Landscape, Archaeology, Heritage
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TAPA
Trabajos en Arqueología del Paisaje

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Edita: Grupo de Investigación en Arqueología del Paisaje, Universidade de Santiago de Compostela
Depósito Legal: C 1870 1997
ISBN del Volumen: 84-8264-141-7
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The papers included in this volume represent different stages of various research projects developed in the Department of Historia I (University of Santiago de Compostela) during the last 3 years.

references

The papers collected in this volume represent some of the contributions of GIArPa (Landscape Archaeology Research Group) to the two last meetings of the European Association of Archaeologists, hold in Riga (Latvia) and Ravenna (Italy) in September 1996 and 1997 respectively.

financial support

This edition has been entirely supported by GIArPa (Landscape Archaeology Research Group).

edición castellana

Próximamente se editará una versión castellana de este volumen, dentro de esta misma serie TAPA.
INTRODUCTION: COMBINING THE DIFFERENT DIMENSIONS OF CULTURAL SPACE: IS A TOTAL ARCHAEOLOGY OF LANDSCAPE POSSIBLE?

Felipe Criado Boado

The studies of Landscape Archaeology and, in general, the consideration of space as a component more relevant to ancient societies, constitute an area of research of doubtless importance. Its origins and development are directly related to Historical Geography and to Functional Archaeology.

However, the need for a more profound reworking of Landscape Archaeology is evident. This rethinking is parallel to the process which has taken place during the last few years within Post-Processual Archaeology, and also within the re-emergence of a sociological perspective in Social Sciences in general, which need to be adopted in order to reconcile the human being with the real world. This rethinking should be based on the necessity of considering space as not only a physical, economic or functional matrix of human action, but also as a social and symbolic issue.

We must recognise that prehistoric human activity and its results (Archaeological records, sites, monuments and archaeological material) are not directly related to their local environment, nor bear a limited functional relationship to it, but instead inter-related with each other and with the environment in a way that is based on the mental representation that this society has of the world. Among others, the concepts of nature, social space, time and temporality and the ideal conceptualisation of the relationships between human beings and their environment are the basic elements of this representation.

This idea presumes that we need to revise the concepts of landscape in order to use it within Archaeology. We should go beyond the notion of understanding landscape as merely being the spatial projection of the economic, functional or environmental dimensions of human action (a predominant assessment within Environmental or Spatial Archaeology) and replace it with a view of landscape which combines ecological conditions, social strategies and cultural values.

This means that Landscape Archaeology is plural and must be critical. On one hand, the diversity of landscape allows for plural approaches...
to its study. Furthermore, we need to combine this plurality in order to interpret landscape as a social and cultural entity, but at the same time we have to overcome the risks of merely eclectic positions.

On the other hand, these ideas have become increasingly commonplace within the field of Archaeology in recent years. A growing number of Archaeologists agree with them, and because of this these ideas run the risk of being reduced from new intellectual attitudes to mere legitimating statements, and therefore lose their theoretical capability to bring new experiments into practice. With such variety, we are faced with the dilemma of either accepting them as self-sustained readings, or searching for an intertextual reasoning.

Being at such a cross-roads, we should critically consider the guidelines for rethinking Landscape Archaeology. This reflection is related, among others, to the following questions:

1. Could we produce a unified understanding of the plural dimensions and levels of human spatiality? (pointing out the Method)
2. Could we reconcile the strategically plural approaches to them under the same unifying theory? (pointing out the Theory)
3. In brief, could we build up a total archaeology of landscape? (pointing out Epistemology and Ontology)
4. Or should we accept late modern claims for individual plurality as an alternative instead of learning from the limits of Modernity to construct a true post-modern thought and practice? (pointing out the contextuality of knowledge).

The contributions for this volume reflect this plurality, not only through the data and themes they deal with, but also because of their diverse practical scope (methodological developments, interpretation of Archaeological record, management of Archaeological heritage), and, moreover, because of their different disciplinary orientations (pure research: diachronic either synchronic of Archaeological heritage), and, moreover, be-}

The plurality of both building (in the past, i.e. thematic diversity) and understanding (in the present, i.e. theoretical diversity) human spatiality could be organised as a two-way road from the material to the ideal. Along it we move from the contributions centred on ecological and economic issues, to those centred on social strategies, symbolic dimensions, or even perceptions of landscape.

We would like to propose to deal with this rich thematic variety and the present volume as an excuse to consider these ideas, and, at the same time, as a way of checking the relationships between the different levels and interpretations of human spatiality.

To start this project, we would propose concentrating on two dimensions: firstly, stating a number of methodological principles which develop a general theoretical background, and secondly producing practical implementations of our discipline from the perspective of Landscape Archaeology.

**Some remarks on the aims and principles of Landscape Archaeology: introducing the volume**

Landscape Archaeology studies a specific type of human product (the landscape), that uses a given reality (physical space) to create a new reality (social space: humanised, economic, agrarian, habi-
tational, political, territorial, etc.) through the application of an imagined order (symbolic space: that which is felt, perceived, thought, etc.). This conception supposes that the symbolic dimension forms an essential part of the social landscape and that therefore an integral understanding of it must take this into account. This proposition is plausible independent of the fact that, according to whatever theoretical matrix we chose, we may bestow priority (descriptive, causal, genetic or logical) upon one or another of the three constituting dimensions of landscape that have been mentioned.

However, may the significant and symbolic dimension of archaeological landscapes be reconstructed without extending the feeling and perceptions of the actual observer to other contexts, without thus reproducing our model of subjectivity?

Bearing in mind that landscape, like all human products, is the objectivisation of an intention, sense and previous rationality that are actualised in concrete formal elements and that, as such, these elements should represent in some way (even if distant) the features of that rationality, then it is proposed to develop a description of landscape which deconstructs this and allows us to isolate the elements and formal relationships which make it up. Sense should rid itself of
forms and relationships, and impose through the weight of its own materiality, without needing the concourse of a horizon of intelligibility that is distant from it.

In a world swollen by sense, where each individual, agency or lobby constructs their own vision of things through their own specific interests, where plurality is reflected and concreted in a hermeneutic spiral or endless process of lectures and a substitution of old readings for new, then a principal of practical action should be Stop Making Sense by the New York group Talking Heads from 1983. As in this theme, the continuous engagement of questions leads uniquely to senselessness. It brings satisfaction to the hedonism of the post-industrial subject, but does not produce any kind of benefit to the critical understanding of reality.

Faced with this, one would have to return to the origins of the foucaltian archaeological project, more centred on the formal relations of the significant than on hermeneutics, more on structural analysis of the significant than on interpretation. We know that the dominant theoretical fashions do not tend towards this. But we also know that behind the actualizations of the system of knowledge, there is a certain system of power: the hiperliberal model of power.

In this context, the fundamental cognitive objective of Landscape Archaeology would be to deconstruct social landscapes; this means deconstructing the mechanisms through which landscape and architectonic technologies produce domestic space reproducing the system of power; showing how constructed space is the product of a series of representation mechanisms, of mechanical systems of reproductions which, however, are hidden; questioning the systems of domestication of space, that are more conceptual structures than effective, more discursive than material, that configure space in the system of knowledge to allow this to be compatible with the system of power.

Some remarks on the theory and method of Landscape Archaeology: introducing Part One

Despite the categorisation which distinguishes between the material and the ideal, which could be primarily comprehended as a horizontal classificatory device of human activities, this in fact vertically crosses every human phenomenon (both economic and symbolic, practical and cognitive). The theoretical assumption which is essential for the study of Archaeological Landscapes should be that the activities which take place in relation to space are organised in a coherent way along with the social group's ideal representation of the world. A space is never independent of the systems of representation that appear to monitor it.

Every society has certain types of technologies to domesticate space, and to construct domestic space. Given that these are constructive technologies we could, metaphorically, denominate them architectonic: Architecture, strategies of land-use, material culture production, etc. But this construction is a production which depends on systems of representation. These technologies do not only consist of mechanical apparatus which shape the social space, but which include conceptual systems which configure (define, articulate and give name to) the space of knowledge.

We can approach these representations by accepting that they form an essential part of Mind, understood in the line of Lévi-Strauss as a pattern of rationality. A change in the pattern of rationality involves a change in the shaping of social landscape and, vice versa, a change in the relationship between humans and environment provokes a similar change in the social shaping of Mind. Furthermore, an appropriate reconstruction of Archaeological Landscapes should allow us to present a partial interpretation of this pattern of Mind.

This implies that former spatial conceptualisations reappear in some way in all areas of social activity which may be defined archaeologically (i.e. the interaction between the individual and the group, domestic and productive space, the world of the living, the world of the dead, the community and the outside world, the social and natural environment). In this way, these concepts of cultural landscapes can be reconstructed through the analysis of the interrelation between the world, artificial environment and the physical products of social practices. The latter is recognisable in Archaeology through the Material Culture and, therefore, its characteristics and relationship to the contexts in which they emerged and functioned should allow us to archaeologically reconstruct the configuration of landscape.

It is important to recognise that cultural landscape presents multiple levels of spatial articulation from the natural environment to personal space, and is produced in material products of different scales, such as monuments, buildings, tools, pots, decoration, tattoos etc. In this way, we need to develop a zoom mechanism or an methodological model which allows us to understand the formal features of the different spatial levels of social practices (the natural, the wild, the outside, the community, production, the dead, the domestic, the individual, the material culture) as different objectifications of the same structural principles or codes.

Therefore, to interpret the meaning of these cultural objects, it would be enough to define the processes of formalisation of material culture. This may be achieved through the deconstruction
of archaeological items in terms of: shape, location, inner and formal articulation, social function, visibility and conditions of visualisation, movement and access.

The study of symbolic landscape must be completed with the reconstruction of how the landscape was perceived in the past. An increasingly large number of studies are joining this research programme, which we may call Archaeology of Perception, or even Phenomenologist Archaeology. The interest of the subject should not, however, lead us to forget its difficulties. It is not possible to reconstruct nor interpret the sense of the original perception based on the perception which we actually experience of the material way this sense has of manifesting itself. This would presume postulating upon the existence of a reason or transcultural subjectivity whose subjective proximity to our own allows us to understand it.

The first part of this volume includes four papers that provide an overview of these themes. The first paper, by Criado, Santos and Parcero, gives synthetically a view of changes and continuities in settlement patterns and land-use in Galician Late Prehistory Early History (from Neolithic times to traditional agrarian system); at the same time, this paper introduces the study of sacred or mythical geographies from Archaeology. The paper by Villich, Santos and Criado consider in detail the ceremonial landscapes of Neolithic and Bronze Age, build up around different monumental features (first megaliths and later rock art); at the same time this work introduces some remarks on the study of past spatial perceptions from Archaeology. The paper by Cobas and Prieto reviews the social and symbolic changes from Galician Bronze Age to Iron Age looking at the pottery from the perspective of landscape archaeology. The last paper of this first part, by C. Parcero, deals with the social landscape of the Iron Age in which warfare and warriors became the most prominent character of society.

Some remarks on practice and use of Landscape Archaeology: introducing Part Two

We should not expect research strategies of this type to function only for studying Archaeological record. If this were the case, then it would be useless. We must acknowledge within our practice that a certain understanding of Archaeological Landscapes can be used upon which to base the management, social use and evaluation of Archaeological Heritage.

The use of these positions in the management of Archaeological Heritage therefore becomes quite obvious. For instance, their ability in linking the relationship of this Heritage with Historical and Natural Heritage becomes very clear. Landscape Archaeology is a strategy which allows us to bring both arguments together and consider them as one. Moreover, the work of archaeologists involved in projects concerning Archaeological and environmental assessment in Public Works, field-evaluation or planning, can be better developed from a landscape perspective, not only to share techniques and arguments with other disciplines involved in these activities, but above all to be able to use this perspective as a base for unified action. This unity of action is something that is generally lacking in large capitalist enterprises which increasingly tend to act in a more fragmented way in order preserve their own identity, objectives, and particularly, capitalist profits.

And finally, Landscape Archaeology is also of great practical use in programmes of social evaluation of Archaeological Heritage. In these cases, the reconstruction of the sense of prehistoric space may be used today as a narrative, discussion, recourse or excuse for projects regarding the value of this Heritage: it offers a reading of the archaeological register that makes this accessible and understandable to the public. Valorisation projects may be planned to display this reading.

In these cases, the reconstruction of the sense of historical space lends itself to the construction of a present sense of space which makes Archaeological Heritage accessible and allows it to be profitable. It simultaneously carries out an educational function: it shows onlookers that the sense of space is an essential component of social life, that other concepts of space have existed different from those we see today, and, accordingly, that it is possible and necessary to relativise our own. In this way, Landscape Archaeology may become an instrument of the leisure industry that, instead of being in the service of mere profit making and facilitating a manipulative use of Archaeological Heritage to these ends, may contribute critically to the training of the public in habits of cultural consumption, and through this, establish a new type of identity in post-industrial societies.

To sum up, Landscape Archaeology can provide the archaeologists who work in archaeological management with the basics to maintain the standing of Archaeology as a body that manages intellectual values and promotes knowledge.

In this sense, the second part of the volume offers some examples of practical uses of Landscape Archaeology. The first one, by Martínez, Amado and Barreiro, explores the possibilities of basing assessment and correction of archaeological impacts of Public Works on landscape archaeology. Then M. González reviews the concept and design of archaeological parks and offers landscape archaeology as a strategy to define narratives to signify cultural parks. The last paper, by C. González, deals with telematic technologies applied to produce and manage archives of archaeological record which
could overcome the limitations of usual literary texts; its relationship to landscape archaeology is not so clear as in the other papers but the alternative information system that is being developed is also based very much on theories and practices reviewed in this volume.

To end the presentation of the volume: it is our privilege to decide if Archaeology should resign itself to being a fragmented practice, where the only possible unity is limited to a mix; or we may still maintain a global perspective that, admitting the plural character of all human products, may be able to recognise the common ground between very different problems and solutions. Our group accepts, thanks to cooperative work carried out in distinct projects and circumstances and with different developers, that is still possible the last alternative. We hope the papers in this volume will represent such proposal and, at the same time, provide a good overview of the work addressed by the Landscape Archaeology Research Unit of Santiago de Compostela University.
SETTLEMENT PATTERNS, LAND-USE AND SACRED LANDSCAPES IN GALICIAN LATE PREHISTORY AND ANCIENT HISTORY: ESSAY ON AN ARCHAEOLOGY OF SACRED GEOGRAPHIES

Felipe Criado Boado, Manuel Santos Estévez, César Parcero Oubiña

Introduction

The intention is, therefore, to carry out a structural analysis of the meaning, in a way that is possible (partial) within Archaeology. The correct instruments for this are in the redefinition of the notions of description, deconstruction, formal analysis and soft analogy:

- We understand description in the way supported by Feyerabend, who establishes that “there is only one task which we may legitimately ask of a theory, and it is that it gives us a correct description of the world, meaning, the totality of the facts seen through their own concepts” (1974:118).
- With the concept of deconstruction, we refer to two things at once: methodology and criticism. On one hand an analytical practice which turns to the meaning of a determined social construction, not reconstructing but destroying it: deconstructing is extracting those levels which make up a reality in order to discover their morphology and internal configuration; in reconstruction by addition meaning is what is placed upon it; in deconstruction the meaning is what remains. On the other hand, in the sense given to the term by Derrida (1989), deconstruction is a practice which unmasks the relationships between the fundamental concepts of modern rationality and which shows how our knowledge is always reconstructed on the same model of subjectivity (or logocentrism). Therefore, proposing a deconstruction of the landscape means simultaneously breaking down the prehistoric social space in order to study it, and avoiding that the study reproduces
the features of the study's horizon of rationality.

- We understand formal or morphological analysis as the analysis of the solid material forms which make up the landscape, both natural (geographical) and artificial (elements of Material Culture, monuments etc.), without introducing an unusual meaning to them. This is therefore a type of deconstructive practice which, when successful, describes the object of study from within itself.

- The concept of soft analogy is derived partly from the criticism and recover of analogy in archaeological and anthropological research (Wylie 1985), and partly from the proposal by Vattimo of a soft thought (debole pensiero).

The methodological process which we follow is usual in structural anthropological analysis. It consists of counterpositioning the formal models of the organisation of space resulting from the study of different archaeological spaces. The stages of the process may be detailed as follows:

1. **First stage**: a formal analysis of the physical space and of the existing archaeological spaces in the area. The study of these spaces should lead to the definition of a hypothetical concrete model of their individual formal organisation.

2. **Second stage**: analysing different spatial codes within each cultural context; thus we may generalise the concrete model in order to establish (first) an ideal concrete model and (then) an hypothetical generic model. The coherence of this model may be contrasted by considering other environments and levels of each cultural context in detail, in order to check if the same ideal model reappears in them, or if there are transformations in it.

3. **Third stage**: models are compared with the intention of examining the most outstanding conjunctions and disjunctions; thus we may define the ideal generic model. The principle of this phase of analysis is that the correspondences between spatial codes in different (and even opposing) cultural contexts are not due to a cultural identity or continuity, but are the result of similar organisational principles, the most obvious of which are contained or determined by the actual organisation of the physical space.

4. **Fourth stage**: the meaning of this model could be apprehend reading it upon the interpretive horizon offered by soft analogies or distinct anthropological patterns of cultural rationality (in some sense what Lévi-Strauss call 'Mind').

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**Figure 1. Location of the study area in Galicia**

**Formal analysis**

The area chosen for the development of our study was in the west of Galicia, in the north-west of the Iberian peninsula (Fig. 1); an area of approximately 130 km² which is especially well-known for its important concentration of Bronze Age petroglyphs (see for example Bradley et alii 1994, 1995). The landscape is generally abrupt, with no important altitudes (mainly under 600 metres) but with steep slopes and a lack of flat surfaces (Fig. 2).

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**Figure 2. Study area: relief and main rivers (contours each 100 m.)**

The most important physiographical element is the river Lérez, which forms a canyon with lateral slopes which in some places rise to 100 metres, thus resulting in very localised crossing points. It is therefore a very clear natural limit, and serves as a border for parishes and municipal districts, except for one specific area which we will analyse later.

The land on both sides of the river is characterised by its abrupt nature. To the north there are gentler features, where the majority of the population of the municipal area of Campo Lameiro lives; to the south the slopes are much steeper, and the interfluvial dividing line is very close to the river, meaning that the occupied land...
is limited to a narrow band found either half way up the slopes or in the highest areas.

**Figure 3. Relief units over an ideal profile of the area**

If we draw an ideal North-South profile (Fig. 3), we may isolate the following relief units:

**Unit 1:** Sheer slopes over the Lérez. Their intensity decreases in certain points, which coincide with the traditionally used crossing points.

**Unit 2:** Gentler scale of relief, valley lands. They are quite rare and distributed in a very localised manner.

**Unit 3:** Lateral sierra crags, with generally abrupt sides, although with variable slopes.

**Unit 4:** Flat surfaces in the interfluvial areas, where humidity accumulates, causing marshes.

**Unit 5:** Peaks of the principal dividing ranges.

**Figure 4. Relief sectors**

In accordance with the combination of these units, we may define the following sectors (Fig. 4):

**Sector A:** The central part, with more open shapes and the clearest valleys of occupation. This is the area where the majority of the crossing points are to be found. There is a predominance of working land and population.

**Sector B:** The most easterly part, representing the start of the high Lérez valley. Characterised by a particularly steep and abrupt relief, with the river almost forming a canyon.

**Sector C:** Having the same characteristics as the previous, although less emphasised. Half way up the slopes there is a flatter area where agriculture and population is possible.

This is, then, an approximately symmetrical situation, with a central area, offering the best conditions for occupation and intense agricultural use, flanked by two more enclosed areas.

**Figure 5. Limits between parishes (thin line) and arciprestazgos (thick line)**

We may also talk of a new Sector (D). This is a small dorsal area, although with a significant emplacement, at the limit of the more open lands of Sector A and the start of the high Lérez valley. It is not a homogenous and clear Sector like the others. Its geographical difference comes about from reasons which are more historical and cultural:

- its lower part coincides with one of the clearest crossing points in the river, which is historically documented;
- this is where the limit imposed by the River Lérez is broken: thus the area of Fentáns, despite being physically linked to the parishes of the municipality of Campo Lameiro, belongs to the parish of San Xurxo de Sacos, in the municipality of Cotobade. (Fig. 5). This parish distribution comes from at least the XVIII century, although we may imagine that this goes back further due to the few changes in Galician parish organisation between the Middle Ages and the XIX century;
- the limits of three different archbishoprics converge here. This situation may date back to at least 1607 (Hoyo 1950);
- the radial distribution of several of the parishes with regard to the area of Fentáns, a strange situation which is not repeated.

Thus, this place acquires a series of geographical and historical-cultural connotations which show it to be an important place since at
least the Modern Age, and, almost certainly, since mediaeval times, which justifies our treating it as an independent sector.

## The archaeological spaces

### Medieval Population

Mediaeval (and later) populations (Fig. 6) show a clear preference for Sectors A and C, with a lesser density in B and a total absence in D. They are found almost exclusively in Unit 2 lands (valley areas and arable land).

[Figure 6. Population in 1867]

### Roman sites

We have direct data relating to routes and inscriptions, but not about settlement sites.

Firstly, the existence of some type of communication route which crossed the area appears to be clear (perhaps via XIX). It possible route (Fig. 8) would cross practically all of the Units defined above, although with a certain tendency to avoid the steepest slopes or the wettest areas.

Two rock inscriptions have also been found (Fig. 7). They are obviously not ‘classic’ or ‘official’ Latin inscriptions, but more the work of indigenous people who have imitated, with distinct luck, a practice which is removed from their culture. Therefore we cannot interpret them from Roman parameters, but rather try to understand them as an indigenous expression dressed in a ‘Latin’ way. They are a product which is neither totally indigenous nor Roman, but which perhaps which is more convenient to interpret from indigenous cultural parameters.

[Figure 7. Rock inscriptions]

Both are found close together (Fig. 8), in Sector D, just above the principal dividing line of the area, which also separates Sectors A and B.

### Iron Age Hillforts

There is a clear concentration in a limited area, contrasted with significant empty spaces (Fig. 8). Compared to a frequent presence of hillforts in relation to the land within the valley (Unit 2), there is a complete absence in Unit 1 and in the steepest parts of Unit 3. In the other two units (4 and 5) there are some examples, although their presence is less usual.

Also, the absolute concentration in Sector A and the gentler areas of C is particularly noteworthy. In contrast, sectors B and D have a total lack of hillforts.

[Figure 8. Iron Age hillforts (round dots), Indigenous-Roman inscriptions (stars), ermita of San Xusto (cross) and Roman road]

### Bronze Age settlements

These have a distribution which is greatly conditioned by the best examined areas, but which allows us to discover, at sample level, their emplacement patterns (Fig. 9).

The settlements are found in three of the four established Sectors, A, B and C, but not in Sector
D, despite this being an intensely studied area. The distribution in units is much more restrictive, as they are always linked with Unit 4, in close association with marshes and transit areas. For this reason their absence in Sector D is noteworthy, which has an abundance of marshes and is a marked line of movement.

**Bronze Age petroglyphs**

These appear (Fig. 9) both in the slopes of the sierras (Unit 3) and, above all, in the flat areas linked to wet valleys (Unit 4); they also appear exceptionally on the peaks of dividing ranges (Unit 5). They do not appear in Units 1 and 2.

They are preferentially linked to two elements of the landscape: wet lands with grazing and lines of movement and transit, especially in the most important crossing points such as the area of **Fentals**.

![Figure 10. Neolithic barrows](image)

**Neolithic Barrows**

The only barrows that are known are found on the edge of the study area (Fig. 10), always in Units 4 and 5 (marshes and dividing ranges). They are concentrations of a different entity which are spread out along the interfluvial division lines which outline the area chosen for study.

The emplacement pattern of the barrows is generally associated to the lines of movement and to basins which receive humidity, with the presence of marshes. Their absence in Sector D is curious, despite the abundance of both elements in it: marshy basins and an important line of movement.

**Synthesis 1: models of landscape occupation**

After showing the data, we can proceed to a counterposition between the different spaces defined by the settlements of each stage, so that the correspondences between them stand out. It is by observing these correspondences that we may better understand the models of spatial organisation in each of the moments through a deconstructive process.

The correspondences are of two types: between different types of settlements, and between settlements and physiographical Units or Sectors. In practice, both types frequently overlap, which underlines the correlativity between certain models of spatial organisation.

- A first correlation is established between barrows, Bronze Age settlements and certain types of petroglyphs (with the simplest motifs, with a predominance of cup marks). These elements usually appear physically close and visually connected (Villoch 1995). This association is reinforced by the habitual coincidence with Unit 4 and transit areas, particularly key points within them.

- As a counterposition, a second block of correlations is established, measured by physical proximity and visual relation between hillforts, the mediaeval population and the traditional villages. This is a very characteristic association, and is also related to certain geographical forms: land typical of Unit 2, deep-floored valleys which are not lines of movement but basins, concave units of occupation. The significance of these basins for the structuring of the population is supported by their coincidence with the fundamental territorial unit of traditional population - the parish.

- Apart from this series of associations, there are petroglyphs with complex panels, with natural motifs (animals, weapons, human figures) and elaborate combinations of circular elements, cupmarks etc. Their pattern of distribution is outlined from the two previous groups of associations, although it has a certain relationship with the first: they are found in the periphery of areas belonging to Unit 4 (marshes etc.), but outside of them, in normally hilly land, although always at the transition point to flatter areas.

Distribution by Sectors is not particularly significant. There are obviously Sectors where one or another type of settlement dominates, but only with reference to the dominance of one or another type of Units; in other words, the determining factor in localising the settlements is the Unit and not the geographic Sector.

However, there is one exception. Sector D, unlike the others, has an important abundance of all types of petroglyphs and the only indigenous-Roman inscriptions which are known. However, there is no other type of element within it, despite being a place suitable for Bronze Age set-
tlements or traditional villages. It is, then, an area which has possibly been marginal since the Bronze Age. This marginalisation can be clearly seen in the radial distribution of the nearest parish nuclei, which makes this area a reference, around which the parishes are distributed, without clearly belonging to any of them. It could be argued that there are many other areas which do not contain archaeological elements, above all in the dividing ranges or high peaks of the area. However, the differences are notable: this Sector D is not an area of difficult access, is not high up, does not have important slopes, and neither is there an absolute absence of archaeological elements, just a selective presence.

Despite the variety of geographical areas and of models of occupation of space which are superimposed with each stage, there is one element which appears to act as an axis at different times, to a lesser or greater degree: the lines of movement. The best areas for movement obviously function as conditioning elements for the emplacement of barrows and petroglyphs (Fig. 11). Their effect on the organisation of the following settlement is less clear; however, its importance at that time is shown by its artificialisation, which gives way to paved roads, bridges etc., which were clearly in the Middle Ages but also possibly in Roman times.

The lines of movement form a wide and diverse network, from which we would particularly indicate, for their logical specificity, the roads in a N-S direction, where the Lérez allows. Among them runs the best documented line for toponomy and material remains (roads, bridges, but also petroglyphs), which crosses the Lérez at Flentins and heads north through Sector D. The importance of this line of movement is that it underlines, once again, the particular and important role that this sector has within both the physical and cultural configuration at different times, and from, at least, the Bronze Age.

Synthesis 2: chronology of change in the landscape

We will now draw attention to the most outstanding inflection points in a diachronic sense.

The first is between the Neolithic and Bronze Age, with significant changes not so much in the emplacement of the settlements but in the ways of signalling their presence. In the Bronze Age, as something new, the areas which were occupied by settlements with a concentration of important resources were marked and delimited with complex petroglyphs.

An important change is also documented in the patterns of mobility and movement. In the Neolithic, a parallel transit to the river was in rigour, articulated from the lines defined by the barrows themselves, which run along the inter-

fluvial divides and areas which lead to them. In the Bronze Age the lines of movement went radically from the river, with crossing points as important areas, from which lines leave, connected in both directions (North and South), that follow the gentler slopes and allow access to the higher lands where there were settlements and resources (wetlands). These lines of movement appear to be artificially marked by the presence of important concentrations of petroglyphs.

A second, important, change was registered in the change to the Iron Age (around VIII Century BC), which was intensified at the start of the second Iron Age (V-IV Century BC). Now new discoveries are spread to every level: settlement (emplacement and fortification), formalising human presence in his surroundings, conquering the lower lands (they became areas of occupation and exploitation instead of just for crossing). The role of the transit lines disappears, or at least is diluted. In its place a more static landscape appears, structured from fixed points and territories; this would also be a logical reaction to the apparition of agriculture with permanent land and overcoming the semi-mobile model of production of the Bronze Age (Criado 1989, 1991, Méndez 1994). This is how we understand the apparition of a new type of element of archaeological register: inscriptions. Their localisation in Sector D, in the dividing line between two well determined relief groups, in the line which visually closes the area of the valley, in the line between the occupied and empty part of the population, etc., mark their character both as territorial divides and as achievements which give symbolic value to a particular space, different from the area of occupation and also on its boundaries.

The movement to the mediaeval world was the last great milestone in the evolutive process we have described. The establishment of open villages, the final conquest of the valleys, christanisation (often in relation to the pre-existent symbolic universe), and the formalising of the

![Figure 11. Lines of movement in Neolithic (dotted line) and Bronze Age (black line)](image-url)
transit lines or of jurisdictional limits between communities, are processes which would have involved, in many cases, long periods of time from their implantation until their definitive function. In general terms, the most substantial change may be seen in the high mediaeval period (around IV-V centuries A.D., Rodríguez 1994), becoming gradually more complex and acquiring, in some cases, new trappings or fundamental changes which, essentially, would not affect the structure of the landscape to any large extent until the XIX century.

The configuration of a sacred space

Bronze Age

In principal, it could be thought that the distribution of petroglyphs in Sector D responds to the normal conditions of situation of these elements, and that their presence should be understood in relation to the control of grazing reserves and of an important transit line. It was foreseeable that a Bronze Age settlement would appear nearby. However, despite having applied, as far as possible, an opportune investigation strategy, no evidence was found of this type, which does appear in other similar spots.

Bearing in mind the formal correspondence which we have noted between types of landscape and archaeological remains, as well as the morphological characteristics of this Sector D and the significant lack of remains of certain types and periods, a different hypothesis could be presented. We could suggest that the presence (or absence) of archaeological remains in this area does not correspond to taking economic advantage of the surroundings, but more to the absence of archaeological remains in this area and that their presence should be understood in the same way. The extraordinary density of petroglyphs in Sector D play, once again, a particular role in the configuration of the landscape. However, compared to a Bronze Age where this area was preferably a line of movement, now it was converted more into a static limit, in a border separating the inhabited area from that which was less intensely occupied (or unoccupied). Obviously the unequal distribution of the Iron Age population was conditioned by an uneven physical environment: what Sector D and the symbols in it represent is the separation between both areas, the formalisation and recognition of this difference; the previsible conformation of territorial division. We should not forget, however, the frequent sacred role of the frontiers in ancient times (García 1990), in relation to the previsible religious content of these inscriptions.

Iron Age

In the Iron Age the area maintained doubtless features of individualisation. The unequal distribution of hillforts accentuates the duality between the lands to the West and the almost complete emptiness of the East. As well as this physically limiting position, the dividing line of Sector D forms the first and most easily perceived horizon line that is seen from all of the low-lying areas, and, particularly, from all of the hillforts. It is precisely over this dividing and horizon line where the two indigenous-Roman inscriptions are found, whose character, whether jurisdictional, religious or both, reinforces the role played by the orography and “cultures” it.

Thus, the objects from the Iron Age in Sector D play, once again, a particular role in the configuration of the landscape. However, compared to a Bronze Age where this area was preferably a line of movement, now it was converted more into a static limit, in a border separating the inhabited area from that which was less intensely occupied (or unoccupied). Obviously the unequal distribution of the Iron Age population was conditioned by an uneven physical environment: what Sector D and the symbols in it represent is the separation between both areas, the formalisation and recognition of this difference; the previsible conformation of territorial division. We should not forget, however, the frequent sacred role of the frontiers in ancient times (García 1990), in relation to the previsible religious content of these inscriptions.

Middle Ages

Our data for later periods is less abundant. Whatever the situation, the traditional Galician world, from at least the end of the Middle Ages, once again gave Sector D a particular role. The extension of the parish boundaries, with this area becoming part of the parish of San Xuán de Sacos, violating the most evident limit imposed by the River Lérez, and the radial distribution of the parishes around this area, show that once again we are dealing with a special place. In some way its character is quite like that which we designed for the Iron Age (boundaries, frontiers), and even the line which divides the parishes follows the same path as the Latin inscriptions. The differences are also important, perhaps minimised by a lack of data and by a still non-intensive analysis of the traditional situation.
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RESUMEN

La comprensión del paisaje como construcción social está completa sino se considera también la forma cómo fue percibido el ambiente y el espacio social por las sociedades pretéritas. En este sentido, la Arqueología antecede la necesidad de desarrollar una Arqueología de la Percepción. Su objetivo sería evaluar el efecto de los elementos artificiales y naturales del paisaje sobre los seres humanos pretéritos en cuanto observadores. Este trabajo propone una estrategia para estudiar estas dimensiones basada en el análisis sistemático de las condiciones de visibilidad, de los efectos escénicos y de las panorámicas relacionadas con los monumentos prehistóricos.

Se consideran las formas de construcción del paisaje socio-cultural entre el Neolítico y la Edad del Bronce de Galicia. En ellas podemos reconocer como, mientras permanece en sus líneas generales el mismo modelo de paisaje y los mismos principios y mecanismos de organización del mismo, las formas y sentidos concretos que transmite el paisaje cambian en ambos periodos.

ABSTRACT

The study of Landscape as social construction is not complete without taking into account the ways as environment and social space was perceived by past societies. Thus, our discipline faces the project of building an Archaeology of Perception. The aim of such a research program would be to evaluate the effect of natural and artificial landscape features on past human beings as observers. This paper proposes a strategy for studying these dimensions based on the systematic analysis of visual features of the prehistoric monuments and in the characterization of the scenic effects and vistas related to them. In doing that, this paper also deals with the strategies to construct socio-cultural landscapes from Neolithic to Bronze Age in Galicia, on the atlantic facade of Iberia. Throughout these periods. We can observe that the same general model of landscape and the same organising principles and mechanisms are kept, while the actual meanings and concrete forms change.

PALABRAS CLAVE


KEYWORDS


FORMS OF CEREMONIAL LANDSCAPES IN IBERIA FROM NEOLITHIC TO BRONZE AGE: ESSAY ON AN ARCHAEOLOGY OF PERCEPTION

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Introduction: aims and methods

This work intends to approach the reconstruction of the neolithic and bronze age ceremonial landscapes and their meanings, and from this to the ways of creating a humanised space and of conceiving the landscape firstly through Megalithic monuments and then through Bronze Age petroglyphs. In short, this study tries:

1. to define a method of reconstructing socio-cultural landscapes in Prehistory,
2. to discover the continuities among these archaeological landscapes, particularly establishing how the worked and kept a long-standing tradition,
3. to characterise their differences and how they referred to distinctive social conditions,
4. and, mostly, to approach in greater detail the study of the ways of spatial perception in Prehistory.

In the same way as a Geography of Perception exists, various studies have appeared in recent years supporting Archaeology of Perception. If we understand landscape as the spatial representation of human practices, then this line of investigation is very important since the understanding of the social landscape is not complete without considering the perceptive dimension, or being aware of the appreciation and positions of the individuals who constructed and used a particular landscape. In addition to the study of the three fundamental dimensions of landscape (environment or physical space, social or used space, and cultural, or thought space) we should then have to add the perceptive dimension.

However, the study of this dimension presents important problems. It may easily be subjective or subjectivising. It is subjective because it is difficult to analyse this theme without substituting the reconstruction of the perception of the space by prehistoric peoples with our own per-
ception. And it is also subjectivising, as by doing this it extends our pattern of subjectivity through history.

Our investigation strategy will not consist of studying perception in its directly individual or subjective dimension, but in discovering the social systems of constructions, guide or predetermination of perception. We believe that if we are able to transcend the level of subjective perceptions and situate ourselves in the objective level over which they are constructed, we would really be able to approximate an Archaeology of Perception. In a manner of speaking, we are trying to study perception in its objectivity. This strategy therefore implies a displacement of the objective: there is no attempt to study perception at an individual scale (what the prehistoric subject felt), but at a social scale (how those sensations were directed and controlled, how a certain type of perception was imposed).

This investigation may be based on the reconstruction of those procedures or technologies through which a certain social landscape expressed its meaning and pre-established it for those individuals who knew its visual and symbolic code. This may be done through a systematic analysis of the visual features of the prehistoric monuments (either neolithic megaliths and barrows, either bronze age petroglyphs) and in a characterisation of the scenic effects and panoramas related to them. The study of the location pattern of the monuments and their conditions of visibility, particularly of the visual catchments that they generate, and visualisation, particularly how they are made out at a distance, will allow us to recognise, if they indeed exist, the regularities that show the will and intentional strategy to make a monument perceptible, underline its presence and provoke dramatic artificial effects in relation to it.

Theoretical model

The theoretical and analytical strategy followed in this study has been considered with certain detail in the Introduction of this volume. In short, our methodology is based on comparing the archaeological spaces (i.e. the distribution of monuments, their location and the architectonic varieties, being the elements we may observe without the need for excavations) with the geographical and physiographical data. This comparison allows us to discover the correspondence which exists between them, and so be able to deconstruct the models of spatial organisation which exist within the megalithic ceremonial landscape.

But beyond these remarks, we may define now a theoretical model to build up the human construction of space. This model is really based on a model of human perception. The analysis of archaeological record will try to discover to what extent this perception model has determined the forms of cultural landscapes. We will contrast such hypothesis considering two different archaeological landscapes.

The model will be described in a totally graphic style (see Fig. 12). Humans are dots; at the very beginning individuals are dots in the middle of nowhere. To know where they are, they look about and create a visual catchment; visuality and perception open an human space. To know more, they walk about and produce physical lines; movement and time break down the closed natural environment for humans. So, dots, catchments and lines are the basic mechanisms to revert the space into social space, environment into landscape.

We can understand this mechanism as a set of basic principles to produce landscapes or a landscape technology. As we could see nextly, this technology underlies so megalithic as bronze age landscape. They both keep the same general model and implementate it producing phenomena with certain distinctive features.

![Figure 12. Simple model of perception of space and construction of a human landscape](image-url)

Data

This paper consider two kinds of archaeological evidence. Firstly it undertakes a revision of the megalithic monuments of the Barbanza Sierra, an area of the North West of the Iberian Peninsula that is well known within Galician Archaeology and was studied monographically at the start of the last decade (Criado et al. 1986). Secondly it deals with bronze age rock art, prehistoric petroglyphs engraved on flat surfaces of rocks in open environments (Bradley et al. 1994, 1995; Santos 1996).
The Barbanza study area corresponds to a coastal sierra situated between two estuaries, surrounded by steep slopes and dominated by a gentle, flat landscape. In the central part of the sierra, over a surface of 3 km², there are 28 Neolithic barrows. In the rest of the sierra there are another 10 barrows, but these are dispersed and spread out from one another, with no less than 4 km between them linearly.

The barrows belong to two well defined types. The most frequent are circular barrows, 20-25 metres in diameter and 2 m high, and have within them the remains of megalithic chambers. These are of a type that is frequent in Galicia: passage graves made with granitic slabs with a short corridor. As well as this more frequent type, there are another 8 barrows that have completely different characteristics: these are smaller barrows, of between 10 and 15 metres in diameter and 50 cm high, with a chamber formed by a stone cist. While the first type are prominent and clearly stand out over the surrounding landscape, the second type are difficult to make out.

Our present knowledge about funeral constructions in Galician megalithism indicates that the second type appears to be older than the first. In fact, it appears to correspond to the first moments of monumental architecture in Galicia, which has been dated in calibrated radiocarbon dates at around 4200-4000 BC. In turn, the other type represents the most characterised group of tombs from the peak moment of Galician megalithism. According to calibrated radiocarbon dates, they were built between 4000 and 3500 BC and would have been in use until around 2800 BC, when the access corridors were sealed and they appear to have been abandoned.

In this analysis we will concentrate on studying the most recent monuments. The Barbanza Sierra is perfect for carrying out this type of study and thus reconstructing the patterns of emplacement and the perceiving conditions of its monuments due to the fact that the natural and traditional landscape is quite well conserved, with a predominance of open vegetation, which allows for both viewing and moving in any direction.

Then we will move to Bronze Age rock art, what consist of prehistoric petroglyphs on flat rock in open land locations. Their designs are quite simple, either abstract or geometrical motifs (circles, cup-marks, lines, spirals...) either naturalistic ones with representations of animals (mostly deers and horses). The depiction of human figures and everyday scenes (hunting, riding...) are present but exceptional and in any case they have got a mostly male-dominant character being probably the expression of a male-chauvinist ideology. The representations of weapons also adjust to this character. Despite being exceptional, they are important and acquire quite relevance in size and number of motifs.

Petroglyphs occur mostly in Galician south-western areas, near the coast and in the prelitoral valleys and mountains. It is an area what present problems of summer drought and, then, the control of areas with water and fresh pasture surpluses become quite critical.

For the intentions of this paper, it is relevant to recognise that, with the exception of some small funerary mounds, petroglyphs are the only visible feature from archaeological points of view in Bronze Age landscapes. The settlements of the period were open area hamlets made in perishable material and without any permanent or stone construction what had left visible traces on landscapes (Méndez 1994). Then petroglyphs are the monumental expression of this period and produces a strong contrast between ritual-ceremonial sites with monumental character and domestic settlements without it.

### Analysis and results

#### Pattern of Neolithic monuments location

**Monuments and nature**

Studies carried out up to date in Galicia have shown that megalithic barrows comprise the artificial reference point of a cultural landscape based on the symbolic domestication of nature (Criado and Vaquero 1993, Criado and Fábregas 1994, Villoch 1995). This domestication of space was principally built using four types of resources which continually appear associated with the emplacement of the monuments. This association is underlined by a relationship which is both visual and related to proximity:

1. Situating the monuments in relation to the rocks and important natural features which allow cognitive references to be spread over the area.
2. Situating the monuments in relation to the natural lines of movement that make a particular natural space accessible.
3. Situating the monuments in relation to other previous monuments, which would allow a representation of a social tradition kept through time in the territory to be built.
4. Situating the monuments in relation to their builders’ domestic sites.

The recurrence of these factors may be seen in the Barbanza Sierra. However, at the same time the analysis may go further. The results from the analysis carried out in the area are detailed below.
Natural signs. A relation with significant natural features exists, although this adopts a special morphology. In some cases the barrows are linked with conspicuous rocky outcrops, although this is not predominant. A specific variant of this relationship would be the link with petroglyphs with cupmarks.

In recent studies, it has been observed that this relationship is recurrent and that the cupmarks tend to define the barrow’s immediate arc of visibility. The cupmarks occupy a topographical edge which also becomes a visual and practical boundary.

According to the data collected from these studies, the cupmarks would have been an artificial signal that identified the proximity of a monument, which marked the line of access towards it, and above all, outlined the sacred space around the barrow.

Visibility conditions. The barrows of the second type which we have defined are situated so that some of them are visible from more than 2 km away. Even those which occupy low-lying areas are clearly visible.

Except for some exceptions (to be precise, 7), from where less than 4 barrows may be seen, a high number of monuments may be seen from all of them: the average is around 8-9 intervisibilities, and in some cases more than 15. But before we comprehend the syntax of the visual relationships, we must widen the analysis, considering a different set of circumstances, particularly movement.

Monuments and movement

The relation of the monuments with transit allows us to understand the position of all of the barrows in the sierra. This association is so close that it could be thought that transit is the one and only factor for barrow placement. However, as we will see, this is only part of a complex process of emplacement and of making the monuments more widely perceptible. This phenomenon may be studied at various levels or scales.

Firstly, what allows us to understand the concentration of barrows in the sierra in the space which they occupy, what justifies why they are mainly found in a concrete space forming a close-knit nucleus, is the fact that this is a keypoint for organising transit across the Barbanza peninsula. On a general scale, it may be seen that this zone is a great natural gorge which is the most adequate point for crossing the topographical barrier formed by the sierra. This area thus becomes a type of traffic distributor, in a key cross-roads in the Barbanza peninsula.

On a smaller scale, the importance of this factor may still be observed as the precise distribution of the monuments of the centre of the sierra follows the specific transit lines which cross it. Or put differently: the most important routes (in fact the only possible routes, as they have the best physical conditions to allow for travel on foot, horseback or wagons and carts), are identified thanks to the presence and distribution of the particular barrows.

But we may make the relation between barrows and transit even more precise if we reduce the observation scale and carry out a detailed analysis. When one covers the natural routes which we have previously described, one does not only see that the best way of following the best route is to guide oneself by the barrows seen in the distance, but that on an even more reduced scale, when one arrives at a change of direction or the trajectory to be followed is ambiguous, then the precise disposition of the barrows is what indicates the option that should be followed. In these cases, after having arrived at the barrow marking the stage of the journey that has just been made, another second monument, close to the last (generally less than 50m) marks the correct direction which should be taken to complete the next stage. In this way the transit allows us to understand not only the distribution and emplacement of the barrows in the sierra, but also the precise configuration of the grouping of various barrows. Having arrived at this point, it would be simple to conclude that movement is what explains everything. And in this way it would also be very easy and tempting to correlate this circumstance with the presence in the Atlantic Neolithic (also in Galicia) of mobile patterns of settlement, protoagricultural ways of land use and light domestication of the land which still was a wild environment. Although these situations are partially true, they should be evaluated in the light of the wider observations which we may still make if we continue with the analysis of the emplacement of monuments in Barbanza.

Monuments and visual catchments

The network of routes and the visualisation of the monuments allow the space to be crossed and understood as a whole. Based on the recognition of the monuments and of the movement network related to them, a form of spatial organisation is reproduced which simultaneously contains a cognitive and a form of rational domestication of the environment.

Given that this form of organisation is imposed upon the observer when he or she crosses the terrain, the perception of this landscape model becomes a living experience. Experiencing landscape produces a series of scenes that are unveiled before the observer throughout the space he or she is crossing.

The megalithic scenes possess some regular characteristics. The majority of them possess an elemental form, characterised by the concurrence of three features:
1. they have a closed view, divided by well-defined topographical borders and which have within them a low basin, both topographical and visual.
2. the edge of this view is dotted with artificial monuments as well as natural features.
3. the scenery trends to have a centre or omphalos that is well individualised and that is thus identified with the presence of a barrow.

These features are present both in the visual valleys that stretch away from the monuments and in the principal visual valleys which are seen when crossing the area, regardless of whether one is next to a barrow or even following the network of routes or not. Although there are certain differences that, above all, are defined in the fact that point number 3 is accomplished nearly always when the scenery is contemplated from a barrow and only occasionally when observed from any other point, it is particularly relevant that a regular form is maintained in both cases.

In this way, the space experience of megalithic landscape is concreted into a succession of circular scenarios which are outlined and/or preceded by monumental constructions and articulated by the network of routes.

Here we find a phenomenon which is of great importance in the European Neolithic: the existence of circular patterns of spatial organisation that take form in the construction of artificial circular spaces, and, more generally, in the production of ways of perceiving the landscape based on circularity. Lack of time does not allow us to go into this discussion further.

Pattern of Bronze Age rock art location

As we said early, Bronze Age landscape as marked by petroglyphs keep the same general model than Megalithic landscape.

The archaeological record from the Bronze Age presents two types of elements which represent two dimensions of the same spatial reality. Firstly, the domestic sites found in high positions near flat, open areas with wet basins in their centre. Petroglyphs appear in the areas with most accentuated slopes, in contact zones between escarpments and the previously mentioned areas. The relationship between sites and petroglyphs therefore takes shape in the lower and peripheral location of the petroglyphs.

In spite of megaliths, what could be defined as substantial monuments, petroglyphs could be called ambiguous monuments. They were engraved on flat rocks what often are not particularly conspicuous on the surrounding and just seen by humans when they are approached. They are related to pattern of movement through land and control visually small basins what are wet areas with fresh pasture even during the summer drought. In fact petroglyphs worked as an artificial resource to translate into the land a movement syntax, a code what expressed the ways and routes to make accessible natural space and go from ones places to other. The whole of petroglyphs in a single area build up a net of lines and nodes what revert land into a social territory.

At the same time, rock art established a circular control of topographical basins occupied by brañas, peat-bog or humid area with stock of

Figure 13. Model of Neolithic ceremonial landscape based on megaliths and barrows

Figure 14. Model of Bronze Age social landscape based on petroglyphs
pasture. These became important resources areas for either wild and domestic animals either humans. (A more detailed review of this pattern could be found in Bradley et al. 1994, 1995).

However, the landscape model shaped in this moment is more complex, particularly with regard to petroglyphs. The definition of lines of movement is still a basic resource for the appropriation of space, although there are important differences compared to Neolithic times. Instead of general lines of transit, they are more concrete and related to local topographies. Generally, the petroglyphs occur in such positions that they controlled the connection between the uplands, where the settlements are concentrated (in areas suitable for shifting cultivation and around peat bogs which acted as stocks of pasture land, Méndez 1994), and the lowlands, covered with dense woodland offering hunting and wild resources. The lines of movement which now acted as basic axes of articulation of the social landscape appear marked artificially by the presence of important concentrations of petroglyphs.

**Interpretations and perspectives**

A detailed analysis of the pattern of location of megalithic monuments (expression of a neolithic landscape) and of rock art (bronze age landscape), of their visibility conditions (ie: the visual catchment commanded by them) and visibilization conditions (ie: the way as these are seen from the distance), allow us to recognize certain regularities what display an intentional will of remarking the existence of artificial cores to organise land perception and provoking dramatic artificial effects in regard to them.

Our study took into account the different resources to create visual impact, skylines, contrasts of colours and textures. In such way we could approach towards a phenomenology of prehistoric perception without falling in mere subjective solutions. But the final scope of this study is not only proposing theoretical and methodological as well as critical standpoints to develop the approach to these phenomena but producing a case-study what offers new insights to the understanding of archaeological past.

In this sense, to end we would risk some interpretations about the meaning that these technologies of landscape construction and spatial perception would have transmitted. We will start from Barbanza Sierra and then we will move to petroglyphs.

The linking of the monuments to movement indicates that they worked as artificial references of a complex code of signs that transmit information about the routes. As well as having a practical dimension, this function evidently has an important symbolic dimension. On one hand it linked the world of the dead with the route and created a representation of the relation between the living and the dead, between life and death, based on a metaphor of movement and discourse. On the other, it used dramatically and scenographically movement, access and approximation to the barrows, as a basic resource in order to construct its monumentality.

In other words: the process of symbolic domestication of space articulated through the monumens was based, as well as on the visibility and inherent permanence of monumental construction, on the control and management of the experience of time and of movement over the space which is produced through the monuments.

Similarly, the hegemony of the circular perception of space should perhaps be understood as a metaphorical resource of human domestication of his surroundings. Circular shapes are the best expression of domination and control, in the same way that circular vistas are the core point of the panoptico.

But at the same time that this general model is kept, is also changed from Neolithic to Bronze Age. What is new in the latter is the control of basins with practical purposes and the construction of lines what made accessible the whole lands understood now as territory. This shows the split from a pure cultural landscape to a mostly economic landscape and from strategies of just cultural domestication of nature to emphasis on economic domestication. In this sense, what we find in Galicia is parallel of a general trend found through out Europe what, from neolithic to Iron Age times, changes the cultural control of land by its practical control.

**References**


DEFINING SOCIAL AND SYMBOLIC CHANGES FROM THE BRONZE AGE TO THE IRON AGE THROUGH OPERATIONAL SEQUENCES IN NW IBERIAN POTTERY

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Presentation

The framework of this study is an examination of ceramic cultural material from the north-west of the Iberian peninsula according to the perspectives of Landscape Archaeology. It has a basically methodological value as the intention is to outline a new line of investigation for the study of different registers of material culture, based on the study of ceramics and landscape from the Bronze and Iron Ages in this part of Spain (Fig. 15).

Figure 15. Galicia in the Iberian Peninsula

Theoretical-methodological principles

The theoretical basis for this study is Landscape Archaeology (see Fig. 16), according to which archaeological entities do not stand alone but instead are spatial entities, produced through social action, related to a socio-cultural context, and comprehensible within this framework. Material culture is therefore considered as the product of a society combining both practical and symbolic aspects, as, consciously or unconsciously, the concept of the material indicates a meaning.
As social products created within a community are closely related to all of the material and imaginary areas of its reality, the characteristics and elements of a particular society are reflected in all of the facets of its material production, causing patterns of similar regularity and complementary relationships between codes, as proposed by Lévi-Strauss (1987) for studying myths, and as applied by Criado (1993:41) for the study of the archaeological landscape. Based on these principles, we defend relying on a structural line. Despite not working with modern societies and not having access to their language, meaning that in archaeology it is not possible to carry out a structural analysis as proposed by Lévi-Strauss, this does not prevent the existence of hypotheses and procedures that may prove very useful from a methodological viewpoint.

**Style**

Style concept will be used in a broad sense, understood as a mechanism of the power discourse of a culture reflected in the formal products of its society. In the light of certain dominant opinions, we propose to understand style as a formalisation of power according to Foucault (1980). We therefore consider it important to assess how the patterns of formal regularity which exist between different codes of material culture may be defined within a given social group, making them coherent between themselves, and with a definite pattern of rationality: in short, identifying what can be referred to as a style (see Fig. 16). However, it is not possible to arrive directly at the underlying conceptual schemes only by means of the identification of cultural choices. Accordingly, accepting the limits of interpretative practice in archaeology, our interest centres on identifying the matrix of theoretical possibilities, compiling all of the wide array of choices produced within an equally viable series of options, and extrapolating from them elements of regularity. The method used to arrive at a definition of the matrix of possibilities is formal analysis, using the concept of the technical-operative sequence as a basis.

**Formal analysis**

Considering that ceramics, like any human product, is the formalisation of a particular rationality, we propose that formal analysis be used for the study of material culture (see Fig. 16). This consists of studying shapes and the relationship between them, understood not just as morphology and finished products, but as a unit of activities, ideas, premises and mental schemes brought together in their fabrication. Investigation takes place reconstructing the technical sequence used to make ceramic products.

**The Technological-Operative Sequence**

The concept of the technical-operative sequence (see Fig. 17) involves three interwoven aspects: the strictly technical aspects, considered in what is effectively the technical sequence; those aspects which refer to social instances, which may be designated the conceptual sequence, considering the economical, social, territorial and imaginary elements which merge together and indicate all of the object’s process of fabrication, and finally the result of these two
processes, defined as the final product: a group of formal characteristics which, determined by social demands, is registered within a stipulated pattern of formal regularity, in line with other codes, and as a reflection of the pattern of rationality to which it belongs.

By using the concept of a technological operational sequence, the technological aspect is incorporated as a new style parameter, meaning that by following the technical processes we may have access to criteria which are less susceptible to changes, as indicated by Gosselain (1992). With this, we may both define the points of continuity which allow us to talk of a style, and the breaking points which form categories. We therefore underline the active role of the object in ancient societies, and the existence of a variable cultural choice for each society (which Lemonnier, 1986, denominated a socially suitable technological choice), over and above external constraints.

**Interpretation**

We continue with a summary of the landscape and ceramics of the Bronze Age, then refer to the characteristics of the Iron Age, and finally examine the relationship which exists between both periods.

**The Bronze Age**

We shall firstly refer to the contexts in which Bronze Age ceramics appear, and then discuss the general characteristics of its ceramics.

![Domestic context](image1)

![Funerary context](image2)

![Monuments](image3)

![Cists](image4)

Three types of contexts are known in Galicia: ritual, with petroglyphs (see Santos 1996, for a revision), and domestic and funerary (see Méndez 1994 for a revision). Ceramics are only registered in the two latter contexts.

**Domestic Context** (see Fig. 18): characterised by being settlements which are invisible in the landscape, having: perishable constructions (holes for posts, foundation trenches for huts), divided arable land nearby, and defined wetlands suitable for grazing. **Funerary Context** (see Fig. 18): formed by two main groups according to their visibility in the landscape:

- visible megalithic monuments in the landscape: dolmens and tumuli
- invisible sites in the landscape: underground cists and pits

Having carried out the technical sequence of the ceramics, we offer a summary of the most important formal features:

<table>
<thead>
<tr>
<th>Simple morphologies</th>
<th>Complex morphologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN SHAPE</td>
<td>CLOSED SHAPE</td>
</tr>
<tr>
<td>CLOSED SHAPE</td>
<td>OPEN SHAPE</td>
</tr>
</tbody>
</table>

**Undecorated pottery and non-bell beaker pottery**

**Decorated pottery (bell beaker)**

**MORPHOLOGICAL OPPOSITION**

![Figure 19. General ceramic morphology in the Galician Bronze Age](image5)

The most important characteristic of ceramics from the **Bronze Age in Galicia** is of decorated material, bell beaker pottery and undecorated ceramics. Two types of morphologies are documented: simple and composite (see Fig. 19).

- Simple open or closed profiles and closed composite profiles are associated with non-decorated ceramics.
- Open composite profiles are, however, associated with bell beaker pottery.

Accordingly, we have a strong morphological opposition between plain and decorated beaker pottery. The characteristics of the **decoration** are as follows:
• The use of Incision and impression techniques.
• Decoration instruments are combs, punches and cords
• The decorative elements are always geometrical and horizontal.
• Body decoration on the object may be divided into segments, outlined, integral or in strips

We will now characterise ceramics within each context (see Figs 20 & 21). In a domestic context the morphological opposition is maintained between plain and decorated pottery, although this opposition is reflected in other aspects of the phases of production: the finish, colour, size of the gritting, the accessories, and, above all, the final product.

Ceramics from invisible burial sites differ between cists and pits. In cists only undecorated items appear, with two morphologically differentiated groups: one with simple, open morphologies, and another with closed composite morphologies, well finished and with bright, clear, visible colours. The differences are only found in one production stage: the modelling phase.

In pits, undecorated or decorated pottery may be found, although these are not beaker shaped. There are two well morphologically defined groups: one with simple, open morphologies, and another with complex, closed morphologies. Both use matt, dark tones, with rough, invisible finishes. The differences are only found in one production stage: the decoration phase.

If we compare the ceramic register of both contexts, we can underline the following aspects: (1) decorated ceramics in a domestic context are always beaker shaped, while in funerary contexts they may be beaker shaped or of another style; (2) the strong opposition between plain and decorated ceramics in a domestic context is diluted in a funerary context as more homogenous phases exist: finish, colour and gritting; (3) the existence of an association between the type of non-decorated utensils and the type of funerary architecture which does not exist in a domestic context; (4) the decoration is more varied in a domestic context, giving rise to substyles, whereas in a funerary context it is more standardised. Differences may be seen in the following features:

In a domestic context, instruments are used for decoration, which do not appear in a funerary context (shells, nails, fingers).

In a domestic context, the decoration is horizontal, integral and flowing, and the most significant decorative element is the horizontal line. In a funerary context, the decoration is also horizontal but may be integral and in stripes for bell beaker pottery, and zonal and flowing for ceramics that are not beaker shaped. The most out-

---

**Figure 20.** Similarities and differences in the technological process in the Galician Bronze Age

**Figure 21.** Decorative features in Galician Bronze Age pottery

**Non-decorated** ceramics are roughly finished, with large gritting, and light, matt colours which are practically invisible. **Bell Beaker pottery**, however, has a better quality finish, with smaller gritting, and lively, visible colours in various tones. The decoration displays a certain variety enabling us to group it into four *substyles*. In a **funerary context**, differences may be seen according to the type of burial. In visible burial sites, or megaliths, the pottery is similar to that found in domestic contexts, a formal opposition between non-decorated and decorated ceramics, which are always beaker shaped. Differences are only found in two phases of the technical sequence: in the modelling and application of the decoration. The other production stages use the same technology: a good quality finish, small gritting sizes, bright, light colours and a lack of accessories complementing the profile. This leads to both types of ceramic having a good visual appearance, with a visible character.

Ceramics from invisible burial sites differs between cists and pits. In cists only undecorated items appear, with two morphologically differentiated groups: one with simple, open morphologies, and another with closed composite morphologies, well finished and will bright, clear, visible colours. The differences are only found in one production stage: the modelling phase.
standing decorative elements are zigzags, reticulated shapes and oblique lines.

In summary, the rupture points within the technological process vary according to the contexts (see Fig. 22): whereas in a domestic context the differences between plain and decorated items may be seen in five phases of production, in the funerary context these are reduced to two phases of production (with the exception of the technical process for ceramics in graves, which is totally different to the other ideal technical processes). Two types of relations exist in the visibility strategies between the landscape and the ceramics which in some cases are represented by way of an opposition between both codes, and in other cases by complementing each other.

The Iron Age

For this period, we found different characteristics from the Bronze Age both in its landscape and ceramics. For the landscape (see Fig. 23), and following the scheme proposed by Parcero (1995), the greatest difference found with relation to the Bronze Age is the disappearance of the separation (at least visual) between the domestic and non-domestic landscape. This is due to the application of a strategy whereby the symbolic space was completely hidden (both funerary and ritual), resulting in a complete lack of samples in the archaeological register. On the contrary, an apparent strategy of exhibiting the domestic landscape characterised by the monumentalisation of domestic space is used, represented by the concept of the hill-fort not merely as a focus of population, or even a fortified area, but as a major achievement. Instead of merely being situated in the landscape, the hill-fort organises it and gives it a conscious and ostensible meaning, and converts the landscape into territory, by imposing a cultural order upon it (see Parcero 1995 for a review).

Figure 23. Galician Iron Age landscape

With regard to Iron Age ceramics from this region, and focusing on the domestic context, we should point out that once the ideal technical-operative process is reconstructed, separate from the varieties and internal categories which we will not consider here, a series of regularities may be identified in their formal configuration (see Fig. 24).

Figure 24. General ceramic morphology in the Galician Iron Age

The most significant characteristic is that unlike Bronze Age ceramics, the opposition between decorated and plain ceramics lies only in the presence or lack of decoration, as it does not imply a different treatment during the technical-operative process (see Fig. 25). We may therefore say that in general they share: modelling (as all of the recipients are hand made using a potter’s wheel, and a duality is maintained in the object’s morphology between simple profiles, which may be open or closed, and complex profiles, which are always closed, although divided into flexed and edged shapes; finishing techniques (as they use burnishing, combing, spatula designs and burnishing); type of firing (with a predominance of the use of an oxidising atmosphere) and sur-

Figure 22. Formal patterns of regularity between landscape and pottery in the Galician Bronze Age
face colouring (with dark colours, either dark brown or black).

<table>
<thead>
<tr>
<th>CLAY</th>
<th>UNDECORATED</th>
<th>DECORATED</th>
<th>STAMPED</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRITTING</td>
<td>Small</td>
<td>Medium</td>
<td>Large</td>
</tr>
<tr>
<td>MODELLING</td>
<td>Manual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MORPHOLOGY</td>
<td>Simple opened shape</td>
<td>Complex bowl shape</td>
<td>Complex rounded shape</td>
</tr>
<tr>
<td>FINISH</td>
<td>Smoothed</td>
<td>Brushed</td>
<td>Burnished</td>
</tr>
<tr>
<td>COLOUR</td>
<td>Brown</td>
<td>Red</td>
<td>Black</td>
</tr>
<tr>
<td>OTHERS</td>
<td>Handle</td>
<td>Lid</td>
<td></td>
</tr>
</tbody>
</table>

Figure 25. Galician Iron Age pottery in a domestic context

With reference to decoration (see Fig. 26), it is possible to isolate a series of common features throughout all of the Iron Age. For thematic issues, the constants refer to decorative elements which are always geometric, and to perfectly independent decorative motifs in the same item, without the existence of an element which acts as an axis of what is represented. It may be said that more emphasis is given to the individual motif than in the general theme. For morphological issues, various aspects may be differentiated:

- 'Verticality' of orientation, as the combination between orientation, disposition, distribution and the decorative scheme is executed so that the decoration is always vertical, without needing to turn the object.
- Divisor distribution which instead of uniting the profile of the object divides it, and makes its different parts independent from one another. This may be either by giving special attention to a single area on an otherwise undecorated piece, or individually detailing each section using different decorations.
- Location in a visible area, as even though examples exist of relative invisibility, for example in the case of decoration which appears in the upper part of the rim, no invisible decoration as such exists, as neither the interior nor the bottom part of the piece ever appear with decoration.

However, within this regularity it may be seen that these ceramics respond to a system of categorisation based on ternary series. These take shape in a series of complex relations and combinations of choices among a wide range of varieties in each step of the decorative technical process. Three groups may therefore be identified (see Fig. 27): undecorated items and items with simple decoration, which share the same technical operative process; undecorated items and items with complex decoration sharing the same technical operative process, and a group of items with complex decoration which belong to a different technical operative process.

Accordingly, we may propose a hypothetical model which includes three differentiated groups. Firstly, ceramics with scarcely specialised shapes including undecorated and decorated pieces with only moderate differences (as they share their morphology and technological treatment, although there are exceptions), where the decoration is ambiguous due to being very simple, barely visible, either unemphasised or with very little emphasis, or zonal. Secondly, we have a more specialised group of ceramics which we may refer to as non-domestic, with a probably more limited and specific nature than the previous. It is characterised by having more decoration, which is more complex, clearly visible and defined, and even integral in some cases. Within this second group we may differentiate between pieces which have a common technical operative process with both decorated and undecorated ceramics, and pieces which are always decorated and belong to a specific technical operative process (ceramics with an 'S' shaped profile with mainly stamped decoration and a varied decorative pattern).

Figure 26. Galician Iron Age decorative features in a domestic context
If, finally, we relate the ideal model of the landscape with ideal model of the ceramics, a coherent formal regularity is observed between both, which could be understood as an inverted structural relationship (see Fig. 28).

In the landscape a strategy of exhibition of domestic space exists, by means of the territorialisation of the surroundings and the monumentalisation of the hill-fort. This is transformed into an authentic landmark which organises and gives meaning to the landscape, combined with a strategy of concealment of the ritual space. On the contrary, a strategy of inhibition or even concealment is used for domestic ceramics, and a strategy of exhibition for non-domestic ceramics, in which the elements of the occupied space are reproduced: its monumental and territorial character. 'Monumental character' through the existence of a precise decorative style, with a clear intention of visibility (the greater expansion of decoration in the piece, outlining of decorative fields, the difference between types of finish and decorative styles, etc), and 'territorial character' through the divided and differentiating nature of the decoration with regard to the piece as a whole. This is seen in the predominantly successive decorative scheme, in the distribution and composition of the motifs which is different in each of its parts, and in the perfect definition given to the majority of the decorative motifs using straight horizontal lines.

**Consequences**

A difference in styles may be seen between these two periods, despite the existence of common cultural choices in both (see Fig. 29). These differences are related to a conscious intent, and differentiated cultural standards in each of them.

The changes from one period to another are evident in the two codes of material culture which were studied. For the landscape, a change occurred from a clear separation between the domestic and non-domestic environment in the Bronze Age, to a less apparent or even inexistend separation of these in the Iron Age.

**Figure 27. Hypothetical model for pottery styles during the Galician Iron Age**

For ceramics, although a type of decoration exists in both periods which received a differential treatment (bell beaker pottery decoration in the Bronze Age and stamped decoration in the Iron Age), there is a change between the Bronze Age, with a clear definition between decorated and undecorated pieces, and the Iron Age, where the technological treatment given to decorated and undecorated ceramics is the same.
Figure 29. Symbolic change between the Bronze Age and Iron Age in Galicia

References


THE INVISIBLE WARRIOR: WARFARE AND ARCHAEOLOGY IN THE INDOEUROPEAN IRON AGE

César Parcero Oubiña

In this short paper we will try to show which, in our opinion, are some of the features to be considered when studying a subject as complex, delicate and discussed as warfare in Prehistory. From our point of view, much of the controversy which has emerged from the evaluation of this subject results from the improper application of points of view which are either minimally or not at all relativistic. The problem has its origin in starting to look for indicators of a certain type without previously asking ourselves what it is we are actually looking for, or, more precisely, what we hope to find. The problem becomes more acute if our investigation is based on a period such as the Iron Age which, with the exception of some recent studies and schools of thought, has traditionally remained at the margin of the most innovative lines of prehistoric investigation.

Figure 30. Location of the study area

The problem

The first step in revealing the results from an investigative study is to state what the problem is - the question we are trying to answer. As previously mentioned, our aim is to analyse the role of warfare, or war-like activities, in a socio-cultural context distant from our own. Seen in this light, the following developments aim to be valid, firstly, as a methodological proposal, which al-
though not particularly original is rarely used, for the analysis of any Historic or Prehistoric context, stage or moment. In order to analyse this role, the existence of these bellicose activities must be identified and recognised; only after having located these may we move on to analyse other questions.

But as may be deduced from the title of this paper, this is not intended to be a principally and uniquely methodological proposal. Our aim is to reach a definition of war (warlike activities) in the context of the Iron Age within a geographical area defined as the Northwest of the Iberian Peninsula (Fig. 30). This is proposed from the perspective of the analysis of archaeological information, the Archaeological Record, which will be our source of essential information. However, it would be impossible to analyse this question within a cultural context that has not only disappeared but is also notably different from our own using only the Archaeological Record. It will therefore be essential, as we shall see, to rely on non-archaeological sources of information.

The conditions

Two important conditions have to be taken into account in order to develop the programme which we have described. Considering these conditions represents a first step in the effort to distance our study from more traditional investigation procedures, which are more generalised and less contextual.

Each of the conditions we refer to deal with a different element in the investigative process. The first is connected with the process itself, with the developmental conditions of our analysis. The second affects the object of the study.

These are:

1. Our analysis, regarding archaeological investigation, represents an attempt to recognise and have access to non-material aspects of a certain socio-cultural context (in this case, warlike activities) using the Archaeological Record, meaning physical, material objects. The harmonious development of this proposal calls for the previous acceptance of one issue: the Archaeological Record is formed by the essential action of two fixed agents - those which created the objects which compose it, and ourselves, who convert it into a historical record. Therefore the Archaeological Record is not something neutral, but something which has been culturally constructed by its creators and is culturally reconstructed by us during the investigative process.

2. It is possible to denominate the object of our study in various ways: war, warfare etc. In any case these words may represent and refer to a wide range of contents and different meanings. In any of these meanings, warfare is a type of activity with a low degree of material representation, and with a little chance of being reflected through physical objects. This is particularly true in the case of pre- or proto-state social formations. The best example of this is the most typical way in which wars have been recorded within historical contexts: through the written word (absent in our case) or by graphic representations (present in very small quantities).

It should be remembered that warfare defines a type of activity which is closely related with the type of social formations where it occurs, which are deeply conditioned by their social and cultural context.

The key question

These questions lead us to the start of our investigation, and reveal the need to recognise its limitations and conditions. Accordingly, before we are able to recognise the existence and the characters of the warlike activities in the context of our investigation, we should first ask ourselves two questions:

1. What type of warfare do we expect to find? Among the many possible meanings of the expression, which best fits the conditions of the context we are going to analyse? What type of warfare may we expect to have taken place during the Iron Age in the north-western Iberian peninsula?

2. Once this has been established, we should examine which correlations may be expected to appear in the material record, and what effects of a war of this type may be expected within the Archaeological Record.

Once these questions have been answered, we may then start to examine the record. Following the analytical logic we propose, we believe that the best way of dealing with the analysis of the Archaeological Record is by previously proposing hypothetical models, which act as guidelines for our investigative process. The two previous questions should not merely exist as some kind of previous warning, but instead be situated in the foundations of the construction we propose. In this way, by establishing initial models which fit the circumstances of our particular study, we may direct this not only more rigidly, but more profitably. In this way we interrogate the record, and it is not the record which supposedly speaks to us.
The record

We have already mentioned that our analysis is centred on Iron Age emplacements in the northwestern area of the Iberian peninsula, traditionally known as the castros (hillforts) world or culture. As may be expected, the archaeological record from this area is similar to that in many other parts of Europe from the Iron Age, although it does have certain distinguishing features, some of which are particularly interesting (Parcero 1995).

The most characteristic element, which has given its name to all of the Iron Age in this area, is the type of settlement. The so-called castros (hillforts) are the only type of settlement known for this lengthy period which started around the ninth century BC and continued until the Roman occupation (first century BC), during which it still continued to be the only type of settlement used by the indigenous population. These are fortified villages or hamlets, usually covering less than 1 hectare and only on rare occasions covering more than 5 hectares. Despite intensive efforts to uncover them, we have no known examples of unfortified, open settlement sites, which would appear to indicate that these never existed.

The hillforts are a type of settlement characterised not only by being fortified and situated on prominent areas, usually with difficult access. They also have a notable visual control over quite large areas, which in some cases reaches dozens of kilometres. As well as enjoying this visual control, the settlements are outstanding within the environment, either because of their situation in the landscape, their defensive structures, or, more typically, because of a combination of both factors.

This apparent exclusivity of fortified settlements is reinforced by the important density of settlements which have been documented for all of the region. Although their wide ranging regional variability should be taken into account, in general the number of settlements per square kilometre may be considered quite large, with some areas (which are not exceptional) having more than one hillfort every five square kilometres.

The high density of occupation is perfectly complemented by an intensive exploitation of the environment, led by an agricultural system combining the working of permanent, high-yield fields with the permanence of extensive exploitation in other pieces of land. A system of production was therefore created which obtained two harvests per year due to the deforestation of the landscape. This was complemented by taking advantage of a wide variety of domesticated animals.

Contrasted with the high visibility of the activities of the living (settlements, fields etc), death was characterised by complete obscurity. No funerary practices are known that may have taken place, although they did not build artificial structures to bury their dead or to indicate or accompany the funerary rites. In fact it appears that they did not even practice any form of burial, as neither cemeteries nor burial sites exist. Death, then, is something invisible.

In summary, we are dealing with a group of peasant communities within a little articulated system of political relations (neither state nor state formations exist), with a high degree of pressure upon the environment and natural resources, and with a high level of competitiveness between groups. The visibility and monumental nature of the world of the living (settlement sites) is contrasted with the complete occultation of the dead (burial sites).

The model

Starting from the proposed work plan, we now need to design a hypothetical model which will act as an essential instrument for investigation. However, this model should not be chosen at

Figure 31. Monumental granite sculpture of a warrior. Indigenous-Roman period (ca. I-II AD)
random, but should instead meet two important criteria:

1. It should adapt to the social, political and cultural context we are dealing with. In our case the general features of this context have been explained synthetically in the previous section.

2. As the object of our investigation is the archaeological record, the model should be able to contain implications which affect the world of objects, the material world. The model should allow us to extract contents which may be contrasted by examining the archaeological record.

We have therefore opted for a model which we consider as not only meeting all of these conditions but which is also sufficiently developed as to guarantee its rigour and applicability. We are referring to the functioning model of Indo-European societies, as defined through analysis of myth and symbolism by G. Dumézil (see for example Dumézil 1990a, 1990b) and later enlarged and extended by those who came after him.

<table>
<thead>
<tr>
<th>To be expected</th>
<th>Not to be expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warfare</td>
<td>War</td>
</tr>
<tr>
<td>Defences</td>
<td>Destruction</td>
</tr>
<tr>
<td>Weapons</td>
<td>Armies</td>
</tr>
<tr>
<td>Location of evidence of warfare in special, 'symbolic' contexts (rivers, burial sites, deposits)</td>
<td>Location of indicators of warfare in daily, usual, 'normal' contexts (houses, rubbish pits, ...)</td>
</tr>
<tr>
<td>Warfare is not a factor of historical processes</td>
<td>War can cause historical change</td>
</tr>
<tr>
<td>Warfare is linked to nature (evidence outside settlement sites)</td>
<td>Warfare is a social construction - architecture of war (disputes, monuments)</td>
</tr>
</tbody>
</table>

Table 1. The two models of war

The significance of the model

We are aware of the complexity which today accompanies any attempt to deal with questions relating to Indo-European or Celtic culture. All of these concepts have been weighed down by diverse and extra-historical elements until their content has been made into something extremely banal. In our opinion a great many of the problems which today appear related to this subject are due to a deficient and incorrect use of what is fundamentally nothing more than a wide-ranging and solid model of functioning and socio-cultural thinking, which is neither more nor less reliable than others. Our choice does not mean that we assume or reject the Indo-European, Celtic or other character of the Iron Age communities we are trying to study. Beyond this question, the aim is to chose a well known and developed anthropological model to be used as a working instrument, a model connected to socio-cultural formations at least equivalent to those we are going to analyse.

Figure 32. The image of warrior in "barbarian" art: duel scene from Valcamonica (Northern Italy)

The model, wide-reaching and complex, offers a series of features which should at least be presented synthetically. With regard to the object of our study, warfare in the context of Indo-European behaviour, it is presented as a multiple activity, or rather as an activity which is incumbent upon various aspects of reality:

- **Economy-Production.** War is understood as pillage, a war of skirmishes and plunder focused upon obtaining objects more attractive than necessary, with a more symbolic than real importance. Seen in this way, war directly affects the productive activities of the communities who embark upon it or suffer from it. This influence is reflected in the material world and is seen, for example, in the construction of enclosures for cattle within the fortified settlements themselves. However, it would not be suitable to apply this argument as an exclusive and total explanation of the existence of warlike activities in this context, in the same way that it is erroneous to apply concepts such as benefits obtained.

- **Socio-political.** Warfare, the use of violence, may be a way of solving conflicts between communities. However, once again this use of war may be understood in a way that has little to do with the modern meaning of warfare as an activity of territorial conquest and/or mass destruction of the enemy. The use of warfare as a way of solving inter-group conflicts does not necessary imply, in this context, the large-scale destruction of settlements, but instead should be seen from a ritual point of view, through the prevalence of activities such as single combat, etc. War as an element for regulating social and political life once again appears to us as an activity far removed from the modern concept we have of it.

- **Symbolism, ritual, religion.** War is perhaps the principal constitutive element of
myths and legends: it is at least always present in them, either directly or indirectly, and forms an essential part of the world of beliefs in the Indo-European context. In contrast with this importance, the image of the warrior in the material world seen through, for example, weapons or graphic representations, is selective, and neither general nor dominant. This record is also of a proportionally lower quantity when compared with other activities, although it is outstanding for its quality. The objects associated with the world of warfare (weapons, defensive objects, graphic representations of wars or warriors, etc), do not only show a greater degree of care in their elaboration, but are also often exceptional pieces, made from infrequently occurring materials.

Figure 33. The image of warrior in classical art: scene with Ares from a Greek vase.

Using this concept of war presented here, we should ascertain which are the correlations we may expect to find in the material (archaeological) record. After completing this step we will be ready to apply the model to the observed reality which interests us (the study object) in order to verify how we may obtain negative or positive contrasts. Table 1 shows the comparison between what we should look for in our archaeological register (in the north-western Iron Age in our case) and what we should not expect to find.

Epilogue

As may be seen, the suggested use of analytical procedures has allowed us to establish a working instrument which purifies one of the most problematic issues when dealing with the archaeological study of war: what is the content we should give to the word ‘war’? The application of this analytical framework to our particular working context reveals to us that war, despite its apparent non-existence or accidental nature within the Archaeological Record, is not only an activity which is present, but which is also important, and should be evaluated within different parameters of the concept of reality from our own. The use of a framework of the functioning of societies defined as Indo-European may give us one of these models of reality. It is possible that others exist, which in any case would not invalidate this model.

References


RESUMEN
En el presente texto se parte de la base de que los trabajos de Evaluación y Corrección de Impacto Arqueológico en OO.PP. constituyen una práctica no sólo técnica, sino también interpretativa dentro de la Arqueología. Consideramos que este tipo de prácticas forman parte de un proceso integral (Evaluación y Corrección de Impacto) que no se debe limitar a la Evaluación superficial (assessment) durante la fase de planificación del proyecto, sino que debe contemplar asimismo la corrección del impacto durante su ejecución. Para ello, se hace necesaria la elaboración y desarrollo de una metodología que permita la sistematización de todos los procesos involucrados en este tipo de trabajos mediante la definición y estandarización de procedimientos y criterios de actuación.

ABSTRACT
This paper deals with activities related to the Evaluation and Correction of Archaeological Impacts. It will argue that these kind of activities should be fully considered as part of Archaeological Practice what involve not only technical issues but also interpretative and cognitive dimensions as the pure research archaeological activities. The paper will consider these activities from an integrated perspective, arguing about the necessity to complete the phases of assessment of Archaeological Impact with active strategies to correct it during the construction and development of the full working project. It is particularly necessary to define and standardize criteria and procedure for practice in such contexts. We will present the main bases, principles and details of such a methodology.

PALABRAS CLAVE

KEYWORDS

MANAGING
ARCHAEOLOGICAL
IMPACT: FROM
EVALUATION TO
CORRECTION

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Construction and Archaeology

The problem
In this paper we consider the urgent need to propose alternatives in order to avoid, minimise and correct the impact which public works have on Cultural Heritage, by adapting our discipline to the needs of this type of action, developing the necessary methodology and procedures both in technical areas as well as investigative methods1.

We insist not only on the importance of the Evaluation of Archaeological Impact, but also on Correction, considering this as an active method used to lessen and mitigate impact, and a fundamental component of a complete Evaluation and Correction programme.

We also reflect upon the need to carry out an active policy of archaeological action not only with public works, but also in all activities which have repercussions on the environment and, in particular, upon the different elements of which Archaeological Heritage is comprised: archaeology which adapts to present needs and gives a definitive response to the socio-economic demands of our society.

Figure 34. Past remains conflict with Present demands: archaeological excavation in a motorway

1 About the problematic in excavation methods see Criado, Méndez & Parcero 1995.
The objective is to develop a methodology which leads to the systemisation of the procedures involved in the Evaluation and Correction of Archaeological Impact. We consider that this task should be carried out with urgency as:

- it is a real and specific area of study within archaeology which, despite its apparent clarity, is still ignored by a great many archaeologists.
- its consolidation as a working practice is the best indicator that archaeology is capable of dealing with practical problems effectively.

**The Solution**

The practices which our Investigation Group proposes in order to adapt archaeological practice to the Evaluation and Correction of Archaeological Impact are:

1. The development of archaeological activity as an *evaluative practice*, based on theoretical concepts (in our case Landscape Archaeology), which gains strength through the basic investigative work derived from the activities of evaluation and correction. The intention is to *convert Destruction into Knowledge*.

2. Including the processes of evaluation and correction of Archaeological Impact within a strategy of *Integral Heritage Management*. This programme includes (Criado 1996):
   - Cataloguing: Detecting and documenting archaeological remains (an Inventory).
   - Evaluating Cultural Elements archaeologically and as heritage.
   - Exploitation: Transformation of Cultural Elements into Cultural Resources.
3. Technological adaptation of archaeology: creating new technology for new problems.
4. Methodological adaptation: Our Investigation Group has started a line of applied investigation detailed in the CCLAAH programme (Criteria and Conventions in Landscape Archaeology and Archaeological Heritage). This attempts to define the necessary specifications in order to intervene productively and with agility in the different areas of study and management of Archaeological Heritage, which include both Evaluation and Correction.

These proposals take shape in the design of a working strategy which is unitary, efficient and consistent with the problem in hand.

![Figure 35. Integral Management of Cultural Heritage](image)

**Working Strategy**

The different stages of an Evaluation and Correction strategy should take into account all of the elements of the general plan of the project to which it is applied:

1. Design stage: concentrating on the design of the project, including the modifications to be introduced in order to avoid or minimise impact.
2. Reconsideration stage: this should be started prior to construction work beginning, anticipating the actions to be taken by revising of the precautions established in the Impact Study.
3. Execution stage: developed in parallel to the construction project, following it directly, documenting and reporting all of the anticipated and unforeseen incidents caused by excavation work.
4. Restoration stage: this takes place at the end of the work, controlling the restoration of land close to sites which may have been found.

This involves:
1. A superficial examination before construction work begins, carried out when

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2 About these concepts see Criado 1995a.
3 Additional information can be found in Criado 1996.
4 An example in Criado & Villoch 1997.
the projects detailing the route are being designed (Evaluation of Archaeological Impact stage)⁵.

2. Direct archaeological control and monitoring of the work (Correction of Archaeological Impact stage).

**Evaluation Procedures**

**Concept:** The Evaluation of Archaeological Impact may be defined as the process by which the archaeological impact of a project is identified, predicted, evaluated, avoided and communicated. It is defined in the Impact Study, which should be made during the project design stage⁶.

The experience we have obtained from several years of work has enabled us to generally define the elements we consider should act as guidelines in a process of impact evaluation in the specific field of archaeology. The resulting investigation is therefore aimed at perfecting and standardising the criteria and procedures which should govern the process of evaluation in its different stages. These have been established according to current legislation for environmental impact evaluations, readapting them to the specific nature of Archaeological Heritage as an integral component of the environment. These are:

**Project Analysis:** One of the principal objectives of standardising an evaluation process is recognising a project, and trying to develop a homogenous model of analysis for any type of undertaking which involves modifying physical space.

<table>
<thead>
<tr>
<th>Agents</th>
</tr>
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<tbody>
<tr>
<td>Windmills, accesses, etc.</td>
</tr>
<tr>
<td>Fleet</td>
</tr>
<tr>
<td>Factors</td>
</tr>
<tr>
<td>Soil Removal</td>
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<tr>
<td>Vehicular traffic</td>
</tr>
<tr>
<td>Actions</td>
</tr>
<tr>
<td>Excavation, demolitions, clearing the underground, drainage</td>
</tr>
<tr>
<td>Rolling</td>
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</tbody>
</table>

**Figure 36. Component analysis of the construction project of a Wind Farm**

This analysis goes from general to specific actions, starting with the managerial situation of the project (design, execution, exploitation, dismantling etc.), until arriving at breaking down its component parts and characterising their effects (see fig. 36)⁷.

An essential step for correct evaluation is defining the area which will be affected, differentiating zones within a predetermined perimeter around the construction site, which will depend on its size.

**Evaluation of the Inventory:** Once the project analysis has been carried out, it is necessary to carry out field studies which permit the identification, registration, characterisation, classification and evaluation of the different elements of archaeological heritage which are affected. The strategy of site identification is based on two complementary types of examination: An intensive examination (inspecting all of the affected area) and a total examination of those areas where earth has been moved, with the intention of documenting archaeological evidence which is not visible on the surface.

Once the elements affected by the work have been identified and registered, it is necessary to characterise them, determining if the remains which have been found may be considered as evidence of a site or not. Then, using typological and chrono-cultural criteria, the elements are classified, with the aim of placing the object within a framework of reference and guiding the later evaluation phase of the recovered elements. This phase is aimed at describing the condition of the objects found, and offering an archaeological evaluation based on four basic criteria: meaning, representation, diversity and exceptional nature.

Establishing and defining these criteria and procedures will not only permit their transformation into quantitative terms for the development of the process of evaluation, but will also act as a basis for later lines of investigation related to the integral management of cultural resources.

**Impact Evaluation:** By cross-referencing the data obtained, it will be possible to identify the specific archaeological impacts. This leads to the production of an inventory of impacts, represented by the formula: 

\[
\text{action + archaeological element} = \text{impact}.
\]

**Figure 37. Simplified Model for the Evaluation of Archaeological Impacts**

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⁶ The questions concerning the Evaluation Procedures are in Villoch & Barreiro 1997.

⁷ The methodology employed in this analysis is based on Conesa 1995 and Gómez 1994.
Once the impacts have been identified, we move on to their evaluation, using a series of criteria which establish parameters indicating the degree to which the elements will be affected: extension-size, incidence and certainty.

The development of a method of quantifying impact means transforming the parameters into numeric values, for their later inclusion in an impact matrix (see Fig. 37).

**Proposal for Corrective Measures:** Aimed at avoiding or mitigating effects upon sites, before construction work begins (preventive precautions and effective precautions): modifications of road routes for visible sites, and the establishment of precautionary measures for both visible and invisible sites (see Fig. 38).

**Criteria for Correction**

The correction of Archaeological Impact may be defined as putting a working programme into practice through which the necessary control mechanisms are established, so that it is guaranteed that the correction plan is adhered to in the project’s construction phase, that possibly unforeseen events are controlled, and that the evaluation of impact undertaken is applied to the final project. The objectives are:

- Revising and supervising the state of the precautionary measures as well as controlling the undertaking of corrective measures as defined in the Impact Study.
- Controlling and solving the appearance of unforeseen events in different areas (technical, archaeological and heritage) which may appear during construction work.
- Avoiding and correcting effects upon new and/or known Heritage and Archaeological elements.
- Solving practical problems offered by these elements and incidents in the normal development of construction work. This means, above all, satisfying the previous objective in a manner that is compatible with the working plans and avoiding as much as possible delays, stoppages or additional complications, and acting as technical assistance to the construction company in archaeological matters.
- Studying Prehistory and History in depth, using the information obtained by solving the two previous objectives.

Figure 38. Avoiding destruction after Evaluation of Archaeological Impact

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**Figure 39. Working Process of the Archaeological Control and Monitoring Work**

The working strategy we propose in order to deal with these demands implies the need to:

1. **Change archaeological attitudes:** The incorporation of archaeology into Public Works projects should be undertaken

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8 An interesting example is Martínez López 1997.
9 See Criado 1995b.
with the consideration that this is another speciality, dedicated to the company’s success, and responsible for solving all of the problems which may appear related to Archaeological Heritage.

2. Abandon the concept of ‘ultra-conservationism’: It is necessary to change the attitude which archaeologists have regarding the destruction of Archaeological Heritage. Given that the complete destruction of Heritage is unheard of, and it is inevitable that a part of it will be affected, it is necessary to adopt a strategy and an attitude which compensates aggression with a surplus of information, substituting destruction with knowledge.

3. Adapt the theoretical-methodological resources of archaeology to enable the needs which arise in these new contexts to be dealt with. In our case, we have used Landscape Archaeology as a basis.

4. Improve the technical resolution of the discipline. In order to satisfy all of the previous characteristics, it is essential to adapt the technical resources of our discipline and even create or test new working techniques. In the monitoring projects which we have carried out, a series of working techniques and registers have been tested and perfected enabling us to solve problems and satisfy the proposed objectives with an economy of time, methods and effort, adapted to the different types of working project.

The working process applied to the archaeological control and monitoring work in the construction phase follows the plan showed in Fig. 39 (on the organization of works, see Criado & Reino 1997).

**Organisation of Work**

In line with the previously detailed needs and considerations, the necessary actions are programmed in order to directly monitor construction work during the process of earth movement. It is therefore important to design a realistic working strategy, compatible with a situation with limited resources, and generally characterised by a need for urgency.

Work is organised around the different areas of activity for dealing with problems in the different stages of construction. These activities are:

**Field work**

- Monitoring in situ by a team dedicated to inspecting land affected by the project, documenting and solving impact.
- Control work, carried out by the same team, supervising the taking of precautionary measures, adherence to legislation regarding Heritage, and carrying out Correctional Measures as proposed in the Impact Study.
- Special action, carried out by this team or another dedicated to this work, on a lesser scale (cleaning, documentation, small-scale test pitting, etc).

**Laboratory work**, given over to a group comprising of several teams, in charge of:

- Systematisation and computerisation of information
- Treatment of material
- Production of reports
- Organisation and filing of resulting documentation

This organisation works according to the following diagram, taking as an example the Archaeological Impact Control and Correction Plan for the Galician Gas Network, which the Landscape Archaeology Research Unit is carrying out at present:

![Diagram of Organisation of Work](image)
References


LANDSCAPE ARCHAEOLOGY AS A NARRATIVE FOR DESIGNING ARCHAEOLOGICAL PARKS

Matilde González Méndez

Definition and concept of archaeological parks

Spain began considering the process of creating archaeological parks in the mid 1980’s. By the end of the decade, two meetings had been held to discuss the possibilities, objectives and contents necessary to establish these environments in our country. These were the Archaeological Park Seminar, with the participation of the authors of the projects then contained within the National Archaeological Parks Plan, and the Conference on Parks with Cave Paintings, which debated the project for the creation of what would come to be known as cultural parks.

Both meetings enabled the concept of archaeological parks in our country to be discussed, and for its weaknesses to be revealed. The fundamental basis of both cultural and archaeological parks is the definition given by ICOM, being seen as a particular type of museum. In 1983 this organism defined natural, historical and archaeological parks as organisations of public interest, with a scientific and cultural vocation, responsible for a controlled and defined territory, conserved as a representation of nature in a wild state or controlled by man, suitable for the preservation of wild or domesticated flora and fauna where this unit is the permanent habitat (Querol 1993:17).

The suggestions and objectives under consideration may be summed up in the definition offered by Querol, who defines archaeological parks as a site or archaeological are of great scientific, educational or historical interest, in a good state of conservation, with a complex structure and a special consideration for the cultural and natural environment, open to the public for cultural, educational and leisure purposes (Querol 1993: 21). Other definitions may be found in Caballero and Latorre (1993 47.79) and in Martín (1993: 210).

In contrast to archaeological parks, cultural parks strive for the protection and promotion of larger areas with more of a cultural presence than that found in archaeological remains and their surroundings. They therefore promote and
control the archaeological, historical and natural resources in large areas. Seen in this way, a cultural park is more than a single site within a group of natural and historical resources in an area which may be opened for public use. The most outstanding example, due to its inclusion in the archaeological concept of spatial archaeology, is the design of the third of the cultural parks in Aragon (Spain), the Parque Cultural de Molinos (Burillo et al., 1992).

Ten years on, in which time a great many developments have taken place, the conceptual content of archaeological and cultural parks as conceived in Spain suffers from certain deficiencies, meaning that these are insufficiently comprehensive of the objectives which archaeological sites open to the public should seek to attain. These deficiencies are principally the lack of an authentic museographic programme, and a restrictive concept of the surroundings.

Problems in the traditional design of Archaeological Parks

The lack of a museographical programme

The first deficiency lies in the disassociation between the theoretical definition and the materialisation of parks as museums. Most of the proposals for archaeological or cultural parks in Spain therefore lack a museological and museographical programme which specifies the discussion or narrative on offer to the public, as well as the elements through which this is illustrated.

The objectives proposed when creating a park are: to investigate, conserve and divulge the material and immaterial values of the area. But whereas the first two objectives are dealt with in detail, the third, its dissemination, is resolved by designing ‘routes’ or ‘signposts’ without any explanatory content. There is no interpretation of the site, and accordingly little advantage is taken of the values it contains.

Concept of the surroundings

The second limitation is based on the fact that in the majority of the cultural and archaeological parks that are planned, the site and its surroundings are considered as a monument which is isolated in the landscape, and particularly as a cultural monument in a natural environment which at best surrounds and gives a context to the site. The surroundings are considered as the natural framework of archaeological heritage, and, simultaneously, as containing other features or elements ranging from natural to ethnographical. However, their role within the cultural phenomenon is as a support, a context and an environment in which human activity takes place, and not a cultural element in their own right. From this perspective, not only isolated sites are privileged, but also their selection according to criteria which prefer the exceptional to the normal.

In contrast to these ideas, the developments of landscape archaeology and environmental archaeology have given rise to a different concept of landscape, which, instead of being seen as merely a place where sites are contained, or a neutral space in which human activity takes place, is now seen from the perspective of environmental or green archaeology as the result of human and natural interaction, so that human activity may be seen both in the sites and the environment. This becomes a document of the past as valuable as the sites themselves (Maccines 1992, Barber and Welsh 1992).

This, in turn, is seen through Landscape Archaeology as a sociocultural product created by objectivising the environment, and, in spatial terms, of social action (Criado: 1988; 1993). With this suggestion, sites cease to be isolated remnants of the past and become focal points in a significant network of man’s relationship with himself and the environment in a particular historical moment. Here the surroundings acquire an equivalent importance to that of the sites, making them significant not in their position of exceptional isolation, but instead in a group of smaller and larger sites and landscape in which they are situated, where human activity in the environment may be traced, as well as its use and conceptualisation.

From this perspective, an archaeological park is seen as a defined geographical area, where it is possible to illustrate not a site in its territory, but instead an archaeological landscape whose most outstanding remains are the sites, of whatever importance or typology, as only the entity as a whole permits a vision of what the landscape used to be.

The Landscape Archaeology Research Unit therefore offers a proposal aimed at dealing with these deficiencies:

The proposal for creating archaeological parks from the premises of landscape archaeology

A line of investigation has been underway in Galicia for several years, started by Felipe Criado, with a series of proposals, developments and results which correspond with the strategy referred to as Landscape Archaeology. Based on the principle that humans, unlike other living beings, do not only live in their surroundings, but instead create their own living environment, constructing their own socio-cultural landscape (as occurs in Galicia), Landscape Archaeology
may be defined as a line of investigation with the double objective of:

- reconstructing social landscapes from prehistoric times, and
- studying the processes of change and continuity which have brought about the present-day rural landscape.

However, as well as being a fundamental basis for historical investigation, Landscape archaeology forms a useful basis for the Social Exploitation of Archaeological Heritage, for creating Archaeological areas or parks where the public may learn about the past. The alternative which we therefore propose from this line of investigation is to create a narrative or discussion which may be easily understood by the general public in which History (time, sites) and Landscape (the context in which human activity occurs) become the principal characters of the story which we offer to the public, a story or narrative whose plot should be derived from archaeological investigation.

In the LARU we study the interrelationship between the environment, social processes and the symbolic-cultural framework in different moments of Prehistory. We consider that whenever it is possible to recreate times long past, it should also be possible to evoke past landscapes. Using this premise, the aim is not to demonstrate excavated and consolidated monuments and sites, but instead to evoke social landscapes where the sites are only a part of that landscape. In order to put this proposal into practice, we may depend on:

- excavated sites
- non-excavated sites, which are often more useful than those which have already been excavated
- the reconstruction of the palaeo-ecological environment
- the reconstruction of ways of using the environment in Prehistory and environmental or social processes used in the environment.

Above all, we may depend on a fundamental resource which, as an essential characteristic of the archaeological record, is also a basic didactic instrument which may be built upon: the visibility conditions of the archaeological record. The aim is to show that the different archaeological elements and monuments have different conditions of visibility, and that these do not appear purely by chance, but instead inform us about the characteristics of the socio-cultural universe to which the elements observed in the record belonged. These visibility conditions are specifically related to social and cultural factors such as:

1. The attitude towards nature held by the social group which built the observed archaeological element.
2. The way this group understood the relationship between culture and the environment.
3. The type of social action which this group carried out in the environment and, particularly, the strategies of subsistence and obtaining resources.
4. the original function of the archaeological elements under consideration.

In this way, using visibility and visual resources, our proposal is based upon firstly fusing together and then diluting the archaeological elements in their environmental and geographical matrix, integrating the sites in their surroundings and evoking the landscape of which they formed a part. This proposal widens the scope of Historical and Archaeological Heritage, as it allows us to abandon action focused on the site, in order to deal with the spaces which were given a social and cultural meaning by human action. This enables us to transmit to the public the idea that:

1. the different sites are actually focal points in the network of prehistoric settlement and, accordingly, the fundamental elements of certain types of ancient landscapes and,
2. the archaeological sites, together with the visible remains of ancient landscapes and the historical action of humanity on nature, form the present landscape.

Based on these precepts, the design of an archaeological area or park may be based on particular groups of sites and the recovery of areas in which archaeological, historical, environmental and landscape elements are harmonised and united, permitting an understanding of the landscape they form.

Putting this proposal into practice is a relative simple process: it is enough to bring together information, signs, paths and observations. Following a well designed programme of action, using these four inexpensive and straightforward resources, it should be possible to make the space accessible: to achieve that this and the natural and archaeological elements which form it may be seen and interpreted by means of observation guided by suitable signposting, and which covers the landscape both following paths and away from them. Accordingly, by experiencing the surroundings in the present, one may construct an experience of how the space was used in the past.

In order to summarise the proposals which have appeared in this description, we offer a definition of the specific objectives to be achieved
in order to create an archaeological park or area in the way we suggest:

1. Dilute the individual archaeological elements, which are traditionally considered as more important, into the widest archaeological context to which they belong. This means not renouncing the context which establishes the co-ordinates of meaning of the recovered elements: the archaeological record must be presented to the public in the same way as it is presented to the archaeologist: as a global element interwoven with significant interrelationships, many of which are of a spatial nature.

2. Dilute this archaeological context into the natural and historical landscape in which it is found. This means dealing with the events provoked by History and the circumstances created by the environment as archaeological documentation.

3. Reconstruct the cultural and symbolic meaning of the landscapes seen as such, while maintaining the critical conscience that this meaning is a product of the present.

4. Deal with the results produced by archaeological investigation which are offered to the perception of new spectators, as polysemic spatial realities which may be understood when they are experienced and experimented.

5. Use a viewpoint from which the different segments of these spaces may be perceived, and which reveals the different relationships established between them, as a general instrument for the approximation and access of the public to the archaeological spaces which are intended to be recovered.

The use of these proposals from Landscape Archaeology aimed at making the archaeological record more accessible to the public, offers several additional advantages:

- The first is that Landscape Archaeology tells us more about a wider variety of subjects than just archaeology, such as the adaptation of society to nature, the formation of present day and traditional landscapes and the cultural values and concepts of the environment.
- The second advantage is that Landscape Archaeology permits the contextualisation of sites and archaeological interpretations within spatial and environmental co-ordinates, thus associating archaeology with ecological values and concepts, which are well known and are a cause for concern among the general public.
- This spatial contextualisation not only enables the temporal dimension of the landscape to be rediscovered, but also the sense of place (the meaning of the space) which has been lost by modern society, and which traditionally is only recovered in the space which contains the site.
- Finally, this contextualisation relieves a fundamental constraint of the archaeological register, as obviously not all sites are equally attractive to the public, nor do they offer the same type of conditions for their recovery. The traditional solution lies in selecting a reduced and privileged list of elements to be exhibited, rejecting all others. A biased segment of the Archaeological Heritage is therefore presented, resulting in the public receiving an erroneous idea of the past we are trying to reconstruct. However, using our strategy, it is possible to recover and integrate all types of sites (large or small, excavated or non-excavated), allowing a global image of the reconstructed archaeological context to be offered, as sites are selected according to their ability to express the depth of an archaeological landscape, although they may apparently be ‘less important or grandiose’.

All of these proposals may at present seem a little confusing. In order to clarify them, we may use a practical example as presented at this Meeting (see paper by F. Criado, V. Villoch and M. Santos “Forms of Ceremonial Landscapes in Iberia from the Neolithic to the Bronze Age” in session I.11, Archaeology of Cult, organised by P. Biehl and F. Bertemes). Our proposal essentially consists of guiding public access to Archaeological Heritage in the type of reconstruction of archaeological landscapes offered in this paper. In our opinion, the intellectual and interpretative values derived from this study offer the resources and, above all, the ideal argument for giving a value to archaeological elements, offering an alternative to the traditional methods of indicating and recovering megalithic monuments.

References


The purpose of this presentation is to sketch the foundations for the management and production of integrated archaeological record archives. In contrast with more classical approaches, we define an archive as a structured collection of material pieces and representations of them. Such archives include archaeological artefacts themselves, plus all kinds of documentation, images and any other type of information about them, and are considered part of the archaeological record. For a system based on this kind of archive to work properly, we must concentrate on several points: (1) It is necessary to strengthen the linkage between documentation and the referred part of reality. (2) We must improve the ease of use of the documentation, mainly in the areas of search and navigation. (3) Ease of distribution and dissemination must be also improved.

The proposed way to carry into practice a system like this is to use computerised tools such as format-free, structure-based document editors, SGML (Standard Generalized Markup Language) databases, and workflow management tools.

**Abstract**

The purpose of this presentation is to sketch the foundations for the management and production of integrated archaeological record archives. In contrast with more classical approaches, we define an archive as a structured collection of material pieces and representations of them. Such archives include archaeological artefacts themselves, plus all kinds of documentation, images and any other type of information about them, and are considered part of the archaeological record. For a system based on this kind of archive to work properly, we must concentrate on several points: (1) It is necessary to strengthen the linkage between documentation and the referred part of reality. (2) We must improve the ease of use of the documentation, mainly in the areas of search and navigation. (3) Ease of distribution and dissemination must be also improved.

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**Palabras Clave**


**Keywords**


**Beyond Literacy: The Digital Management and Production of Archaeological Record Archives**

César A. González Pérez

The Archaeological Record is usually documented by conventional documents, such as reports or catalogues, either printed or on computer media. These documents serve well their purpose as long as they are kept limited to represent a small and simple portion of reality, they are not needed to change over time, and their number does not grow over several thousand.

Reality is too complex and hyperlinked to itself as to be represented linearly by a printed document. In fact, archaeological reports often contain a number of cross-references, and many more are omitted in order to make the easier to read. Also, changes in represented objects along time may make the documents change as well, having the previous information overwritten by the new, or duplicating the document in order to keep both versions.

In addition, the number of documents can grow rapidly as work goes on, making search and navigation almost impossible tasks when over several thousand documents.

We define an Archaeological Record Archive as a structured collection of material pieces and representations of them. Therefore, the archive is not only composed of archaeological finds and structures, but also of representations of these.

The concept of representation is very important at this point, because its properties can be used to define the needs of a good Archaeological Record Archive.

**Properties of the Archaeological Record Archive**

The Archaeological Record Archive is considered part of the Archaeological Record itself, because it contains descriptive and valorative information that is needed to fully understand the described portion of reality after it has been destroyed or modified and is no longer available.
This fact implies that the Archaeological Record Archive must be self-descriptive and independent of any external information source in order to guarantee its expressiveness and persistence along time.

Also, it must be integrated with other tools, such as databases that store information on archaeological finds, structures or projects; geographical information systems that show the geographic procedence of finds and the location of remains; and publication and dissemination systems that enable us to distribute information to other specialists or the main public.

**Dimensions of the Archaeological Record Archive Representations**

The Archaeological Record Archive is composed of material pieces and representations of them. Representations have three dimensions: content, subjectivity, and temporality, and can vary in any of them.

The content dimension is determined by the object of the representation, that is, what it talks about. This is the most familiar to us, and often the only that is contemplated.

The subjectivity dimension is determined by the author of the representation, be it an individual, several individuals, or even a big group. It is always possible to identify a representation’s authorship, and therefore determine its subjective character.

The temporality dimension is determined by the moment in time when the representation is constructed. Sometimes, a time frame or context is more suitable to characterize a representation than a specific point in time, so the “time frame” term is used.

Documents can vary along any combination of these dimensions.

Representations keep linked to the portion of reality they represent through their three dimensions. The content dimension links a representation to its object; this link is often kept even with conventional printed documents.

The subjectivity dimension links a representation to the individual or collective “intersubjectivity” that created it. In a social discipline such as archaeology, in which absolute truths are seldom found, authorship is a key parameter in order to understand the Archaeological Record Archive, and therefore its necessary to keep this link alive.

In addition, the temporality dimension links the representation to its time frame, giving us the information to rebuild, whenever it is needed, the state of archaeological objects in the past, or even the thought chain that carried somebody to a specific assessment or evaluation. It is then necessary to maintain this link, too.

**Properties of the Archaeological Record Archive Representations**

Moving into practical issues, the Archaeological Record Archive representations, mostly documents, must have four fundamental properties in order to guarantee a flexible and powerful archive.

First of all, documents must show integrity, that is, they must comply to a homogeneous formal definition, both in form and content. Also, documents must be navigable and searchable. Navigability deals with the ability to scan, skim, outline, and cross-reference documents. Searchability is concerned with the ability to look for specific words or concepts contained in documents.

Also, documents must be usable for any purpose that is needed. They are often used as source material for new documents, for publication or other ways of dissemination, or even just to be read on screen or printed on paper.

**Integrity**

The main integrity needs are related to the necessity of a common set of document types across organizations. A document type is a definition of the structure of a specific kind of document, indicating what parts it consists of, and what sort of content can be inserted in each of these parts.

Also, it is necessary to automatically avoid references pointing to deleted documents or to the wrong place, as well as to maintain a distinctive “corporate look” in every document, balancing creativity with compliance to conventions.

The proposed solutions to achieve these goals include using the Standard Generalized Markup Language (SGML), which can be used to specify document type definitions and write contents. Documents created this way live on a centralized database from which they can be retrieved as necessary. Also, document editing is format-free and structure-based. Further application of style guides or templates can format a document in the most appropriate way.

**Navigability**

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**Searchability**

Keyword-based search has some advantages, but in an integrated multi-user system they produce more problems than solutions. Full-text search is then desirable, allowing the users to perform searches through every significant word in every document. Also, document attributes such as creation or editing date, author, version number, etc., can be used to query the SGML database. A further step is to include concept searches, in which not only a word or phrase is sought, but a general “fuzzy” concept.

Possible solutions include conventional full-text indexing systems, which can discard “noise words” such as prepositions and pronouns and maintain a global index of meaningful words. Again, SGML databases are needed in order for documents to be characterized by their attributes. They can be complemented by semantic proximity dictionaries, which store a list of semantically related words or phrases for each indexed word or phrase, together with a proximity factor. These factors can be used to adjust the fuzziness of the search.

**Usability**

Documents are usually created to be used. They are often needed as sources for the creation of another documents or any other kind of representation. Also, they sometimes have to be transported to a different place or environment while guaranteeing that their usefulness and functionality are preserved. A specific and very common way of transportation is publication or other ways or dissemination.

A key property to achieve these goals is document self-descriptiveness, which can be attained by using the aforementioned document type definitions. Self-descriptiveness ensures standardized document interchange among organizations and avoids “file format” problems. Also, the fact of format-free document creation and editing makes SGML documents very suitable to be automatically formatted by applying pre-defined style templates, and making them ready for on-paper or World-Wide Web publication.

**Integrating the Archaeological Record Archive with other Tools**

Integrating the Archaeological Record Archive with different tools is key to the success of the proposed approach for document management. Workflow systems route documents to the appropriate persons at the correct moments, take care of deadlines, and in general reflect an organization’s procedures.

Integration with conventional databases is also desirable, for a big amount of archaeological information is stored in them. References among documents and database objects can be maintained and tracked through hyperlinks or other referencing systems. Also, geographic information systems (GIS) can be linked to the Archaeological Record Archive in the same way they are linked to databases. A “gateway” approach, in which the GIS is used to perform a spatial query that is then executed against the SGML database, can be very useful to relate documents to geographic areas.

**Concept Summary**

An Archaeological Record Archive is a collection of material pieces and representations of them, and is a part of the Archaeological Record itself. The most common kind of representation are documents, and as such they can vary along the content, subjectivity, and temporality dimensions. SGML databases and document type definitions can support all three dimensions through structure-based, format-free document authoring, providing at the same time good navigation and search facilities. Additionally, a good archive must be integrated with another tools to become a success.
TAPA is a periodical publication that collects the results of projects carried on by the Landscape Archaeology Research Unit of the University of Santiago de Compostela. It is part of a working philosophy based on a model of integral management of Archaeological Heritage and understands archaeological practice as an unit including recuperation of archaeological record, its evaluation and interpretation, solutions to the present demands related to it, and dissemination of results.

In this series
TAPA 1  Documentación de un Entorno Castreño: Trabajos Arqueológicos en el Área de Camela
TAPA 2  Landscape, Archaeology, Heritage

Coming soon
TAPA 3  El Archivo Digital del Registro Arqueológico