

## **Learning from Places - Topographical Analysis of Northern British Rock Art**

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In this paper I shall take what may seem an unusual approach to the landscape of Northern Britain, for I shall be discussing the evidence of prehistoric rock art. What is the connection between these fields of research?

Both these topics present problems. Landscape archaeology has its limitations, and nowhere more so than in the north, where it has concentrated on studying the location of settlement sites in relation to agricultural resources. Its approach has been entirely neutral, scientific - it has always looked for the most efficient solution to the problems of early land use. Not surprisingly, that approach makes no allowance for the ways in which particular landscapes were experienced by people in the past, or for the process of moving about those landscapes which is so central to our own response today. Modern archaeology is all about sites and monuments, and not about the paths and places which influence our experience of the uplands.

There are other problems in engaging in any study of the earlier prehistoric landscape in this country - and by this I mean the landscape that was settled at virtually any time before the agricultural expansion of the Bronze Age. That is because all too often settlements remain poorly documented and even more poorly dated. Artefact scatters are rarely investigated systematically, and the field record is dominated by monuments associated with the dead and the supernatural. Our response to this dilemma has been a curious one. Either we have made excuses for not finding what we expect to find - the crucial sites must be deeply buried or destroyed by chemical solution - or we have simply projected the settlement pattern of later prehistory back into earlier phases. Thus we commit ourselves to a vision of stable, mixed farming at a much earlier date than much of our evidence allows, and in doing this we forget the vital importance of mobility. Nowhere is this more apparent than in the upland landscapes where so much rock art is found.

For good or ill, rock art research has become a subject in its own right and even supports a specialist journal of its own. But what kind of study is it? In this country the answer is only too clear. It enjoys a low status in prehistoric research, and is thought of, quite unfairly, as the open-air equivalent of brass rubbing. Strange, then, that in other parts of Europe it enjoys much greater

esteem. For instance the Norwegian rock carvings at Alta are on the World Heritage list and the site museum there has been European Museum of the Year. In Britain, on the other hand, we have made little attempt to record these finds and no attempt whatsoever to conserve them. The prospect of interpreting them to the public seems even more remote. Why is this?

I suggest that rock art has yet to find a role in our research. British rock art is completely abstract and for that reason it appears particularly intractable. The various motifs have been treated as if they were portable artefacts and are analysed for their stylistic and chronological information. They play no part in landscape archaeology because they are studied in the same ways as pots.

The situation is very different in those areas with a living tradition of open-air painting or carving, and here we have much to learn (for instance, see Layton 1992). For the most part, rock art is associated with communities who practise a mobile way of life, with the result that it offers a medium through which people who rarely meet face to face can communicate with one another (Mithen 1990, chapter 3; Hartley 1992, chapter 4; Bradley, Harding and Mathews 1993). It provides them with a variety of information, from the everyday to the sacred, and it is rare for any design to have only one meaning. Much depends on who is allowed to see it, on the occasions on which it is viewed, and on whether or not knowledge of its significance is freely available. Thus a single image may mean different things according to the status of the onlooker. Anthropologists have taught us that some of the simplest images may also be the most powerful as they can carry so many different layers of meaning. More complex designs, on the other hand, may be more specific, less ambiguous (see Morphy 1991).

How can we come to terms with such intractable material? It has one great advantage for field archaeologists. Rock art is not only a medium of communication; because it was created on natural surfaces, it forms an essential part of the ancient landscape.

In studies of upland Britain the emphasis has necessarily been on the distribution of monuments - monuments because so little else survives. But if rock art once provided a medium of communication, the variations

in its siting and composition ought to shed some light on the movement of people across the landscape. I must emphasise one very basic point. Mobile people have territories just as settled farmers do, but they see them from a different perspective and they mark them in different ways (Ingold 1986). That is most obvious where resources come under pressure, for in such areas conflicts of interest will arise (Casimir 1992; Barton, Clark and Cohen 1994). That is why particular resources can be indicated in various ways. Rock art was just one medium, but among other things it could certainly have provided a source of practical information for those moving about the terrain. At the same time, there could be cases in which the messages played a different role. Consider the distinctive areas described as 'ritual landscapes'. These may have attracted people from a wider region, and once again these carvings could have provided them with vital information, but in this case it would be information of an altogether more specialised character. In short, we might expect to find most of the rock art in two particular contexts. It should be especially obvious in regions that came under pressure during everyday patterns of land use, but we could also expect to find it near to our ceremonial monuments.

Where are the carvings in the British Isles? They occur throughout northern Britain (Morris 1989) and are also recorded in Ireland (Johnston 1989). There are very few in Wales and the west of England, although related motifs extend along the coastline of Atlantic Europe as far south as Portugal (Burgess 1990a); I shall not consider the continental evidence in this paper. At a local scale, the motifs are found on rocks that were soft enough to carve but resilient enough to retain those carvings today. Generally speaking, they are in areas of sandstone. There may have been similar carvings on other kinds of rock, but, if so, these have now been lost.

The rock carvings are generally found in regional groups, with similar but not identical motifs. In England the main concentrations are in West Yorkshire (Ilkley Archaeological Group 1986), County Durham (Laurie 1985) and North Northumberland (Beckensall 1991 and 1992). In Scotland they are found between the Forth and the Clyde (Morris 1981), and there are other groups in Galloway (Morris 1979; Van Hoek 1986), Mid Argyll (Morris 1977; RCAHMS 1971 and 1988) and Strath Tay (Stewart 1961). In Ireland the major groups are in County Donegal (Van Hoek 1987 and 1988), County Kerry (Cuppige 1986, 56-65; O'Sullivan and Sheehan 1993) and County Louth (Clarke 1982). Their local setting is often rather similar. Although they are confined by the occurrence of suitable rock, they do not extend across its entire distribution. For the most part they overlook tracts of unusually productive lowland soils, and normally they are found in regions where the possibilities of stable land use were limited by topographical features. For example, the carvings of North Northumberland are found around the edges of fertile valleys and basins, closed by the Fell Sandstone to the east and by the Cheviots to the west. In the same way, the rock art of south-west Scotland occurs in a restricted zone between the sea and the Galloway

hills. The art of Mid Argyll was also created around the limits of an island of unusually fertile land, whilst the carved rocks in Strath Tay are found as the productive lowland soils become more restricted towards the head of the valley. Thus we can say that rock art occurs in regions of unusual fertility but it generally avoids those areas in which there was room for expansion. It tends to be found around the edges of restricted areas of productive land. That is precisely where resources might have come under pressure, and it is here that we would expect territorial arrangements to be defined more explicitly. As we know from ethnographic evidence, one way of achieving this would be by inscribing significant features of the landscape with messages of different kinds. Rock carvings might have provided information about the nature and accessibility of resources, but that is not to suppose that they played an entirely practical role. The art of Aboriginal Australia contains a particularly subtle blend of the sacred and the secular (Layton 1986), and, for all we know, British rock art could have done the same.

Lest I raise any false hopes, let me enter a qualification. I am not concerned with reconstructing the original meaning of the British carvings, and in any case I doubt whether any particular motif was ever limited to one interpretation. I am concerned with rock art simply as a method of communication. But it was a peculiarly powerful medium, and we can perhaps take comfort from that. The repertoire of British rock art overlaps with the decoration applied to such features of the landscape as standing stones, circles and alignments. It appears in primary contexts in the Clava passage graves (an observation based on excavation undertaken by the writer in 1994), and it probably developed in parallel with megalithic art (Johnston 1993). It shares a few design elements with portable objects, and it retained its importance long enough for fragments of older carvings to be incorporated in Early Bronze Age burials (Bradley 1992).

Having laid the foundations, I must say something about the premises on which my analysis is based. Clive Gamble once talked about what he called the 'GCHQ factor'. He was referring to the way in which intelligence services monitor foreign radio signals. There are so many of these that it is impossible to decode every message, but some information about troop movements and the like can be reconstructed by working out the intensity of communication passing along particular channels (Gamble 1991). We can do the same. Is it possible that the messages imparted by rock art were more complicated in certain areas than others? If so, was that because of changes in the character of the intended audience? If people came into contact on a regular basis more could be left unsaid. But where the parties were unlikely to meet face to face, or where the audience was larger, the messages might well have been more complex - and never more so than when they were addressed to strangers (Bradley 1991). It has long been claimed that similar rules influence the appearance of portable artefacts (for a general review see Conkey and Hastorf eds. 1990).

We cannot understand the messages contained in



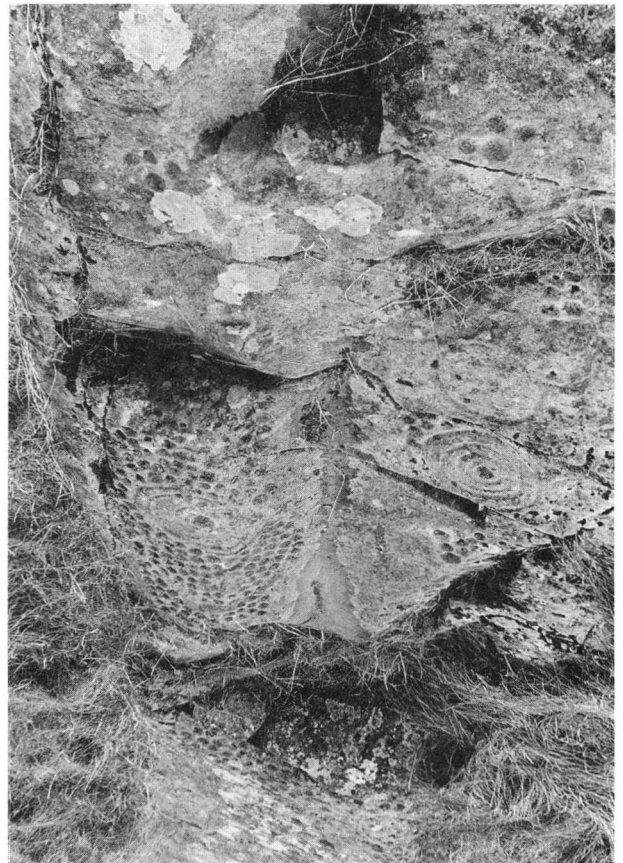
*Plate 1. A simple cup- marked rock on Gayles Moor west near Barnard Castle.*



*Plate 2. Cup marks and cups and rings on Gayles Moor east near Barnard Castle.*



*Plate 3. Circular carvings on a prominent outcrop at Castleton near Stirling.*



*Plate 4. Complex carvings on a prominent outcrop at High Banks near Kirkudbright.*

any of the carvings, but what we can do is to work out the rules by which they were composed. The simplest component of these carvings is the cup mark, which may be found in isolation or may form part of a more elaborate design (Plate 1). Certain cup marks may be embellished by one or more concentric rings (Plate 2), and these rings may show obvious contrasts in their size and spacing across the rockface: generally speaking, the larger the motifs, the more they are set apart (Plate 3; see Bradley 1991). At the same time, the larger circular designs are frequently linked together in a more extensive pattern (ibid); in some areas they may also be found with a range of specialised designs which are shared with megalithic art (Bradley, Harding and Mathews 1993, table 2). None of these claims is particularly exciting, but these relationships are certainly significant (Table 1). They suggest that the commonest designs were deployed according to a simple grammar. Although there is a continuous range of variation, I find it helpful to divide this material into two groups, which I shall call 'simple' and 'complex'.

So far I have suggested that some panels of art may have provided rather different information from others - some designs are quite simple and others are remarkably complex, and it seems unlikely that they imparted exactly the same messages. I have also suggested a reason for this contrast, as different carvings may have been directed towards different audiences. Where information was shared - or could even be taken for granted - the carvings could be fairly simple. But where strangers came into contact, the designs would have to be more explicit and probably more complex. Sometimes the parties would not have been present on the same occasion, and for this very reason it would be quite essential that the carved rocks were easy to find. They would have to be distributed in a predictable manner and, more than this, those addressed to a non-local audience ought to occupy more conspicuous

positions than the rest.

Here we come down to a practical question that is easily answered by fieldwork. I have argued that rock art is generally found in areas where resources may have been coming under pressure, but how would these images have been employed? Are the carvings within these concentrations located in a predictable fashion? Or are they distributed at random? Do the simpler designs have a different distribution from the more complex panels of rock art? And is one group easier to find than the other? If those criteria are met, we can proceed to a more ambitious analysis.

At different times there have been two main claims about the siting of British rock art, although neither has been substantiated. The most explicit statement was by the late Ronald Morris, who emphasised how rock carvings tended to be found at viewpoints (Morris 1979). Less clearly formulated ideas have linked their distribution to paths or trails across the landscape (Walker 1977) - the two suggestions are not alternatives to one another, as both could apply to many individual sites.

Our initial task is to consider the merits of these ideas, but this cannot be achieved simply by visiting the sites. First, we need to show that the prehistoric environment was sufficiently open for these questions to be worth considering. And, secondly, if we are to establish that rock carvings were located on a consistent basis, we need to demonstrate that their positions differ from those of other points in the landscape. We need a control sample if we are to make any disciplined comparisons.

The first question can be answered immediately, although the answer is inadequate. In the areas that I have studied in most detail - Galloway and north Northumberland - there is botanical evidence for the creation of more open conditions during, or leading up to, the period in which the rocks were carved (Moar 1969;

*Table 1*

Maximum number of rings	Number of sites with motifs not joined by lines	Number of sites with motifs linked by lines	
1	18	3	
2	5	3	'Simple' carvings
.....			
3	7	15	
4	1	9	'Complex' carvings
5	1	8	

*The relationship between the number of concentric rings on rock carvings between Ford and Old Bewick, Northumberland, and the evidence for lines linking the motifs together (data from Beckensall 1991). The more elaborate the circular motifs the more likely it is that they will be drawn into a wider composition. The relationship is significant at the 5% level. The table also suggests a distinction between 'simple' and 'complex' carvings.*

**Table 2**

	N-E	E-S	S-W	W-N
Actual sites	36%	3%	22%	39%
Control sample	9%	19%	21%	51%

*The direction of long distance visibility (at five km) from the carved rocks in Galloway and from the randomly chosen control sample. Note the large number of carvings with views northwards towards the Galloway hills (data from Bradley, Harding and Mathews 1993). The difference between the two distributions is significant at the 1% level. Some of the contrast may arise because so many carvings are near a south-facing coastline, but comparison with the control sample suggests that this is not in fact a major cause of variation. Each sample of sites has about the same proportion of views out to sea:*

	N-E	E-S	S-W	W-N
Actual sites	7%	29%	44%	20%
Control sample	12%	33%	41%	14%

Birks 1975; Davis and Turner 1979; Tipping 1992). The disadvantage is that pollen studies provide us with such a generalised picture, especially when the samples come from very few sites. This evidence allows our analysis to proceed but it can hardly do more than that.

The second objective is to compare the rock carvings with control samples in the same areas. There are some parts of northern Britain which are well suited to this kind of study and others where it is virtually impossible, although some of the relevant material can still be obtained using a Geographical Information System (Gaffney, Stancic and Watson in press). There are regions in which the views are obscured by woodland, whilst in others so much raw material has been incorporated in walls that there is little exposed rock on the surface. We need to adapt our field methods to the local terrain.

Let me begin with the idea that rock carvings had been located at viewpoints. In south-west Scotland we compared the views from all the carved rocks that are now accessible with two sets of control points in the local landscape (Bradley, Harding and Mathews 1993). The first was selected by random sampling based on the National Grid. In this case 3% of the study area was analysed. We recorded the width of view in a series of distance bands from nine positions within each kilometre square - these were spaced at 250 m intervals along two transects crossing at right angles in the middle of the sample area. The results were unambiguous, and again they are statistically significant. The views from the carved rocks were wider than those from the points in the control sample, but only within a distance of five kilometres.

We also compared the views from the rock carvings with those from eight surrounding points in the landscape. These were spaced at 100 m intervals along two transects crossing at the site itself. Where there were any differences

of elevation, one transect followed the contours and the other cut across them. The results of this exercise were strikingly similar to those of the previous study. The views from the rock carvings were significantly wider than those from the control sample, but once again this was true only within a range of five kilometres.

There are other areas where the rock has not been cleared, and here it is possible to approach this question from a different angle. In this case we can compare the views from the rock carvings with those from other rocks that could have been carved but in fact were left undecorated. For this exercise we needed another study area, and Northumberland seemed ideally suited. Here we were able to map the distribution of potentially carvable rock in two areas of the Fell Sandstone. The control points were laid out on a hundred metre grid and the nearest exposed rock to each intersection was recorded in the same manner as the rock carvings, so that once again we would be able to compare the two patterns. It soon became clear that the carvings avoid the areas with little or no view (Bradley, Harding, Mathews and Rippon 1993). In a transect cutting across one of the densest distributions of rock carvings we found that the views from the carved rocks are significantly wider than those from the control sample, although in this case the difference is greatest at a distance of more than five kilometres.

It is much harder to decide whether the carvings were also associated with paths or trails, since the identification of prehistoric routeways is notoriously subjective. That is not to say that the problem is insurmountable. Again there is an obvious danger of subjectivity, and so in each of our field studies we compared the direction of view from the rock carvings with those from the different control samples (Table 2). Again the results were statistically significant. In Galloway the carvings, which were often located near to the sea,

favoured orientations northwards into the Galloway hills (Bradley, Harding and Mathews 1993). That is to say, they were directed towards the two main resource zones in this area and the most probable axis of movement between them.

In Northumberland we chose to examine one large area at the junction of the Fell Sandstone and the coastal plain (Bradley, Harding, Mathews and Rippon 1993). Our study transect crossed a major valley linking these two areas. This would be obviously be a focal area in the movement of people and livestock between the uplands and lowlands (in this respect it is not particularly important whether the animals were wild or domesticated). The same route is followed by a Roman road and by the modern A 697. I have already shown that the views from the rock carvings were wider than those from the uncarved rocks, but in contrast to the evidence from Galloway, the two groups share the same orientation. Where they differ significantly is that only the rock carvings enjoy long distance views in both directions - into the Cheviots to the north and down to the coast to the south. In that way they resemble the carvings of south-west Scotland.

All those analyses operate at a very general level, so there is room for a second series of studies at a much smaller scale. The argument that rock art was, among other things, a system of communication depends on showing that the sites were located on a consistent basis - our studies certainly suggest that this claim is justified. But they also depend on the ability of past communities to locate the carved rocks easily, and, most especially, the complex compositions that may have been addressed to a more varied audience.

One test was to see whether these two groups of

**Table 3**

	Boulder or rock sheet	Outcrop
Simple carvings	14	13
Complex carvings	11	26

*The siting of simple and complex carvings between Ford and Old Bewick, Northumberland (the sample of sites is taken from Beckensall 1991). The two groups are distinguished on the basis of the analysis in Table 1. The complex carvings tend to be on outcrops and the simpler carvings on other kinds of surface. The contrast is significant at the 10% level.*

carvings were found on different types of rock. Over thirty years ago Margaret Stewart had suggested that in Strath Tay cup marks are normally on boulders and cup and ring carvings are on outcrops (Stewart 1961). In Northumberland we visited every carved surface between Broomridge and Old Bewick (the area with virtually all the more elaborate carvings in the county). Again the complex carvings are hardly ever found on boulders; instead they tended to occur on prominent outcrops (Table 3). Again the contrast was statistically significant.

We also asked ourselves whether the rocks with the prehistoric carvings could be recognised from a distance. This is not quite the same as our previous test, as some boulders are quite conspicuous and some outcrops are difficult to find. In Galloway there was a marked contrast between the two groups of compositions. All but

**Table 4**

	Simple	Complex
Narrow (visible from up to 90° of the surrounding area)	12	6
Medium (visible from 91° to 180° of the surrounding area)	15	7
Wide (visible from 181° to 360° of the surrounding area)	44	26

*The visibility of carved rocks between Ford and Lordenshaw from a distance of 50 m (the sites are those published by Beckensall 1991 and 1992). There is no relationship between the nature of the carving and the area over which it can be seen.*

	Simple	Complex
Narrow	17	6
Medium	27	7
Wide	26	26

*The same relationship from 100 m away. The complex carvings are visible from more of the surrounding area than the others. The relationship is significant at the 5% level.*

one of the rocks with complex carvings was visible from 50 metres away, whilst fully a third of the rocks with simple carvings could not be recognised at all (Plate 4; see Bradley, Harding and Mathews 1993, table 3). We repeated the analysis in Northumberland but here we used a rather more complicated procedure. This time we considered two distance bands - at 50 and 100 metres - and we also asked ourselves whether the rocks with complex carvings were visible from a wider area than the others. The two groups showed exactly the same pattern at 50 metres, but at 100 metres there was a striking contrast, and the evidence recalls our findings in Galloway. In both groups most of the rocks could be seen from 100 m away, but those with complex motifs were visible across a significantly wider area than the others (Table 4). They would have been easier to find than the rocks with simpler designs, and once again this is consistent with the idea that the two groups were directed towards different audiences.

Because those observations represent an aggregate pattern, they are only a pale reflection of the processes by which people may actually have located the carvings in the past. So we decided to tackle the problem head on. How easy is it to locate carved rocks in an upland landscape? And what methods are most productive?

The normal procedure for answering such a question would be to visit all the known rock carvings and to record their characteristics in detail. Having done so, we could employ simple statistics to work out how much influence different factors may have exerted in the choice of those locations. But such an approach is not entirely straightforward. It cannot reveal any patterns that were not envisaged when the recording system was devised, and once again it suffers from a certain over-abstraction. For that reason I preferred to carry out an experiment (Bradley, Durden and Spencer 1994).

It has often been pointed out that survey teams tend to 'lock onto' one prevailing interpretation. Thus some people find flints while fieldwalking and others find pottery. As archaeologists, we have devoted a great deal of time and effort to correcting these biases, when it is sometimes easier to let them play a more conscious role. In the case of Northumbrian rock carvings we deliberately structured our work to capitalise on this characteristic of human perception, employing four separate teams to search the same area of ground simultaneously, each according to just one hypothesis. These were areas where the rock art had already been discovered and mapped, but none of those taking part in this work were allowed access to any records. Each team covered the same area of ground, and did so for the same length of time. Our aim was to find out how successful each method was in locating the carvings - it was not to find new sites. We surveyed seven areas in all, and every day the teams were changed and took on a different task.

The results reinforce a number of the patterns that I have described already. 45% of the discoveries resulted from searching viewpoints, whilst 29% came about because the relevant team focussed on particularly prominent rocks (those which could be recognised from

100 m away). We compared these approaches with two others, which again provided a control over our results. One team searched the limits of the sheltered ground just below the exposed moorland. This is where rock shelters have been discovered in the past. The remaining team searched a ten metre wide corridor extending between a series of locations selected by random sampling. There were fifteen of these per square kilometre. Both control samples produced the same result, each of them accounting for only 13% of the finds. The results of this experiment were consistent with our other findings.

So far I have tried to show that this apparently unpromising material is organised according to a few general principles. There are statistically significant regularities in the ways in which the designs were composed, in the character of the rocks where they were made, and in their broader distribution across the landscape. Now we may embark on a more ambitious study.

I would like to consider two regions in which we can build on that simple framework, and in doing so, I want to return to some of the broader ideas from which this project began. Let me recall two particularly important points. First, there seem to have been certain rules governing the composition of the carvings, from the simplest element (the cup mark) to far more complex designs. To some extent these rules vary from one region to another, but they can be recovered by studying scale drawings or the sites themselves and are amenable to statistical analysis. They suggest a gradient of increasing complexity among the designs, from what I have called 'simple' to 'complex' rock art. Secondly, I have suggested that the character of the carvings reflects the audience to whom it was addressed. The apparently simple carvings are where people came into contact on a regular basis, whilst more complex carvings occur where the art was encountered by a larger or more varied audience. In this second case there was a need for more extensive or more precise information.

I also suggested that we might expect those variations to reflect the movement of people across the landscape. That might involve apparently mundane activities like hunting, or herding domestic animals, but it could also be connected with the wider gatherings that must have been associated with ceremonial monuments. I shall illustrate each of these points in turn.

I have already referred to Margaret Stewart's work in Strath Tay (Stewart 1961). This is one of the most northerly clusters of rock art and it is a region where the carvings survive amidst large areas of cultivated land. The area has a very simple topography. The sites are almost all located in one major river valley leading towards the eastern limit of Loch Tay. The gravel terraces on the valley floor include a number of fairly simple prehistoric monuments, mainly stone circles and round barrows, as well as a notable concentration of cup-marked rocks. A number of these carvings also overlook the lowest ground. By contrast, the rocks with cup and ring marks are consistently located towards the upper edge of Strath Tay (Plate 5) or around a series of basins situated above the flanks of the valley (*ibid*). The latter area might

**Table 5**

Height above sea level	50-100m	101-150m	151-200 m
Rock carvings	CM	cm	cm, CRM
Surface lithics per hectare	65-50	65-35*	35-5
Artefact distributions	clustered	diffuse	very diffuse

\* (This omits a local peak at 110m where the study transect crossed a raw material source)

CM: major group of cup marks; cm: minor group of cup marks; CRM major group of cup and ring carvings.

*The results of field survey in Strath Tay (data from Bradley 1995). The main concentrations of lithic material are on the lower ground near the major distribution of monuments and cup marks. Artefacts are more scattered on the valley side and are found in decreasing numbers until they reach a minimum where the study area crosses the distribution of cup and ring carvings.*

have been used on an intermittent basis, for it sometimes retains its snow cover when the lower ground is clear. There are very few monuments in this area.

Because of the extent of cultivated ground we were able to compare the distributions of both types of rock carving with the distribution of artefacts in the ploughsoil. This showed quite consistent patterning (Table 5). On the lower ground where most of the cup-marked rocks are found there had been a series of clusters of worked material (mainly quartz but occasionally flint). These were in the same situation as the earlier prehistoric monuments and their distribution focused on the river terraces. The best quality quartz was used in this part of the study area, suggesting that it had provided the location for fairly stable settlements. By contrast, there were no artefact clusters on the flanks of the valley and here poorer quality raw material was worked even when more suitable stone could be found nearby. The density of lithic artefacts fell steadily and reached its lowest point in the zone of cup and ring carvings above the valley. Here prehistoric land use was apparently less sustained and these sites might quite possibly have been located on the margins of the landscape (Bradley 1995). If so, the more complex character of the art might have been influenced by several factors. It could have been viewed by a more varied audience than the cup marks on the valley floor because the higher ground was visited intermittently by a wider range of people. If it had been situated at the edge of the settled land, it might also have marked a boundary that would be understood by people entering the area from outside. In addition, its marginal location might mean that it could be used as a meeting place for a limited segment of the community, and this too may have contributed to the 'special' character of the art.

There are few major monuments in Strath Tay. To investigate the second situation let us turn to the evidence from Mid Argyll.

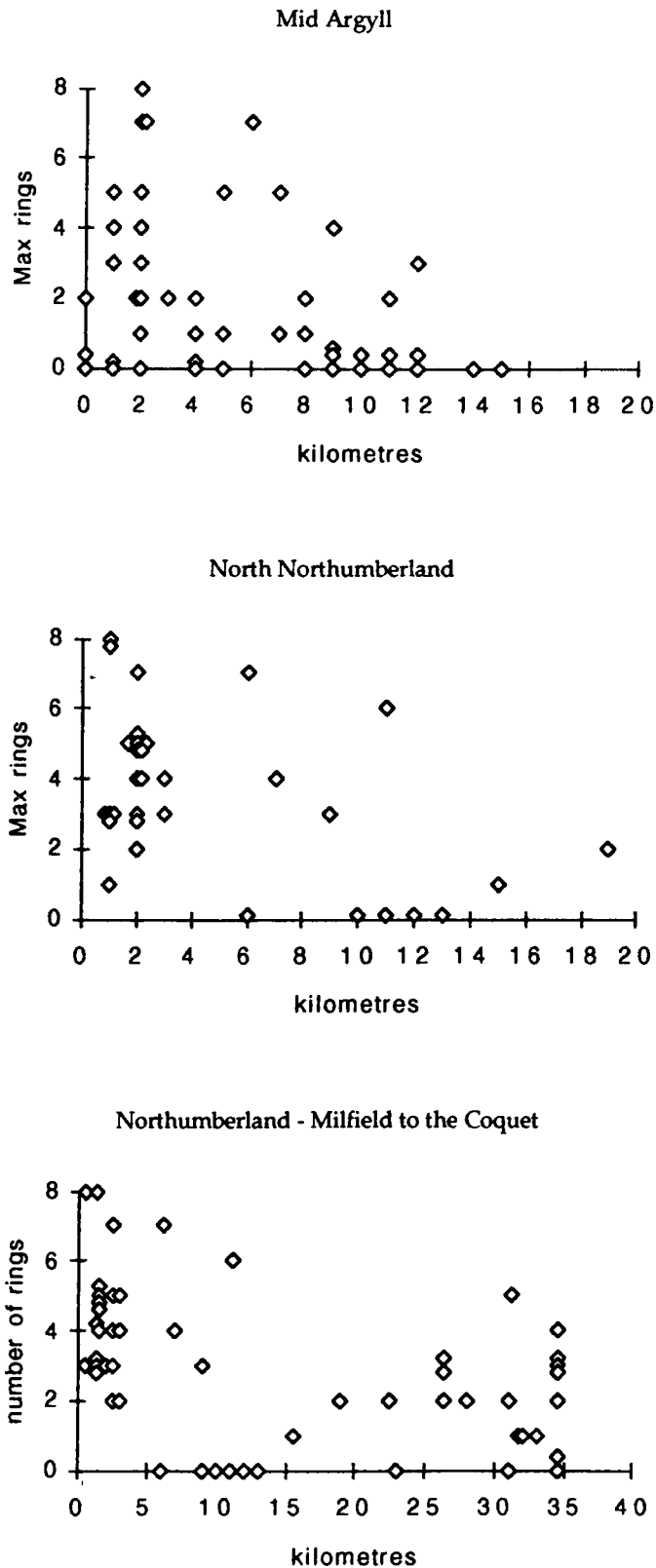
Here the rock art is widely distributed and there is

little to suggest a real distinction between seasonal territories and the areas that could be occupied all year round. The major contrasts are most apparent at the regional scale. Rock carvings are widely distributed, but virtually all the sites with complex motifs are concentrated in one area (Morris 1977; RCAHMS 1971 and 1988). The same is also true of those design elements which are shared with megalithic art. Why is there such a striking contrast within the distribution of these finds?

One possibility is that this concentration of complex motifs focusses on to the route linking the mainland of western Scotland to the Irish Sea, and another possibility is that there was particularly intensive activity in the fertile lowlands close to Kilmartin. On the other hand, perhaps these were simply factors that influenced the creation of major monuments in this area. If so, it may have been the presence of those monuments that coloured the content of the rock art.

In this one small area there are megalithic tombs, stone alignments, stone circles, round barrows and henges, and lining the valleys that approach these sites there are major panels of rock art. These seem to overlook the main routes leading into this special area, and it is noticeable that the most complex carvings of all are those whose positions command more than one of these valleys (Bradley 1991). It is as if people approaching Kilmartin from further afield might have been confronted by carvings providing more and more specialised information. This is illustrated in fig. 1 which shows how the size of the carved motifs increases towards the edges of the lowland basin where so many monuments are found; in the same way the carvings become steadily simpler in outlying areas. Rather similar arguments apply to the art of the North Northumberland (Beckensall 1991 and 1992), and fig. 1 also illustrates the same pattern in relation to the position of the Milfield Basin. In this case there is a second, more minor group of complex motifs towards the Coquet Valley around Rothoury where many burial cairns are





**Fig. 1.** The decreasing complexity of carved designs with distance from major monument complexes. This diagram compares the maximum number of concentric rings on any carved surface with the shortest route along the network of valleys to the entrance of a natural basin containing a major group of monuments. In Mid Argyll the sample is taken from Morris (1977) and RCAHMS (1988) and is limited to sites to the west of Loch Fyne. In Northumberland the sample is taken from Beckensall (1991 and 1992) and is shown at two different scales. The first diagram shows the decreasing size of the carvings with distance from the edges of the Milfield Basin, whilst the second extends the analysis as far as the Coquet Valley where the complexity of the motifs is rather greater, perhaps because there are so many burial monuments in that area.

located. Again I suggest that there is a direct relationship between the character of the carvings and the composition of the audience who would have viewed them.

I have stressed that rock art may have worked at several levels, but in much of this paper I have emphasised the pattern of land use. It provides an obvious point of departure, but it is only the beginning of the process of interpretation. In Britain we have long recognised the overlap between open air rock art and the decoration applied to very specialised monuments. I should like to end by suggesting a further stage of analysis.

I have already complained that the earlier prehistoric landscape is a landscape filled with monuments and that settlement sites of the same date are often difficult to find. In the course of this paper I have talked about the importance of paths and places, and I have argued that viewpoints are another feature that we study all too rarely. But none of this addresses the vital question of sequence.

Perhaps the most basic point to make is also the simplest. The agricultural landscapes with which we are so familiar have no place for prehistoric rock art. They relate to a quite different way of organising and perceiving the world. Once the landscape was divided into a network of enclosures and fields, natural places would have been far less important. Territories were defined in an unambiguous manner and now they could be recognised from a single vantage point: that is to say, from the settlement itself. When did this development occur?

There is some archaeological evidence that panels of rock art were slighted by features of the later prehistoric landscape, and these examples provide at least some fixed points in the process of change. There are rock carvings on Ilkley Moor that are crossed by prehistoric field walls (Ilkley Archaeological Group 1986), and in such cases it is obvious that the designs could no longer be seen. There are other rock carvings that were buried beneath later monuments. A good example is the main hill fort on Dod Law in Northumberland whose rampart clearly overlies an elaborate design (Smith 1989). And there are more ambiguous cases in which carved stones seem to have been built into prehistoric earthworks like Eston Nab (Vyner 1988) or the Derbyshire hillfort of Ball Cross (Stanley 1954). Such sites appear to be of Late Bronze Age or Iron Age origin, and in these examples there is nothing to suggest that the motifs retained their significance.

There are also Early Bronze Age monuments which incorporate previously carved stones (Simpson and Thawley 1972), but this time it is difficult to argue that it happened by chance (*pace* Burgess 1990a and b). Fragments of older carvings were quite often incorporated in round cairns, but they were not a representative sample of the rock art found in the surrounding area (Bradley 1992). Circular motifs are over-represented and simple cup marks are rare. Still more specialised motifs with their counterparts in megalithic tombs also appear more often than we might expect. Generally speaking, these motifs were directed towards the corpse. Thus they can be found inside cists, on the inner surface of the kerbstones or on the underside of slabs or boulders built into the fabric of

the cairn (*ibid*). Circular motifs tend to be associated with cist burials, whilst cup-marked slabs cover simple urned cremations. It seems as if the reuse of pieces of carved rock was ruled by strict conventions.

Where did these fragments come from? It is difficult to say, although most of them are decorated in exactly the same style as panels in the open air. The carvings incorporated in Early Bronze Age burials had often undergone a period of natural weathering, and in some cases the design was broken when these pieces were taken from their original setting. Not long ago MacKie published the results of an excavation near Dumbarton, where, he claimed, a rock outcrop had been carved at two different times (MacKie and Davis 1989). The older, weathered carvings had been truncated when blocks of stone were taken away from the site. The freshly exposed surfaces were decorated in the same style, but these motifs were less weathered and presumably more recent in date. There was no evidence for the use of decorated cist slabs in the surrounding area, and MacKie preferred the idea that the outcrop was quarried when a nearby hillfort was built.

A new find from my work in Northumberland suggests another interpretation. The field evidence is very similar, but in this case just one slab had been removed from the parent outcrop, which forms part of an important series of rock carvings at Fowberry near Wooler (Beckensall 1991, 44; plate 6). Again the newly exposed surface had been decorated, but this time there are records of Bronze Age cist slabs in the surrounding area. This provides a further reason for supposing that the reuse of pieces of carved rock was very carefully structured.

The location of this particular site is especially intriguing in view of two other finds from the same moor. In one case a fragment of carved stone had been used or reused in the kerb of a round cairn, but the decoration faced inwards (*ibid*, 41). It also contained a series of cup-marked boulders, most of them facing downwards. There was a second cairn nearby whose kerb had been built from carefully selected glacial erratics. In this case the monument itself was located at the mid point in a linear distribution of rock carvings, which featured simple motifs at its edges and more complex designs towards the centre (*ibid*, 45-6; Bradley and Mathews in prep.) .

This is not an isolated instance, and we have identified four other sites in Northumberland where round cairns are closely related to individual rock carvings. In at least two cases it is known that these cairns included cists, presumably of Early Bronze Age date. There are at least four instances in which a rock carving is found just outside the kerb of one of these monuments. On one site the rock art must be earlier than these structures, but in the remaining cases there is no evidence of sequence.

These observations suggest a gradual convergence between the treatment of natural locations and the creation of funerary monuments. In one case relics of open air rock carvings were incorporated into Bronze Age cairns, and, in the other, the presence of rock art itself influenced the location of those sites. The building of mounds and cairns forged a link between specific people and particular



*Plate 5. Cup and ring carvings overlooking the end of Loch Tay.*



*Plate 6. The possible cist quarry at Fowberry near Wooler. The quarried slab would have been about 50 cm square. (See also Beckensall this volume, fig. 1).*

places in the landscape. In that way it provides a foretaste of the shape of things to come, for that very process suggests the development of closer controls over the terrain.

During the last few years we have learned how to study settlements and field systems, and have become used to the idea that prehistorians can contribute to the history of territorial organisation. Funerary monuments have a less obvious contribution to make, but, as the late Don Spratt showed so well, they do have their part to play (Spratt 1990, 116-22). Rock carvings, on the other hand, provide a clue to a very different way of seeing the world. In this paper I have tried to show how that world can be rediscovered. That is why I have been writing about art when some of the other contributors are writing about the landscape. We are following different paths to the same destination.

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