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Rock art research as landscape archaeology: a pilot study in Galicia, north-west Spain

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Introduction

Rock art is found in many different areas of prehistoric Europe, but it often appears in similar contexts. It is most apparent in periods in which settlement sites have a rather ephemeral character and in parts of the landscape which are likely to have experienced a mobile pattern of exploitation (Bradley 1993: chapter 3). It is surprising, then, that studies of this phenomenon so rarely take advantage of its connection with the natural terrain. Instead, they have concentrated on the character of the designs, and the main emphasis has fallen on questions of style and chronology. In effect, the motifs have been separated from the rock and its place in the landscape and treated in exactly the same manner as portable artefacts (Anati 1976; Malmer 1981). It is our contention that this approach has obscured their full potential for research and, in particular, the contribution that they have to offer to studies of the prehistoric landscape.

Neolithic and Bronze Age petroglyphs are widely distributed and occur in many parts of Europe, from the central Mediterranean to Scandinavia. Although there are occasional areas of overlap between the different styles of rock carving, these have obscured the more important point that they may have been created under similar conditions in a variety of different areas. Their interpretation has always presented problems, and has usually been approached in one of two ways. In Scandinavia, rock carvings have been studied using the insights provided by regional ethnography, particularly the traditional beliefs of the mobile peoples who still live beyond the agricultural frontier (Helskog 1987; Tilley 1991). Elsewhere, in Atlantic Europe, the most promising approach has been through comparisons with other media: the distinctive decoration applied to portable objects and also the motifs associated with stone statues or megalithic tombs (Johnston 1989: chapter 4; Vázquez 1990; Jorge and Jorge 1991). In this paper we suggest another way of looking at this material. We consider that an equally promising method of analysis is to reunite the carvings with the rock itself and to study their detailed relationship to the local topography and its possible modes of exploitation. We shall illustrate this approach, using some evidence from north-west Spain.

The prehistoric rock carvings of Galicia

Among the major groups of rock carvings in Europe are a number which are found in upland areas that might be best suited to exploitation by hunting, mobile pastoralism, shifting agriculture or transhumance. Others are located on the coast near to fishing grounds or along the routes leading between different parts of the landscape. They seem to have been created in regions of extensive land use and sometimes during periods with only limited evidence of sedentary farming. In both Scandinavia and Atlantic Europe their history comes to an end with the agricultural expansion of later prehistory (Bradley 1993: chapter 2). Although they do portray domesticated animals, they suggest a major emphasis on the use of wild resources. Certain species, especially deer, figure prominently among the identifiable images.

A few examples may help to illustrate these points. In the Pyrenees, for instance, the rock art is closely linked with traditional transhumance routes (Bahn 1984: 324–31), whilst the more complex carvings in Britain and Ireland are normally on the higher ground some way above the areas with more fertile soils (Bradley 1991). At the same time, hunting scenes are very widely distributed and can be recognized in the central and west Mediterranean, in Atlantic Spain, and throughout Scandinavia.

A number of writers have discussed the ways in which resources are demarcated by mobile peoples and the circumstances in which this is likely to happen (Ingold 1986; Layton 1986; Casimir 1992a). We can extend their arguments to those regions utilized on an intermittent basis by populations whose home settlements were in other parts of the landscape. There is a greater emphasis on paths and places than on the continuous boundaries that characterize areas of farmland. Significant points in that terrain may be marked in special ways: by paintings, petroglyphs or even by the creation of monuments. This does not happen everywhere. It is generally found in areas of the landscape where resources are productive and dependable but sometimes of limited extent (Casimir 1992a and b). Under these circumstances mobile people may define their rights more closely than is otherwise the case.

Such arguments have often been employed in studies of megalithic monuments, and recent work has shown that they apply to sites in Galicia, at the north-west limit of the Iberian peninsula (Fig. 1; Vaquero, *in press*; Vaquero 1991: 165–72). In this case, however, the main groups of megalithic tombs are just as closely integrated into the general pattern of movement through the landscape (Criado *et al. in press*; Vaquero, *in press*). Detailed studies of tomb distribution suggest that they were located at important points along routes across the terrain which are used by people and animals to this day (Infante *et al.* 1990). The same may be true of Galician petroglyphs, and it seems worth taking a similar approach to that material. In doing so, we can also make some use of the distinctive subject matter of the carvings.

These carvings have a fairly simple repertoire. There are a series of abstract designs, ranging from simple dots or ‘cup marks’ to more complex circular motifs, a number of which can be joined together by a network of wandering lines (Vázquez 1990). In addition, there are numerous representations of deer (Plate 1), and smaller numbers of recognizable horses, human figures and artefacts (García and Peña 1980: 133–43). The chronology of these designs remains to be resolved, but it seems likely that they were first created in the

Figure 1 Map of Galicia showing the areas (stippled) with prehistoric rock art. The countours arc at 200m intervals.

Plate 1 Carvings of a red deer and curvilinear motifs at Fentans, Campo Lameiro.

Late Neolithic period and remained important during at least the earlier phases of the Bronze Age – some of the carvings may be assigned to the latter period because they depict recognizable types of weaponry, for instance halberds (Peña 1980). Galician petroglyphs seem to have lost their significance by the Late Bronze Age and Iron Age when individual examples were buried beneath the walls of the defended sites known as *castros* (Peña and Vázquez 1979; Peña 1992; Peña and Rey, in press).

We can consider their distribution at several different scales. At a very general level Galician rock art belongs to a broad tradition of carvings extending along the Atlantic coastline. To the north, it shares a range of abstract motifs with sites in Britain and Ireland, and to a lesser extent in western France (MacWhite 1946; Burgess 1990). In this case the major source of inspiration may have been the art of the Irish passage tombs. The purely Iberian contribution includes depictions of what are described as 'idols' and weapons that would normally be found in areas further to the south (Vázquez 1990). These connections provide evidence of a wider interaction sphere which is best documented between the later development of passage graves in the fourth millennium BC and the dissemination of metal artefacts over a thousand years later.

Very simple carvings are found widely in Galicia, but there is also a more local axis, and it is the sites in this group that provide the subject matter of our paper (Fig. 1). Nearly all these carvings are on granite, but they do not extend across the full distribution of this rock. They focus on a compact region of the country in which three important resource zones are found in close proximity to one another. On the Atlantic coastline there are the deep inlets known as *rias*, which provide an extremely productive range of wild resources. Further inland are quite narrow tracts of fertile lowland soils, which are well suited to intensive cultivation, and beyond these we find extensive areas of upland which contain a number of megalithic tombs. As well as these topographical differences, all three areas show important contrasts in their climate (Fig. 2a), temperature (Fig. 2b), proneness to drought (Fig. 3a) and productivity (Fig. 3b). These might have two implications for the prehistoric pattern of land use. They would have made this area particularly productive,

Figure 2a The climatic regions of Galicia. The most favourable follows the Atlantic coast to the north and west. To the south-west it also corresponds quite closely to the overall distribution of the rock art. (After Carballeira et al. 1983.)

Figure 2b The annual average temperature in Galicia in degrees centigrade. Note the gradient across the area with the rock carvings. (After Carballeira et al. 1983.)

but the concentration of different resources could have led to conflicts over their exploitation. At the same time, they would also have necessitated regular movement between these three parts of the region during the course of the year. This situation is restricted to the area in which we find the main distribution of rock carvings (Figs 1–3), and the very existence of those sites may indicate a significant level of control over natural resources.

Topographical analysis of the rock carvings

There are equally striking contrasts within the distribution of the petroglyphs. Although the differences can be over-emphasized, there are two important groups of sites, one of which focuses on the rias and the other on the edges of the high ground. The coastal group seems to include a greater proportion of abstract motifs, whilst the carvings in the interior contain more depictions of red deer (Peña and Vázquez 1979). In fact the distribution of the latter group is really quite restricted and very few of the carvings are located close to

Figure 3a The extent of drought in Galicia during July. An index of >1 indicates the areas of drought. Note that these include parts of the coastal distribution of rock art. (After Carballeira et al. 1983.)

Figure 3b Potential crop production in Galicia represented in bioclimatic units (After Carballeira et al. 1983). The most productive areas are generally towards the coast, and regions with values of less than 7.5 are unable to support forestry.

the megalithic tombs found in the uplands. Rather, they tend to be distributed around the edges of the higher ground in the intermediate zone between an area which has been used for intensive cultivation and tracts of more marginal land in which arable farming takes place intermittently when it is practised at all. This is particularly striking in view of the importance of red deer in these carvings since their annual range would have extended far beyond the distribution of the petroglyphs (Clutton-Brock, Guinness and Albon 1982; Putnam 1988). The rock carvings are found in an area in which the movement of these animals would have impinged on the lives of those working the more productive soils. There are no deer in the area today, but a similar pattern can still be observed with the free-ranging horses that move across this landscape (Plate 2). The paths followed by these animals emphasize the location of a series of archaeological sites, from Upper Palaeolithic rock shelters to megalithic tombs (Infante et al. 1990).

The siting of the petroglyphs can also be considered on a more local scale, and here the evidence must be studied by detailed analysis in the field. This involves examining the local

Plate 2 Free ranging horses in the Galician landscape close to Pedra da Auga, Vincios.

topography of each of the carved rock sites and comparing it with the characteristics of the uncarved rocks in the same area (cf. Bradley, Harding and Mathews, in press). Such work is labour intensive and so far it has been confined to the open landscape in the foothills, where the full extent of several natural basins has been examined on the ground. Although work is still in progress, there are already sufficient results to indicate the potential of this approach.

The topographical evidence is both positive and negative: we can characterize the situations in which the petroglyphs occur and those in which they are absent.

The positive evidence is remarkably consistent, although it may not take the same form in coastal areas. The petroglyphs tend to be found along the paths across the open landscape followed by free-ranging horses even today. Generally speaking, they focus on the shallow upland basins, some of them containing peat, which remain relatively moist even at the height of summer (Plate 3). These *brañas* provide shelter for the animals, and some have been enclosed by present day farmers. Field survey at Bocelo (Criado et al. 1991), just outside the distribution of the petroglyphs, has shown that the *brañas* provide an important focus for upland activity, as reflected by finds of lithic artefacts (Cerqueiro 1991) and Bronze Age domestic sites (Méndez 1991). These locations are equally important in the distribution of monuments to the dead (Criado, in press). Such a regular pattern is limited to the changing strategies of land use during the prehistoric period (Criado 1991; Criado in press).

The paths which provide such an obvious focus for the distribution of rock carvings run along the edges of these basins and also follow the sides of the larger valleys. There are important finds of petroglyphs where these routes connect different components of the landscape, and, in particular, where they cross. Groups of petroglyphs are found where such paths enter or leave the basins, and still further examples can be discovered on natural

Figure 4 The topographical setting of the prehistoric rock art at Chan da Lagoa, Campo Lameiro. The heavy black arrows indicate the paths across the modern landscape followed by free-ranging horses and the vertical arrows mark the positions of the rock carvings. The stippled area is a *braña* which is enclosed by a modern fence.

terraces within the wider valleys and also around the springs. In general, all these locations command views over the paths and basins that characterize the landscape in this area (Figs 4 and 5; Plate 4).

The negative evidence is equally clearcut. In comparison with the uncarved rocks in our study area, the petroglyphs avoid conspicuous outcrops in favour of less striking positions. In some cases this involves selecting exposures on lower ground than these alternative locations. As a result, the views from the petroglyphs can be directed towards very specific areas, normally the *brañas*. There are instances in which these sites are found only a few metres away from exposures with much wider views; the important difference is that these do not command the edges of the basins. As we shall see, in those rare instances in which this pattern breaks down the motifs carved on the rocks may depart from the normal repertoire.

Motif analysis

Despite the attention paid to the control sample of uncarved rocks, such an analysis is bound to be impressionistic. In particular, it places a considerable emphasis on the paths across the landscape followed by free-ranging horses and the places where they congregate. Is there any evidence that these areas had the same significance in prehistory? At this point we can turn our attention to the content of the petroglyphs and discuss them in relation to their positioning in the landscape.

The petroglyphs in our study include many carvings of animals, the great majority of which can be identified as red deer (García and Peña 1980: 123–43). As we shall see, they include different combinations of stags and hinds, but in almost every case they are

Figure 5 The topographical setting of the prehistoric rock carvings around a *braña* at Fentans, Campo Lameiro. The conventions are the same as in Figure 4.

Plate 3 General view of the *baña* at Fentans, Campo Lameiro. There was a carving on the rock beside the tree in the foreground. Compare this photograph with the diagram in Figure 5.

depicted in greater numbers than we would expect to encounter in a closed environment (Clutton-Brock, Guinness and Albon 1982; Putnam 1988). Although horses do occur, they are generally found with riders or with other human figures. Animals are rarely shown in complete isolation and are often accompanied by abstract designs and occasionally by

Plate 4 A carved rock overlooking the head of a valley near Fentans, Campo Lameiro.

depictions of recognizable artefacts (García and Peña 1980: 140–2). These animals are invariably drawn in profile, and in many cases they seem to be moving. Where several of them are depicted on one surface they usually face in the same general direction, as if they were portrayed crossing the landscape together. The orientation of these carvings is very striking indeed, for in virtually every case the deer are shown passing along the same basic axis as the paths in the modern landscape; this is also indicated by the occasional carvings of hoof prints. There are fewer drawings of horses, but these exhibit very much this pattern except where they form part of hunting scenes. In that case horses and their riders either pursue the deer or they confront them head on.

If such observations were confined to isolated panels of carved rock, there would be no reason to take them particularly seriously, but in fact the same patterns are repeated around entire valleys or basins, so that what seemed to be an isolated pattern may be regarded as a more coherent system. At virtually every site the pattern of movement recorded in the petroglyphs is around the edges of the *brañas* or running upslope along the paths taken by horses today.

At one level such observations are valuable because they seem to shed light on the use of the uplands during a period in which the pattern of settlement is little understood. In particular, they are useful because they emphasize the importance of mobility long after the first adoption of domesticated resources. But there are clear limits to this approach, and these have to be confronted. Our analysis builds upon an earlier study of tomb location and of the pattern of movement across the landscape (Infante et al. 1990). This is evidenced at both a general level (Criado, Fábregas and Vaquero, in press) and a local

scale (Vaquero 1990 and 1991). Whilst it adds another dimension to that analysis, the evidence of those monuments also warns against an excessively functionalist interpretation.

Although the placing of burial monuments in the landscape may shed some light on the pattern of settlement, we cannot overlook the central importance of ideology in this process. The same caveat applies just as strongly to rock carvings: they cannot be viewed simply as illustrations of everyday life. There are several reasons for taking this view.

So far our analysis has concentrated on the drawings of animals, and yet these form only part of more elaborate compositions in which abstract motifs may be at least as important. This seems to be particularly true in the coastal area. At the same time, we have already seen how these carvings may also incorporate foreign elements, some of them, like the 'idols', apparently connected with ritual. Nor is it very likely that the uplands were used exclusively for hunting, yet in the province of Pontevedra, where precise figures have been published, carvings of deer outnumber depictions of horses by a ratio of about fifteen to one (García and Peña 1980: Fig. 142). The art contains no scenes of domestic life. Throughout there is an emphasis on a restricted range of activities – hunting, riding and fighting. Like the rock art of the central Mediterranean (Anati 1976; De Lumley 1984), they may present a partial, male-centred view of the world.

That may have been an ideological projection, but it was by no means uniform. Within individual valleys or basins we can recognize spatial variation at a very local level. Here three kinds of patterning have been identified, and once again they show a remarkable sensitivity to the details of the micro-topography.

First, we find sites where the layout of the individual carvings echoes broader structures in the landscape as a whole. In this case the drawings of the animals not only share the same orientation as the paths across the terrain: they are located around the edges of the panels of carved rock. Thus they are peripheral to large circular motifs in the same way as the petroglyphs themselves are distributed along the edges of the *brañas*. There have been claims that the rock art of the central Mediterranean provided maps of the surrounding country (Delano Smith 1990), but because of the overlap with tomb art we do not favour such a literal interpretation here (for a somewhat similar interpretation of Galician petroglyphs see Züchner 1989). On the other hand, the relationship could have been metaphorical, as these carvings can be organized in a similar manner to the surrounding landscape.

That particular pattern is found in the heart of the rock art distribution. Rather different configurations appear towards its limits. Although most of the rock carvings are found around small valleys or basins, that is not always the case, and some of the exceptions have a rather different character. These command unusually extensive views and may be located in more conspicuous positions than the others. Normally these sites share the characteristic imagery found elsewhere in the region but they can also include depictions of more exotic artefacts, principally weapons (Peña 1980). This is especially striking as such motifs are so unusual. In the province of Pontevedra García and Peña record fifteen locations with carvings of weapons, compared with nearly 350 where there are simple cup marks and 250 or more with circular motifs (1980: 123–43). It seems as if the sites with carvings of exotic artefacts looked outwards from the edges of the system. Peña and García

Plate 5 Drawing of a stag at Laxe da Rotea de Mendo, Campo Lameiro.

(in press) come to rather similar conclusions, analysing the rocks with weapon carvings and/or hunting or riding scenes.

One further pattern has been recognized (Peña 1987; M. Santos Estevez, pers. comm.). In this case the edges of the rock art distribution were marked in a different way. On the lower ground there are carvings of both stags and hinds, usually drawn at the same size as one another; in general there seem to have been rather more females than males. Towards the upper limit of the rock art distribution the carvings become more varied. There is still the same interest in drawings of deer but the animals are considerably larger and there is a more obvious emphasis on depictions of stags (Plate 5). These may dominate a composition in which most of the animals are hinds, and in such cases the females are drawn at a smaller scale. The nature of the composition also changes, and the larger animals can be carved in relief whilst the others are drawn in outline. These carvings place more emphasis on the antlers than the other petroglyphs.

At one level these drawings may emphasize basic distinctions in the natural distribution of red deer (Clutton-Brock, Guinness and Albon 1982; Putnam 1988; Pike-Tay 1991: chapter 4). For much of the year the mature stags occupy different areas from the other deer, and less than half the carvings illustrated by García and Peña (1980) seem to show stags and hinds together at the same locations. In the rutting season, however, their distributions overlap, and at this stage the older stags tend to occupy the highest ground (Lowe 1966). Occasionally we can recognize a similar pattern in the siting of the rock art. In such cases outsize stags may be depicted alongside larger groups of hinds. Once again these scenes could have a broader symbolic content, for during the annual rut mature stags employ their antlers in aggressive displays, and there are dramatic fights between rival males. It may be no coincidence that two members of this small group of carvings also depict metal weapons. Again this suggests the emphasis on 'masculine' activities that so often characterizes rock art.

In each case it is important to emphasize that we are describing patterning that has been

investigated over small areas. At the moment it is premature to connect these observations into one coherent system. They need not have expressed a uniform visual code, or they may be expressions of a wider view of the world that was interpreted in different ways at a local level. More ambitious interpretations must await further work in the field.

Conclusions

It has not been the purpose of this paper to offer a detailed discussion of the ideology that may lie behind the prehistoric rock carvings of Galicia. Our objective has been far simpler. We have attempted to show the value of studying prehistoric petroglyphs in their precise topographical setting: as well as 'reading art', we have attempted to read the landscape of which it was a vital component. In doing so, we have offered a series of interpretations at quite different geographical scales. Those hypotheses also draw on traditions of archaeological research which are rarely used in combination. Such interpretations are not offered as alternatives, as they are in Tilley's recent study of Scandinavian rock art (Tilley 1991). Whilst it is worth considering this material from more than one perspective, each of these interpretations operates at a different geographical scale. Taken together, they suggest the potential for a new approach to this material.

Our most general interpretation draws on a well-established tradition of ecological archaeology. At this level we suggested that Galician rock art is restricted to an area in which a series of productive resources could be found in close proximity to one another and that these would have had to be exploited at different times of year. We argued that particular places in the landscape may have been marked by rock carvings as more low-lying resources came under pressure, and we took the view that this might be a characteristic feature of regions with a mobile pattern of exploitation. It is a case that can only be argued at a very general level.

We attempted to substantiate that argument by showing how closely the distribution of petroglyphs reflected the routes that free-ranging animals follow across the modern terrain. This emphasized the crucial areas that would provide the best grazing and shelter during the late summer drought. We also argued that the existence of those paths in the prehistoric period might be documented by the distribution and organization of the petroglyphs. These depicted large numbers of deer apparently moving in the same directions as animals do today. It still remains to consider the significance of the links between different concentrations of petroglyphs, as they may shed light on rather broader patterns of movement across the landscape. Again this interpretation bears the influence of a distinctive school of field research, and that is why the title of this paper relates our studies of rock art to the more general aims of a 'landscape archaeology'.

At the same time, any detailed appreciation of this material soon reveals the limitations of a functionalist approach to the landscape, and in the final section of this paper we embarked on an analysis of the character and location of the petroglyphs that placed much greater emphasis on symbolism and ideology. At this stage our findings are rather tentative, but they are sufficient to reveal a dimension to the distribution of Galician rock art that has not been appreciated before. Such an approach may be novel, but once again it is firmly grounded in topographical analysis.

To conclude, in the light of the pilot studies described here we would contend that Galician rock art can be recruited into a study of the landscape, even in an area where burial mounds are more conspicuous than settlements and where mobility may have been at least as important as sedentism. By taking this step we would hope to complement existing studies based on the distribution of monuments.

At the same time, like other art styles, the Galician rock carvings echo everyday life only obliquely, and it has become clear that the routines of daily existence, and even the distinctive behaviour of the red deer, may also have provided a vital source of metaphors and symbols. Rock art provides evidence for a proposition that is more often asserted than demonstrated: that the landscape was permeated by meanings and was not simply a source of provisions. Through the analysis of rock art we may be able to moderate the functionalist bias of landscape archaeology.

One of the rock carvings considered in our fieldwork, Pedra das Ferraduras, has played a central role in earlier discussion of petroglyphs (Anati 1968; Peña 1981; Alvarez 1985–6). Anati (1968) has placed some emphasis on the juxtaposition of two images there, a red deer and an 'idol', and has used this evidence to discuss the chronology and cultural affinities of the prehistoric art of Galicia. That is a perfectly legitimate approach, but it is not the only way in which this material can be studied. The same rock is just beyond the limits of one of the *brañas* that play such an important part in our interpretation, and the deer depicted in that particular carving belongs to a much more extensive series following the limits of the basin (Fig. 5). Anati's approach has much in common with the study of portable objects, yet it is concerned with images that were fixed at specific places in the natural world. If rock art research is to play a central role in the study of prehistory, we should take that observation as our starting point.

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Abstract

Bradley, R., Criado Boado, F. and Fábregas Valcarce, R.

Rock art research as landscape archaeology: a pilot study in Galicia, north-west Spain

Like so much rock art, the Neolithic/Bronze Age petroglyphs of Galicia have been studied mainly as a source of stylistic information. This paper contends that it may be more rewarding to see them as a vital component of the prehistoric landscape. In this paper we study their siting in relation to Galician ecology and the movement of wild animals across the terrain. We also consider the organization of the panels of carved rock at a more local level and attempt to interpret their distinctive use of the local topography. We should not treat rock carvings as if they were portable artefacts. A more flexible approach to this material may help to break down the functionalist bias of landscape archaeology.

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Richard Bradley, Felipe Criado Boado and Ramón Fábregas Valcarce

Images out of water: interpreting the Karlby Stone

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