

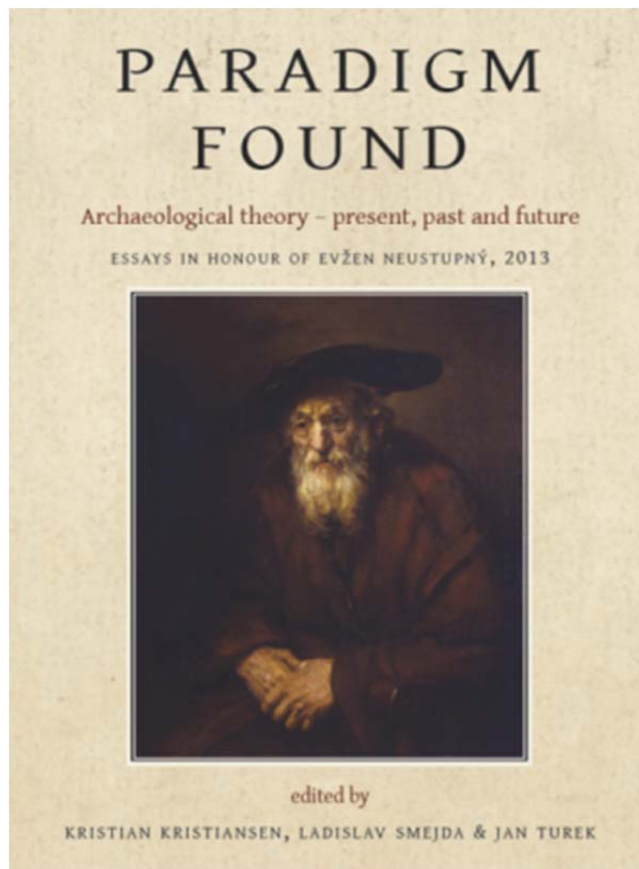
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Archaeologies* of Space: an Inquiry into Modes of Existence of XScapes

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Felipe Criado-Boado

Institute of Heritage Sciences (Incipit), Spanish National Research Council (CSIC)
Santiago de Compostela, Galicia, SPAIN

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Abstract

This text will deal with space, an important issue in human research, as it is a core element in human experience and society, inherent to the very possibility of reality. It tries to overcome the fact that, as a concept, it has not been properly appraised in archaeology, despite its importance. This proposal is based on the principle that actively engaged with the material world, there is a certain way of shaping space that underlies human action and its materialization, making it possible to produce order. A spatial form is never independent of the systems of representations that appear to monitor it, something that I will call the "concept of space". My aim is to study it through the objectification of concepts of space in material culture, by means of an interpretive and symmetrical approach to archaeological phenomena, which are characterized by presenting a meaningful and visible spatial articulation. This is the case of the first funerary and ceremonial monuments, domestic architecture, rock art and fortifications, as well as early field-systems and land use. In other words, my concern (now and for the future) explores the forms of space through time to detect their spatial regularities, and from them the cognitive representations of space. This objective calls for a review of different socio-cultural contexts in order to examine whether or not they present correspondences (and which, how and why) between the different ways in which their space is materialised.

Resumen

Este texto versa sobre el espacio, un tema importante de investigación porque constituye un aspecto esencial de la experiencia y sociedad humanas, embebido en las mismas condiciones de posibilidad de la realidad. A pesar de su importancia, el espacio como concepto no ha sido considerado de una forma adecuada por la arqueología. La propuesta que presenta este texto se basa en el principio de que, engranado activamente con el mundo material, hay un cierto modo de configurar el espacio que subyace a la acción humana y sus materializaciones, haciendo posible entre otras cosas producir orden. Una forma espacial no es nunca independiente de los sistemas de representación que la monitorizan, algo que podemos referenciar como el "concepto de espacio" de cada formación socio-cultural. Mi propósito es analizar éste a través de su objetivación en la cultura material mediante una aproximación interpretativa y simétrica a los fenómenos arqueológicos, que se caracterizan por presentar una articulación espacial visible y significativa. Esto es el caso tanto de los primeros monumentos funerarios o ceremoniales, la arquitectura doméstica, el arte rupestre y las fortificaciones prístinas, pero también de los sistemas de parcelación de campo, las canchas de cultivo, las arquitecturas de regadío o, incluso, el uso del suelo. En este sentido, mi propuesta (aquí y en otras partes) es explorar las formas del espacio a través del tiempo, identificar sus regularidades espaciales y, a través de ellas, aislar los modelos cognitivos de representación del espacio. Este objetivo demanda revisar diferentes contextos de una misma formación socio-cultural para examinar si presentan correspondencias y relaciones de compatibilidad (y cuáles, cómo y por qué) entre los diferentes modos de materializar el espacio.

Introduction

Before other considerations, I could not find a better contribution to offer Professor Ezven Neustupný than to briefly present a number of ideas and reflexions that guide my archaeological inquiries at this present moment in time. I grew up during the dictatorship of General Franco; when I started university, at the beginning of Spain's transition towards democracy in 1977, surrounded by the English and French texts my tutors had given me with the aim of clearing a path for my mind through the grey mist of that time, I enjoyed a number of texts by Neustupný. In many ways I felt them very close, symmetrical and inverse to my own position: looking from the western corner of Europe to its other side (which, quite interestingly, was then perceived as the East, but today is almost as its centre), and both under opposing dictatorial regimes. I remember that his refreshing writings spurred me on to broaden my horizons beyond French and English authors.

My aim in this paper is to propose a proper archaeological research on the concept of space, understood as something fundamental, successively giving rise to spatial representations, regularities, shapes, configurations, arrangements and then forms. This proposal is based on the principle that there is a certain way of shaping space which is actively engaged with the

material world **and** underlies human action and its materialization, making it possible to produce order (Demarrais et al. 2004, Malafouris 2010, Lillios et al. 2010) and arrangements of social life. A spatial form is never independent of the systems of representation that appear to monitor it (Wigley 1993), something that I will call the “concept of space”. As space is a core element in human experience and society, because it is inherent to the very possibility of reality, I believe it is an important issue for human research. But despite its importance, the concept of space (as a concept) has not been properly explored through archaeology. This text, which is more programmatic and tentative than factual and prescriptive in nature, proposes the analysis of the modes of existence (in the sense of B. Latour’s last project, <http://www.modesofexistence.org>) of material forms to discover their embedded concept of space, to account for their regimen of truth or episteme (Foucault 1978 [1966]), thereby interpreting the *archaeologiques* (Criado-Boado 2012) of space as a practice of symmetrical archaeology (González-Ruibal 2007) that avoids a reification of the constitutive dualities of Western modernity. To epitomize this approach, I will suggest three case studies that are outlined as graphic stories. In other words, this text calls for seeking a paradigm to interpret spatial principles that orientate the becoming and knowing of human reality, something that I consider to be a central problem for social sciences as ‘becoming’ is impossible without it.

Still a pending problem in Archaeology

After the seminal work *The Shape of Time* by Kubler (1962), we still lack a *Shape of Space* (of course different to the book of J.R. Weeks (1985) on geometry with the same name). *The Shape of Time* is a contribution to the history of things and images (*other* things) that replaces the traditional notion of style with new forms of historical *durée* that simultaneously involve mutation, replication and invention. In fact, this work suggests the very possibility of rethinking artistic styles (categories of cultural classification that are waiting to be rethought) as updates of each culture’s concept of space, as the formal regularities that produce the materialization of the cognitive representation of the spatial system. This is not the topic of this text, but a suggestion to bear in mind. Tim Ingold made a substantial contribution in several works (e.g. Ingold 2000) towards understanding spatial basics or principles when emphasizing the structural action of concepts such as points, lines, movements, animal, living beings or nature. Over the last 20 years he has been very influential in the fields of landscape archaeology and archaeological interpretation.

However, Archaeology (also History or Art History, and even Architecture or Geospatial methodologies) still requires research such as that put forward P. Sloterdijk (2003, see below) as basic forms of human work, action and thought. His approach is asking to be *prehistorized*; in other words, tested in the forms of material culture within the frame of concrete historical and social processes. This has been put forward by R. Bradley (2012) in his last book *The Idea of Order*, in which we finally find an archaeological account of this theme. One merit of this book is to establish the feasibility of the present research for the pursuit of a spatial order. Another recent and wide-ranging contribution is the German research initiative TOPOI, a research cluster to study the formation and transformation of space and knowledge in ancient civilizations [<http://www.topoi.org/>], which despite including Archaeology does not include many prehistoric contexts. Both initiatives are interesting to deal with this topic.

Despite the importance of the theme, it has been considerably overlooked in archaeological and prehistoric research. Quite obviously, this matter has nothing to do with Spatial Archaeology, a disciplinary trend that has always been understood as a group of archaeological studies that focus on exploring the spatial aspects of archaeological phenomena, but not as the challenge of identifying the very concept of space behind these spatial dimensions.

In recent years, spatially-oriented approaches have developed enormously in Archaeology, particularly through Landscape Archaeology, the explosion of GIS applications and the full emergence of Geospatial Digital Technologies (GPS, remote sensing, digital photogrammetry or 3D scanning). Today, a large number of archaeologists state that they use these approaches to Archaeology. The almost **ubiquitous** role of landscape archaeology as a keyword in recent archaeological research is a topic to be studied (Parcero-Oubiña et al. s/f), while the major development of GIS applications in Archaeology is understandable both from the perspective of their efficiency as their scientific-technological prestige. Geospatial Technologies have helped to further refine GIS techniques and produced a huge amount of data and new information. In turn, landscape archaeology has studied every kind of cultural landscape, and now we understand landscapes as processes, monuments as scenarios, and certain sites as places.

While these developments provided new insights into spatial behaviour, insufficient attention has been dedicated to space itself. Space has not been dealt with by functionalist Cognitive Archaeology, neither (despite its interest in symbolic and cultural studies) by Postprocessual Archaeology, nor (despite its thematic proximity) by landscape archaeology, nor, of course, by GIS-based Archaeology. It is a research topic that has been lost in the wake of current archaeological approaches towards the landscape and spatial analysis. The causes of this absence are complex, associated with its difficulty and its apparent unknowability (see below), but also connected with current disciplinary trends in Archaeology.

In part, this is due to the empiricist approach that dominates the landscape and GIS-based Archaeology. The latter has limited itself to an instrumental application of standard, commercially available GIS packages to Archaeology (the reason why a vast majority of archaeologists say they work *with GIS in Archaeology*), instead of formulating a genuinely new fundamental research to develop new geospatial procedures to process archaeological information, and replacing GIS applied to Archaeology with a complete Archaeological Information Science (Llobera 2010). The main questions that currently guide GIS research are scarcely significant, and lack hermeneutic ambition. Few studies go beyond the statistical acknowledgement of settlement patterns, locational decisions, carrying capacities, land-use potentials and territorial tracts. The postprocessual criticism to this GIS Archaeology (e.g. Tilley 1994) has insisted on these constraints and in the highly functionalist orientation of its research applications. But little has been done to offer positive alternatives to promote an innovative use of geospatial methodologies.

Neither the factual, case-centred direction of landscape archaeology has helped. The phenomenology of landscape (Wylie 2007), pertinent when associating the notion of landscape with the human perception of its setting, has emphasized the study of its subjective dimension, but has moved away (as also shown by cultural studies of the landscape in art) from the cognitive compounds which, engaged with material reality, structure the landscape.

Finally, the subjective twist of postprocessualism, which should have been the theoretical matrix for considering these conceptual problems, has limited its own capabilities. In fact, the main difficulty is the absence of a positive method for producing archaeological knowledge. To my understanding, this lack has deactivated this and other efforts, meaning that a large amount of good research has taken refuge in a renewed empiricist and technologizing paradigm, producing more database, processing them through new digital techniques, but without introducing new research questions and scopes.

So, a *real problem* remains: how to integrate the amount of information and the processing power of computers, with innovative interpretations to understand landscapes. One mean to do this would be by accounting for the concept of space that produced spatial phenomena, in the belief that what has been forgotten beyond monuments and landscapes is pure space.

Apart from research on landscapes, we have seascapes, skyscapes, soundscapes, visualsapes, dreamscapes, powerscapes ... but not *spacescapes*. After *each-scape* has been studied, we should look for the model for conceptualizing space that serves to arrange it. This becomes the *Xscape factor* we should account for. Here I am proposing a synthesis between the capacity of Archaeology to consider materializations (e.g. Funari 1998) and the powerful approaches to them in Anthropology (Appadurai 1986) or History (García 2009) to visibilize the Xscapes from an inverse engineering of each-scape.

Building the Matter: Landscape, Forms, Space

In a stimulating text (*Building, Dwelling, Thinking*), Heidegger (1994 [1954]) established how the being is reflected in the dwelling and that in the building, to the point that the construction and its form give reason to the being and its thinking (completed by Ingold (2000) own contribution as *Building, Dwelling, Living*). This idea has been developed in architectural critiques (Abalos 2000, Wigley 1993). It happens this way because the being-in-the-world is realized in habits, and habits are materialized in habitats. Thus, the being-in-the-world gives rise to specific forms of dwelling or inhabiting. In Galician or Spanish (my mother tongues) it is easy to understand this relationship, because the Latin verb *esse* (English *to be*) has been dualized into to *be* (*ser*) and to *stay* (*estar*). *Ego sum* means both *I am* and *I am here*: it implies that I am so because I am here, and I am in a certain place because I am who I am. In Spanish it is even easier; one says: *yo soy* and *yo estoy*. The condition of staying is complementary to the condition of being; it is not an immanent of the being (something intrinsic to being). Being-in-the-world is staying-in-the-world. The staying adds something, since it is possible to stay in many different ways, as many as there are distinct ways of being. Thus, being becomes, in a sense, more flexible and adaptive, depending upon locational conditions.

What leads from the habit of being to the habitat (or dwelling) of staying is the way of conceiving and thinking about space: the transformation of the habit into habitat is based on a specific *conceptualization of space*. The effect of thought space is materialized equally in the habitat understood as environs, as a house or an action, as a landscape or architecture, as proscenium or proxemics (Creese 2011, Pallasmaa 2008, Parker et al. 2004).

In this way, the models of landscapes are redoubled in architectonic forms: each type of architecture represents a landscape in the same way as each landscape contains its architecture. This is so because both are firstly spatial forms, materializations of a concept of space that constitutes and is conformed in the social being, and that is active in each socio-cultural formation. Architecture, like the landscape, is primarily space. Beyond monuments and landscapes is pure space, not only understood as the physical environment but also as an abstraction, as idea, as knowledge. Monuments, landscapes or even land-uses are objects (*actants*, after Akrich and Latour, 1992, 259) that cannot be divorced from the space that pervaded their forms, relating their material and ideal dimensions through a symmetrical relation (Webmoor 2007), as the new ontological turn (Olsen 2010) proposes; if we are going to be realistic, we should keep the constituents of the 'real': "the ontological question implies that the basic ingredients of the world (are) matter, agency, space and time" (Alberti et al. 2011, 897). From a perspectivist position (Viveiros de Castro 2004b) I will discuss 'time' and 'agency', at least without reclaiming an understanding of them under ontological categories that are radically different to Western ones, an understanding open to consider if every language needs these concepts in order to speak about things, if every object in alternative worlds (rather than calling them 'worldviews' or 'cultures', as pointed out by Alberti et al. 2011, 906) needs them to come into existence. In any event, time and agency imply their perception by a subject, while matter and space became inner components of the things. Therefore, landscape, architecture or mobile material culture (whether sculpture, pottery,

jewellery or tools) are an objectification of what is going on culture: they are a formalization of space through which social being becomes objectified and is reflected in diverse material styles, because style is a materialization of the system of power-knowledge (Prieto 1999, Warnier 2001).

And so, things are space before they are time, in the very sense that space comes first, and then the succession of life creates time. Although modern Western metaphysics has been concentrated on being and time (Criado-Boado 1993, 43), in fact it should have focused simultaneously (as other cultures did: Cormier 2003) on being and space; this is the main focus of my research program in archaeology, heritage and landscape, an argument found in different philosophers such Foucault (1976), and more recently developed by Sloterdijk (2003) in criticising Heidegger: the experience of space, in the same way as its action or effectiveness, has logical and, to my understanding, ontological pre-eminence over the experience of time. However, this does not imply denying time, its social dimension (temporality), or its historical dimension (periodization): to inhabit space is to inhabit time (see Karlsson 2001). But it does imply privileging (in the sense of to start with) space and matter in our ontology, in physical reality or, moreover, in non-Western ontologies (as pointed out by Viveiros de Castro 2004a).

But *what is space*? We should be capable of distinguishing its empirical reality from its concept. Physically there is something that is space (space as environment); but this existence is understood and organised through different regimes by different cultures. Conventionally we use the term “concept of space” to refer to the system of representation that monitors and products spatial actions. If “any landscape is composed not only of what lies before our eyes but what lies within our heads” (Meinig 1976), what is within our heads is that concept of space. This cultural conceptualization of space is reproduced in social life, at the same time that social life produces it. There are material things that can be perceived by the senses, and immaterial things that are thinkable. The landscape (like architecture, buildings and material culture) falls into the first group, while the spatial codes upon which the construction and perception of the landscape are based fall into the second. But both come together entangling complementary dimensions of the same objects (as the ontological turn proposes, e.g. Bryant’s ontology, Bryant 2010)), because any thought, but particularly thinking about space, is intricately interwoven with the material world, as symmetrical archaeology (Olsen 2007) would emphasize trying to overcome the constitutive dualities of modernity such as subject-object, ideal-material representation –thing ..., that universalize our own world and deny the others (Latour 2007 [1991], González-Ruibal 2013).

What interests me is the question of when the becoming of things makes them visible, what formal process is taking place? What syntax (if any) gives shape to the process of materialization process? My concern is whether this syntax exists, as otherwise it will not be possible to recognize common formal features or regularities in these objects; it could not be possible, for instance, to decode or interpret some things in terms of others (as done by Velandia 2005, a book that I believe should have a much greater impact). At the end, what we find is perhaps something very general, which could be told in narrative terms and functions as a metaphor bringing things together, but which in any case provides a comprehensive understanding of formal regularities in a certain cultural style and makes it possible to decode their underlying rationale (as done by Deleuze 1988 when discovers the *fold* as the spatial resource underlying baroque *logiques*). Therefore, this assumption is not an apriori or a phenomenological reduction. But it is some-thing that arises from the entities themselves, because “realities become determinate through processes of internal differentiation in which all elements of the puzzle are subject to the “emergent” rules” (Alberti et al. 2011, 906), a theoretical position that is applied to study a formalization process in Alberti and Marshall (2009). Finally this proposition is based on new ontology when saying that all entities are composed of internal relations with other entities, and therefore that objects or beings are

their relations (Bryant 2011; a proposal that has been argued for many years by Hernando and developed in detail in her last book, Hernando 2012).

In social practices, the experience of space is created by seeing, apprehended by vision, dimensioned by movement, thought by reason. If the social being thinks about space, if this becomes form and the form is visible, then everything visible is rational and symbolic. This is one of the premises that make it possible to account for space and its materializations in practice, from landscape to material culture. In order to *look* we have to successively but simultaneously see-know-think. As a result, cultural forms (the landscape, architecture or material culture) involve ways of knowing, looking, seeing and thinking, as well as ways of walking and moving. Once space is thought, it is built and pervaded when seen and walked. And this determines the forms of materiality.

But allow me to put these ideas in simpler terms. If we seek out the etymology of landscape, we find something very meaningful. Landscape is related to the old English 'landscape', which in turn is a term that appeared in the late 16th century from the Dutch word 'landschap' (German 'Landschaft') to denote a picture of a scenery where 'SCHAP' derives from the same root that gives '-ship' and is also in 'shape.' Finally, the *shape*, the *pattern* and the *relation* are internal to the very concept of 'landscape': considering a landscape means decoding the shape of space upon it.

Deconstructing the Objects: Knowledge, Method, Methodologies

A consequence arises from the previous theoretical discussion. If a social being builds its habitat in a way that it is as engaged in its living habits as in its thoughts, if the being is reconstructed in and constructed by its staying (*estar*, in Spanish) and its thinking, then we could discover the configuration of space and therefore access to a central dimension of human experience, what could be analysed in its twofold levels of reality keeping a symmetrical way that understands both sides (tangible and intangible) as constituents of the same actants, which implies simultaneously dealing with land-use and land-shape, with the form and its concept. Previous accounts of this are highly relevant for this proposal, as they combine well with our prior studies (Prieto-Martínez et al. 2003, Robin 2010, Gianotti et al. 2011, Troncoso et al. 2011, Hernando et al. 2011, Bradley 2012).

Therefore I will assert this research is feasible, despite the main practical, theoretical and philosophical difficulties of its aim: the immanent dualism of Western modernity; the initial unknowability of this study due to the lack of linguistic subjects to provide access to the rational and mental representations; the inevitability of postmodern subjectivism; how to move from observation of material codes (the *perceptible*: things, monuments, landscapes...) to the identification and account of structural codes (the *thinkable*); its relationship with the phenomenology of perception; cultural variability derived from historical context; its relationship with the symbolic system of each society; its relationship with orality (the changing experience of time and discourse between oral and literary societies ought to have caused some effect on their shape of space, Rodríguez 2010, 175); and its relationship with basic cognitive functions linked with visual and sensorial perception.

Its feasibility lies in the possibility of coping with this "space" through the materializations that it does produce and through the patterns of formal regularity reified on them. This can be contributed through Archaeology, analysing the archaeological record and considering diverse spatial phenomena from an interdisciplinary perspective.

Achieving this calls for an *archaeologiques* research programme (in the sense of Criado-Boado 2012) that solves these matters. This working programme aims to carry out a model of knowledge production situated in the mainstream of current ontological and epistemological debates (postpositivism, postprocessualism, postmodernism, the symmetrical speculative turn to consider the correlation between thought and world –Brassier et al. 2007, and the urgency to positively transform reality in the current context of the huge economic and cultural crisis of Western), which pleads for a weak model of scientific practice in Archaeology and the Humanities. Even its most weak (or *post*) version must recognize this practice as the production of knowledge based on rigorous empirical studies informed by robust theoretical models (Criado-Boado 2013) and based on post-positivist epistemologies and ontologies. This accounts for a method that is interpretive but methodical, to make it possible to contrast interpretive statements through the sequential and contextualized comparison of interpretations. Given that material objects do not speak for themselves, archaeological understanding (which is interpretive in nature) needs to use different horizons of rationality to contextualize our archaeological interpretations; these models could come from different sources, but in particular they come from the diverse cultural formations. This theoretically simple principle (which is actually complex in practice) avoids the risk of the solipsistic subjectivism that is so common in relativistic practices after the linguistic turn. An ‘open mode’ of research practice is required, some sort of a *multidimensional research environment* open to multiculturalism, multivocality, multiagent dialog and public participation. Even thinking about a multilingual dialog is important, since this makes it possible to test the capability-resistance of the different concepts to be translated into one language or the other.

Such a *symmetrical* approach goes beyond functionalism and post-processualism, and while appealing to narrative to present the results and make them understandable, it is not only narrative but positive: it seeks an *objetivable*, if not objective, knowledge that could be weakly categorized as *scientific* (if this matters, but at the end of the day we still have to convince partisans of Western scientific knowledge). Being deeply post-processual, it overcomes post-processualism and supports a rigorous method of interpretation. This method makes it possible to order the empirical evidence, the different methodologies, their contributions and the interactions between their results.

The actual methodology to accomplish this intellectual ambition is quite simple, since it studies materialities and processes of materialization. It starts out with actants to analyse its basic forms; it identifies them through a formal analysis of material objects; it searches for spatial regularities in the things under study through the use of powerful methodologies (including formal analysis, landscape archaeology, land-use and palaeoenvironmental studies, geospatial technologies and cultural astronomy) and looking to specific aspects (such as formal pattern, basic spatial model, visibility, visualization, accessibility and orientation); and finally it will unveil the logic of missing realities through the correspondence between these and the material culture they produced. This will make possible to propose interpretive statements on the principles of organization and order that underlie spatial cultural forms. For instance, by using advanced GIS techniques informed by new research questions, we could penetrate into the field of symbolic aspects of the human experience and space, putting emphasis on the human perception of the landscape, exploring the complexities of the factors that intervene in the act of perception and introducing movement not only to explain the localities of monuments, but also to understand the perception in a dynamic sequence (Llobera et al. 2011). The question to solve is not only “what is seen” but also “how is it seen” (Llobera 2007). We will now go on to see some examples.

Disentangling the Materials: Megaliths, Spaceships, Skyscrapers

As I previously mentioned, my concern here is what is the internal logic that orientate-conform the shape of actual objects. For this, diverse material entities should be convoked, from the landscape and land-use to the actual effects of human actions at a micro-scale, and including different types of architecture, rock art and mobile material culture. These topics are interrelated. To some extent, they actualize a same model that constitutes the matrix of meaningful variations for a given spatial phenomena. Moreover they are intra-related because each of these topics could be analysed through a multiscale chain that ranges from the building and its spatial arrangement, outwards (considering the perception of landscape and relations to its surroundings) and inwards (proxemic and internal relations). In my experience, there are two powerful tools to confirm the presence or absence of the same articulations of space and then unveil the entanglement between objects. The first is zooming through the different spatial scales, which verifies spatial regularities in different actualizations, versions, modifications or inversions, making it possible to identify a principle of spatial representation. The second is performing a micro-archaeology of objects (either built environments, buildings or mobile items) through a particular biography in order to see how the spatial codes on which they are based are materialized and negotiated. The reconstruction of the biography of materials and buildings allows us to identify the formal regularities through which a shape of space is expressed, insofar as checking if the episodes of rebuilding and re-use maintain the same spatial articulation, or detecting if they present different ones.

There are different fields and topics through which it is possible to decode these material entanglements: megaliths and monumentality, rock art, houses and fortifications, agrarian landscapes, domestication of land, skylscapes... I will quickly review the potentials of these material codes to finish with a more detailed example.

The most recent research on rock art deals with the consideration of religious aspects and beliefs (Fredell; Kristiansen et al. 2010). However, a proper account of art from the point of view of its inner spatial arrangement, the distribution of motifs and the layout of the panel in order to understand themes such as its viewpoint, ways of depicting perspective or underlying spatial codes, require further analysis. A detailed case study in central Chile shows how the “four suyos” model of Andean thought is replicated in the becoming of significant groups of rock art and even of the actual rock panels and motifs (Troncoso et al. 2011). Instead of considering art as representation of other world-views, we should explore the internal *logiques* that created such specific objects as art.

A similar approach could be applied into built environments, either houses, domestic space, *urbanisms*, or fortifications. Exploring how their architecture structures perception and mobility through the landscape (when dealing with walls or settlements as seen from outside) or within the urban landscape (when dealing with houses inside the settlement), is a powerful field of study to help recognize spatial patterns. In a broader sense, the built environment also includes rural landscape, mostly where this fully shapes a huge part of the environment through the systematic construction of field-systems, terraces, paths and water-management structures which amplifies the human effect on the environment and results in a pure *engineered landscape*, in the words of Earle et al. (2008). The possibility of studying the process of complete *architecturization* of the land provides an unique window to understand the cognitive representations and the very concept of space that underlie this process of massive construction of territory.

But beyond these, there are still new fields in which an approach of this kind could also be profitable. One is human-environment relationship and the other is cultural astronomy. Palaeoenvironmental research has demonstrated that human activities have caused a

considerable change in the landscape, even during periods prior to agricultural intensification. As such, humans introduced themselves as another agent in landscape dynamics. The alleged co-evolution of human interference with factors typically considered to be controlled by “natural” parameters (Berglund 2003), particularly (pre-industrial) climatic forcing during the Holocene, implies that both extremes of the (modern) *nature-culture* dichotomy should (once again) be avoided not only for the purpose of achieving a coherent understanding of the real world (otherwise, this conceptual division would incapacitate an empirical approach towards the study of human behaviour and their environment, Widgren 2012), but also as part of the cultural critique of Western metaphysics, to which Archaeology should also contribute [to de-colonize our thinking and practices](#).

The merging interaction between humanity and the environment signifies the development of fully domesticated landscapes arranged through systems of cognitive representations that underlie the [specific](#) settings. Being so, obtaining more precise information on the history of land-use technology could shed light on to what extent the co-evolution of humankind with the environment employs the same concept of space that shapes other archaeological phenomena. This is in agreement with Widgren (2012), who argued that we can only signify the circumstances under which human action changes in the shapes of past landscapes by understanding the fundamentals of social and cultural formations.

A further terrain to explore is the skyscape. Archaeoastronomy has been broadly applied to many contexts in the past, but particularly to megalithic monuments and Neolithic enclosures. These works, mainly focused on the Western Mediterranean and Atlantic Europe, have shown that the different groups of megalithic monuments present orientation patterns that are far from random (Ruggles 1999), and that in most of these cases these patterns could be interpreted in relation to the sun or the moon. However, it is still rare to find a comprehensive study on any archaeological landscape where both parts of the world, below and above the horizon, were considered jointly. Some efforts to disentangle this dichotomy have been attempted in recent years (e.g. Belmonte et al. 2009 or González-García et al. 2010). But we still lack a comprehensive study of the ‘land-sky-scape’, including the orientation of a single monument (either a megalith or a building) and, above all, of a whole group (e.g. a megalithic necropolis) in a particular region, looking at the same time towards the sky, towards prominent topographical features on the horizon and towards other archaeological features, and combined with a full spatial analysis. Therefore, observing possible links in how the orientations are implemented in buildings and the landscape would permit an inclusive understanding of the Xscape underlying sky- and landscape representations.

However, in order to show the potential of this approach towards [the concept of](#) space in prehistoric archaeology, I will now turn to a more familiar field: megalithic monumentality. I will briefly present a specific study case that makes it possible to see how diverse monumental forms are the result of a transitive engagement between the material world and the virtual world.

This topic is highly relevant for this inquire, because the first monumental architecture [was](#) the first material expression of human action that [artificialized](#) the environment in a permanent and visible way. Because of this, it is important to analyse the changing conditions of the relationship between humankind and the environment they contain (López-Romero 2008), the patterns of spatial articulation and, thus, the potential models of cognitive representations of space engaged with the surrounding world (VV.AA. 2012). Recent research is provoking a paradigm shift in the understanding of this phenomenon. In spite of the usual conception of megalithism as a *continuum* (for more than two millennia) and the monument as a *given* form, now it is necessary to consider (i) the intrinsic discontinuity of the period and (ii) the monument as a final result of a complex process of construction, modification, accretion and even destruction (e.g. Laporte et al. 2002). At the same time, new empirical data (which we do

not still fully understand) show that, at least in some regions of Iberia, megalithic construction occurred in certain specific cycles, perhaps in quite short time spans; this means that construction events did not happen uninterruptedly from 6.5 to 4.5 ky BP, but mostly concentrated in (hypothetically) short periods of building activity divided by periods without it. Here, as in other cases, the archaeological preconceptions created an illusion of identity and continuity that does not actually corresponds to the reality of historical objects. The monument became a real agent, which implies accounting for a new ontology for the megaliths in which the ancestry of monuments and their long life crossed by happenings of construction, reusing, reconstruction and abandonment would represent the succession of cycles of visibility and invisibility of social action, perhaps associated with what could be referred to as a specific dynamics of social change, social resistance to change, and distinct patterns of pre-historicity, as discussed in Parcero-Oubiña and Criado-Boado (2013). This social dynamic should also be linked with particular symbolic arrangements that could be illuminated through detailed consideration of the shaping of space involved in different monumental actualizations. Therefore, if we revise them, it becomes feasible to find the Xscape underlying them.

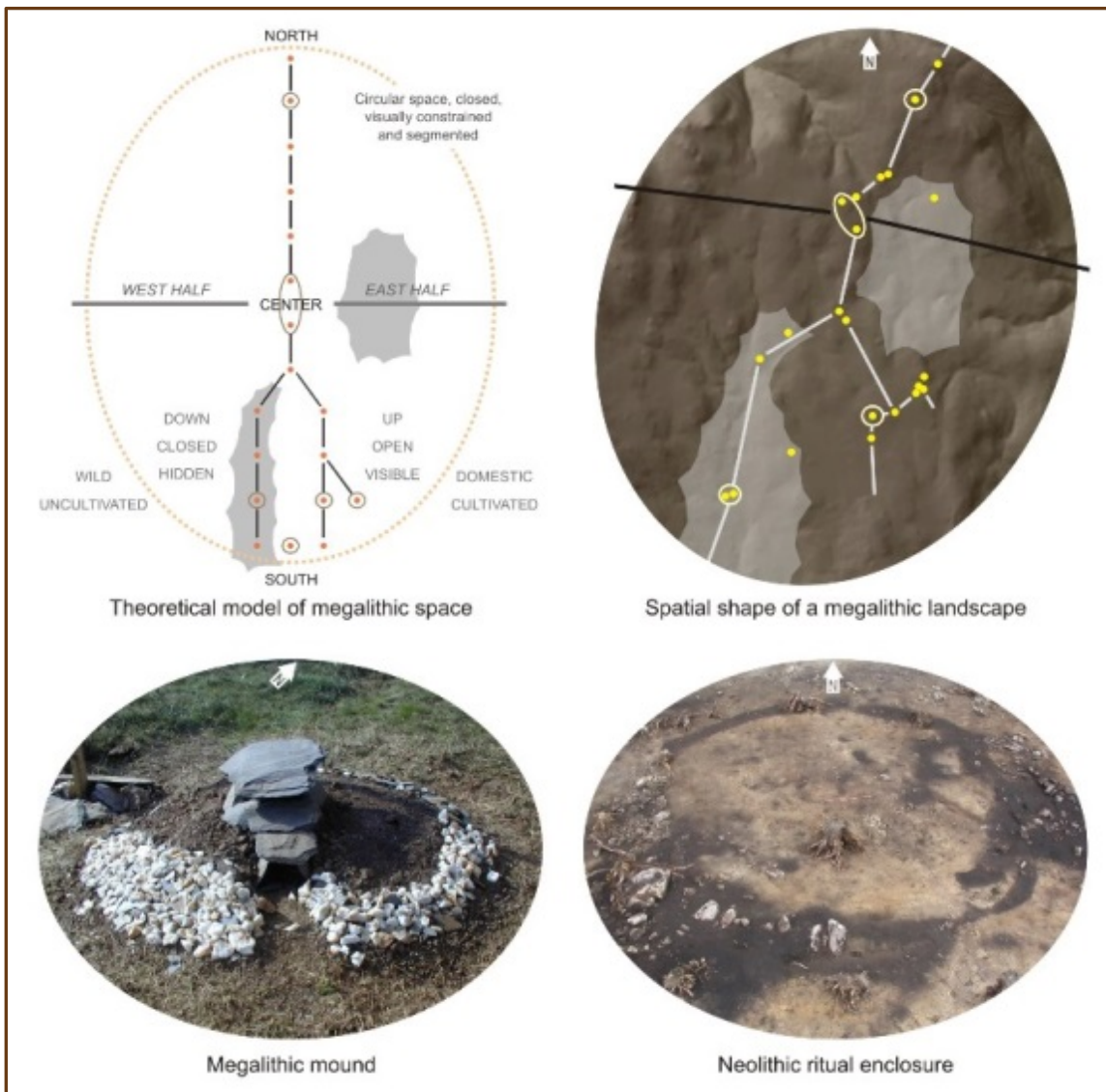


Fig. X.1

This is what is shown in Fig. X.1. Based on a detailed analysis of the megalithic forms (involving successively ceremonial landscapes, ritual enclosures, mound plans, chamber architecture and

the distribution of grave-goods and parietal art in chambers), a recurrent model used to shape space in this architectural tradition can be discovered. This model is presented schematically in the upper left hand corner of Figure X.1. In summary, it is configured as a circle with a clearly marked centre, and two halves with opposing features that are roughly oriented towards the east and west. Obviously, each specific megalithic form has major variations, underlining the fact that it was a specific actant. However, once its real life as a non-human agent has been recognised, the most surprising thing is to discover that all of these monumental forms have a spatial regularity that leads us to see that each of them is the materialisation of a basic form. Therefore my conjecture is that this basic form is actualising the concept of space in use in this specific cultural context (this study case is presented in greater detail in Gianotti et al. 2011).

Similar examples are found in other prehistoric material codes. But to illustrate this I will add a case of contemporary archaeology, which also allows us to return to a critical accounting of western modernity. In this case, I propose examining (from a very general perspective) some of the forms of material culture from Late Modernity during the last 40 years. The material codes we will now consider are architecture, car design and the design of spaceships from sci-fi movies.

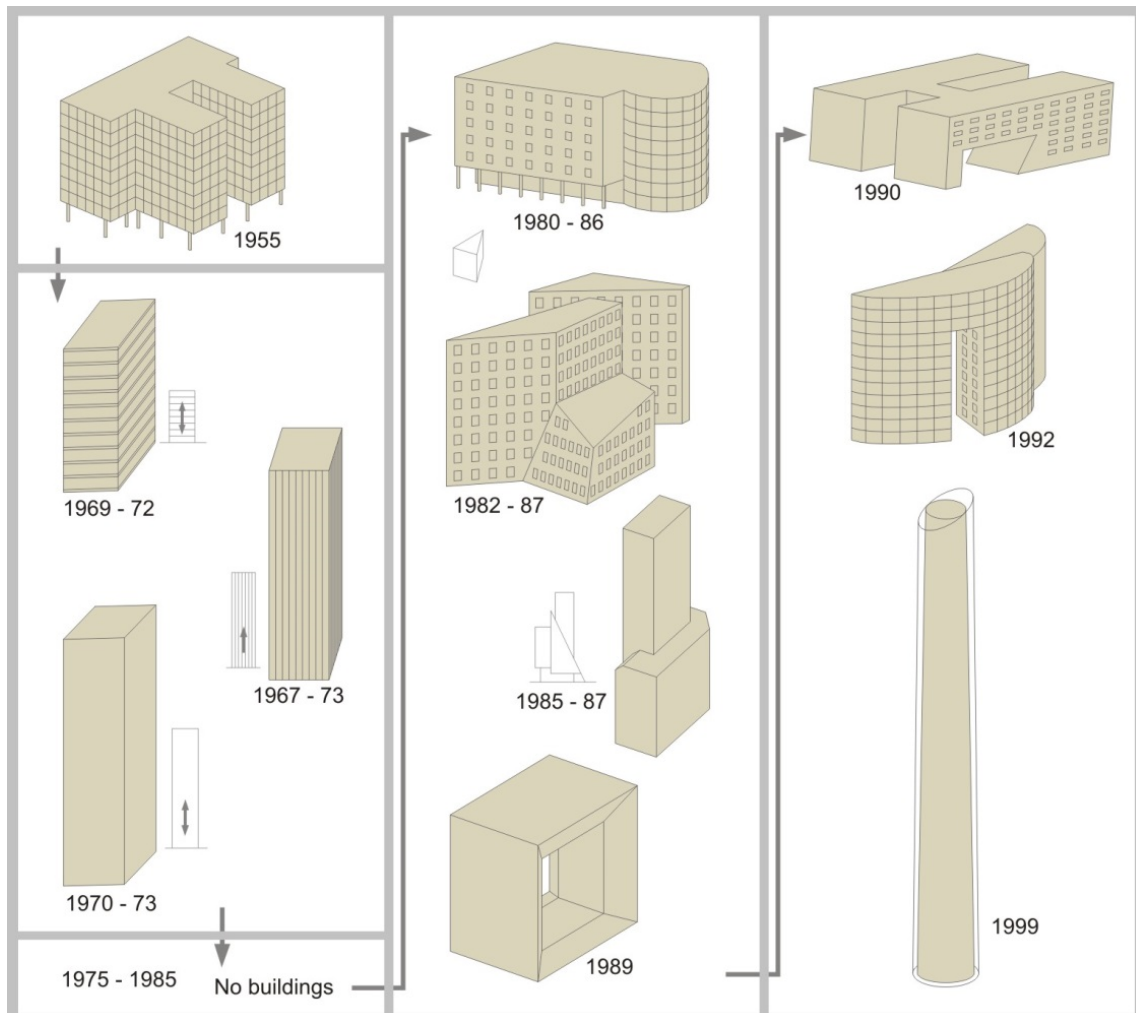


Fig. X.2

The architecture I consider is above all the evolution of skyscrapers in the futurist district of *La Défense* in Paris. Its pattern of development is shown in Figure X.2 based on sketches of real buildings. After a hesitant start in the 1950s, there was on the 60s and early 70s a sudden explosion of tall, linear skyscrapers with the shapes of the rectangular parallelepipeds,

corresponding closely to the ambition for economic development of the time. This dynamic was suddenly interrupted as a result of the economic crisis of 1973 and the following years, and no skyscrapers were built for almost ten years. Then, in the 1980s a new period of expansion began with unique buildings that reached skywards, once again timidly at first – these were years predominated by the idea that skyscrapers led to an increase in the number of suicides – then gaining height and becoming ever bolder. However, the most unique feature of the architectural style from this momentum was not its height, but instead the hegemony of angular shapes and sharp edges; the edges of the buildings are almost like knife edges. This trend culminated with Mitterrand's new *Arc de Triomphe*. It was a period of the optimistic growth of an aggressive, financial capitalism, the time of the *yuppie*. But soon this trajectory would be cut short by the economic crisis of the early 1990s, but which was short lived. When building activity frenzy restarted, a new basic shape appeared that was predominated by curved, rounded shapes. The climax of this trajectory came with the *Tour Sans Fins* by J. Nouvel, a skyscraper conceived as an extremely high column apparently without end, appearing to disappear amongst the clouds. It was to have been opened in 2001, but instead it never came to fruition. However, the history of architecture from the first decade of the 21st century continued and increased this trend: the curves of P. Eisenman in the *Ciudad de la Cultura* in Santiago de Compostela, or F. Gehry's warped forms used for the *Guggenheim*, or the rhizomatic style of Zaha Hadid, dissolved into the literally organic forms of (to name but a few) in a dizzying process that was not only a result of the incorporation of digital technology into architectural design (replacing the pencil and drawing board), but which also represents the maximum degree of neo-Liberal and neo-Con capitalism, until reaching what we could call "the big R" (being "R" either recession or robbery).

The most notable aspect of this development of architectural standards is, however, its unexpected similarity to other material forms. As shown in Figure X.3, the design of cars during this period, from the early 1980s through to today, has followed the same entangled formal trend: the aerodynamics of sharp, angular forms, then curving discretely at first, then folding, and finally acquiring organic shapes. But we can also consider the design of some of the starships used in the famous sci-fi movies from the period. The curved shapes of the first "Enterprise" from *Star Trek* can barely conceal the hegemony of a sharp, linear aerodynamics which were further heightened in the first episodes of *Star Wars*, then becoming curved, rounded and almost organic machines in films such as *Matrix*. The parallelism in this case is all the more noticeable when we consider that these objects, which only exist in a virtual world, are totally independent from any type of functional determination, making it possible to avoid the temptation of the simple functionalist explanation (e.g. aerodynamics) which for some will justify the changing pattern of spatial shape in skyscrapers and cars.

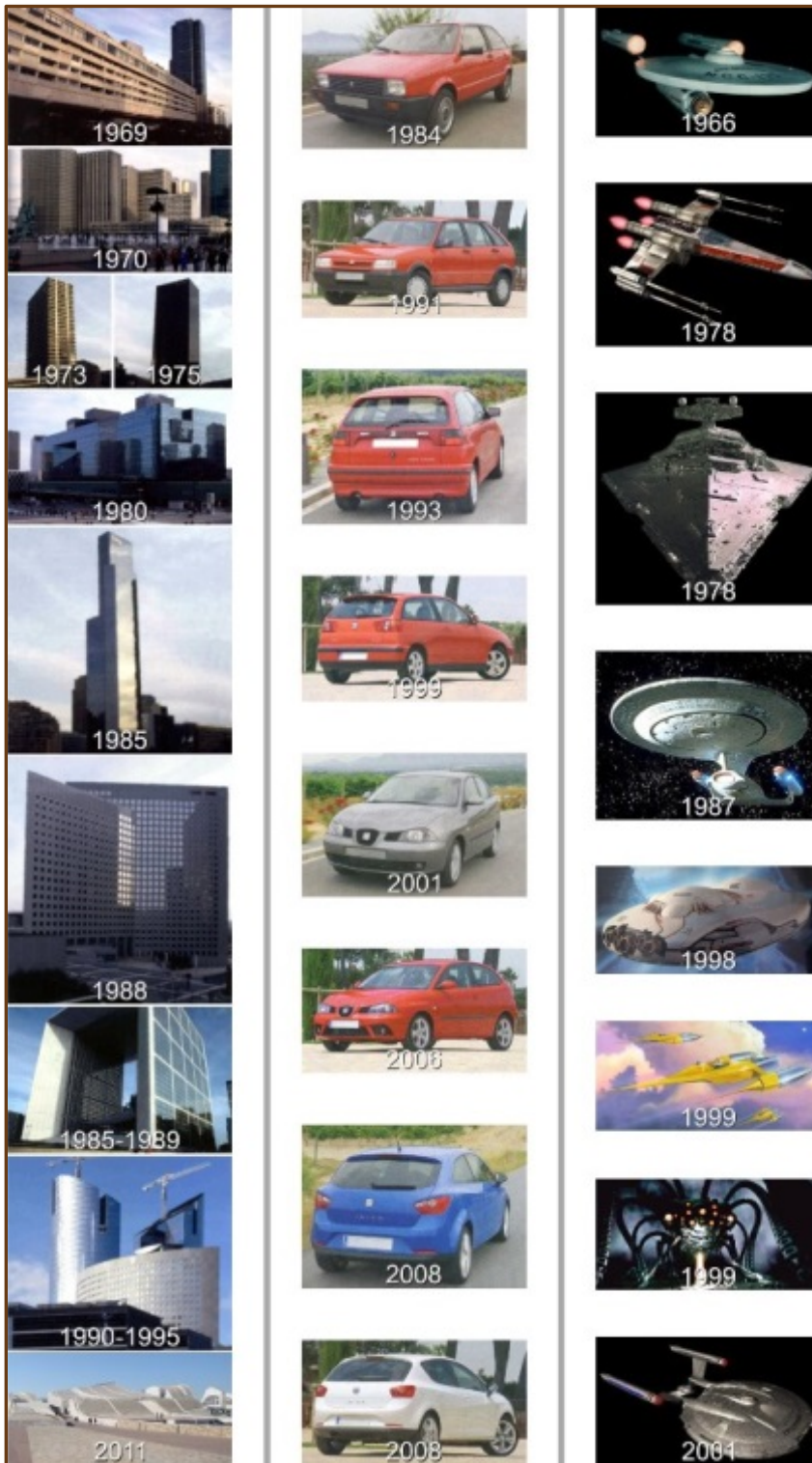


Fig. X.3

I do not want to overstretch this example with other cases, but we can see the same dynamic if we consider any late modern code of material culture. It does not matter if we consider small home appliances such as toasters or juice squeezers, fax machines, mobile phones or stealth planes. These are once again a perfect example of this formal trend: consider the opposing chronology and characteristics of the F-117 Nighthawk and B-2 Spirit.

The question is, what does this parallelism in the basic forms of Late Modernity mean? In all honesty, I am not sure. In a sense, this evolution is solved in the growing hegemony of neo-

baroque in recent years, and the analysis of this trend could give us references to interpret their significance. While the curves allow going beyond materiality, the Baroque, as with hyperrealism, is the style that best makes things real (remember the exhibition on Spanish painting and sculpture between 1600-1700, organized in 2009 by the National Gallery in London and entitled precisely "the sacred made real"). Therefore, I think we will understand this formal evolution if we associate the 'Barroquisation' of the curves to the aim of late-modern design to relate the world of things to our bodies. Personally I find it tempting to correlate this with the subsequent emergence of a new ontology that equates human, animate and inanimate beings, thereby bringing together curves, the neo-Baroque and ontology, (something enlightened by the explicit intentions of, for instance, the new –curves and polished- headquarters for Apple or the Saraceno's *Cloud City* experiment <http://arts.mit.edu/va/artist/saraceno/>). But I am not interested in making an overinterpretation here of these data, something that calls for a more detailed study. What I am interested in is showing the recurrence of a shape of space in any single moment that is found in very different materials, and that beyond all of them, some Xscape appears (ie. a basic pattern of shaping the concept of space that is embodied in a certain socio-cultural context). Secondly, it is also interesting to see that the pattern of change in these material codes follows a similar and parallel trend. And last but not least, the conditionings of these formal changes have its roots in three quite basic spatial tensions. I will consider this topic as a conclusion to this article, and in a very broad sense, as a way of attempting to interpret these formal regularities.

Shaping Things: Geometry, Direction, Terminus

It could be suggested that the forms adopted by space, as well as their pattern of diachronic variation, are the result of a *triple spatial tension*: on the one hand *between the circle and the square*, between curved and axial lines, between the sphere and the cube; on the other, *between horizontal and vertical lines*, between the extension in the plane and the conquest of the air; and finally *between the open and the closed*, between forms that are unbounded and bounded, between shapes that are unframed and framed.

The first tension is explored by Sloterdijk (2003), who develops a phenomenology of space that he calls *spherology*. He studied the *spheres* (in a trilogy consisting of *Bubbles*, *Globes* and *Foams*, published in Germany respectively in 1998, 1999 and 2004, and in Spanish in 2003, 2004 and 2006; only the first volume has recently been published in English by MIT) and proposes that the human being is a being-in-spheres, and that living in the world means conforming spheres; the sphere is the sheltering form, the space for protection and existential security. Sloterdijk's proposal is that the being-in-spheres is the essential component of the human being, because spheres are placid armatures, generators of sheltered and defensive spaces, givers of psychological and physical security. Throughout humankind's history, spheres have been transformed into *bubbles*, *globes* and *foam*. However, this simplified argument does not mark the end of the question, but instead its beginning, since they cannot be equal and the same in every moment: what are the spheres like at each given moment in time? What were they like for prehistoric humans?

The second tension is confirmed in the history of Architecture, which can be epitomized by the tense relationship between horizontal and vertical forces, (the possibility of also proving the effect of this conformative tension in prehistory, landscape, sight or perspective, are hypotheses worthy of further exploration). This tension gives rise to four lines of force, to four basic shapes, but also to four ways of seeing and four ways of representing: disorder (or wild order), horizontality, obliqueness and verticality. They can be successive in temporal terms but (since they primarily appeared) they occur also simultaneously, synchronically.

The third tension has to do with the terminus, with the actuality of the limits, with the material means to construct the boundaries of forms. According to the ways in which they relate with others (other people, other things, outward vacuum ..., outer space), forms can be unlimited or more or less limited. The construction of the border is the mediator of relationship between something and some-other: to some extent it reflects the nature of this relationship. As can be seen in pottery decoration, settlement plans, land allotment or social complexity, an entity can be more or less divided or undivided. Without becoming overly simplistic, it can be seen that the architecture of limits in some ways corresponds with the actual tendency of social reality for division or undivision (following P. Clastres –see an account of both concepts in Parcero-Oubiña et al. 2013). Between both extremes (the blurred and the wall), there are different degrees of becoming open or closed.

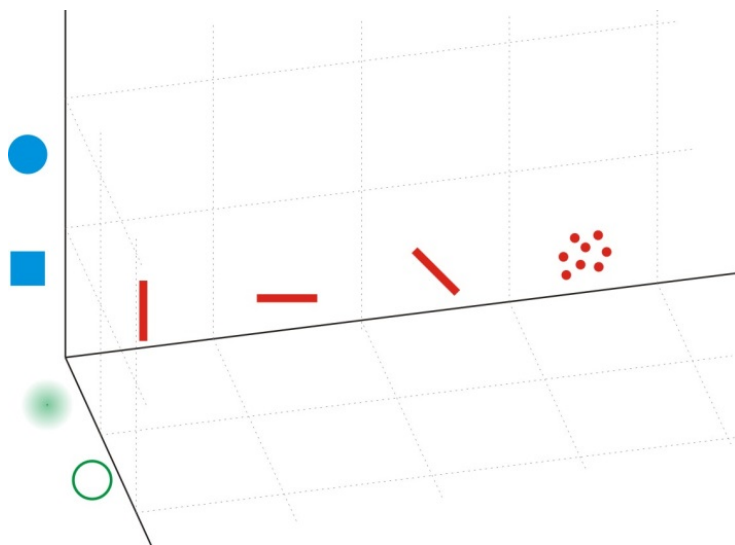


Fig.X.4

The conjunction of those tensions defines the formal model of space (either architectonic or built, material or intangible) at different times. This (Fig. X.4) hypothetical model (or any other alternative model that would arise if this were discarded) could be confirmed in the material forms (monuments, constructions, houses, landscapes, and land-use) of different stages of prehistory and history.

There is a full and lengthy history that ranges from the sphere as a positive space providing safety in the wilderness, initially represented in the ‘circles of fires’ (after Lizot 1976 who uses such expression not only to describe the Yanomami village but also for naming the basic form that shapes sociability and community between this people), the roundness of cabins or the roundness that trace the clearings in the first undivided Clastrian societies, to the imposition of quadrangular and vertical forms (see an account of NW Iberia late prehistory applying a perspective based on P. Clastres on Parcero-Oubiña et al. 2013). This history is first of all a chronicle of shapes, but is also a chronicle of space, a history of the landscape, sight, perspective, society and thought. But above all it is prehistory, because the things our present societies are used to seeing appeared in stages that only Archaeology (informed by an interpretive theory) can reconstruct.

And so, we will consider the late prehistory and history of Galicia (in the NW Iberian Peninsula) as a case study (Fig. X.5), where we see circular and square forms. Circular shapes: prehistoric cabins from the late Neolithic (no. 1) and Bronze Age (no. 4), Neolithic barrows (no. 2), ceremonial enclosures from the late Neolithic (no. 3) through to the *croas* of the Hill fort period, houses of Iron Age hillforts (no. 5), and hillforts themselves (no. 6). Square or

rectangular shapes: complex Iron Age houses (no. 7), Roman camps (no. 8), Roman villas (no. 9), Roman mausoleums (no. 10) and public buildings (no. 11) and later on, castles (no. 12), temples and churches (no. 13).

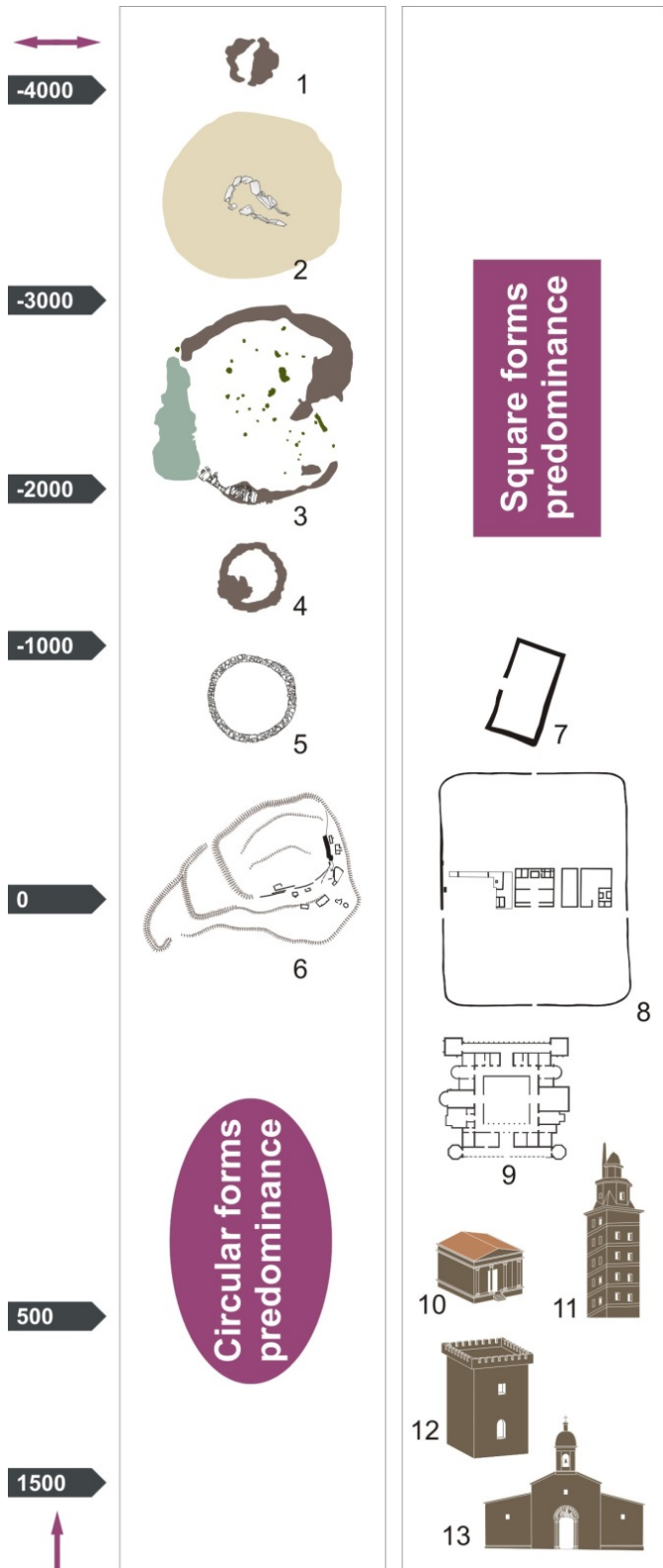


Fig.X.5

Similarly, some of these forms are more vertical than others, and others are more visible or monumental, depending on whether they are more or less petrified than others. It could be

said that these examples are selective, although it is true that this spatial system of tensions does not accept exceptions: all of the empirical cases are within it. The circular, perishable forms, closer to the ground, less monumental and barely visible or invisible, are not only the oldest, but also reflect different types of social groups, predominated by more communal or egalitarian values. The shapes become squarer, more consistent, more vertical, more monumental and more visible, precisely at the time when societies and groups appeared that had radically different characteristics.

These tensions can operate in a diachronic and synchronic way. When these oppositions operate synchronously in the same horizontal horizon, they make it possible to establish or represent structural differences within the society. And so it comes as no surprise to see in the Iron Age hill fort culture the differential use of circular houses and square houses to respectively characterise family groups in contexts of community predominance and non-egalitarian contexts, a transformation that has basically been attributed to the Roman invasion but which in reality characterises the end of the “hill fort world” before the arrival of the Romans, with the appearance of complex political groups based on internal processes of differentiation and the rise of aristocracies. Similarly, the stronger the trend towards the consolidation of the family as the basic nucleus of production and consumption, the more circular, more petrified, monumental, visible and vertical is the “hill fort culture” house. It would be possible to create a history of the family, the individual and their relationship with the community based on the architecture of the home, and in the transformations that took place in the domestic sphere.

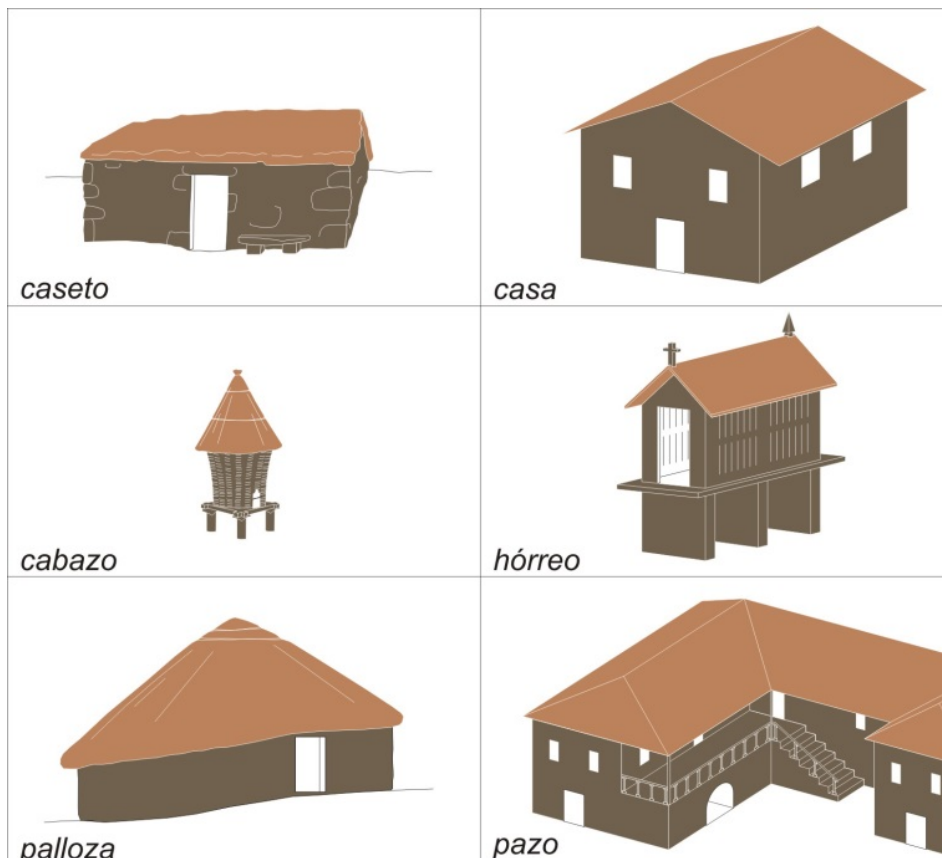


Fig.X.6

The same thing occurs in vernacular architecture (Fig. X.6). The poor dwellings of rural communities stagnated in circular forms (*palloza*), close to the ground and barely visible (*caseto*), while the rich peasant families build rectangular homes (*casas*) that rise over the surrounding landscape, dominating it, seeing and being seen. The noble families build their

rural manors (*pazo*), normally called “towers” (*torre*) not only due to the presence of defensive structures but also their vertical nature. This opposition can be seen more clearly in the architecture of granaries in the countryside: the humble *cabazo* (small and simple raised granaries characteristic of poor domestic units) is the opposite of all of the formal features of the *horreo* (larger raised granaries belonging to rich country landowners).

Thus, spatial forms (especially architecture but not only) are cultural devices for organising the experience of space and time by controlling the form, vision and sight. By building a form that involves a way of seeing and looking, which gives rise to a way of thinking, architecture is reproducing the power-knowledge system of the social being. Architecture has an order within society. For this reason, architecture has functioned historically as an efficient, cultural device to produce meaning, exhibition, control, and domestication of will. If each type of architecture reflects the society that builds it, this is because this it is the result of a certain conceptualization of space. As already said, this text *calls attention to account for this conceptualization*. Architecture is a superb case of the constructive-productive effect of the concept of space. Despite being a privileged case study to detect and analyse spatial codes, it is not the only one. The same must occur in other ranges, from material culture through to the landscape, from the terrain to the sky, as well as from the ground to the underground or underworld. The problem that needs to be explored is how, as a result of the above mentioned internal relations, new objects arise that incorporate similar regularities to the same set of objects or to other kinds.

All of these regularities function (within the same ontological context –in the very sense of Alberti et al. 2011, 903 when proposing “ontology” as a better term for “culture”) in similar ways, i.e. in the same mode of existence. Because behind X-scape (where the X stands for “land” or whatever), there is space. They are all are spatial devices, even if they modify the environment substantially, slightly, or not at all. In any case, they use (modify or build) the environment, and therein lies the domesticating power of these mechanisms, their cultural tension. Another matter is the scale of this mechanism, which can range from the *domus* through to domestication and, finally, the pure artificialization of the world.

An open end

Here I have touched on a number of relevant issues, which I believe call for further interpretation (including a proper account of their social and historical contexts, e.g. Earle and Kristiansen 2010). An inquiry of this kind will contribute to several fields in archaeology, the humanities, science, technology and even culture and the arts, because a proper account of space will produce new meaning about any materialization process, what includes some current relevant matters as the hegemony of design or the processes of Culture Heritage formation, today acknowledged as “heritagization” (Margry et al. 2011). It also will complete our understanding of social time and facilitate a space-based ontology which, beyond 3D GIS, must look for a 4D perspective (incorporating time) and for what I call the “XD perspective” (incorporating multi-subject perspective). This could be facilitated by robust models on the concepts of space that underlie either representational entities either alternative ontologies.

In any case, since I do not accept a positive will-to-knowledge (but some sort of Adorno negative dialectics), the falsification of the theoretical principle on which this inquiry is based (that there is a shape of space underlying human action and its materializations) will not imply the failure of this research, but instead its satisfaction in negative terms.

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