian accounts, four of these monuments were approached from the north-east by stone 'causeways', at least one of which seems to have been a substantial structure (Burl 2000, 225). In turn, they might be compared with the evidence from Broomend of Crichie where a paired stone avenue may have led from another stone circle of this type (J Ritchie 1920). In this case the alignment seems to have been reversed, as it apparently originated on the SSW side of the monument and crossed the interior of the nearby henge.

We can consider one other source of information, for there is some evidence for trampling in the entrances to a series of Irish stone circles. Again they were located on the north-east. These monuments are found in Munster and have sometimes been compared with the recumbent stone circles in Scotland (Burl 2000, 225), but it seems as if such monuments are later in date than those in Aberdeenshire.

5.6 THE SITING OF RECUMBENT STONE CIRCLES

Much has been written about the locations of recumbent stone circles, but for the most part this has been concerned with their orientation. Many sites were on raised ground with extensive views to the south and west. Some, like Tomnaverie and Cothiemuir Wood, were on hilltops but others were located on slopes. In either case it was important to construct them on a level platform. Burl has suggested that each monument may have served a local community (2000, 220), but how were they related to the wider pattern of settlement?

One feature of the recent project was its use of pollen analysis, soil micromorphology and field walking. These were employed in combination at two of the sites, Tomnaverie and Cothiemuir Wood. In both cases the results were much the same. The monuments seem to have been established in places with limited vegetation cover; as anticipated, they could have commanded extensive views. There was no evidence of nearby farmland. They may have been positioned on, or even beyond, the edges of the settled area. This is in contrast to the Clava Cairns where the monuments appear to have been constructed close to occupation sites.

The results of field walking support this interpretation. Lithic scatters of the same general period as these monuments could be found in the same regions as the sites at Tomnaverie and Cothiemuir Wood. They were generally on south-facing slopes and, whilst they occurred at a variety of different elevations, few finds of artefacts were made in the vicinity of the stone circles themselves. This is especially important as there was a phase of land clearance during the period when Tomnaverie was built (Edwards and Rowntree 1980). Clearly, the site of the stone circle was not central to that activity. The recumbent stone circles may have been constructed at a distance from the settled land, and in both cases it is likely that they could be recognised on the skyline from the occupation

sites: an effect which would have been enhanced if fires had been lit inside them.

Recumbent stone circles are usually orientated towards the south or south-west (Ruggles and Burl 1985). Although many of the monuments would have faced the 'winter sun low in the sky' (Ruggles 1999, 95), the range of alignments extends too widely for this to have been the only element and it seems likely that others emphasised the position of the moon at midsummer. Tomnaverie is one of a small group of sites whose orientation is well outside the segment of the sky in which the sun appears. Ruggles has calculated that the monument could have been directed toward the moon every eighteen and a half years (1999, Tables 5.1–5.3). The view from these enclosures was influenced by the position of the recumbent and flankers. Not only did these obscure the immediate foreground, they sometimes highlighted the position of a more distant hill and a segment of the sky. This would have been much easier to achieve where the monument had been built on a level foundation. Tomnaverie is especially interesting in this respect. Here the view emphasised the summit of Lochnagar, 3km away. This is important because the mountain lay well beyond the area that seems to have been occupied at the time (I Shepherd 2001).

Monuments might adhere to these conventions, even though the moon could never have been seen over the recumbent stone. This happened at Midmar Kirk and Sunhoney owing to the height of the Hill of Fare which is located to the south of the monuments. In other cases – and Tomnaverie is one of them – the moon would not have appeared over the centre of the recumbent every year (Ruggles and Burl 1985). Perhaps their axis was more important as a concept than it was on the ground. If so, it may be less important to distinguish between sites that seem to face the setting sun and those directed towards the moon. The same idea has been suggested by O'Brien (2002, 160–6), who contends that monuments in Munster observe a south-western alignment because it was associated with the onset of darkness. In Irish tradition the south-west was the domain of the dead. That idea has a particular relevance to the recumbent stone circles of Scotland, for the field walking surveys reported here suggest that at least some of them were set apart from the daily world and constructed so that they were cut off from their immediate surroundings. This idea needs further investigation on the ground, but the evidence presented in this study suggests that they could be aligned on distant landmarks and on a section of the sky. Inside these monuments conspicuous fires had burned and in some cases they may have been where the dead were reduced to ashes. The smoke would have risen into the air above them, and at night the monuments themselves could have been illuminated by the moon. When the structural history of individual sites was at an end, they were enveloped by rings of monoliths dominated by the recumbent and its flankers. This feature was both an entrance and an obstacle, but it allowed the light of the moon to pass between the portals. This is not a new idea, for it was first suggested by Burl over twenty years ago (Burl 1980 and 1981).

5.7 THE SYMBOLISM OF RECUMBENT STONE CIRCLES

In a recent article Parker Pearson and Ramilisonina (1998) proposed a new interpretation of Stonehenge. It is a scheme that has a wider relevance. They emphasise two observations. At many sites timber structures are replaced by settings of stones, and this distinction, they argue, is reflected in the material associated with them. Wooden monuments are often found with quantities of artefacts, including the residues of feasting. Stone circles, on the other hand, rarely produce many finds and are principally associated with the remains of the dead. Could this be explained in terms of a wider symbolic system? Wood is an organic material. It comes from living trees but ultimately it is subject to decay, as are human bodies. Stone, on the other hand, is indestructible and is likely to last for enormous periods of time. The same is true of bone. Parker Pearson and Ramilisonina argue that this distinction is crucial to the interpretation of such monuments. The timber circles are associated with the living and their activities; stone circles are devoted to the dead. They enclose sites that had once been connected with the living but they also bring their use to an end. That is not unlike the structural sequence identified in this paper, and it is one that applies to no fewer than four of the other monuments considered earlier in this chapter: Balfarg, Moncreiffe, Machrie Moor and Oddendale. At a fifth site, Croft Moraig, it

Table 25 The changing character of ceremonial monuments in the Late Neolithic and Early Bronze Age.

	Earlier Monuments (Late Neolithic)	**Later Monuments (Early Bronze Age)**
	Passage graves; henges; timber circles; earlier stone circles	Later stone circles; recumbent stone circles; Clava Cairns; wedge tombs; stone rows
Raw materials	Wood, or stone replacing wood	Stone
Associations	Varied material culture; residues of feasting	Human remains; some quartz
Decoration	'Megalithic' art; some cups and rings	Mainly cup marks
Evidence of fires	Occasional	Locally abundant
Alignment	Solar, especially sunrise	Mainly lunar; occasionally sunset
Dominant association	Daylight	Darkness
Symbolism	The living	The dead

seems as if events took a different course, for here the timber circle may date from the Later Bronze Age (Bradley and Sheridan in prep; Piggott and Simpson 1971).

We can link this scheme with another observation. Whatever their raw materials, earlier monuments were generally associated with the movements of the sun at the summer and winter solstices and, most probably, the equinoxes. That applies to passage graves like Newgrange, Knowth and some of those at Loughcrew and also to circular enclosures like Stonehenge and Woodhenge. Later monuments were more closely linked to the position of the moon. Recumbent stone circles are among the best known examples of monuments with this alignment, but they also include Clava Cairns and wedge tombs on either side of the Irish Sea. The same applies to the stone rows of western Scotland, those of south-west Ireland and, to a lesser extent, to some of these monuments in Ulster (Ruggles 1999, chapter 8).

There are other links between a number of the regional traditions mentioned here. Individual monuments can be associated with deposits of quartz and cremated bones, and often they are embellished with cup marks (Burl 1980 and 1981). These structures hardly ever had timber precursors. This development extends from the late third millennium to the beginning of the first millennium BC, suggesting that it took place over approximately fifteen hundred years. The recumbent stone circles of north-east Scotland belong to the earlier part of that sequence.

Published accounts of these sites suggest a basic division between monuments that had been associated with the sun and those related to the moon. Structures that were aligned on the midwinter sunset form an intermediate category, and it may be significant that the best known of these, the passage grave at Maeshowe, could have been among the latest Neolithic monuments of its type (MacKie 1997). On a broader level, the distinction between predominantly eastern and western alignments may correspond to the difference between day and night. It adds a further element to the contrast that Parker Pearson and

Ramilisonina observed between monuments constructed out of wood and those built from stone. Again it may be related to a wider symbolic system. The basic pattern is set out in Table 25. The earlier monuments are linked with the activities of the living. They are associated with daylight and sometimes with the rising sun. The later monuments are associated mainly with the dead, with darkness and the moon.

There are obvious limitations to this kind of analysis, and it is only right to acknowledge that the paper by Parker Pearson and Ramilisonina (1998) has been criticised for the way in which it compares the structural sequence at British monuments with the symbolic system evidenced in their own fieldwork in Madagascar (Barrett and Fewster 1998). It may be that their interpretation is on surer ground where it interprets specifically archaeological evidence, for the model has an internal coherence that is persuasive in its own terms. In the same way, the scheme set out in this chapter should be judged in terms of its ability to make sense of a number of observations that are usually treated in isolation.

Even if this approach has its attractions, the scheme is probably too simple, for there was clearly an overlap between the currency of monuments with solar alignments and those directed towards the moon. Indeed, megalithic structures like the chambered cairns at Balnuaran of Clava seem to combine both these features (Bradley 2000, 126). There is no reason why buildings with quite different alignments could not have been employed alongside one another, just as many prehistoric landscapes contain formal arrangements of monuments of entirely different types. Table 25 suggests that the dominant imagery of stone-built monuments may have changed over time, but it does little to explain why these structures took so many different forms. There is still a need for fine-grained analyses of individual sites. Again it may be less important to identify celestial alignments than it is to distinguish between monuments that were associated with daylight and those associated with darkness. In simple terms, some were directed towards the eastern horizon and others appear to have faced west. Those directions may have been imbued with a special significance even under natural conditions in which astronomical events could not have been seen.

5.8 IMPLICATIONS FOR LANDSCAPE ARCHAEOLOGY

Whether or not we accept this specific analysis, two points are clear. Recumbent stone circles may have been directed towards the moon and in some cases they may also have faced the winter sun. This project has suggested that some of these sites were cut off from the pattern of everyday land use and were apparently placed on open ground towards the edges of the ancient pattern of settlement.

Rather than domestic activity, the dominant associations of recumbent stone circles seem to be with human cremations and with evidence of fire, although we should resist the temptation of making an automatic link between the two. Certain monuments may include the remains of cremation pyres, but there are others in which burnt bones appear to have been absent. Perhaps it is time to combine these different observations, as Burl did when he commented on the association between monuments with lunar alignments, deposits of quartz and finds of cremated bone (Burl 1980 and 1981). That might well account for the importance of white or grey materials in the architecture of these monuments. A second element is the widespread evidence of burning, and again this may be connected with distinctive organisation of the cairns and stone circles with their striking predilection for red stone. These elements may have been linked in a more systematic manner. If the stone circles of north-east Scotland were associated mainly with the moon, they would have been at their most significant at night. It might also have been then that these places were illuminated by fires. This distinctive practice may have continued into the Middle and Late Bronze Ages when a number of these monuments were reused.

That association between the hours of darkness and the commemoration of the dead suggests a different view of the world from some of the monuments of the Late Neolithic with their emphasis on the rising sun. It also suggests a different perception of the landscape. A number of writers have commented on the ways in which reconstructions of the prehistoric world emphasise the importance of visual phenomena. That is especially true of the body of work that has taken its inspiration from phenomenology, for it pays special attention to the roles played

by long distance alignments and views (Tilley 1994). Exactly the same emphasis characterises another kind of archaeology that prides itself on its scientific methodology. Geographical Information Systems have also been used to investigate the siting of particular monuments in the ancient landscape and the sometimes complex visual relationships between them (Lock 2000; Wheatley and Gillings 2002). In each case the emphasis is on what might have been *seen* in the past. Both approaches presuppose that such places were most significant during the hours of daylight. This may not have been the case.

Surely the most important feature of any monument aligned on the moon is that it would have been used at night. That would have had a drastic effect on its relationship to the surrounding area. As the poet Pauline Stainer has written, 'Nothing simplifies/like moonlight' (2003, 179). It has quite different qualities from sunlight, foreshortening and often blurring topographical details. It also emphasises the sky quite as much as the ground. The point is perfectly illustrated in the work of the German painter Caspar David Friedrich (Koerner 1990).

Moonlight would have created special effects within the monuments of north-east Scotland. It would bring out the textures of the individual monoliths and would certainly have enhanced the appearance of the cup-marked stones. It would also pick out any pieces of quartz. At Tomnaverie, blocks of this material had been placed along the south-western edge of the site, and both there and at Cothiemuir Wood the recumbent stones included deposits of the same material.

The use of these monuments at night would have other implications. The senses are heightened during the hours of darkness and sound travels more clearly and over longer distances, if only because competing sources of noise are often excluded. None of these claims is in any way remarkable, for they form part of many people's experience of being in the countryside at night. Modern town dwellers are so accustomed to noise and light pollution that they can be surprised by these simple effects. There is one other factor to mention. Recumbent stone circles seem to have unusual acoustic properties which result in the sounds being amplified within the enclosed area at the expense of the space around them (Watson and Keating 1999). It is impossible to prove that such effects had been contrived by the builders, yet they would certainly have been apparent to the people who visited these sites.

The lighting of fires within these monuments would have affected human perception in other ways. If this had taken place during the daytime, its impact would have been quite local, although of course this activity could be identified from surrounding settlements by a plume of smoke rising into the air. At night, however, the flames would have had quite different effects. They would always have been in motion and would have cast shadows among the standing stones until the monuments themselves seemed to be alive. Most local details were lost in the all-encompassing glare, and the more distant surroundings of these sites would have seemed correspondingly remote. For those who were allowed to go there, the lighting of fires inside these monuments separated such places from the landscapes around them, while, for others, they provided a spectacle in which the stone circles dominated the terrain in a way that could never have happened in daylight.

Landscape archaeologists have rarely thought about these issues.

5.9 IMPLICATIONS FOR THE STUDY OF PREHISTORIC MONUMENTS

In Chapter 1 I considered the ways in which prehistoric monuments might be conceived. The similarities and differences between particular structures were explained in terms of the gradual movement of people and ideas. Thus in 1976 Burl had suggested that recumbent stone circles developed from Clava Cairns and that their forms gradually diverged as different parts of the landscape were settled for the first time (Burl 1976, 160–90). Twenty-four years later he reversed this hypothetical sequence in the light of radiocarbon dates, instead suggesting that the stone circles of north-east Scotland developed before those around the inner Moray Firth. This represented a major change in his thinking, but these architectural developments were still explained in the same way. The evolution of the monuments was played out over a period of time during which they were constructed in one region after another. It is a classic diffusionist argument and one which he also applied to the local distribution of recumbent

stone circles (Burl 2000, chapter 12). As we have seen, the programme of fieldwork reported here has emphasised the similarities between monuments in separate parts of Aberdeenshire rather than their differences.

On a larger scale the same is true if we compare recumbent stone circles with Clava Cairns. In many respects their architecture has even more in common now than it had when Burl first discussed this question. The argument extends from points of detail to larger questions of interpretation and chronology.

The points of detail are particularly striking. They concern a number of important elements in both traditions of architecture (Bradley 2000, chapters 2 and 7). Common features include the importance of radial divisions at Tomnaverie and also in the central ring cairn at Balnuaran of Clava. Another is the use of graded kerbs, which is seen in all the major monuments at Balnuaran of Clava and also at Tomnaverie. Indeed the inner kerb of the Clava ring cairn is graded so subtly that the effect is hardly noticeable: a feature which it shares with the outer kerb at Tomnaverie. The cobbled surface of the platform outside the south-west passage grave at Balnuaran of Clava is very similar to the capping of the cairn at Cothiemuir Wood, and the use of coloured stone is important, too. The selection of red, grey or white raw material is a feature which Tomnaverie, Cothiemuir Wood and Aikey Brae all share with Easter Acquorthies and the main cemetery at Clava (Lynch 1998). It is also found at a few other cairns around the Inner Moray Firth. A further link between the Clava type site and Tomnaverie concerns the ways in which these monuments were built, for in each case their outer kerbs seem to have been revetted by an external bank of rubble. The relationship between Tomnaverie and the passage graves at Balnuaran of Clava is especially striking in this respect. Lastly, there is the distinctive stratigraphic sequence observed in the recently excavated monuments of both traditions, in which the stone circles were constructed after the internal cairns had been built. They may represent the final stage in the evolution of these structures and in some respects the 'pairing' of individual kerbstones and monoliths at Tomnaverie matches the more complex arrangement that was followed at Balnuaran of Clava.

More general links can also be suggested between these two traditions. In both groups of sites it seems as if the evolution of individual monuments followed a prescribed sequence that had been laid down at the outset. Just as the stone circles at Clava were erected as access to the passage graves was closed, the erection of rings of monoliths in north-east Scotland may have been completed by the provision of the recumbent stone. Together with the flankers, this had the appearance of an enormous blocked entrance. In the same way, the ring cairns in both these traditions seem to have been characterised by evidence of *in situ* burning, although this is much more pronounced among the Aberdeenshire monuments. Examples in both regional groups seem to have been filled in with a deposit of rubble.

All these features add weight to the already accepted links between recumbent stone circles and Clava Cairns, such as the number and grading of the monoliths and their orientation towards the south-west. Indeed the solar alignment of the two surviving passage graves at Balnuaran of Clava represent the only major anomaly, and it is unusual within this broader tradition of monuments (Bradley 2000, 126).

The dating evidence from both traditions remains extremely limited, but modern fieldwork provides little objective basis for supposing that one tradition developed before the other. It is possible that some of the characteristics of recumbent stone circles are prefigured in the Late Neolithic of north-east Scotland, but the currency of Clava Cairns and recumbent stone circles must have overlapped and may even have run in parallel throughout their histories. Nor are these the only groups of monuments that should be considered in this context. As I mentioned earlier, many of their characteristic features – the grading of the uprights, their emphasis on the south-west and the use of coloured stones – also occur in other parts of Britain and Ireland.

For that reason it is worth returning to a second possibility that I outlined in Chapter 1. Perhaps the recumbent stone circles, like the Clava Cairns and other less distinctive traditions, drew on a range of ideas that were current over a larger area during the Late Neolithic/Early Bronze Age. These may not have been conceived as architectural or structural devices, so much as the embodiment of particular beliefs. The graded stone circle, for instance,

might refer to the importance of the south-western sky, and the use of white and red stones may even stand for the moon and the bonfire of my title. What really matter are the idiosyncratic ways in which these elements were combined in different regions. That cannot have come about by chance. What archaeologists think of as architectural traditions were carefully constructed statements about the concerns of particular communities. They also provided the physical framework within which those ideas could be explored and expressed in public ceremony.

Such ideas might have taken different forms in different areas and may also have changed over time. The ways in which they were reflected in architectural form might have been equally varied, but those variations are unlikely to have come about by accident. Rather, the contrasts in the styles of stone circles may have been intended to draw attention to local identities and to local ways of thinking about the world. Archaeologists have been concerned with points of similarity and have used these to trace the evolution of particular traditions of monument building, but it is just as likely that those traditions developed in opposition to one another. They were constructed from some of the same elements but their meanings may not have been the same.

Consider the relationship between recumbent stone circles and Clava Cairns. As we have seen, there are many points of similarity, and these are important in establishing their chronological context. On the other hand, some of the very same elements were employed in quite different ways in these two traditions. This is likely to be significant, as the monuments themselves are found in adjacent areas.

As we have seen, recumbent stone circles were located towards the edges of the prehistoric landscape. They were rarely associated with many finds apart from human bones, and pollen analysis suggests that they were set apart from the occupation sites of the same period. Some of them occupied quite conspicuous positions in the landscape and their sites could certainly have been recognised from the settlements of the people who built them. Clava Cairns, on the other hand, rarely occupy such prominent positions in the terrain. They are often inconspicuous and they were built very close to settlements and even on abandoned living sites (Bradley 2000, chapters 8 and 9; Henshall and Ritchie 2001, chapter 3).

The contrast may go even further. Although both groups of monuments adopt similar orientations towards the south and west, the architecture of one group of sites explicitly picks out a segment of the sky whilst the other does not do so. The recumbent stone may symbolise the closure of these monuments, and yet the circles that contain

Table 26 Some contrasting characteristics of recumbent stone circles and Clava Cairns.

	Recumbent Stone Circles	**Clava Cairns**
Relationship to settlement sites	Remote but visible from a distance	Close integration
Landscape setting	Often conspicuous	Usually inconspicuous
Evidence of fires	Abundant	Limited
Form of the primary cairn	Ring cairn	Ring cairn; passage grave
Appearance of the primary cairn	Less conspicuous	More conspicuous

the Clava Cairns are completely permeable. In both traditions the monoliths exhibit the same grading by height, but only in the north-east is this emphasised by a massive construction joining the tallest monoliths. In the same way, recumbent stone circles normally enclose ring cairns and never include passage graves, whilst the Clava Cairns employ both types, sometimes on the same site. The ring cairns are normally more prominent than their counterparts in north-east Scotland. The large passage graves at Balnuaran of Clava are directed towards the midwinter sunset, and in this case any lunar alignment plays a subsidiary role.

The main contrasts between these traditions are summarised in Table 26.

It seems as if both architectural traditions drew on similar elements, but it is clear that in many respects they used them in quite different ways. The same applies to the wider distribution of these elements across the British Isles, but at present too little is known about individual groups of monuments for this argument to be taken further. It provides an important problem for future research.

5.10 CLOSING REMARKS

Alexander Keiller should have the last word, for he played a crucial role in publicising the stone circles of north-east Scotland and securing their preservation. But he also developed a concern, which eventually amounted to an obsession, with related monuments in other parts of the British Isles. It is through that combination of detailed local studies and research across an altogether larger area that progress is most likely to be made.

In 1934 Keiller gave a lecture on 'Megalithic monuments of North-east Scotland' to the British Association for the Advancement of Science. He prefaced it with these words:

> While grateful to the authorities for granting me so long as forty minutes for this paper, I would stress the fact that forty hours would not be sufficient to deal adequately with a subject of such complexity and yet, at the same time, of such archaeological importance, to say nothing of its intrinsic absorbing interest (1934, 1).

In bringing my study to a conclusion, I have come to share this sentiment.