KEYWORDS: ***Rock art – Art history – Narrative – Eurocentrism – Postcolonial discourse***

ROCK ART STORIES: STANDARD NARRATIVES AND THEIR ALTERNATIVES

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Abstract. This article examines the main ways in which the history of pre-Historic rock art has been written since the end of the nineteenth century. Under the influence of models first developed by art historians, twentieth-century archaeologists typically described rock art's story as a progressive evolution from rudimentary styles to highly realistic paintings. This master narrative remained unchallenged until the 1990s, when it became apparent that rock paintings did not progress from simple to complex works of art. With the decline of traditional chronologies, it has become essential to explore new forms of writing the history of rock images. In this context, I consider how recent debates in art history can inform archaeologists about alternative ways of telling the story of rock art. I conclude with a case study showing how Pleistocene art specialists can move forward with new narratives.

1. Introduction

In archaeology, as in many other social sciences, the past twenty years have witnessed an increasing interest in literary theory, textual analysis and narratives (e.g. Pluciennik 1999; Joyce 2002; Shanks 2004). In general, attention to the different ways of 'writing' archaeological texts has been fuelled by a growing postmodernist emphasis on the so-called 'linguistic turn' (Rorty 1967). The idea that language represents the limit to any scientific inquiry into truth has encouraged what several authors have called 'the revival of narratives' (Burke 1991). In this setting, analysis of the structure and nature of different forms of explanation has become fashionable in many human and social sciences during the last thirty years (e.g. Danto 1985; Rosaldo 1989; Nash 1990). However, with a few exceptions, Pleistocene art specialists have been reluctant to evaluate the role of narratives in the understanding of pre-Historic art. In fact, there are not, as yet, studies about the ways in which rock art explanations have developed within narrative frameworks. This lack of concern contrasts with the situation in art history, where there is now a renewed interest in the master narratives of twentieth-century art (e.g. Belting 1987; Danto 1997; Elkins 1994, 2005, 2007; Gilmore 2000; Mitchell 1986; Nelson 1997; Summers 2003). Since the 1990s, some of these authors have pointed out that 'the great master narratives which first defined traditional art […] have not only come to an end but contemporary art no longer allows itself to be represented by master narratives at all' (Danto 1997: xiii; see also Belting 1987; Elkins 2002; Carrier 2008). They have argued that traditional art history was based on a view of 'art' that excluded a number of non-Western and non-figurative traditions. In this setting, much of the recent controversies in art history have focused on how historians can move towards new forms of historical writing without relying on traditional schemes (e.g. Elkins 2002; Carrier 2008).

In this paper I examine twentieth-century rock art narratives and their alternatives. In particular, I suggest that art historiography can be useful to explore important problems concerning the history of rock art: what have been the shapes of rock art stories since the authentication of cave art? Are master narratives compatible with recent developments and discoveries in rock art? If not, what are the alternatives? Before attempting to answer these questions, some preliminary clarifications are in order. First, while this paper is about rock art stories, I primarily focus on Palaeolithic rock art, my field of expertise. Second, I distinguish between 'interpretation' and 'narrative'. Since the discovery of cave art, archaeologists have proposed different *interpretations* concerning the meaning of rock images, including sympathetic magic, structuralism, semiotics, and cognitive approaches. These interpretations may be embedded in *narratives*, i.e. unified sequences of events by which information is presented and made acceptable, regardless of the specific interpretation proposed. The difference between 'interpretation' and 'narrative' explains, for instance, how authors such as Breuil and Leroi-Gourhan proposed different understandings of Palaeolithic art but they used a similar narrative form. In

other words, narratives are, up to a point, independent of underlying interpretations. This does not mean, however, that they are not open to falsification. In some cases, the emergence of new data can significantly affect narrative structures. For instance, the discovery of the Grotte Chauvet in 1994 called into question the metanarrative of progress dominant in rock art stories until that time.

With these considerations in mind, I suggest in the first part of the paper that, at least until the late 1970s, the most influential rock art narratives (especially Palaeolithic art narratives) conceived the story of cave paintings as the progressive journey from 'primitive' and 'rudimentary' images to 'sophisticated' and 'complex' representations. I argue that this account was highly influenced by the narrative that, during the nineteenth and the twentieth centuries, became the customary way to tell the history of art. In this period, art historians recounted the history of Western art as the development 'from archaic symbols to highly naturalistic styles' (Elkins 2002: 58–59). As I seek to demonstrate in the second part of this article, this model has been recently challenged both in art history and in rock art studies. On the one hand, art theorists like Hans Belting, Arthur Danto and James Elkins have problematised master art history narratives, pointing to their Eurocentrism, reductionism and cultural colonialism. Dissatisfaction with traditional models has resulted in noteworthy exploration of alternative ways of telling art stories. On the other hand, a number of recent developments in archaeology have questioned the idea that rock art progressed from simple to complex representations. In particular, recent discoveries such as Chauvet and Cosquer, have demonstrated the existence of very 'sophisticated' rock representations since the beginnings of the Upper Palaeolithic. With the decline of traditional stylistic chronologies, archaeologists' interests concerning the ways in which the history of rock art is organised have passed from theoretical to practical. In this setting, I examine how recent discussions in art historiography can encourage archaeologists to consider alternative ways of telling the story of rock images. I suggest that while important changes in rock art narratives are already taking place, recent debates in art theory and history can assist rock art historians in their attempt to go beyond traditional meta-narratives.

2. Standard narratives: setting the scene

In his *Lives of the painters, sculptors and architects* (first published in 1550), Renaissance artist Giorgio Vasari considered three main phases in the history of art. In the first period, the formative arts were far from their perfection and, 'while they had much in them that was good, yet this was accompanied by so much imperfection' (Vasari 1900: 302). During the second phase, 'the arts were, in a measure, delivered from that rust of old age' (Vasari 1900: 302). Finally, in the third period, artists attained a high degree of perfection in 'the imitation of nature' (Vasari 1900: 303). Following this historical development, Vasari concluded that it was inherent in the very nature of art to progress gradually from humble beginnings to the summit of perfection (Vasari 1900: 303).

As a number of authors have pointed out (e.g. Belting 1987; Danto 1997; Elkins 2002; Carrier 2008), Vasari's book has influenced later stories of art in several ways. First, like Vasari, contemporary historians have the tendency to present the story of art as a linear sequential form (Elkins 2002: 64; Carrier 2008: 22–25). Ernst Gombrich expressed this idea with great clarity in a paper given in 1966: 'It should not be hard to explain to art students that the canvas of art history must be stretched on a frame of chronology just as their painted canvasses must be stretched' (Gombrich 1966). Like Gombrich, art historians have typically conceived the story of art as a chronologically-ordered succession of events with a beginning, middle and end. The narrative typically starts with 'the art of the early civilisations', including Egypt, Mesopotamia, Greece and Rome. The story continues to 'the Middle ages' and to the Renaissance. From there, the plot moves to the Baroque and Rococo and, finally, it culminates in Modernism. This structure is common to some of the most popular twentieth-century art histories, including Helen Gardner's *Art through the ages* (1926), Ernst Gombrich's *The story of art* (1950), Horst Janson's *History of art* (1969), Frederick Hartt's *Art: a history of painting, sculpture, and architecture* (1976), and Honour's and Fleming's *A world history of art* (1982).

Second, the search for 'realism' or 'naturalism' ('the imitation of nature' in Vasari's terms) constitutes the 'emplotment' of most art history narratives, i.e. the active way of organising the events into a system (Ricœur 1984: 33). In fact, 'realism has been the major theme of Western [art history] since Vasari' (Elkins 2002: 59; see also Belting 1987: 22–23; Carrier 2008: 29). For instance, Ernst Gombrich suggested that the history of art from the Greeks to the end of the nineteenth century may be described as a 'road towards illusionism [and] visual consistency' (Gombrich 1973: 238). Similarly, according to Clement Greenberg, 'from Giotto to Coubert, the painter's first task had been to hollow out an illusion of three-dimensional space on a flat surface' (Greenberg 1961: 136). In other words, art historians assumed that 'naturalism', i.e. the depiction of things as if they were an optical phenomenon, was Western artists' primary goal.

Third, and related to the previous point, the history of art has been usually described in terms of an unceasing progress in illusionism (Elkins 2002: 59–60; Bal 2003: 22; Carrier 2008: 37). In fact, since the end of the nineteenth century the belief in the notion of 'progress' has been widespread in many historical disciplines, including political history (Burrow 1981), the history of ideas (Skinner 1969) and the history of science (Jardine 2003). In the case of art history, artistic progress has been associated with the development of a set of

pictorial devices during the Renaissance, including linear perspective, foreshortening and modelling. Thanks to these technical 'advances', mimetic art was more fully developed in the Baroque and Rococo, reaching its peak in the nineteenth century. It was only later when 'the road away from illusion in twentieth-century art led through the cunning inconsistencies and ambiguities of Cubism' (Gombrich 1973: 238). This progressive view of history is common to some of the most influential twentieth-century art texts, including Wölfflin's *Principles of art history* (1950), Panofsky's *Perspective as symbolic form* (1994), and Gombrich's *Art and illusion* (1960).

Fourth, master narratives mainly focus on 'fine arts' and excluded 'certain artistic traditions and practices as "outside the pale of history" ' (Danto 1997: xiii; see also Shiner 2001: 5; Carrier 2008: 31). For instance, traditional stories typically overlooked non-Western art. In fact, until recently the art of India, China, Japan, as well as 'primitive art' (the native 'arts' of the Americas, Africa and South Pacific) deserved no more than a chapter or two in most art history books. Furthermore, contemporary art (e.g. surrealism, abstract art) 'either was not part of the sweep of the history or it was a reversion to some earlier forms of art' (Danto 1997: 9).

This way of telling the history of art has permeated not only professional art-scholarship but also other forms of Western writing on art. Indeed, Western representations of pre-Historic art have been highly influenced by ideas and theories developed within art history (Palacio Pérez 2010, 2012). Similarly, the narrative of representational art has highly influenced the way in which archaeologists, anthropologists and art historians have written the history of pre-Historic rock images (Fig. 1). This story began at the turn of the twentieth century when French archaeologists recognised the authenticity of cave paintings (Bahn and Vertut 1997: 20–21). Within only 25 years (1895–1920), archaeologists discovered numerous paintings, engravings and bas-reliefs on the walls of many Spanish and French caves, including La Mouthe, Font-de-Gaume, Les Combarelles, El Castillo, Niaux, Le Cap Blanc, Le Tuc d'Audoubert and Santimamiñe, among many others. Archaeologists soon realised that 'these works of art did not belong to the same period' (Breuil 1907: 5) and, therefore, that they needed to 'establish the bases of a chronology' (Cartailhac 1908: 515). In other words, like art historians, archaeologists sought to set cave images in a time line.

The first formalised rock art narrative was proposed by Henri Breuil. Breuil was a French priest who became the highest authority on cave art in the first half of the twentieth century. Since 1906, Breuil reckoned on the basis of stratigraphical and stylistic analyses to put forward the first cave art narrative (Cartailhac and Breuil 1906: 111–114; Breuil 1907). The story begins with the 'very stiff and poorly proportioned' figures of the early Upper Palaeolithic (Breuil 1907: 10). According to Breuil, these images were extremely rough in terms

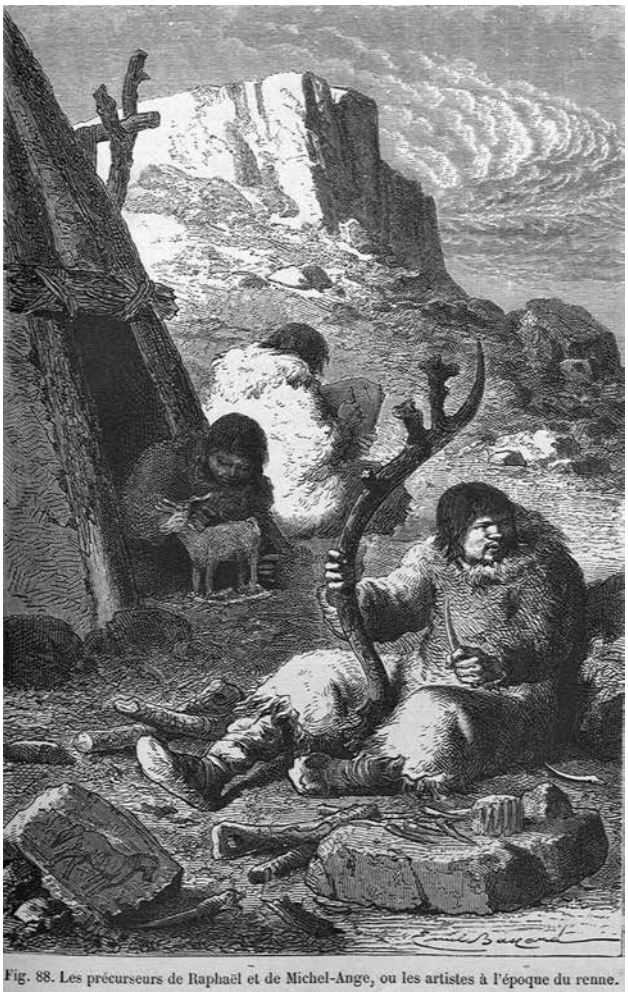
Fig. 88. Les précurseurs de Raphaël et de Michel-Ange, ou les artistes à l'époque du renne.

Figure 1. *Pre-Historic artists represented as 'the precursors of Raphael and Michelangelo' in Figuier (1876: 167).*

of technique and conception. Palaeolithic art then moved to a second phase in which representation made significant progress. In particular, artists distorted some parts of animals' anatomy (e.g. horns) to obtain three-dimensional effects (Breuil 1907: 12). Moreover, they coloured some paintings (either in red or black) and developed a primitive form of 'modelling', the artistic technique consisting in the systematic gradation of colour within a contour to create the illusion of volume (Breuil 1907: 12). The plot then has its moment of suspense when progress in 'naturalism' was interrupted by a period of 'deplorable and disproportionate' paintings (Breuil 1907: 14). Modelling disappeared and the colour of the body of the animal was painted uniformly. After this interruption, realistic 'art' resumed its progress and culminated at the end of the Palaeolithic, when pre-Historic artists developed an impressive number of technical devices to create naturalistic images, including oil- and water-based polychrome painting, modelling and shading (Breuil 1907: 15). Finally, the account moved to its tragic ending, in which Palaeolithic art disappeared during the Azilian period.

Given the considerable proliferation of works on

pre-Historic art that appeared during the first decades of the twentieth century, it might be a reasonable assumption that there were different ways of telling the story of rock art. However, few accounts of Palaeolithic art written at that time did not conform to Breuil's model. Like Breuil, most rock art specialists based their sense of history on the artists' technical skills to create increasingly realistic images (e.g. Reinach 1908: 5; Cartailhac 1908; Peyrony 1914; Luquet 1930: 20; Capitan 1931). This idea was also widespread in pamphlets, archaeology textbooks and popular science books (Parkyn 1915; Osborn 1915; Kühn 1954). These narratives shared features with traditional stories of art: rock art history was presented in a unilinear progressive form, the struggle for 'naturalism' gave the story its drama and the history of rock painting was exclusively based on European evidence.

This model remained unchallenged until the late 1930s. At that time, new discoveries introduced a significant contradiction at the heart of previous chronologies. Until then, rock art specialists had considered the evolution of two parallel technical developments in order to explain the history of cave paintings. On the one hand, chronologies were based on the progress in foreshortening, the procedure governing the three-dimensional representation of bodies. On the other hand, the history of rock paintings was the story of the constant improvement of painting techniques, from simple outlines to polychromes. In the mind of early rock art specialists, there was a strict correlation between these two developments: Palaeolithic artists had first depicted animals in profile and without colour, then they have represented monochrome animals showing a rudimentary use of foreshortening, and finally they have achieved the most realistic polychrome figures. However, discoveries such as L'Abri Blanchard, Labattut and Lascaux demonstrated that polychrome figures were not necessarily represented in 'proper' perspective. For this reason, since 1935 Breuil distinguished between two main phases in the history of pre-Historic art: the *Aurignacian-Perigordian* and the *Solutrean-Magdalenian* (Breuil 1935; Breuil 1952a: 38). During the first period, corresponding to the beginnings of the Upper Palaeolithic, representation evolved from 'clumsy' and 'amateurish' outlines of animals to bicolour paintings. The most sophisticated representations from this period (Lascaux) were figures presented in profile that had their horns or antlers forward facing (a technical procedure that Breuil called a '*twisted perspective*', Breuil and Berger-Kirchner 1961: 24). Later, after a hiatus during which 'no paintings could be ascribed to the Solutrean' (Breuil 1952a: 39), Palaeolithic art resumed its progress during the Magdalenian period. The early Magdalenian representations were line drawings in black 'which were frequently sketchy' (Breuil and Berger-Kirchner 1961: 24). These first outlines evolved to 'fine contour drawing executed with masterly skill' (Breuil and Berger-Kirchner 1961: 24). In a subsequent phase, artists introduced modelling to create more realistic paintings. Finally, the zenith of cave art, polychrome painting, was reached. In sum, while Breuil's chronology was cyclical in its form, he carried on suggesting a progressive evolution of cave paintings: 'After fumbling beginnings [pre-Historic art] attains a magnificent peak of achievement, the first climax in the history of art, in the roof frescoes of Altamira' (Breuil and Berger-Kirchner 1961: 24).

The 1950s witnessed the emergence of structuralism, a theoretical framework that suggested that cave paintings were structured systems reproducing a mythological opposition between male and female divinities. While scholars like Annette Laming-Emperaire and Leroi-Gourhan revolutionised the study of pre-Historic paintings in a number of ways, they did not introduce significant changes in the progressive story of rock art. In fact, their narratives were reminiscent of Breuil's early unilinear model. For instance, according to Leroi-Gourhan, 'the range of artistic manifestations increases very slowly, over the millennia, [in] a single ascending curve [that spanned] the whole of the Upper Palaeolithic' (Leroi Gourhan 1995: 49 and 51). In other words, Palaeolithic art had evolved in a 'coherent evolutionary curve' (Leroi-Gourhan 1964: 90) throughout five periods or 'styles': the pre-figurative period, styles I and II (or 'primitive period'), style III (or 'archaic period') and style IV. Leroi-Gourhan's criterion for categorising cave images was the degree of 'realism' of Palaeolithic representations. In short, structuralist authors continued to interpret the history of rock art in terms of a constant progress in realism.

3. The crisis of standard narratives: thinking about alternatives

Traditional art stories and rock art narratives shared a number of essential features, including linearity, progressiveness and Eurocentrism. These resemblances are not coincidental. First, these traits are common to most forms of historical writing (Burke 2002). Second, art history played an important role in the early development of archaeology and rock art studies. In particular, early archaeologists made use of numerous concepts, methods and models coined by art historians. For instance, Winckelmann's historical approach to classical art lies at the very core of the founding of classical archaeology (Shanks 1996). In the case of pre-Historic art, the first cave art stories were highly influenced by what James Elkins calls the 'standard story of art history' (Elkins 2002: 63), i.e. the prevailing way of telling the history of art. This model, however, has been the object of intense criticism in art history and rock art studies since the 1980s. On the one hand, renowned art theorists and critics have pointed out some of the problems associated with traditional narratives, including their presentism, reductionism and ethnocentrism. On the other hand, and paralleling these critiques, recent developments in archaeology have questioned conventional rock art narratives. First,

the pre-eminence of European Palaeolithic art has been challenged by the discovery of Pleistocene rock images in many parts of the world. Second, since the 1960s, rock art research in most parts of the world has transformed itself from a practice bound by concepts in art history to one that is following trends in broader archaeology and anthropology. Third, recent technical and factual developments (like AMS radiocarbon dating) have questioned traditional chronologies. As a result of these developments, an increasing number of rock art specialists consider that 'the various grand stylistic schemes of Palaeolithic art chronology are all contradictory, and none can be reconciled with the evidence as it currently stands' (Bednarik 1995a: 881).

As these examples illustrate, rock art specialists in general, and Palaeolithic art specialists in particular, are facing problems that parallel those broadly discussed in recent years in art history. For this reason, in this section I explore how awareness of scholarly discussions in art historiography can encourage archaeologists to inquire more critically about the form, the structure and the meaning of cave art stories. In particular, I focus on four pressing issues in both disciplines: what counts as 'art'? Is art history global? Is there progress in art history? What is the shape of art history? The problems raised by these questions are useful for pre-Historic art scholars in their search for alternative ways of telling the story of rock paintings. I finish with a concrete example of what an alternative history of rock art would look like.

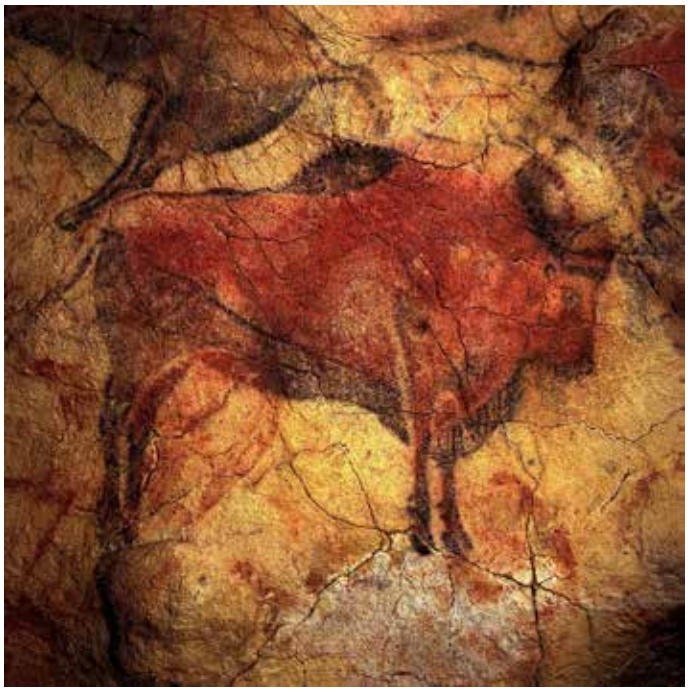

***Figure 2**. Altamira's bison. Published in C. González Sáinz; R. Cacho Toca and T. Fukuzawa* Palaeolithic art in northern Spain. *Photo VR Database. Santander: Universidad de Cantabria/Gobierno de Cantabria. Photo by and courtesy of César González Sáinz.*

What counts as 'art'?

A particularly troublesome issue highlighted by recent debates on art history has to do with the definition of 'art'. As many authors have pointed out, standard narratives were based on a view of 'art' that is problematic in many ways (e.g. Danto 1997: viii; Shiner 2001: 5–6; Bal 2003: 22; Elkins 2007: 56). First, several scholars have repudiated standard narratives that focused exclusively on the 'fine arts' (mainly painting, sculpture and architecture), ignoring 'crafts', 'decorative' and 'popular' arts (e.g. Shiner 2001: 5; Summers 2003: 31). These authors argue that the divide between 'high' and 'popular' culture cannot be maintained and, therefore, art history needs to move beyond the fine art/crafts distinction (Shiner 2001: 304–305; Bal 2003: 25). Second, many historians have argued that customary histories of art were largely based on a 'mimetic' or 'representational' ideal of art (Danto 1997: 7). This view assumed a formalist definition of art according to which the artist's main goal is the visual representation of nature (Belting 1987: 28; Carrier 2008: 29). This approach, however, cannot accommodate a number of contemporary artistic traditions (Danto 1997: xiii). Third, it has been argued that the official interpretation of art history 'necessarily slights non-Western art' (Elkins 2002: 64). In particular, traditional treatments of 'primitive' and 'tribal' art have been described as forms of cultural appropriation (Clifford 1988). This spate of critiques has outlined the limited range of the traditional concept of 'art'. In this setting, some scholars have suggested a shift from art history, exclusively centred upon the analysis of *'art'*, to new disciplinary fields concerned with the examination of all kinds of *'images'*, including iconology, visual studies, image studies and *Bild-Anthropologie* (Bal 2003; Belting 2011; Bredekamp 2003; Davis 2011; Mitchell 1986).

Archaeologists are certainly not unfamiliar with these debates. In fact, in recent years the question 'what counts as (pre-Historic) art?' has been posed in a number of different ways. In the first place, since the 1980s, some English-speaking scholars have attacked the concept of 'art' in 'Palaeolithic art'. They have argued that 'art' is a Western concept that does not have universal validity (Layton 1991: 1–7; White 2003: 20–23), a label that has contributed to condense all the diversity of Pleistocene media into a single category (Conkey 1987: 413) and, additionally, a modern category associated with the Western idea of 'aesthetic' (Nowell 2006: 244). While other scholars consider 'art' as a legitimate concept to describe rock paintings (Whitley 2001; Heyd 2005), a number of alternative terms have proliferated, including 'imagery' (Conkey 2010: 272), 'representations' (White 2003: 20), and 'images' (Renfrew and Morley 2007). In the second place, understandable resistance about the privileged status of certain cave paintings (such as Altamira's bison, see Fig. 2) has emerged (Nowell 2006; Conkey 2010).

Some authors have argued that these favoured images are only some among thousands of others, including engraved images, marks, geometric signs, short lines, finger markings, and so on (White 1992: 538; Conkey 2010: 273). For this reason, they have focused their efforts on the analysis of cultural and archaeological contexts of all media of Palaeolithic representation (e.g. Bradley 2009; Conkey 2009; Farbstein 2011a). Recent cave art narratives have incorporated this wider concept of 'art' and have examined a highly diverse set of images and materials, from realistic cave paintings to personal ornaments (Clottes 2002; White 2003; Bahn 2010).

Is art history global?

Globalism is crucially important within contemporary art criticism and art history (Elkins 2007; Carrier 2008; Onians 2008; Elkins et al. 2010; Harris 2011). Rising interest in this topic is related to a number of questions. To begin, 'globalisation' has emerged in recent years as a buzzword to describe a number of economic, cultural and social worldwide transformations. In this context, numerous philosophers, sociologists, historians and anthropologists have suggested that a more global approach is necessary to counteract the Eurocentrism prevailing in Western human and social sciences during the last century. Art history has not escaped this critical wave. Widespread belief that 'the history of art has been very nationalistic, and has been deeply implicated in the faith in progress and cultural superiority justifying Western imperialism' (David Summers in Elkins 2007: 146–147; see also Hooper-Greenhill 2000: 164; Elkins 2007: 9; Carrier 2008: 119) has emerged in the field. In addition, it has been argued that non-Western images have played a very minor role in art historiography (Elkins 2002: 138; Carrier 2008: 143–152), that art history has been written mostly by Western Europeans and North Americans (Elkins 2007: 6–7) and that the concepts used in art historiography are restricted to the scope of the Western artistic tradition (Summers 2003: 25). In this setting, art historians have wondered whether the ideas, methods and models of art history can be applied everywhere in the same way. James Elkins has examined different answers to this question, from the conservative position of those who suggest that art history can remain intact as it moves into world art, to those who argue that the discipline is so intrinsically linked to Eurocentrism that it may disappear as a field (Elkins 2007: 56–64).

Globalisation has attracted increasing interest in rock art studies. First, most rock art specialists have recently adhered to the postcolonial imperative to decentre and destabilise traditional Western discourses. Second, the impact of globalisation has been particularly important among Palaeolithic art specialists. While early archaeologists and anthropologists did not necessarily have a Eurocentric attitude towards rock art (see for instance, Garrick Mallery's work on North America rock art (1886), Fred Fawcett's work in India (1901), Julian Steward's work on Californian petroglyphs (1929), Erik Holm's work (1961) on southern African rock art), most twentieth-century scholars typically considered Pleistocene rock art as being exclusively European. This Eurocentrism is said to stem from racially-biased perspectives that oriented rock art research during most of the twentieth century. The work of Henri Breuil, the most renowned rock art specialist in the first half of the last century, is a good example of this ethnocentrism. Beginning in the 1940s, he devoted several works to Namibian and South-African rock paintings. While Breuil was actually aware of some of the specificities of southern African art (especially its inclusion of 'social' scenes, rather than animal ones, as in the Franco-Cantabrian region), he was persuaded that aboriginal people have borrowed their artistic skills from more 'civilised' people. For this reason, he attributed some of these paintings to travellers from Europe and Asia instead of to the ancestors of native groups (Breuil 1952b).

This Eurocentric orientation of Pleistocene art research remained unchallenged until the 1970s. Since then, a number of social, cultural and political developments (the emergence of postcolonial studies, the questioning of racial segregation, the entering of aboriginal groups into the political arena) have generated less-racially biased approaches. In particular, the traditional belief in the European origins of Palaeolithic art has been largely discarded and scholars have reported an impressive number of rock 'art' sites in Africa (Le Quellec 2004; Deacon 2007), America (McCreery and Malotki 1994; Whitley 2001; Loendorf et al. 2005), Asia (Bednarik 1994), and Australia (Bednarik 2010; Taçon 2011). At the same time, the establishment of new organisations, such as AURA (Australian Rock Art Research Association), IFRAO (International Federation of Rock Art Organisations) and ARARA (American Rock Art Association), has contributed to promote a more global understanding of rock art. These institutions are dedicated to the preservation of rock art as a worldwide heritage in a context of respect for traditional indigenous cultural traditions.

The globalisation of the field has had an important impact on the writing of rock art stories. Randall White's *Prehistoric art* (2003) is a paradigmatic example of this influence. This nine-chaptered book is one of the most reliable one-volume surveys of pre-Historic art published in the last decade. The first chapter is a critique of the Eurocentrism associated with pre-Historic art studies. White (2003: 30) argues that the Western concept of 'art' does not apply to other cultural traditions and, therefore, that 'an understanding of [pre-Historic] representations needs to be based on a comprehensive understanding of their culture and environment'. Then, following a chapter dedicated to the history of research, White methodically examines 'pre-Historic representation' in five geographical areas: (A) Western Europe; (B) Eastern Europe and Siberia; (C) Africa, the Near East, and Anatolia; (D) South Asia

and Australia and (E) Americas. White concludes by pointing to 'globalisation' as the main challenge facing the study of pre-Historic art: 'No global perspective that goes beyond the art appreciation of Western eyes will be possible until archaeology breathes life into the thousands of regional cultures that have existed over the past 40 000 years' (White 2003: 221). Like White, today other specialists are telling the story of rock images from a globally-oriented perspective (e.g. Clottes 2002; Whitley 2005; Bahn 2010).

Is there progress in art history?

Traditional art narratives interpreted the history of art as a story of progress. In particular, they suggested that the European artistic tradition was marked by a constant improvement in 'realism'. While this approach may conveniently explain the history of Western art from the sixteenth to the nineteenth century, it is not helpful in understanding art theory since the beginning of the twentieth century. At the turn of the century, a number of artists reacted against the importance given to the imitation of visual experience in the fine arts. There were many different artistic tendencies involved in this revolution but, in general, they all worked to dismantle 'illusionistic' art. For instance, since the first decades of the twentieth century, Kandinsky's abstract art and Mondrian's Neoplasticism eliminated any reference to the world as we see it. Similarly, Cézanne and Picasso (or, more broadly, Post-impressionism and Cubism) explored a new artistic language beyond naturalism. At the same time, art theorists, like Tristan Tzara, shared the conviction that the traditional link between art and beauty was flawed. In short, avant-garde movements showed a widespread dissatisfaction with naturalistic art. A separation between art and art history thus emerged. On the one hand, artists abandoned illusionistic art; on the other, art historians (like Gombrich) described the story of art as a long journey in the direction of optical naturalism. This situation has changed in the last thirty years as a new generation of historians has reacted against universal schemes of artistic progress. Hans Belting (1987) and Arthur Danto (1986) were the first to suggest that traditional art history had reached its end. They argued that this field cannot incorporate contemporary developments in the productive conditions of the visual arts and, therefore, it should disappear as a discipline. Following Belting and Danto, a number of scholars have called into question grand narratives of historical progress (e.g. Carrier 2008; Summers 2003; Elkins 2005). In general, these authors agree that art history can retain some of its basic assumptions, purposes and critical concepts, but it needs to avoid 'Whig' or 'presentist' history, the kind of historiography that judges the past to justify the present (Butterfield 1973).

The idea of progress also underlay the stylistic chronologies that oriented rock art research until the 1970s. This is particularly true in the case of Palaeolithic art. As we have seen in the previous section, archaeologists such as Breuil and Leroi-Gourhan offered accounts of the constant improvement of Pleistocene artists in the imitation of nature. While the first critiques to this paradigm appeared in the late 1960s (Ucko and Rosenfeld 1967), it was at the end of the twentieth century when universal schemes of artistic progress collapsed. This crisis was mainly related to a number of methodological and empirical developments. In particular, the application of Accelerator Mass Spectrometer radiocarbon dating (AMS) and other absolute dating methods to the analysis of Pleistocene 'art' has demonstrated that Pleistocene imagery did not necessarily evolve towards highly realistic images. While AMS is not without problem (Pettitt and Pike 2007), this technique was first applied to some European caves in the 1990s. Discrepancies between stylistic and radiocarbon analyses soon arose. In particular, the dating of Grotte Chauvet (Ardèche, France) in 1995 provoked a revolution in the field of Pleistocene art studies. The variety of artistic techniques employed in the making of the black paintings of this cave (mostly representing felines, horses, rhinoceroses, and mammoths) impressed rock art specialists since their discovery (Fig. 3). These technical procedures include shading, foreshortening, chiaroscuro, perspective drawing and preparation of the surface by scraping limestone. Given the complexity of these paintings, they were initially presumed to be about 21 000 to 17 000 years BP (Clottes in Leroi-Gourhan 1995: 572). In this setting, the field of Pleistocene art studies was struck when these images were dated by radiocarbon to about 32 000 years BP. On the one hand, some specialists considered these representations too 'advanced' to belong to such an 'ancient' period (Züchner 1996). On the other hand, other scholars placed complete faith in the radiocarbon dates and suggested that Chauvet made stylistic chronologies impossible to maintain (Bednarik 1995a: 881, 1995b). Almost twenty years after the discovery of the cave, the early chronology of Chauvet paintings seems to be confirmed by the 50 radiocarbon dates that have been published (Cuzange et al. 2007; Clottes and Geneste 2012). The Chauvet paintings and other artwork (e.g. Cosquer, Hohle Fels) demonstrate the existence of 'sophisticated' Pleistocene 'art' since the very beginnings of the Upper Palaeolithic.

In this context, since the late 1990s, rejection of the notion of artistic progress has become one of the distinctive traits of pre-Historic art stories. For instance, Paul Bahn states that 'Palaeolithic art did not have a single beginning and a single climax […] not every apparently "primitive" or "archaic" figure is necessarily old, and some of the earliest art will look quite sophisticated' (Bahn and Vertut 1997: 71). Similarly, Jean Clottes suggests that '[rock] art did not begin with crude sketches some thirty-five thousand years ago, as previously thought […] on the contrary, there were great artists […] more than three hundred centuries

Figure 3. *Grotte Chauvet (France). Photo by and courtesy of Jean Clottes.*

ago' (Clottes 2002: 44). According to David Whitley, 'rock art certainly may have changed over time in any given region. But the word *change* has different implications than *evolution*. Today, the notion of the stylistic evolution of art has been discredited' (Whitley 2005: 48). These and other examples (White 2003: 60) demonstrate that progressivist rock art history is exhausted.

What is the shape of art history?

A timeline is a typical form of traditional art history practice. This linearity is related to a number of issues. First, linked to the ideas of 'progress' and 'development', the 'linear view' of the past is the most important trait of Western historical thought since the end of the eighteenth century (Burke 2002: 18). Second, 'what privileges temporal narratives on time lines is their identification of the real history of art-making' (Carrier 2008: 25). In other words, timelines tell the history of art 'as it really happened'. Third, chronological schemes allow historians to establish causal connections between earlier and later artists, defining traditions in which art history achieves overall coherence (Carrier 2008: 27). These reasons explain why, until the proliferation of visual studies as a field in the late twentieth century, this art storyline was virtually the only way of presenting the history of art. However, in the last few years, a number of authors have been searching for alternatives. For instance, David Carrier's *A world art history and its objects* (2008) explores the writing of art history beyond the boundaries and the concepts of the Western historiographical tradition. Carrier's main task is to encourage young scholars in non-Western countries to teach the West 'how to see [their] art in ways that today are hard to anticipate' (Carrier 2008: 152). Hans Belting's *An anthropology of images* (2011) uses an anthropological approach to investigate the interaction of image, body and medium as the main components of image making. Whitney Davis (2011) has recently proposed a general theory of visual culture that explores the historical relationships between vision and culture without being subjected to a strict chronological framework. While these and other examples (Elkins 2002; Didi-Huberman 2002; Zijlmans and Van Damme 2008) illustrate important transformations of art historiography, it is important to keep in mind that most art histories are still written according to traditional standards. In this sense, 'the grip of the familiar narratives is still very strong' (Elkins 2007: 19).

In the case of rock art, the strength of sequential narratives is better demonstrated by the lack of viable alternatives. Without significant exceptions, recent rock art stories rely on chronology as their main regulatory principle. This orientation is the result of the pre-eminent role of dating in the history of rock art studies. In fact, since the nineteenth century, the main aspiration of rock art specialists has been to establish a chronology ordering Palaeolithic artwork. The recurrence of this concern is explained by the fact that rock art is extremely difficult to date either by relative or absolute means. For instance, in a recent paper, Pettitt and Pike have suggested that 'only some 61 images from some 19 caves of over 350 known decorated caves can be said to be all *reliably* dated, and thus, the proportion of undated caves is in fact closer to 95%' (Pettitt and Pike 2007: 28). In this setting, it is hard to see how rock art stories can break the mould of their chronological structure. After all, dating is probably

the most pressing issue facing rock art studies.

This being said, there have been important changes concerning the shape of Pleistocene art narratives in recent years. In fact, the 'emplotment' of rock art stories has shifted from a focus on the stylistic evolution of rock images to new post-stylistic approaches seeking to incorporate more kinds of images to the study of Palaeolithic imagery. Until the 1980s, scholars like Breuil and Leroi-Gourhan recounted the history of cave art in formalist terms, i.e. as the continuous development of Pleistocene forms, from simple to complex. The struggle for realism constituted the plot of the story, its forward push. However, with the widespread rejection of stylistic chronologies in the early 1990s, rock art studies have entered into the 'post-stylistic era' (Bahn and Lorblanchet 1993), a period marked by a widespread scepticism towards traditional ideas and schemes. In the case of rock art narratives, Palaeolithic art specialists are increasingly reluctant to interpret the history of rock images in terms of formal progress. Instead, Palaeolithic images are considered more and more as conventional and symbolic systems of hunter-gatherer groups. Changes in the use of the concept of 'style' can illustrate this point. During the greater part the twentieth century, Palaeolithic art specialists used this concept to attribute pre-Historic paintings to a particular period of time on the basis of its formal configuration. For instance, Leroi-Gourhan considered that Palaeolithic art had evolved throughout a sequence of five styles. However, since the 1970s, numerous archaeologists have adhered to a different definition of 'style' that has its origins in Meyer Schapiro's work. According to Schapiro (1953: 287), 'style is, above all, a system of forms with a quality and meaningful expression through which the personality of the artist and the broad outlook of a group are visible'. In other words, 'style' is increasingly considered a characteristic manner of doing something that is peculiar to a specific time and place (Sackett 1977). The recent focus on the incommensurability of artistic 'styles' has entailed the rejection of evolutionist chronologies.

In this context, recent rock art stories tend to use a contextual approach according to which there is no reason to consider a particular form of representationalism (e.g. 'realism') as being superior to any other. For instance, Randall White explains the history of rock images in terms of systems (or logics) of representations whose interpretation 'needs to be based on a comprehensive understanding of their culture and environment' (White 2003: 30). According to White, there is no reason to put 'naturalistic' paintings at the crown of the rock art story. In fact, 'naturalism' is only one among many other representational systems (e.g. non-representational decoration, geometrical signs) employed by pre-Historic groups in the making of images. These systems did not 'progress' throughout time. On the contrary, they might coexist in different time periods. For instance, the same Aurignacian culture that produced the realistic paintings of Chauvet also preoccupied itself with the making of thousands of ornaments and decorative objects (White 2003: 80). This 'contextual method of description of works of art' (Summers 2003: 19) has been increasingly applied to the analysis of rock art (e.g. Clottes 2002; Whitley 2005; Conkey 2010).

Looking for alternatives: a case study

David Summers' *Real spaces* (2003) is one of the most ambitious attempts to write a global history of art that is not chronologically oriented. The premise of the book is that there are many artistic choices, patterns and traditions that cannot be approached with the analytic and interpretative tools of the formalist approach. For this reason, Summers introduces a number of concepts that, according to him, may help to ground understanding when studying the diversity of arts produced around the world. These labels, which serve as the titles of the chapters, are 'facture', 'places', 'centre', 'images', 'planarity' and 'virtuality'. Inspired by Summers' example, I would like to conclude this section by exploring rock art history through the lens of some concepts that can be made applicable to rock images. These terms have been extensively debated during the last years and they may constitute the backbone of a post-formalist history of rock art. I imagine this story divided into five main chapters: 'Images', 'Image-making', 'Visual cultures', 'Places' and 'Narrative frameworks'.

The first chapter, 'Images', sets the ground for a post-formalist approach to rock art history. As many authors have pointed out, the concept of 'image' constitutes an important break with traditional rock art research. First, this category provides archaeologists with a new conceptual framework within which many kinds of representations can be incorporated in the direction of present interests. For instance, in recent years, modern rock art research has ceased to focus exclusively on the most spectacular cave paintings to integrate a number of traditionally-overlooked images, including finger flutings (Sharpe 2004; Sharpe and Van Gelder 2006), hand stencils (Clottes and Courtin 1994; Von Petzinger and Nowell 2011), non-figurative signs (Cole and Watchman 2005), cupules (Bednarik 2008a), and cracks and fissures (Helskog 2000; Clottes 2009). Second, a rock art history primarily concerned with images and iconography can allow archaeologists to explore other dimensions of Palaeolithic representation beyond the artistic one. For instance, discussions on pre-Historic imagery have become central to present-day debates in cognitive archaeology. In this field, there seems to be a broad agreement that Palaeolithic images offer the best evidence for exploring the origins of human cognition and imagination (Renfrew and Morley 2007), humans' neural apparatus (Onians 2007), perception (Hodgson 2008), language (Davidson 1996; Layton 2007), memory (Wynn and Coolidge 2010) and symbolisation (Botha and Knight 2009). This research needs to be fully incorporated into a global

rock art history. Third, it is important to keep in mind that the concept of image may open rock art research to the interest of scholars from other fields, including iconology, anthropology, psychology and neuroscience. This being said, and while the concept of 'image' offers important insights for understanding Pleistocene visual cultures, we must be careful about some of its inherent unexamined assumptions. In particular, in the strict sense of the term, an image is a physical likeness or representation of someone or something. In other words, the term appears to have the meaning of 'figurative' in the sense of a representation of something. And the same could be said of the notion of 'representation'. However, in the case of rock art, we have thousands of images that do not seem to represent any person, animal or thing. For this reason, when using this term as a substitute for 'art' in general, some disavowal of the 'figurative' meaning is necessary. Another alternative category to 'art' is that of 'mark'. In fact, mark-making appears to be universal in the human species, a position that entails recognition of the importance of psychobiology and behavioural adaptation to an environment and way of life. In this sense, '*rock art*' history should begin with the earliest marks made on rock surfaces.

Chapter 2 examines rock art in terms of the socially-conditioned techniques involved in the making of Palaeolithic images. The title of the chapter, 'Image-making', makes reference to a concept that has been extensively used in art theory and archaeology (e.g. Conkey 2009: 174; Belting 2011: 10; Davis 2011: 13). While archaeologists have been traditionally interested in the artistic procedures employed by cave artists, there are still relatively few works on the technologies of rock art (see, however, Fritz and Tosello 2007; Conkey 2009). This situation clearly contrasts with recent developments in other areas of archaeological research. For instance, during the last years we have accumulated an impressive array of works on the manufacturing of portable artefacts such as lithic tools (Ambrose 2010, Nowell and Davidson 2010), pigments (Soressi and d'Errico 2007; Henshilwood et al. 2009), shells (Bednarik 2005; Kuhn and Stiner 2007; Vanhaeren and d'Errico 2006), and portable representations (Farbstein 2011a; White 2006). These studies have examined Palaeolithic material culture from new perspectives, including the cognitive processes involved in the making of portable artefacts (Schlanger 1996; Kuhn and Stiner 2007), the links between social and technological gestures (Dobres 2000; Conkey 2009), and the different steps defining *chaînes opératoires* or operational sequences (Bar-Yosef and Van Peer 2009; Farbstein 2011b). This scholarship, so far mainly concerned with portable tools and artwork, can generate new avenues of research for the social context in which rock art images were produced. Research on rock art technologies may allow archaeologists to better understand different aspects related to the manufacturing of marks and images, including the social dimensions involved in the manufacturing of rock representations (important artistic choices, such as the kind of images represented, occur in non-pictorial social contexts), the ways in which technology affects Palaeolithic representation (technological media determine how certain images can be represented) and the circular interrelation of people, culture and images.

Chapter 3 discusses the concept of 'visual culture' understood as the historical and cultural dimensions of vision. Vision is the chief faculty through which humans produce and experience images. The way in which we see things is a natural capacity that, at a cognitive level, has probably not significantly evolved during the last 40 000 years or even before. What has changed is the cultural context into which images are produced and experienced. For this reason, the intersection between vision and culture must be treated as a historical phenomenon. This junction is what Whitney Davis has called 'visual culture' or 'visuality' (Davis 2011: 8). The intention of this chapter is to consider Pleistocene visual cultures across the full range of representational systems involved in the making of rock images in different temporal, social and geographical contexts. These systems include, for instance, figurative, non-figurative, schematic, and realistic. From a post-formalist standpoint, the development of different modes of depiction may not reflect the inevitable progress of palaeoart towards naturalism, but significant social and cultural variation. Explanations for the emergence of Upper Palaeolithic figurative imagery can illustrate this point. Lewis-Williams suggests that *Homo sapiens* communities began to make two-dimensional images to consolidate their identities and emphasise their differences with the Neanderthals (Lewis-Williams 2009). According to Merlin Donald, art and religion were part of a unified system whereby ideas and images were transmitted to the next generation (Donald 2009). Paul Mellars argues that the exceptional density and concentration of human populations in south-western Europe acted as the most important incentive towards the emergence of figurative cave paintings (Mellars 2009). As these examples demonstrate, the challenge for this approach is to discover the social and cultural processes by which Palaeolithic visual cultures come to be.

Chapter 4 examines the 'places' of rock images. The significance of rock images relies on the medium in which these images appear, whether a cave wall or an open-air outcrop. In other words, the meaning of Palaeolithic representations is determined by the places for which they were created and in which they were used. Rock art places can be approached from very different viewpoints. For instance, countless researches have distinguished between caves and open-air areas. On the one hand, caves are usually described as spiritual places (or sanctuaries) associated with religious practices, shamanistic rituals and sacred ceremonies (e.g. Lewis-Williams 2002; Arias 2009;

Lawson 2012). On the other hand, rock images in the open air are often considered as social markers of the landscape (Chippindale and Nash 2004; Bradley 2009), symbolic systems for transmitting social values (Conkey 1984) and signs reflecting the cosmology of hunter-gatherer groups (Bradley 2006). Rock art places not only articulate the social space of pre-Historic communities; they are also integral to pre-Historic imagery. For instance, Lewis-Williams and Dowson (1990) have suggested that, in shamanistic art, the walls of rockshelters are is some sense a 'veil' or 'frontier' between this world and the world of spirits. More recently, Knut Helskog (2010) has persuasively argued that in Alta, Artic Norway, rock surfaces were selected for specific reasons connected with the symbolism of images. As these examples demonstrate, the place of rock images is as intrinsic to Palaeolithic imagery as are the images represented.

Chapter 5, 'Alternative narratives', means to explore original ways of telling the history of rock images. Given that the Western narrative of progress is open to question, archaeologists need to examine alternative narrative frameworks capable of describing images from different traditions and different times. Ethnographical approaches may be of great help in this search. For instance, during the last decades, studies based on San ethnography have generated new perspectives on South Africa rock art. A landmark of this process was the publication of David Lewis-Williams *Believing and seeing* in 1981. In this book, Lewis-Williams used ethnographical accounts to suggest that the rock images from the Drakensberg Mountains were shamanistic in nature. Lewis-Williams' research has not only allowed archaeologists to see South African rock art with new eyes, but has also inspired new interpretative frameworks. For instance, several scholars have interpreted pre-Historic images from around the world through the lens of shamanistic theories (Lewis-Williams 2002; Ouzman 2010; Price 2010; Clottes 2010). This approach is not without critics (Bahn 2010) and even their proponents now consider that the importance of shamanism has been overstated (Dowson 2009; Lewis-Williams 2012). This being said, discussions on shamanism have fuelled intense debates in the field of rock art studies. If ethnographical accounts from South Africa have changed the way in which scholars interpret rock representations, then perhaps other non-Western narratives could be applied to make sense of pre-Historic art. What, for example, if scholars explore a Navaho narrative of the timeframe between Chauvet and Lascaux? What if the Australian Aboriginal narrative of the 'Dreamtime' can provide archaeologists with clues to understand ancient notions of time expressed in rock images? And what if the ethnographic and contemporary records of Native American can shed light on the imagery of other communities? These questions reveal the potential of using different cultural narratives in the search for new narrative frameworks. Of course, we are aware of the inherent dangers of using ethnographic data in archaeological interpretation, but maybe non-Western viewpoints can help us to elaborate alternative narratives.

4. Conclusions

As I have shown in this paper, there are important analogies between recent debates in art history and contemporary controversies in Pleistocene art studies. To conclude, I would like to briefly examine why art historians and rock art specialists are facing similar kinds of problems and how this situation provides an opportunity to reconsider the relationship between these disciplines.

There are a number of ways to explain the multiple parallelisms between disciplinary debates in art history and rock art studies. To begin, some of these debates are common to a wide range of disciplines. For instance, in recent years, the analysis of narratives has become widespread in many areas, including history, anthropology and philosophy. Similarly, it has become commonplace among scholars to recognise that we have entered into the age of globalisation. Furthermore, some of the debates that I have reviewed in this article are common to most historical sciences. The critique of 'progressive' or 'Whig' history has been recurrent in historical research since the late 1970s. Similarly, the nationalistic and colonialist assumptions of Western historical writing have been under intense criticism since the emergence of post-colonial studies in the 1980s. These examples illustrate the existence of a common ground explaining the direction of current interest in many human and social sciences, including art history and archaeology. There are, furthermore, preoccupations that are specific to these disciplines. For instance, in recent years, these areas have witnessed parallel controversies about the pros and cons of the concept of 'art'. In the case of art history, these debates have been fuelled by the impact of 'primitive' and 'non-figurative' artwork in art criticism. In the case of archaeology and anthropology, debates about 'art' have been promoted by scholars seeking to avoid the pitfalls associated with the Western view of 'art'. Related to this question, art historians and archaeologists are becoming increasingly interested in a wide range of images. This explains, in part, why some art critics have proposed that art history should dissolve into visual studies and why eminent archaeologists have suggested that concepts such as 'imagery' or 'representation' should allow more kinds of pre-Historic images to be meaningfully approached. In short, the growing convergence of interests between art historians and rock art specialists is explained by (A) a number of theoretical trends orienting current discussion in Western academia, and (B) some specific developments in the fields of art history, archaeology and rock art studies.

The commonality of interests among art historians and rock art specialists may be a good occasion for

renewed discussion about the relationship between these disciplines. Since the discovery of cave paintings at the end of the 19th century, the rapport between art history and rock art studies has been based on an asymmetrical model. On the one hand, art history has influenced the study of rock images in multiple ways. Rock art specialists have borrowed a number of working concepts (such as 'perspective', 'realism' and 'style'), narrative frameworks (the narrative of naturalism) and interpretative strategies (formal analyses, and a focus on highly realistic images) from art historians. On the other hand, rock art has played a very minor role in art stories. While it is true that eminent art historians (from Reinach to Luquet) and art critics (from Roger Fry to John Berger) have become interested in rock images, in general art historians have only been interested in the most spectacular cave paintings (from Altamira and Chauvet). These images are generally the object of an introductory chapter to the history of art, even if, as James Elkins has pointed out, they 'cannot be shaped into a coherent preamble to Egypt' (Elkins 2002: 64). In sum, the relationships between art history and rock art studies have often adopted the form of a one-sided and rarely expressly stated influence. However, given the epistemological and interpretative issues shared by art historians and archaeologists, I suggest that it is time to shift from a model based on the *influence* of art history upon the analysis of rock art images to a new framework built upon a *dialogue* between the two disciplines. Both disciplines can benefit from a reciprocal exchange. On the one hand, art historians can examine some of their interpretative strategies in the light of the archaeological record. On the other, rock art specialists can also use some art history theoretical frameworks to elucidate the meaning of pre-Historic representations. These are just two examples of how art historians and archaeologists can work to achieve a more balanced relationship between their disciplines. It was in the hope of contributing to such a dialogue that I wrote this paper.

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COMMENTS

A further look at stories about rock art

By BARBARA OLINS ALPERT

This is a serious, scholarly survey of opinions about the history of pre-Historic imagery. Moro Abadía's paper includes many of the important names in archaeology and related fields. His emphasis is on narratives about Pleistocene art, narratives necessary to create an apparent order out of randomly discovered and mostly undated discoveries. I would suggest that the author needed to make a qualification right at the beginning to clarify that he is writing only about pre-Historic *figurative* imagery so as to acknowledge the much more abundant nonfigurative imagery that occurs worldwide.

Moro Abadía rightly calls these narratives 'stories'. Humans seem compelled to spin them. We have been defined as storytelling animals (Gottschall 2012). When, because of our visual blind spot or because of visual or cognitive damage we receive incomplete information, our brains automatically engage in what is called 'filling in'. A similar cognitive process occurs at many other levels of the brain when we need to draw conclusions with incomplete information (Crick 1994: 57). To live with the blank spots of their knowledge people everywhere have used 'filling in' to create explanatory narratives. These stories or myths, though not literally true, can provide a cultural foundation for the group that espouses them. The difficulties arise when stories are viewed not as a hypothetical ordering of information but as some fundamental truth.

Because the oral stories are missing from pre-History, scholars are tempted to create their own explanatory narratives. Some prehistorians, who made important contributions to archaeology, were nevertheless led to questionable interpretations by their own stories. Henri Breuil interpreted a rock art pictogram in Namibia of what is probably an African medicine man as an elegant woman whom he called 'The White Lady of Brandberg'. André Leroi-Gourhan and Annette Laming-Emperaire sometimes postulated original cave entries to validate their structuralist story of the distribution of animal images in the caves. Alexander Marshack read marks on stone from right to left or left to right and sometimes even used a boustrophedon reading to better accommodate his lunar interpretation of these markings (Marshack 1991). As a practising artist, I first saw the images at Lascaux over forty years ago. Like many others I had the feeling that through their art I had gained access, in some measure, to the mind of these ancient artists.

Neuroscientist Robert Solso corroborated this feeling when he wrote 'When we create or experience art, in a very real sense we have the clearest view of the mind' (Solso 2000: 123).

In anatomically modern humans, the cells devoted to visual processing take up close to half of the total brain (McCrone 1991: 150–154). A specialist in the study of vision, neuroscientist Semir Zeki has stated, 'artists are in some sense neurologists studying the brain with techniques that are unique to them' (Zeki 1999: 10). Artists select a few aspects of the immensely complicated visual array on which to focus. Most artists are taught or discover how to switch focus from one mode of perception to another. One can choose to concentrate on lines, dots, mass, figure, ground, colour, motion or other aspects or a combination of these. One can choose to reduce or enlarge an image or exaggerate some parts and minimise others.

The search for ways to present the visual experience is not straightforward. It may require distortions of optical information in order to present a more convincing replica of the visual experience. Many artists have confessed to this, including Bonnard who wrote that '[t]here is a formula that perfectly fits painting: lots of little lies for the sake of one big truth' (Whitfield and Elderfield 1998: 170). For example the problem of mimesis was exacerbated by the uneven rock surfaces of the caves. The fact that cave artists devised anamorphism to counteract this problem shows that they were aware of the pitfalls of the visual process and had arrived at an ingenious subterfuge, their own 'little lies', to give the impression of reality.

Moro Abadía refers frequently to the theories of Arthur Danto whose book *After the end of art* describes the trajectory of art as a search for ways of achieving mimesis until the very success of this search caused the death of figurative art. In contrast, my own story sides with the opinion of Picasso who believed that there is no such thing as totally non-figurative art. Graphically gifted people at all times have discovered different ways to make use of optical sensation and the images that we extrapolate from these sensations.

To substantiate Danto's story, Moro Abadía cites Kandinsky and Mondrian as artists who worked in ways 'which eliminate any reference to the world as we see it'. However, both artists worked initially to reproduce normally accepted mimesis. Then, due in part to cultural pressures that made artists want to distance themselves from European traditions, each began to concentrate on more limited and less accessible visual stimuli. Kandinsky initially turned his paintings upside down so he could study the look of reality but drained of specific imagery (like speaking in tongues artistically). Mondrian gradually constrained himself to vertical and horizontal marks and to a very narrow colour palette in a severe distillation. For both artists optical sensation was their underlying source and inspiration.

What impresses viewers most immediately about figurative Franco-Cantabrian art is its realistic look. But there are other less familiar aspects of these images. While some cave artists were seeking mimesis others, or perhaps even the same artists at different times, appeared to portray highly personal or caricaturised figures at, for example, Baume Latrone, Cussac and la Marche, or imaginary creatures at Pech Merle, Lascaux and Tuc d'Audoubert, or therianthropes at Combarelles, Trois Frères and Hohlenstein-Stadel.

Images — realistic, fantastic and nonfigurative — appear to have played so vital a role in the minds of our Pleistocene ancestors that to create these images in caves the artists sometimes placed themselves in extreme danger. Incredibly, some individuals put their lives at risk, to leave in those specially chosen places the images that tell their stories.

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Critical comments on O. Moro Abadía's paper

By J. B. DERĘGOWSKI

It is surprising to this student of perception that a paper concerned with classification of visual artefacts ignores the role of perception in the process. In what follows the opinions presented will be those of a student of perception and a devout empiricist. They may well grate with the eloquent (but largely speculative) pronouncements.

A passer-by walking along a wall on which three lines, a vertical, a horizontal and an oblique, have been painted will not see any change in the orientation of the first pair, but will see a steady change in the orientation of the oblique. A visitor to a museum walking past Vermeer's *The Music Lesson* will have an analogous experience. The oblique, the vertical and the horizontal do, as numerous studies of optical illusions show (Robinson 1972), form three distinct perceptual categories. The angular settings which on the protractor's scale lie on a continuum do not form a perceptual continuum. These characteristics of solids, verticality, horizontality and obliquity, are readily registered and used to classify objects so that a factory stack, say, is perceived as sharing the attribute of verticality with, say, a rope pendant from a crane, and both the table top and the horizon share the attribute of horizontality. These are cogent perceptual attributes of the world. It is therefore difficult to conceive how the statement that Mondrian's linear paintings, such as *Broadway Boogie Woogie*, are free of any reference to 'the world as we see it'. Similarly, since collages of

spatially distinct views of objects characteristic of some of Picasso's paintings are also to be found in the art of Australian Aborigines, of Nasca people of Peru, of Ethiopian monks, of monks of Spain, and of Bushmen of Namibia, populations not likely to have influenced each other, their origin is probably perceptual and not devoid of any reference to 'the world as we see it' (Washburn and Crowe 2004; Deręgowski 1984; Parker and Deręgowski 1990). (These instances of incipient cubism found in several distinct cultures could have developed into fully blown cubism. They did not do so for reasons which can only be speculated upon. One of these is that the portrayals were intended to be recognisable rather than to be ornamental.)

Perceptual experiences described above are available to everyone and therefore to every artist. He may choose to explore them, but whether he does so depends both on his personal characteristics and on the milieu. Indeed, even the mere difficulty of execution may affect the portrayal, as the Saharan sitting giraffes suggest (Deręgowski and Berger 1997). Such vectors affect both the subject and the manner of its portrayal. Scharfstein (2009), in a remarkable scholarly book strangely overlooked by the author, describes the difference between Western and Chinese art in the choice of subject. Whilst in the former the human body was a dominant theme, in the latter it was the landscape, so much so that the poet describing a painter painting a bamboo said that the artist does not see people about him, he identifies himself with the bamboo.

There clearly exist considerable cultural differences and it may be impossible to construct a comprehensive theory of artistic change which would embrace all cultures, but it is possible to construct a theory (as Gombrich does) which describes accurately artistic trends in some segment of humanity. Bednarik's (1995a) exhortation to researchers to adopt scientific dating and his observation that results of such dating question Leroi-Gourhan's (1995) scheme, does not question the possibility of construing theories of change in artistic styles. On the contrary, for while use of stylistic attributes of artefacts (as judged by experts) to determine their temporal sequence makes determination of stylistic trends impossible (as these were assumed a priori), scientific dating of artefacts determines their chronology and this chronology makes discovery of the true trends possible. It therefore places rock art at the same level as Western art whose well-established chronology led Gombrich to suggest a developmental sequence.

An observer unfamiliar with rattles made of ostrich eggs but familiar with white flowers with long stalks is very much more likely to identify an ambiguous depiction as that of the latter. The perceptual system constantly tries to make sense of the world. This is how Abbé Breuil perceived the flower/rattle in the hand of the White Lady (Breuil 1948). It is an instance of perceptual error, of individual experience unrelated to ethnocentricity. Such errors are commonplace, and are the bane of industrial inspectors. Such errors may induce speculations as to the origin of the portrayal (as they did in Abbé Breuil's case), which may later be seen by some as fantastic, but this too is not evidence of ethnocentricity.

The value of what one could term a speculative stream depends on the stability of concepts such as for example realism. Byzantine artists favoured inverse perspective which is thought to be unrealistic in spite of the fact that it can be shown to be experienced by viewers in 3D space. Abbé Breuil's observations on the significance of depicted horns, to which the author refers, finds support in a recently published note (Deręgowski 2011) concerning the art of Bushmen, the population whose unusual art has fascinated Western scholars, not only Abbé Breuil, but much earlier Tongue (1909) and Fry (1910).

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Globalism from the bottom up, rather than top down: a *Darwinian framework encompasses both art history and rock art studies*

By ELLEN DISSANAYAKE

The article provides an opportunity for rock art scholars to learn about recent developments in Western art historiography that may be useful in 'telling the story' and developing 'new narratives' of rock art. Moro Abadía provides concise, interesting and useful overviews of traditional but now outmoded 'standard narratives' that have been used to formulate the history of Western art — and describes the largely unrecognised influence of these narratives and their assumptions on well-known archaeological interpretations of rock art images. He addresses important questions about what counts as art, whether art history can be global, whether there is progress in art history, and what 'shape' it might take. He introduces a new post-formalist, post-stylistic and 'global' approach to art history that uses interesting achronological concepts that might be fruitful in rock art discourse (Summers 2003).

I agree with Moro Abadía's recognition that human art-making is a global phenomenon and that many standard or traditional assumptions about 'art' and 'art history' need re-evaluation. I also laud his attempt to find alternative analytic and interpretative tools for understanding rock art. However, to my mind, his proposed scheme does not go far enough.

To begin with, I think that interpreters of rock art using a post-modern (or any other) frame of discourse must be at least as careful about their own inherent unexamined assumptions as they are when faulting their predecessors for naively applying progressive or 'fine art' or structuralist schemes to the Franco-Cantabrian images that concerned them. Post-modern theory emerges from a highly literate (one might say *super-* or *hyper-*literate) cultural milieu that is surely extremely unlike that of the pre-Historic makers and viewers of rock art. Terms such as 'narrative', 'story', 'metanarrative', 'textual analysis' and 'linguistic turn' imply 'analysing' and disembedding oneself from the subject of study. They can be just as 'linear sequential' as the writings of the earlier scholars that Moro Abadía dismisses. This is not to say that what these terms refer to is useless: after all, rock art researchers necessarily rely on scientific methods that are similarly removed from the lived meanings and purposes of palaeo-images for their makers. But it should be remembered that making and responding to markings on rock surfaces emerged from nonliterate forager ways of life and thought that are almost unimaginable to us today. For one thing, motivation and response would probably have been highly affective or emotional as well as cognitive, and thus hard to appreciate using hyperliterate/left-hemisphere concepts.

Mentioning 'ways of life' of ancestral mark-makers leads to my major concern with Moro Abadía's top-down perspective. Although he invokes globalism positively, in my view he does not appreciate the broader and deeper bottom-up implications of this label or premise. To call a phenomenon or trait (such as art-making) 'global' is to claim that it is universal in the human species, thereby suggesting that it was a psychobiological and behavioural adaptation to an environment and way of life. That is, a global trait implies that it is very likely a product of Darwinian evolution — a possibility that Moro Abadía does not address or seem aware of. (His references to evolution are about cultural or stylistic, not biological, evolution).

Defining art is indeed troublesome, as Moro Abadía asserts, especially since our concepts of 'art' or 'aesthetic' do not exist in many if any other languages. Yet not having a word for something does not mean that the posited entity does not exist. Other societies have reciprocity, education, mother-infant attachment and kinship or economic systems, even though they may not use those terms. The larger issue is that even by invoking more inclusive or neutral terms such as image, representation, iconology, visual studies, image studies or *Bild-Anthropologie* (rather than 'art'), we still have no way of approaching the fundamental question about art, including rock art: *why* is it a worldwide ('global') phenomenon? Randall White is quoted approvingly as saying that 'an understanding of [pre-Historic] representations needs to be based on a comprehensive understanding of their culture and environment', but he does not go on to say that this comprehensive understanding implies an evolved psychobiological predisposition to make and respond to images or 'representations'. Nor do the other 'specialists' who 'are telling the story of rock images from a globally-oriented perspective' seem to appreciate that this perspective is not imposed from the top down but grows from the bottom up.

In contrast, Barbara Olins Alpert (2008) compares Ice Age images with similar examples found throughout the history of art, showing that there is a continuum that links the past with the rest of art history, based on perceptual and cognitive universals revealed by neuroscience. The introductory chapter by Wilfried van Damme of his co-edited volume on world art history (2008: 23–61) also begins with this broader perspective. It and his introductions to other sections of the book (2008: 157–165, 293–302, 375–384) should be read by anyone who wishes to consider art as a worldwide phenomenon.

My own approach avoids progressivism and achieves inclusivity by conceptualising 'art' as an activity or behaviour rather than as an object (e.g. 'image') or a subject for study (e.g. 'iconology'). Moro Abadía positively cites 'image-making' (as used by several archaeologists to describe a technological procedure), which is a start. But rock art theory needs to go beyond this and recognise that underlying the traditional subject matter of iconology, visual studies and so forth, there is the *activity or behaviour* of making and experiencing images, representations and marks. In other words, 'art' is the *residue or result* of this activity, which itself deserves attention.

Because there is no verb such as 'to art' or 'art-ing', I have called the activity 'artifying' and the results of the activity 'artification' (as a substitute for the troublesome concept 'art'). In my scheme, briefly, artifying refers to the evolved human behavioural predisposition to make ordinary reality extra-ordinary in biologically-important circumstances about which individuals and groups care (for a fuller exposition see Dissanayake 2008, 2009, 2010). The concept encompasses not only visual images but the artification (making extra-ordinary) of surroundings, bodies, body movements (dance), vocalisations (song), words (poetic language) and so forth — that is, all the arts.

These ideas are of course not the subject of the article in question and I am not saying that Moro Abadía should have written the paper that I would have written. However, I do think that top-down approaches that apply modern theoretical 'narratives' to rock art remain as limited as the earlier theories they hope to replace, unless they incorporate adaptationist thinking as the ultimate foundation of their theories.

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Births and deaths

By LIVIO DOBREZ

Anyone working in rock art will at some stage wonder how rock art studies relate to art studies in general. Moro Abadía's article has specific relevance in that it ties the question to the present state of both disciplines. To begin at the point where this present came into being, and to do so for the purpose of definition: I recall the excitement of Pop Art when I first encountered it in the late sixties, some ten years after its inception. It took one's breath away to see the figurative making a comeback, after all those years of avant-garde abstraction which we had understood to be the only way forward for art. Shortly after came Performance (in the heels of the Happening), Conceptual Art, the Installation and much more. Much of it was so-called Post-Object art, the sort not easily accommodated in a gallery: art without artefacts, art as an idea, or an event, or as something you could set up in a gallery for a time — before dismantling it. The expression 'end of art' had concrete meaning. What had come into being in the late Italian Renaissance could just as easily come to a stop — somewhere in the mid twentieth century. And subsequently people wrote about the 'invention' of art and its demise: Shiner (2001), Belting (1987, 2003), Danto (1997), Kuspit (2004). Naturally everyone knew that, well before Pop, Duchamp had shown that art was simply what we chose to call art. It could be anything, say a urinal — provided you put it in a gallery where it would be prohibited to urinate in it. The issue of utility or function was crucial to the definition, but nonetheless historically very recent, the product of Kantian philosophy and its nineteenth-century development as the notion of art for art's sake. This Kantian premise still generates discursive tangles, not least in archaeology, anthropology and rock art studies, where people still argue that ancient objects or representations should not be taken as art since they originally served a purpose (Conkey et al. 1997). One possible subtext here is discipline-territorial, familiar to all academics; that once-functional things are the business of archaeologists and anthropologists (assuming agreement between the two), not of mystifying art historians. In which context we find another unexamined assumption, that of 'original' intent. We are told that whether the thing is or is not art depends on its makers' intentions. I shall not go into the many difficulties of the intention thesis, which nonetheless has immense value, since without some form of it historical studies would be impossible. The point I make is that intention should not be appealed to without a clear sense of its problematics, which have been thoroughly debated in twentieth-century hermeneutics, notably by Reception theorists such as Gadamer (1989). The evident fact is that, historically, utility and the aesthetic have gone hand in hand (see Lorblanchet 1999 for a concise statement on this). My solution is (1) to ignore Kant's intellectually seductive but misleading separation of use and aesthetic quality (2) to refuse the uncritical opposition (common to rock art and associated studies) of original intent and contemporary reception and (3) to avoid the term 'art' simply because it leads to misunderstandings. We can talk about 'images', 'pictures', 'markings', but my choice is for 'representation', read not as 'figurative' (its art history usage), but as re-presentation, a stand-in for whatever it happens to be in the real world, including shapes (objects), activities and events (dance, mime, story, song). There is the question of the relation of art and aesthetic response. Contra Summers (2003), I would prioritise the aesthetic response over the phenomenon of art, for the simple reason that art presupposes such a response and therefore presumably postdates it. Here we really must set aside all those recent art for art's sake connotations. There is every reason to believe that humans have always responded aesthetically to items of all kinds in their world, natural or, eventually, made (in the sphere of objects, think of a West Tofts handaxe; in that of rock markings, consider the finesse of Daraki-Chattan cupules). Thus while 'art' is a recent invention and definable in (polemical) Kantian terms, 'aesthetic' should be allowed its deep-time pedigree. But how to define it? As *attention* (I use the term to indicate a neural function) to the *formal* qualities of all kinds of things from a useful and elegant lithic to a useful and elegant idea. But historical understanding is essential here. Many societies opt to gloss over formal properties so as to give attention to the utility of the lithic or to the content or truth-value of the idea (as in science or religion). The question then becomes less 'is it attractive?' than 'does it work?' Of course humans are perfectly capable, as individuals and groups, to switch from one perception to the other, as required. In recent European culture, however, despite the apparent dominance of the technological 'does it work?' question, the pendulum has swung radically towards the *purely* aesthetic.

That was the implicit meaning of Duchamp's urinal. Not that it was a thing of beauty. It was neither beautiful nor ugly — but it *was* entirely useless. What happened with and post Pop Art went beyond Duchamp in key respects. When Damien Hirst's installation in a London gallery was swept away by a cleaner who mistook it for rubbish, the result was analogous to urinating in the 'original' Duchamp. However, when Warhol po-facedly exhibited Brillo cartons and Campbell's soup cans, he was not merely choosing to make it art, i.e. blurring the real and the re-presented. He was inaugurating art's collaboration with postmodernity, understood as consumer capitalism, the paradigm which we currently live out. This has been theorised by Baudrillard (1988),

Harvey (1989) and Jameson (1991), among others, and should be distinguished from postmodernism, the cultural side of postmodernity. Postmodernity is best thought of as a large historical development. It has brought us the globalisation of the corporations and of the internet. It operates through all forms of virtuality, through e-tech, P.R. and the politics of spin, not to mention the tsunami of advertising. In this context nothing is exempt from commodification, which is as much as to say that everything can be made politically 'useless', i.e. in current Kantian usage, aesthetic. Perhaps the sign of an ultimately aestheticised post-Kantian community is the Che Guevara T-shirt, or Warhol's images of 'celebrities' (Mao, Marilyn Monroe).

Naturally some have envisaged resistance to an art pursuing the Kantian dichotomy to its terminus, viz total divorce from function. They have done so under banners of feminism, or gay/lesbian rights or the 'postcolonial'. My belief is that, unfortunately, these fragmented moves were undermined from the start by the irresistible market logic of the Guevara T-shirt. The outcome was and continues to be a crisis in Western art. It prompted a 'new museology' (Vergo 1989), debate about the role of galleries and exhibits. It also prompted debate about basic premises in the discourse of art, to an extent re-energising ideas set in train by the 'moderns' in the first half of the century. That meant, among other things, a call for a 'new art history' (for an English version of which see Rees and Borzello 1986). Enter the article by Moro Abadía, which I thought necessary to set in the above perspective so as to balance its, in my opinion, somewhat limited as well as rosy historical contextualisation.

Moro Abadía is certainly correct to begin his own narrative with the 'linguistic turn', though he fails to explain it. The turn to language came, initially to Francophone, then to Anglophone institutions, from Structuralist Linguistics, via Saussure (1983), who had argued for language as operating by a system of differences. Thus, taking the words 'cat', 'cot' and 'cut', we might say that there is nothing catty about the word 'cat', nothing warm and cosy about 'cot' and nothing sharp about 'cut'. Rather the words work by distinguishing themselves from one another: 'cat' is 'cat' because it is not 'cot' or 'cut', 'cot' is 'cot' because it is not 'cat' or 'cut' and so on. In short language is arbitrary. Putting it in terms of semiotics (foreshadowed by Saussure), there is no intrinsic relation between the signifier (the sound 'cat') and its signified (what 'cat' means). This is a challengeable but not implausible thesis. Somewhere along the line, though, it was extended to the notion that the brain itself is structured like a language. This meant for a start that you could not think without language and, further, that social reality in all its aspects had to be structured like a language. And not just language, but language understood as a system of arbitrary relations. Thus social reality, i.e. anything able to be articulated as thought/speech, had to operate by a system of differentials of the cat/cot/cut sort: it had to be characterised not by the old unifying historical principles of cause and effect (formalised as hermeneutic principles by the early nineteenth-century scholars of the university of Berlin), but by 'discontinuity', 'rupture'. There could be no grand syntheses or 'totalisations' after the manner, in their diverse spheres, of Hegel, Marx, Wagner, Darwin. Lyotard (1984) proclaimed the death of 'master narratives' in all their more or less progressivist varieties since the Enlightenment; Deleuze and Guattari (1987) proposed a 'rhizomic', i.e. localised/pluralist alternative to linear history; Foucault wrote history and Bourdieu sociology without causes and effects; Derrida philosophised while 'deconstructing' his argument as he went. It was a 'death of history' and especially a 'death of origins' (that always problematical First Cause). All this influenced the core Humanities disciplines, especially via literary studies, but it also had fallout in the Social Sciences: Lévi-Strauss gave up on the historical sources of myth and simply analysed conceptual differentials (inevitably binary); Leroi-Gourhan applied it all to the layout of cave representation; anthropology became 'reflexive', self-deconstructing — an antidote in the nick of time to the old study of colonised native specimens.

This is the conceptual backdrop to Moro Abadía's appeal to a new set of principles for a history of art: anti-totalising, non-linear, non-progressivist, pluralist. Sadly the fundamental premise, that of the 'linguistic turn' was always unproven and in any case almost certainly incorrect. For all the centrality of language to human culture, there is, to my knowledge, no scientific basis for the notion of the brain as linguistically structured, let alone by a mechanism of differentials. On the contrary there is evidence of thought in the absence of language (Donald 1991; Bermudez 2003). Moreover the brain seems to have been designed by evolution precisely to totalise, not to resist totalisation. However, this does not mean that some of the major methodological shifts proposed by Moro Abadía and his sources are misguided. The philosophy may be at best debatable and the science suspect, but the cultural-political fallout is largely admirable, if also problematical — something which gets lost in Moro Abadía's enthusiastic presentation. It is admirable to propose a new pluralism, dismantling the master narrative of the West, to reject Eurocentric progressivist narratives which emerged from the colonial project initiated in the eighteenth century and perpetuated in economic terms to the present day. The trouble with anti-totalisation and the (however justified) critique of the Western master narrative is that a 'decentred' alternative brings its own complications. We are story-telling animals. If we scrap one narrative, another takes its place, even if pluralist narratives represent an improvement on their predecessors. At any rate there can be no 'end' of dominant or master stories. More specifically, there can only be an 'end' of history if we jettison the doxa of causes and effects. Now history is not simply

annals or (Moro Abadía's term) chronologies. We have always had those, but the invention of 'history' is recent — datable, as stated above, to the early nineteenth century. Its foundation is the understanding of events as a series of causes and effects whose analysis leads to some sort of conclusion or synthesis. This implies a factual teleology, though not necessarily one of progress. The most overtly teleological — and as it happens progressivist — modern art history is Gombrich's (1972), charting as it does the gradual achievement of mimetic mastery in European art. Its counterpart in rock art studies is, as Moro Abadía notes, the notion, common to Breuil and Leroi-Gourhan, that European Palaeolithic art improved in the direction of mimetic correctness. All this is tendentious in the case of Gombrich and nonsense when applied to anything outside the Italian Renaissance mimesis paradigm and its development into the nineteenth century. It has no application whatever to rock art, including that of Franco-Cantabria and Chauvet. But we are talking about a nonsense that is still alive and well in rock art discourse, though it now expresses itself in more oblique ways. We remain astonished, for example (as Moro Abadía notes while missing the irony), that Chauvet turns out to be 'sophisticated'. Surely there had to be gross beginnings or, putting it more politely, transition from simple to complex? The far-from-transparent distinction between simple and complex figurative, forcefully theorised in Australia by Maynard, retains currency in Australian rock art discourse — and its subtext is inescapably progressivist. One thing is clear: the West Tofts axe and the Daraki-Chattan cupule must be 'unsophisticated'.

But how to write a non-progressivist, pluralist-global history of art? As Moro Abadía indicates, Elkins (2004) has lucidly set out the options, from a Western-oriented history spiced with a dash of ethnic 'otherness', to history that might increasingly query its European premises, to, finally, one that might actually try to abandon them altogether. I have before me two examples of the easy first option: Gombrich (1972) and Bazin (1962). These open with classically awkward gestures in the direction of pre-History, including rock art, mostly European. They then get down to the real business of telling the story of European art, with perfunctory digressive treatment of highly selective non-European cultures. The method is chronology-linear. I also have Foster et al. (2004), not a world art history but restricted to the period 1900 to the present. I mention it because it is quintessentially postmodern. In a largely gestural way, it queries its own story with prefatory and (gently) conflicting introductions — followed by a self-consciously broken narrative held together by date-signposts (1900, 1903, 1906 etc.). Amazingly, given its avowed pluralism, it scarcely mentions art that is other than European/American. Summers (2003), Moro Abadía's chosen representative of the new art history, certainly offers a much more inclusive and thoughtful model. His is genuinely a chronicle of discontinuities, an attempted combination of synchronic and diachronic approaches, and genuinely non-ethnocentric. Instead of a history, Summers writes histories in the plural, a series of them, each in its own specific context and with different structures, origins and teleologies. And he does this with enviable flair. Of course to the extent that he puts forward an argument *linking* this heterogeneity he cannot avoid a totalisation of sorts. This may be an uphill climb, illustrated in a detail which stands out for me as an Australian, viz his optimistic inclusion of Aboriginal acrylic art in his history. Not that he could fail to do this, given the current vogue of such pictures. But since Summers can say nothing about the acrylic in question other than to point up the mantra of difference, his in itself admirable gesture has no point. Why bring Australian acrylics into the argument when they add nothing to it? This is the anti-totalising history dilemma. You say X is sui generis but still have to find some reason for its inclusion in the history. The test of radical pluralism is not so easy to pass either: the Aboriginal reference comes very much as an afterthought. Another example, and a more serious one: rock art comes into the picture on, as I recall, no more than a couple of occasions. Thus we read hundreds of pages on 'art' (the tip of depiction's iceberg) and very few on the submerged body of the iceberg, which is world rock art. Less cautiously, Moro Abadía echoes Summers in a reference to Aboriginal thinking, suggesting it might be incorporated into a pluralist enterprise. It goes without saying that Aboriginal artists are perfectly capable of taking part in the Western art project; they have done so. It is quite another matter to imagine that mythopoeic perspectives might find a place in Summers' or Moro Abadía's histories. The concept of the Dreaming is totally incompatible with that of history. The one reads events as taking place in eternity actualised at every point in time — much like the Christian sacrifice of the Mass. The other can abandon factual causes and effects only by ceasing to be 'history'.

There is another ambition in Moro Abadía's project, following Summers: to write a non-formalist history, one focused on 'contextualisation'. I do not believe contextualising is something new, though this variant has its own distinctive characteristics. Contextualising, taken in a broad sense, has been a feature of all 'historical reconstruction' in any number of disciplines (not least archaeology) since the birth of modern hermeneutics. To take a single example from art criticism, Panofsky (1939) put Italian Renaissance art in the context of the Florentine neoplatonic movement. Nonetheless I accept that art histories have, until very recently, been histories of style and that the universities have, also until very recently, taught formal analysis above all else. (Formalism in literary studies went by the misleading name of 'New' Criticism.) Moreover modernism in art, at the very least from Cubism to Abstract Expressionism to Colour Field Abstraction and Minimalism, was more or less self-referential. So Moro Abadía is right to point up the stress on style in Breuil and Leroi-Gourhan,

though he might have shown more boldness and said that style, though regarded as problematical, continues to structure rock art studies. He might also have added, in defence of style-analysis, that when taken with a dose of salt, as provisional or even merely heuristic, it may come in handy. As an activity it may even be unavoidable, yet another expression of the totalising human brain. The point I want to emphasise, however, is that the turn away from formalism need not entail a devaluation of the concept of form, any more than rejection of consumer culture as radically aestheticising need discredit what I have termed deep-time aesthetic response. Art critics, Summers included, could take more account of evolutionary biology, in which context the significance of ideas of form and the aesthetic are grounded not in recent historical developments but in our neural structures.

A specific comment on 'realism', central to the art-history critiques to which Moro Abadía appeals. Of course the problem is one of progressivist Eurocentrism, common to Gombrich and Breuil. But in rock art studies, doubtless more than in art history, that is the least of it. I have difficulty thinking of rock art researchers who would readily distinguish the several meanings of the term 'realism'. Most mean by 'realism' or 'naturalism' (generally taken, without nuance, as synonymous) that a representation 'looks like' the real thing. The trouble is that all sorts of representations 'look like' their referent. Thus a Kimberley Gwion looks like a human, and a colour photo of Mike Donaldson in the Kimberley also looks like a human. Rock art researchers, archaeologists and anthropologists are liable to judge that the photo is *more* 'realistic' than the painted Gwion. But why would you think that, when *both* 'look like' humans? Can there be gradations in 'looking like' a human? It sounds odd, but that is apparently the case — to observers habituated to images not merely 'looking like' X but 'looking like' X *in particular ways*. Yet these particular ways must be culture-specific, such that we would not wish to postulate that those who once made (or still make) stick-figure images regard them as 'looking like' humans — but only 'up to a point'! It would be absurd to suggest it. Clearly those who produce stick-figure images do so in the knowledge that these images do indeed look like their referents — period. Contemporary Westeners, including rock art scholars, chronically confuse 'looking like', i.e. representational approximation to the real, with post-Renaissance pictorial Realism, Realism as a recent depictive convention. By the same logic they confuse 'looking like' with Realism's mechanical offspring, the camera image. Both of these are premised on the culture-relative privileging of the single subjective viewpoint on reality. As long as we find Realist images more 'realistic', i.e. more attuned to the real, than other kinds of images, we have not abandoned a European bias. So much for the prioritising of a particular (Summers calls it 'metaoptical') perspectival projection in art. But what about 'detail'? Surely the Mike Donaldson photo is more information-rich than the Gwion picture — and therefore closer to the real thing? The confusion here may be cleared up with an observation so pithy as perhaps to require us to ponder it for a moment. The observation is this: that you need detail in order to 'look like' a Realist image, *not* in order to 'look like' the real. To 'look like' the real — and this must be especially evident to rock art researchers — detail is unnecessary. All representation is schematic, and degrees of schematisation, while generating quite different kinds of images, make *no* difference to a picture of a human looking like a human. If anyone remains in doubt about this line of argument and objects that the photo identifies its subject more precisely than the Gwion painting, let me restate the case slightly differently. It is true the Gwion picture will not do for a passport. Assuming identification beyond 'looks like a human' is required, the photo supplies diagnostic detail relating to e.g. facial appearance (variation between Mike Donaldson and his brother in the configuration of, say, eyes, nose and mouth), whereas the Gwion painting may, let us hypothesise, identify by variations in the configuration of appurtenances (headgear, sash, tassel, weaponry). In both cases specific identification will depend entirely on pre-existing knowledge of the variations in question. But the whole point is still the one made above, that it is a matter not of *more* information, only of information of a particular sort, obtained by particular depictive strategies. Realism, including that of the camera, is simply one way of providing visual information. Unless you happen to be an Italian Renaissance artist obsessed with the folds and wrinkles in Mike Donaldson's shirt and the fact that foreshortening reveals some folds and wrinkles while occluding others, you will be well served depictively without culture-relative appeal to this *particular type* of detail. (Let us add in passing that the premise of 'detail' as enhancing approximation to reality once again calls up the ghost of that 'simple vs complex' logic, with its unwelcome baggage of progress in representation.)

In conclusion I applaud Moro Abadía's proposed bringing together of rock art and art history studies, in the course of which he raises issues of great importance to both disciplines, as well as to associated disciplines like archaeology and anthropology. The fact is that rock art scholars by and large know little about art in general, while art scholars by and large know little about rock art. With honourable exceptions, people in neither group are well versed in philosophy. In this connection and looking over Moro Abadía's possible 'chapters', I note — to take one example — his discussion of 'place', presented (reasonably) as a concept that extends studies beyond the image on the rock face. This is a familiar strategy, already applied by many (see Chippindale and Nash 2004), but also in need of clarification by reference to its sources — something Moro Abadía glosses over. The idea of 'place' taken up in archaeology and rock art studies comes from Husserl's Phenomenology and its transformation by Heidegger into an ontology.

'Place', as against the more empirical 'site', has helped us to approach rock art in a more holistic way, but the thinking behind it has sometimes been understood very reductively. At one extreme it is interpreted — by Smith and Blundell in Chippindale and Nash (2004) — in a painfully (but clearly unintendedly) parodic fashion as some sort of bodily-imaginative 'immersion' in landscape — so as to gain some access to the 'experience' of ancient hunter-gatherers! This perfectly postmodern fantasy, postmodern because it has its analogue in the ur-consumer-gratification of the 'shopping experience', has nothing to do with Phenomenology, which specifically disowns personal experience (*Erlebnis*) as a guide to understanding. Phenomenology is essentially analytic and anti-psychologistic. Heidegger's celebrated being-in-the-world is, thankfully, not about 'embodiment', the kind of 'feeling bodily' (think of luxurious body lotion ads) which comes as a revelation to some of us in the age of virtuality. It is about human activity, our practical projects which generate human spaces, i.e. constitute 'places' out of merely inert space, a 'home' as distinct from a 'house' etc. Moro Abadía does not suggest to me that he grasps this in his mention of 'place' — which is surprising in the light of his mentor Summers' reliance on Heidegger and specifically the idea of being-in-the-world which is the nearest thing to a leitmotif linking all those apparently broken narratives outlined in Summers' book. To my knowledge the only Anglophone archaeologist to have made a sustained effort to understand Heidegger's highly original thought is Julian Thomas, though Thomas makes the, in my view, serious error of reading Heidegger with distorting Derridan spectacles.

I have other concerns about Moro Abadía's arguments, for all my sympathy with so many of his conclusions. He seems to me stronger on statement than on analysis and his conceptual horizon is largely restricted to the context of recent art history. In fact there is another — non-contextualizing — approach to a possible history of world art, one giving special status to rock art, as it happens alluded to in Moro Abadía's article but deserving greater prominence. This is the cognitive or 'becoming human' (Renfrew and Morley 2009) type of history, proposed by such diverse, indeed antagonistic, rock art scholars as Lewis-Williams (2002) and Bednarik (2003a, 2010; Bednarik et al. 2005; Bednarik and Sreenathan 2012). With his emphasis on deep-time artefacts, his promotion of the significance of e.g. markings in the caves of southern Australia and cupules in Madhya Pradesh, his withering assessment of premature grand announcements and his relentless focus on dating, Bednarik may be as close as anyone if not to an inclusive history of art, at least to a clearing of the ground for such a history. While resisting the 'cognitive' label for its post-Behaviourist baggage, I situate my own research in this space, entirely open to Moro Abadía's 'contextualisation' while concentrating on perceptual, ultimately neural universals which might account for all kinds of representations, rock art included. So far none of the above amounts to a blueprint for a world art history, but it seems to me that some form of universalist approach offers the best prospect for such a history. Either that, or Elkins (2004) may be right in envisaging the possibility of the project itself ceasing to exist.

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Doing global rock art

By PATRICIA DOBREZ

Are art historians, in particular those in the process of reinventing themselves in the light of contemporary theory, poised to make inroads into areas which to date have been largely the terrain of rock art research, a discipline traditionally seen as belonging to archaeologists and, begrudgingly, ethnographers? Moro Abadía's mentor, who has stirred him to propose a new set of preoccupations for rock art studies, is David Summers, whose 2003 book *Real spaces: world art history and the rise of Western modernism* tackles the considerable challenges of a global survey of art. This work has things to say art to rock art researchers which are said with such self-assurance, verve and erudition that it is very hard to resist them.

In his chapter on 'Images' which opens with the question of origins, Summers draws attention to the fact of taphonomy, a useful starting point: 'If by "original" we mean "first", then the first images must have been made independently in many places, and can never be found, or could not be identified as first if they did happen to be found' (Summers 2003: 251). The majority of rock art researchers would probably agree on this score, as they would with comments on the difficulties of dating and determining sequences. However, with a turn to 'cognitive archaeology' and neurophysiology in rock art studies (noted by Moro Abadía), researchers may be less inclined to endorse, without exhausting experimental enquiry, the assertion that 'images assume so many spatial forms that they can hardly be assumed to arise from universal biology and psychology' (Summers 2003: 251).We are given a picture of manifold diversity, yet Summers supplies his own universals: the concept of 'cardinality', for example, which aims to foreground the centredness of human beings in the 'affordant' (to make adjectival use J. J. Gibson's noun) spaces they occupy. From Summers' Glossary: 'CARDINALITY. The specific

conditions of individual human real spatiality, defined by uprightness, size, facing, capacities for movements and actions' (2003: 683). Cardinality is uniquely variable for each individual, but our humanness operates under these normative conditions: 'The conditional basis of human activities is for all intents and purposes common and universal, and at all times we act within these limits' (2003: 37). These conditions, it needs to be pointed out (since Summers does not), arise out of our *biological* relations with the physical environment and express our capacities for marking, pounding, pecking, blowing ochre from the mouth, drawing and so on — those very 'activities of makers' on which art's 'world building' is founded (2003: 41).

Despite this, but perhaps unsurprisingly, given his book's critique of progressivist narratives of art, Summers opts to avoid use of the biology-oriented word 'evolution' where it replaces 'development' in art-historical accounts. Here he becomes prescriptive:

> if works of art on the level of defining internal order [the formalist approach] are like natural forms, then their replications in series might be supposed to display 'development' or 'evolution' in the way natural forms do, so that simple forms 'turn into' complex ones … These metaphors — especially at the level of generality at which they have been employed — should be suspended in favour of a much more multi-layered, or multi-stranded model of historical explanation, in which diachronicity and synchronicity are much more relative terms (2003: 73).

Summers has a point about metaphor. In Australia we worry about 'simple-to-complex', a metaphor ultimately borrowed from descriptions of biological evolution as a way of modelling likely rock art sequences in the 'Panaramitee tradition' (Dobrez 2010–11: 107). We think hard about resisting its seductive appeal. Then again, it might turn out that there is something in the metaphor after all — provided we are willing to anchor our sequence-modelling in reliable dating. We might also think of dumping the evaluative baggage which travels with the idea of evolution regarded as *progress*. Robert Bednarik appears to hold to a 'descent-of-pictures' model consistent with the notion of biological evolution (Bednarik 1985a: 82). He does not, however, represent the human story as progress. On the contrary, he is interested in evidence supporting modern degeneracy (Bednarik 2011a). Is this the only alternative? Might not theories of progress and its opposite be signs of the same Western teleological mindset?

What we are debating here is a range of attitudes and notions rock art researchers might adapt for their own uses from trending theory. Moro Abadía's intention is to begin a conversation between disciplines. What, then, can his set of largely Summers-derived critiques transplanted into the field of rock art studies offer? And what will he and others cognisant of present theoretical trends have to say in the proposed new 'chapters' in the story of rock art, where the focus will be 'images', 'image-making', 'visual cultures', 'places' and the self-reflexive 'narrative frameworks'? The first question which might be usefully asked is this: what is already familiar in the envisaged content and theoretical standpoints of the pending 'big book of world rock art'?

Summers is a determined fashioner of fresh terms to embody his concepts and provides a glossary of his neologisms to explain words employed in special, carefully-defined, ways such as 'format', 'metaopticality', 'planarity' and 'surficiality'. Examples of Summers' section headings which might tantalise rock art researchers are 'Sur-face', 'Full-face, Profile and Virtuality', 'Framing'—and many others. While choosing his own set of concepts, Moro Abadía has to a limited extent adopted a vocabulary borrowed from *Real spaces* in setting out his touchstones for working towards a 'post-formalist history of rock art' — 'formalism' constituting the traditional approach of art historians and critics wanting to separate art objects from their contexts to investigate internal structures and relationships. However, while making us aware of some of Summers' more abstruse terms, he does not employ them himself. Perhaps he would do so in fleshing out the chapters of his envisaged *Prehistory of world rock representations and the rise of visual culture* (if I may be so bold as to give his project a title). It should be noted that Moro Abadía's focus on 'visual culture', derived from Whitney Davis, is contrary to Summers' position. Repudiating art's exclusive and 'reductive association with sight and vision', Summers chooses to speak of 'spatial arts' in place of 'visual arts' (2003: 41). When discussing the final work of art chosen to illustrate his 'history' — an Australian Aboriginal acrylic *Karrku Jukurrpa* (painted by a group of 34 people, mostly women) — Summers stresses its embedment in ritual, thus leaving the door open for a consideration of allied, not solely visual, arts: dance, song, body painting, the making of ceremonial objects. Where ethnography is available, these connections would be already acknowledged by rock art researchers, and with the culture-centred input of Aboriginal custodians, given their due place as supporting context. It is interesting to note, by the way, that Summers has learned nothing from rock art discussions, available prior to the publication of his book, about an ongoing 'Panaramitee' set of image-making practices (Flood 1997: 325; Rosenfeld 2000: 107). Opportunity was there to note Flood's memorable comment: 'Those who buy a modern dot painting in acrylics on canvas in the high street of Alice Springs are actually buying Panaramitee art!' (1997: 325). Published rock art research is surely a *sine qua non* area of study for anyone avowing wide-ranging historical interest in the visual/spatial arts, yet in Summers' discussion of *Karrku Jukurrpa* no link is made with rock art: in its place the suggested forerunner of acrylics is bark painting, an unlikely and unsubstantiated lineage! As far as rock art is concerned, I shall turn presently to Summers' treatment — illustrative of the possibilities and limitations of what

Figure 1. *Panel from Sector 2, Cueva de las Manos, Argentina.*

one might expect from a purportedly post-formalist art history in the future — of several Spanish pictogram panels from the Mesolithic.

To return to Moro Abadía: his chief aim is to endorse contemporary theory's critique of the progressivist narrative of art and its European, Gombrich-style privileging of realism, and to argue that the implications of this critique must be accepted by rock art researchers faced with the ethnocentric example of the founder of Western rock art studies, Henri Breuil, and those he influenced. Moro Abadía's imperative is to embrace the opportunities of our moment, characterised as an 'age of globalisation'. Not enough to wake up to ethnocentric blindspots: a study of world rock art needs to guard against possible new orthodoxies. Hence the emphasis on self-reflexivity expressed in the article's 'analysis of narratives' theme. Nothing to quarrel with here.

Moro Abadía's proposed content for future 'chapters' in the story of rock art is based in the main on a reorganisation of already existing preoccupations and this under headings which, on examination, are not radical departures from concepts that have been driving rock art discourse over a number of years. If Moro Abadía followed Summers more than he does, his suggestions for rock art studies might be more radical. In view of his avowed indebtedness to Summers, it is useful for his readers to know how he stands on this score. Briefly:

Chapter 1 ('Images'). Summers has a section on 'Images' where he makes an appeal to Australian Aboriginal sand-drawing to illustrate the notion of the 'entangled histories' (2003: 251) of language and images, as well as the evident obedience of these works to 'real spatial conditions'. Where Summers' emphasis is on 'social space' (2003: 251), Moro Abadía's plea is for something different, viz the incorporation of 'many kinds of representations' — finger flutings, cupules, and so on — as well as for an opening out to other disciplines. Of course this would require a rethinking of the word 'representation', but would provide a platform for countering Anthony Forge's provocative claim, on the (preciously-argued) grounds that hand stencils belong to the category of nature rather than culture and 'don't represent anything', i.e. that they are not the business of rock art studies (Fig. 1): 'I suggest that we must get rid of stencils as part of art' (Forge 1991: 40, 43).

Chapter 2 ('Image-making'). Here Moro Abadía's emphasis is on 'making', his concern being with what Summers brings to the fore under the heading of 'facture' (cf. 'manufacture'), viz 'indications in an artifact of its having been made' (2003:684). However,

Moro Abadía does little more than review archaeological work on portable tool and related technologies, calling for comparable projects to be taken up by students of rock art.

Chapter 3 ('Visual cultures'). There is an appeal for a consideration of 'the full range of representational systems' relating to the visual. In his stress on vision, Moro Abadía departs from Summers, in which connection it might be said that resistance to vision-oriented concepts of art is not incompatible with the work of perceptual psychologists like J. J. Gibson who, while investigating the way we see, made much of the interconnectedness of the senses in establishing humans in their ecological niche (Gibson 1966).

Chapter 4 ('Places'). Having emphasised the visual, Moro Abadía turns rather belatedly to Summers' emphasis on place and 'social space'. The way the concept of place has already registered in many different ways in rock art research is amply illustrated. In this context, I would like to mention Summers' analysis of a use of space which takes an observer to an 'elsewhere', making it possible to tell a story by allowing that somewhere else 'into spaces of human presence and use' (2003: 431). This discussion takes place under the heading 'Virtuality' and offers itself as a history of the use of surfaces. It begins with examples of rock art paintings from Ulldecona, Cueva Remigia and Los Dogues, Spain, all of which fit the rock art definition of a 'scene', and, in a fashion resembling 'close reading', demonstrate how a narrative effect is achieved. This is managed by the use of space, consistent relative proportions, profile view, directional markers, and so on, to show 'development of the possibility of the unity of the surface to effect unity of space and time in the representation of a significant event' (2003: 436). Livio Dobrez (2007, 2008, 2010, 2011a, 2011b, 2011c, 2012) has covered this ground in detail. Nonetheless these pages of Summers' book are well worth the attention of rock art researchers, providing as they do another antidote to the idea that a formalist approach to representations needs to be completely overthrown.

Chapter 5 ('Alternative narratives') focuses on the contribution of ethnography. As a remedy for ethnocentricity, Moro Abadía recommends that researchers stand outside their cultural envelopes by embracing the world-views of other groups. However, no attention is given, as in Summers' book, to the way in which new histories can embody a non-linear approach by, for example, cinema-like narrative cuts, anticipations and circular returns, neologising, inclusion of hypertext equivalents (etymologies, discursive notes, the Glossary), temporal and geographic switches of focus, concept- rather than chronology-based organisation of subject-matter — to name some of the strategies of *Real spaces*. As for Moro Abadía's recommended remedy of adopting culturally alien standpoints, I refer the reader to a rock art researcher fully aware of the challenge involved. William Breen Murray's *AIRA* 'Rock art studies in China' report (2002) is notable for its insights and its acknowledgement of the conceptual leaps involved in cross-cultural dialogue. This article looks at the way contact with Chinese researchers at the *Second Ningxia International Rock Art Congress*, held in 2000 at Yinchuan, northwest China, began to reshape Murray's thinking about rock art: 'Chinese rock art research shows significant differences in both methodology and context from Western practices. On first encounter, it produces a kind of professional "culture shock" ' (2002: 140). If there is to be a global conversation then this is probably what we all need. The process of setting up frameworks in which different cultural mediations can stand side by side has only just begun. Its outcomes remain excitingly unpredictable.

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New narratives for rock art studies

By PATRICIA A. HELVENSTON

The following comments are in response to the very rich and highly stimulating paper by Oscar Moro Abadía entitled *Rock art stories: standard narratives and their alternatives*. I found myself wanting to respond with comments along a number of different lines to this paper, but due to space limitation I will restrict my comments to two issues. The revision of narratives to keep up with empirical data advances as well as new interpretive schemes is vitally important in all disciplines, as Moro Abadía convincingly demonstrates for the disciplines of Art History and Rock Art Studies. Bednarik (2011b, 2013) has rightly criticised a number of narratives currently in vogue for archaeologists, such as the replacement theory of Neanderthals with AMHs (anatomically modern humans), and Helvenston has criticised many cognitive archaeologists for failing to appreciate the importance of the discovery of writing upon the human mind (Helvenston 2013, and in press). Thus, more implicitly than explicitly, they assume that the mind of the Palaeolithic peoples who created the wonderful cave paintings of the Franco-Cantabrian caves of France and Spain is very similar to our modern, highly literate, Westernised mind, perhaps because pondering these paintings it seems as if it is possible to see directly into that mind across thousands of years. And the Palaeolithic mind *was* similar to ours in some respects, in that right brain functions were highly developed and utilised in Palaeolithic cultures as they are in ours. However, left brain functions were quite different than ours because these were oral cultures not possessing writing. Literate cultures change brains (left

hemispheric) and minds in very distinctive and myriad ways (Helvenston 2013). As Abadía pointed out,

> discussions on pre-Historic imagery have become central to present-day debates in cognitive archaeology. In this field, there seems to be a broad agreement that Palaeolithic images offer the best evidence for exploring the origins of human cognition and imagination (Renfrew and Morley 2007), perception (Hodgson 2008), language (Davidson 1996; Layton 2007), memory (Wynn and Coolidge 2010) and symbolisation (Botha and Night 2009).

Yet in the pursuit of understanding the Palaeolithic mind most of these authors ignore the incredible importance of writing for shaping modern literate minds with their attendant cognitive skills as measured by neuropsychological tests. Too many cognitive archaeologists conflate the Palaeolithic mind with the modern mind. Thus, Wynn and Coolidge use a highly literacy-shaped mind (the modern Western mind) to understand recent memory functions in Palaeolithic peoples. But these people did not possess many of the logical or reasoning skills Wynn and Coolidge speak of because they were not literate. Of course the Palaeolithic people had recent memory functions. But Wynn and Coolidge use a model for recent memory normed on highly literate peoples that involves most of the frontal lobe. Moreover, the frontal lobes have remained stable in external morphological appearance for 300 000 years (Henneberg 1990), suggesting memory capacities at fairly high levels date far back into the human past. Palaeolithic memory functions may have been superior to modern humans' as the memory functions are often superior in oral cultures.

Although the differences between cognitive styles and abilities between individuals from oral-aural cultures and those from literate cultures was a topic of literary criticism in the 1960s to 1980s, I think these findings need to be introduced into cognitive archaeology, palaeoneurology and neuropsychology because I have seen no references to this large body of work when attempting to understand the mind of Upper Palaeolithic peoples, and how that mind would differ from that of modern literate peoples as I first suggested it did (Helvenston and Bahn 2003: 213–224). Thus, we need a new narrative about the limits of Palaeolithic minds because they were not literate.

For example, Walter Ong (1982) encapsulated it well when he stated:

> In recent years certain basic differences have been discovered between the ways of managing knowledge and verbalization in primary oral cultures (cultures with absolutely no knowledge of writing) and in cultures deeply affected by the use of writing. The implications of the new discoveries have been startling. Many of the features we have taken for granted in thought and expression in literature, philosophy and science, and even in oral discourse among literates, are not directly native to human existence as such, but have come into being because of the resources which the technology of writing makes available to human consciousness. *We have had to revise our understanding of human identity* (italics mine).

This quotation has direct implications for understanding the oral Palaeolithic mind. In other words what literate scholars had been assuming to be universal human cognitive attributes of contemporary humans, including scientific thinking and analysis, abstract thinking, logic etc., depended on whether or not that individual came from an oral versus a literate culture. Cognitive archaeology has yet to come to terms with the effects of literacy on the cognitive capacities of contemporary peoples. Literacy itself confers a technology which enhances communication and cognitive abilities (Ong 1967, 1982; Goody 1968, 1977, 1987; Fox 2000). All of these authors conducted numerous studies on the effects of literacy and their work needs to be incorporated into cognitive archaeology, neuropsychology and palaeoneurology. Dean Falk (2011: 83), a palaeoneurologist, is one of the few to recognise the differences between oral and literate cultures and the uselessness of IQ tests, normed on literate cultures, to the understanding of the few oral hunting and gathering societies left on the planet.

Some key differences between oral-aural and literate thought and expression are *summarised* by Terrence Hawkes, editor of Ong's *Orality and literacy* (1982).

Thought and expression in oral cultures is often highly organised but calls for organisation of a sort unfamiliar to and often uncongenial to the literate mind. This organisation is basically formulaic, structured in proverbs and other set expressions. It is aggregative rather than analytic, participatory rather than distanced, situational rather than abstract. Literacy, it is now clear, transforms consciousness, producing patterns of thought which to literates seem perfectly commonplace and 'natural' but which are possible only when the brain has learned and internalised, made its own, the technology of writing.

It is crucial to understanding the Palaeolithic mind that the effects of literacy on mind be pursued vigorously. Without this understanding archaeologists will continue to conflate the literate mind of Westerners with the oral mind of contemporary hunter-gatherers and with ancient Palaeolithic minds. (For more details on this topic see Helvenston 2013 and Helvenston in press).

My next comment is a warning not to be too hasty to toss out older archaeological narratives regarding stylistic data. I am specifically referring to Chauvet Cave, which stylistically dates to the Gravettian and post-Gravettian, but has been radiocarbon dated to 31 000 or the Aurignacian. It was this discrepancy that caused some archaeologists to drop the stylistic analysis of Chauvet Cave drawings in 1994, which had a long history of consistency and correctness in favour of AMS dating that appears to be in error. A new paper by Combier and Jouve (2012) entitled *Chauvet Cave is not Aurignacian: a new examination of the archaeological evidence and dating procedures*, explains why the dating is wrong and once again emphasises the stylistic consistency of the art to the Gravettian period. At the

very least this new paper should be reviewed for its insights before declaring stylistic data as being part of an older narrative in this case. Older narratives should probably not be discarded until there is more than one group of data suggesting error.

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Reframing rock art

By DEREK HODGSON

Moro Abadía's survey of the insufficient efforts to understand Palaeolithic art brings a welcome reassessment of where rock art studies stands. Such a meta-analysis of previous theoretical frameworks helps formulate new ways of approaching the subject and opens up the debate, which suggests a wider range of inter-disciplinary cooperation is called for. By stressing the primacy of context and cultural variability over technical advances, the way is open to a more inclusive agenda, which will lead to more fruitful advances in understanding rock art. I would like to add that one of the aspects of behaviour that has not been adequately explored concerns ritual as a function of animism. By animism, I mean the 'new animism' (or 'ontological turn') that has recently come to prominence as a way of understanding archaeology (VanPool and Newsome 2012; Helvenston and Hodgson 2010), which is proving of greater utility than shamanic interpretations. The fact that many of the representations of animals in Upper Palaeolithic cave art are overdrawn (i.e., superimpositions) illustrates the point in that this shows a disregard for the obvious technical expertise (and aesthetic criteria) involved that can be better explained through evoking an animistic/ritual explanation — which I have suggested relies on a quest to discover and fixate visual elicited imagery that had a special meaning for the authors (Hodgson 2008, 2012).

Although the technical aspects of representation and depiction may have been invoked as a way of realising animistic/ritual tendencies, this does not mean that we should discount technical expertise altogether. We still need to explain how representational depiction arose as it is a remarkable discovery (as opposed to invention) that probably derived from a range of perceptual and fortuitous events related to 'seeing-in' (Wollheim 1980; Hodgson 2012) that occurred well before the representational art of the Upper Palaeolithic; a fact that can explain the seemingly sudden appearance of naturalistic depictions of Chauvet cave. An evolutionary scenario may therefore still be useful but only in so far as a much longer timescale is adopted that takes account of the probable cognitive profile of *Homo sapiens sapiens* and earlier hominins (Hodgson 2000, 2006). From this perspective, and as the author points out, geometric mark-making is all pervasive and existed before representational depictions. This in itself suggests a protracted evolutionary scenario with geometric marks predating representational depictions *sensu stricto* by a considerable period. Of course, as mark-making and representation rely on co-evolutionary factors, much variability intrudes that often makes trends difficult to discern. This picture is further clouded by the influence of population dynamics, where innovation is often invoked by increases in population levels and densities thanks to the greater likelihood of ideas being exchanged and enduring. Having said this, although rock art was probably produced for animistic/ritual purposes, it is interesting that certain features of both mark-making and representational depiction evince characteristics that typify the way the visual brain disambiguates the world. For example, the universal employment of the typical sideways profile of animals in outline and the basic 'form primitives' typical of geometric marks simulate the way the visual brain encodes decisive information about the world. These aspects of rock art may therefore depend on search behaviour that was originally important for survival but through co-evolution came to be expressed in the plastic arts. Although these aspects of depiction were not uppermost in the minds of the authors concerned, by understanding the perceptual underpinnings we are better placed to comprehend what features of depiction are directly related to ritual practices. Moreover, the direction of flow is not always about modern scientific methodologies condescendingly examining palaeoart as rock art can also provide evidence to the neurosciences as to how the visual brain functions. In terms of information processing (and excluding enhanced arbitrary symbolic interpretations) it is incontrovertible that the information contained in a naturalistic depiction is more complex than that found in repetitive geometric marks. From a purely scientific standpoint this shows that some depictions are more sophisticated than others. Despite this, whether a group chose to adopt naturalistic depiction depended for the most part on either choice or happenstance according to prevailing circumstances.

Moro Abadía's stance chimes with Hodder's (1992) postprocessualist approach, which stresses that, although science may be appropriate to investigating the material aspects of a culture, it is inappropriate for analysing the cultural/symbolic facet of 'material culture'. As Callahan states (2003), given humans tend to perceive that which is searched for and often do not perceive what they have not been educated to see, it is important that the presuppositions on which ideologies are based are made explicit, otherwise un-deconstructed assumptions become 'embedded' fundamentals of a discipline. However, although the

need to take account of social and cultural variables is essential, a way of interpreting data is still required, otherwise one would be unable to test hypothesis stemming from theory against existing evidence. By proposing a more nuanced all-inclusive approach Moro Abadía helps to formulate a better paradigm to achieve this. Caution is, nevertheless, advisable as there is always the danger of slipping into excessive relativism where little can be meaningfully construed about any cultural artefact due to the lack of a coherent frame of reference.

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Response to Moro Abadía

By JOHN ONIANS

This is a wise and timely piece; impressive in its range and perceptive on many important issues. By drawing attention to significant weaknesses in both archaeology and art history it renders a valuable service to both fields. Still, if I was to continue the article's tone of intelligent criticism I would want to draw attention to some of its own weaknesses. Most problematic is the way it too succumbs to the 'grand narrative' approach. The view presented, while fresh as a critique of much of the literature, is itself too schematic and linear. Symptomatic is the absence from the bibliography of two books that avoid many of the weaknesses of the field rightly pointed out by Moro Abadía, *The art and religion of fossil man* (1930), by G. H. Luquet and *La naissance de l'art* (1999), by Michel Lorblanchet. One suspects that they were left out precisely because they don't fit the constraints of the grand narrative. More important, though, is what they offer that is new, a sense of what neuropsychology might contribute to the enquiry, a point of view developed from an informed perspective in 2000 by the neuroscientist V. S. Ramachandran in his piece 'Mirror neurons and imitation learning as the driving force behind "the great leap forward" in human evolution' Edge 69. *http:www.edge.org/documents/archive/edge69.html*

This too is not referred to in the article, while my own attempt to demonstrate in detail how this might be done, 'Neuroarchaeology and the origins of representation in the Grotte de Chauvet', in the volume on *Image and the imagination*, is noted but not discussed. That article not only shares Moro Abadía's critical analysis of the current literature but follows up hints in Luquet and Lorblanchet using the latest neuroscience to offer a coherent explanation of the emergence of two-dimensional representation. If my argument is wrong either in its assumptions, its data, or its conclusions it needs to be refuted. If there is a possibility that it might be correct, its implications should be followed up. For me the project of neuroarchaeology that the article launches offers one of the most promising solutions to the problems that Moro Abadía so perceptively describes. Others are moving in the same direction. Lambros Malafouris does so in the same volume and Helen Anderson in her University of East Anglia PhD dissertation *The beginnings of art 100,000–28,000 BP. A neural approach* (2009) goes much further. An explicitly neural approach offers a significant advantage over the more generally 'cognitive' approaches current in archaeology because it allows — and indeed requires — us to engage with individual minds living in particular environments in particular ways. The emphasis it places on the way neural formation is affected by the environment makes it particular relevant to the study of rock art as a worldwide phenomenon.

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Multi-disciplinary collaboration?

By DENISE SMITH

Oscar Moro Abadía's paper is a cogent contribution to an international discussion about the role of style in rock art studies. That it 'updates' many of the thoughts expressed so concisely by Meyer Schapiro in his 1953 essay thrills me. That it was written by someone who is not an art historian thrills me even more. Moro Abadía delineates the historiography of the use of style as a method in rock art scholarship, particularly focusing on his area of expertise, the Paleolithic art of western Europe. Given that my area of expertise lies within the borders of the United States, and the context of my work is American scholarship, where the influence of Meyer Schapiro has been profound, I will discuss how Moro Abadía's paper supplements the ideas of Schapiro, as well as those of Reinaldo Morales, Marit K. Munson and many others, before offering some comments on why I agree with the author that we need to seek a broader approach, and offer additional possible models.

Style, as Moro Abadía clearly delineates, has been the primary method of analysis in European rock art scholarship. Meyer Schapiro, an American art historian, published his keynote address, 'Style', originally delivered to a national conference of anthropologists, in 1953. His essay has been strangely influential in American scholarship. What most American archaeo-

logists quote when using Schapiro as a source is from his first paragraph: 'By style is meant the constant form — and sometimes the constant elements, qualities, and expression — in the art of an individual or a group' (Schapiro 1953: 287). But he goes on to define the many nuances of style, including the idea that it is not limited to one style per person per culture per time period, that artists work in more than one style, and that there are a multiplicity of styles in every culture in every time period (Schapiro 1953: 294). But, as David Whitley points out, '…[w]hile many researchers have cited Schapiro's (1953) definition of style as their justification for its use, they actually have paid little attention to the way Schapiro defined the concept' (Whitley 2005: 48)

Following Schapiro's work, other American art historians have tried to broaden the definition of style and of art for their archaeological colleagues in rock art studies. Reinaldo Morales writes in the introduction of his chapter, 'Considerations of the art and aesthetics of rock art,':

> The discontent with the term 'rock art' will be shown to have less to do with any specific quality of prehistoric painting or engraving on rock and more to do with a limited understanding of art in general. A properly informed understanding of art, one which includes prehistoric painting and engraving on rock as art — *rock art* — can be, in fact, productive and rewarding (Morales 2005: 61).

Marit K. Munson, an archaeologist on the faculty of a Canadian institution (similar to Moro Abadía), echoes Morales when she writes:

> Concerned about the perceived subjectivity of 'art', most archaeologists have shied away from the term, focusing solely on the reassuringly material and practical study of artifacts. In doing so, they have rejected potentially powerful lines of inquiry, neglecting the art-like aspects of ancient objects. Rather than fleeing from 'art' as a concept, I argue that archaeologists should use this loaded term, letting the powerful associations and assumptions that accompany it frame the ways that we look at ancient objects, the kinds of questions we ask, and ultimately, what we see (Munson 2011: 3).

As part of a debate published in the *Rock Art Research* in 2009, I wrote: 'I perceive a verbal poverty in rock art scholarship where authors struggle to find a precise yet nuanced language to address visual imagery. I would argue that such precise and nuanced language exists in the discipline of art history' (Smith 2009: 27). What all of us are suggesting is that rock art scholars need to deepen their understanding of style and explore a variety of analytical methods, some drawn from the discipline of art history.

Moro Abadía calls for a new, post-stylistic approach, or perhaps a cluster of approaches, drawing in part on art history or — more precisely — visual culture studies, that no longer rely solely on the concept of style. I agree that art history as a discipline is moving towards what is increasingly called 'visual culture' in American institutions. While the history in Western thought of privileging vision over the other senses must be addressed, art historians are using this concept to broaden their scope to include anything visual. I am not sure we should entirely dispense with style, as it is widely recognised to be a useful tool, but only one in a well-equipped methodological toolkit.

Additional alternative approaches can be drawn from other disciplines as well. Moro Abadía suggests ethnography as one, citing several excellent examples in recent scholarship. Schapiro himself suggested looking at psychology or sociology for inspiration, that art created by hunter-gatherers is inherently different from that created within a monarchy, for example (Schapiro 1953: 308–311). He concludes: 'A theory of style adequate to the psychological and historical problems has still to be created. It waits for a deeper knowledge of the principles of form construction and expression and for a unified theory of the processes of social life in which the practical means of life as well as emotional behavior are comprised' (Schapiro 1953: 311). I think there are some ideas here that could inspire thinkers of today. I would be interested in collaborating with others on a project where we would all examine the same rock art images, but from our respective disciplines. Moro Abadía's paper will, I hope, inspire such collaborations.

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The tail that wags the dog

By ROBERT G. BEDNARIK

Moro Abadía presents here a major effort to advocate a reciprocal exchange between art historians and archaeologists, to examine some of the formers' 'interpretative strategies in the light of the archaeological record' and to 'use some art history theoretical frameworks to elucidate the meaning' of rock art. Rock art cannot be credibly interpreted by either archaeologists or art historians, and their respective humanities are both non-sciences (consisting mostly of internally untestable propositions). The formulation of more of the fictional narratives they both tend to generate seems inevitable, but we need to appreciate that this is what they are. Humans have no doubt created narratives about earlier rock art for as long as they encountered it, and archaeology and art history apply their limited means of understanding such phenomena to continue that tradition.

In considering the phenomena in question the author focuses on Franco-Cantabrian rock art of the final Pleistocene. This corpus is a miniscule part of world

rock art: a few thousand motifs of the more than 100 million, and its consideration has always been a case of the tail wagging the dog. As a consequence more than 99.9% of the world's rock art has remained relatively neglected. One only has to compare the number of 'Palaeolithic' rock art sites on the World Heritage list with the number of 'others' to observe one effect of this Eurocentrism. In fact several of the listed sites are not even as claimed of the period archaeologists call the Palaeolithic (e.g. Siega Verde or the many Côa sites), whereas Pleistocene rock art elsewhere has not attracted nomination. The levels of protection and preservation of rock art sites are clearly a function of the public appreciation such monuments enjoy, and contrary to Moro Abadía, rock art *dating* is not the 'most pressing issue facing rock art studies'; *preserving* the rock art is.

Nevertheless, he is right in the sense that dating is the second-most important issue, at least from archaeology's perspective: without it there exists simply no tangible link between archaeology and rock art. Archaeology is incapable of estimating the antiquity of rock art, and during its entire history has been able to provide credible *minimum* ages in only 22 instances. With this sole tenuous link the relevance of archaeology to rock art research needs to be questioned, and in view of the archaeological practices of rock art site destruction, the control archaeology exercises over this resource is far from benign — and also needs to be challenged.

While on the subject of rock art 'dating', I should mention that AMS analysis was not 'first applied to some European caves in the 1990s'; the method was first applied to rock art in South Africa (Van der Merwe et al. 1987) and Australia (McDonald et al. 1990). Before that, other methods of direct dating (^{14}C and U-Th analyses) were used by me in Australian caves (Bednarik 1985b etc.).

Having written many historiographic accounts on the narrative frameworks in rock art explanations (my analysis of the numerous claims of megafauna depictions in Australia, in the current issue of *RAR*, is just the most recent example) I understandably disagree with Moro Abadía about the lack of such studies. Indeed, during the 1990s the upheavals triggered by direct dating work and the discourse about stylistically based narratives (such as the Bahn and Lorblanchet 1993 volume, which he cites) led to my forensic analysis of the dating claims concerning a series of 'Palaeolithic' rock art sites (Bednarik 1995b). Chauvet and Cosquer Caves were only two of the numerous contentious sites, and several more have been added since then. Nor was Chauvet the first issue calling into question the 'metanarrative of progress'. The matter of very 'sophisticated' but also very early palaeoart was first raised by Alexander Marshack, in numerous publications, when he remarked upon the complexity of purported Aurignacian palaeoart and suggested that preceding traditions must have existed (e.g. Marshack 1985). Today we know (except for a few scholars who still question the attribution of Chauvet, despite the 250 radiocarbon dates it has now yielded) that he was right all along and yet this improved understanding has not been incorporated into the mainstream narrative in any meaningful way. The old model, well identified by Moro Abadía, is surprisingly hard to displace, probably because it has been sustained by the African hoax (Bednarik 2008b) since the 1980s.

The dominant narrative of archaeology illustrates well the difference (and incommensurability) between archaeology and science. To science, processes such as evolution are entirely dysteleological, whereas archaeology and art history view them as teleological progressions. That explains the mistaken rock art paradigms of most of the 20th century, well characterised by Moro Abadía; but it also shows why these humanities will remain of limited utility to rock art science. For them it is just as difficult to perceive the developments in palaeoart traditions as dysteleological, as their preference of *to them* figurative forms would have to be overcome before they become relevant. The notion of iconic graphic arts being more primitive than non-iconic is hard to grasp within such a framework, even though it is experimentally obvious. Many non-human species can detect traces of meaning in iconicity, whereas the meaning of non-iconic patterns is only accessible to conspecifics possessing the relevant cortical software. Figurative markings result from the deliberate creation of visual ambiguity (margins, arrangements, textures etc. that deceive the eye into seeing the likeness of an object; Bednarik 2003b: 408, 412) and are therefore based on lower levels of perception and neural disambiguation than the cognitively more complex non-figurative markings. Until the humanities understand the scientific (e.g. neuroscientific) approach to these issues there can be no useful dialogue: the two sides exist in different worlds.

Conversely, forms of iconographic depiction superior to Eurocentric conceptions of naturalism are possible — and they even exist. Consider for instance the widespread practice of x-ray depiction in rock art, which reveals relevant information about an object that is not visible to the eye. The advantage of depicting the invisible cartridge in the closed breach of a rifle, by the hand of an Arnhem Land x-ray artist, should be self-evident: there happens to be a significant difference between a loaded and an unloaded rifle, yet both look the same to superficial vision. For these and other reasons, the belief that 'naturalism' is the most evolved form of depiction is a delusion, as well as an expression of a teleological fallacy. An art history based on this and similar fallacies is as hollow as an archaeology seeking to determine what ancient rock art means.

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REPLY

Paradigms for the history of rock art

By OSCAR MORO ABADÍA

I am grateful to the commentators for their constructive criticisms and insightful observations on my paper. Their remarks indicate some potential problems and deficiencies of my work and, additionally, they provide me with the opportunity to both consider alternative points of view and clarify my position. Each commentator has his or her own perspective, but a majority of them somewhat converge on a number of viewpoints and ideas about the nature of narrative in rock art research. In particular, there is general agreement that cognitive and neural approaches play an essential role in exploring new narrative frameworks. My Reply attempts to prolong this constructive spirit by discussing three alternative paradigms for writing the story of rock images that have emerged in the course of this debate. First, I begin with some remarks on the formalist paradigm that has been the object of recent criticism. Second, I seek to clarify the contextualist paradigm that underpins my paper. Third, I examine some of the challenges posed by the cognitive paradigm proposed by many of the commentators of my work.

The formalist paradigm undergirded the presentation of the history of rock art in the twentieth century. With few exceptions (including those mentioned by Onians), this paradigm has oriented rock art history's narratives and still structures and gives sense to many introductory books. There are a number of reasons why 'the old model is surprisingly […] hard to displace' (Bednarik). First, as I argued in my article, rock art stories are embedded in large-scale narratives (such as the metanarrative of progress and linear narratives) that are intrinsic to Western historical scholarship. Second, rock art stories have been highly influenced by the narrative establishing that art evolves from simple images to illusionistic forms of representation, or a storyline of naturalism. This model has structured Western art historiography since the Renaissance and so it is hard to see how it can be completely replaced. Additionally, there is a third factor explaining the authority of time lines' narratives in rock art studies. As many authors have pointed out, rock art research is shaped by the difficulty of dating Pleistocene images. This limitation establishes an essential difference between the art historian and the archaeologist: one knows the chronology of the images he/she is studying and the other does not. If a historian working on Renaissance art has a precise idea about the chronology of Leonardo Da Vinci's works, an archaeologist who discovers a decorated cave only disposes of a number of fragmentary clues to determine the age of the images. Even if recent developments in direct dating methods have opened new perspectives in rock art dating, we are still far from having a reliable chronological framework for most Pleistocene images. This lacuna explains why Palaeolithic specialists' main concern has been (and still is) to date rock images. To do so, as Denise Smith points out, they have traditionally relied on stylistic analyses. In other words, they have attributed Pleistocene images to their chronological framework on the basis of their formal configuration. Formalism has, however, been biased by the idea that rock representations have progressed from schematic to naturalistic styles. The dating of Chauvet Cave and other pre-Historic sites has called this traditional approach into question.

To overcome some of the problems associated with traditional analyses (including linearity, progressiveness and Eurocentrism), a number of scholars have recently suggested post-formalist alternatives. While these approaches do not refer to a unified program, they share a common dissatisfaction with stylistic chronologies, a widespread concern with extending the status of 'art' to multiple images, and a general preoccupation with reconstructing the cultural and archaeological contexts of Palaeolithic representations. These approaches, however, are not without constraints. First, it is not clear if these reconstructions are in the position to replace traditional narratives. In fact, rock art research still highly depends on Western conceptual schemata, or what Elkins calls 'a tradition with its own interpretive strategies and forms of argument' (2007: 19). Admittedly, my own approach has partially succumbed to the 'grand narrative' in proposing a too schematic view of possible alternatives (John Onians). Second, as Ellen Dissanayake points out, post-formalist scholars must be careful about the unexamined assumptions embedded in their theoretical constructs. In fact, while these authors have rightly called into question customary concepts in palaeoart studies (e.g. 'style', 'progress' and 'naturalism'), they should be equally critical of those terms that they have introduced in rock art research, such as 'image', 'representation', 'image-making' and 'visual cultures'. This dose of reflexivity is essential to articulate valid alternatives. Third, the current diversification of approaches to Palaeolithic images jeopardises the conventional conception of rock art research as a single intellectual edifice. That is, the globalism that is currently orienting rock art studies simultaneously introduces a globalisation of approaches, methods and strategies for studying rock images. If understandings of rock representations need to be contextualised in the framework of very different cultures and societies, then we must appreciate that our Western interpretative strategies do not have universal validity. In other words, if we assume that rock art traditions are incommensurable (and this is the standpoint of contextual approaches), then the choice

of writing rock art history from a single language of art (either formalist or post-formalist) is highly debatable. The contextualism paradigm forces archaeologists to face the same dilemma that art historians have been confronting in the last years: should rock art research (understood as a monolithic program of research) dissolve in order to accommodate an extremely diverse array of cultures and images?

At the same time, current research posits an alternative to the dispersal inherent to the contextual paradigm. This substitute emerges from cognitive and neural approaches that have arisen in archaeology since the 1990s. As the comments to my paper illustrate, cognitive approaches have grown in popularity among rock art specialists. Patricia Dobrez for one notes a recent 'turn to cognitive archaeology and neurophysiology in rock art studies'. Livio Dobrez suggests that there is an alternative approach to rock art history: the cognitive or 'becoming human' type that can account for the history of rock art. Barbara Olins Alpert and J. B. Deręgowski examine the preeminent role of perception in the making and interpretation of rock images. Ellen Dissanayake suggests that image-making appears to be universal in the human species, a position that entails recognition of the importance of psychobiology. John Onians' study appeals to neuroscience to explain the origins of figurative art. Similarly, Derek Hodgson's brilliant works have sought to demonstrate that the rise of representational depiction is related to a number of perceptual events involved in 'seeing-in'. No matter how compelling these approaches are, they need to consider some important issues. In particular, following Dissanayake, it is my impression that they tend to assume that 'there is a continuum that links the past with the rest of art history, based on perceptual and cognitive universals revealed by neuroscience'. In other words, these scholars' standpoint is that there are a number of 'perceptual ultimate neural universals [that] might account for all kinds of representations, rock art included' (Livio Dobrez, my emphasis). However, statements on the universalism of the human cognitive, perceptual and neural apparatus are problematic. First, many authors have criticised the idea that we have exactly the same cognitive hardware as people who lived thousands of years ago. For instance, Patricia Helvenston has called into question cognitive archaeologists for failing to appreciate the impact of the discovery of writing upon the human mind. Second, it seems as if recent interests in cognitive approaches have somehow led to neglect the social and cultural dimensions of Palaeolithic representations. Cognitive approaches can certainly help to situate some of the many facets involved in the making and the perception of rock marks and images (for instance, as Hodgson has rightly pointed out, the widespread representation of animals in outlines is probably related to some of the ways in which the visual brain encodes information), but I am not so sure if they can explain the social and cultural meanings associated with these images. Cognitive approaches may be valuable for understanding how Upper Palaeolithic people perceived and represented animals in Europe, but I wonder whether they can explain, for example, why horses and bison were the most depicted themes. This being said, and to conclude, I do not see contextual and cognitive approaches as incompatible. In fact, they refer to different dimensions involved in the making of rock images. My position is that we need to explore the social and cultural contexts in which rock images were made as much as we need to understand the human mind that created those images. In this sense, as this interchange illustrates, fruitful and productive perspectives can emerge from the dialogue between supporters of both approaches.

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