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Beyond art: The internal archaeological context in Paleolithic decorated caves

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1. Introduction

The inner zones of caves are those areas unreached by sunlight that remain in complete darkness and require artificial light if humans are to occupy them. They are characterized by a high degree of humidity and scarcely varying annual temperature. In general, such areas are inimical to prolonged and stable human settlement in comparison to areas closer to cave entrances. The latter have been used as places of more prolonged occupation, where many different activities were carried out (permanent and sporadic settlement, hunting refuges, etc.).

Despite this, throughout the Upper Paleolithic (UP), and also occasionally in the Middle Paleolithic (Jaubert et al., 2016a), people entered these interior spaces, at least from time to time. Questions remain regarding the reasons for a human presence in inner zones, the dating of this presence, and methods of access. The integrated study of archaeological remains found inside the caves enables these questions to be addressed.

The goals of this paper are (1) to establish the state of the art on studies of the inner archaeological context of Paleolithic decorated caves, with the intention of re-evaluating this type of integral analysis, (2) to make a compilation of the published evidence of Paleolithic human activities (other than rock art) in the inner parts of decorated cave sites, and (3) to highlight current problems and limits of their study. The concept of Internal Archaeological Context (IAC) proposed by Clottes (1993) will be used throughout this study. This refers to the assemblage of remains stemming from human activity or related to such activity found in the interior of a cave (in this case decorated with Paleolithic graphic manifestations); in other words, the human transformation of the natural interior (subterranean landscape), where daylight does not penetrate and the use of artificial light is indispensable if humans are to be able to frequent it. The authors do not therefore include in this study the outer areas of decorated caves, semi-dark areas, or caves without Paleolithic parietal art.

The material for this study is the IAC recorded in the decorated caves published until now, on the basis of quite different methods of examination and recording. In this paper, we present an exhaustive list of published archaeological evidence from the IAC of Paleolithic decorated caves. To make an overall assessment of the archaeological information, we propose a typology to classify that evidence and a procedure to address its analysis. We aim to highlight archaeological remains that have been traditionally underestimated and to stimulate a debate about the possibilities to analyze the whole assemblage of activities by UP individuals in the deep zones of caves.

2. Material

Studies of the inner context of caves have almost exclusively been directed towards the analysis of a single type of archaeological evidence: graphic manifestations or parietal art. The first studies that went beyond art and Paleolithic graphic manifestations in deep parts of caves date to the second half of the 20th century. Laming-Emperaire (1962) argued for systematic and highly detailed analyses as a way of obtaining an overall knowledge of the prehistoric use of these spaces, decrying the lack of attentiveness and scientific rigor of archaeological investigations hitherto undertaken at such sites, which had led to the destruction or interpretative obliteration of the survey area. Later, Rouzaud (1978), a speleologist by training, systematized the traces of prehistoric activity (other than art) and categorized different sectors of prehistoric caves in accordance with the degree of natural illumination. He used the term *paléospéléologie* to describe this approach. Taking the organization of subterranean space proposed by Rouzaud as their starting point, Moure and González-Morales (1988) carried out a bibliographical review of research into archaeological remains and prehistoric activities recorded in French and Spanish caves with graphic manifestations. They applied this focus to the description of the work undertaken in the Tito Bustillo cave (Spain).

Clottes is a leading name in the integrated and interdisciplinary examination of caves with Paleolithic graphic manifestations. With R.

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Bégouën, he wrote a study exclusively focusing on the interior features of the decorated caves of the Volp (Bégouen and Clottes, 1981). They argued that such remains have been habitually overlooked by previous researchers, stressed the importance of the first visit for the preservation of remains, and urged that the study of such sites should resume from a new perspective, one that pays attention to all the details. The same researcher coined the term Internal Archaeological Context ("*contexte archéologique interne*") to refer to *"les vestiges et traces laissés par les activités des hommes et des animaux dans les cavernes"* (Clottes, 1993: 49). He devised a classification system for such sites' human and animal remains, and categorized them in accordance with the level of interpretation: direct information about Paleolithic humans (such as footprints), indirect (such as chronological data), and interpretations of human activities (such as illumination).

Some studies of specific sites have gone beyond art to obtain the most comprehensive picture possible of the prehistoric activities carried out within painted caves, e.g. Lascaux (Leroi-Gourhan and Allain, 1979), Pech Merle (Lorblanchet, 1981), Réseau Clastres (Clottes and Simonnet, 1972; 1990), Arcy sur Cure (Baffier and Girard, 1998) and Pergouset (Lorblanchet, 2001). The discovery of caves in Spain and France in an excellent state of preservation at the end of the 20th century and the beginning of the 21st century (principally Cosquer, Chauvet, La Garma and Cussac) gave a new lease of life to the integrated study of painted caves. But it also had a contrary effect, generating a degree of indifference towards disturbed caves, whose potential was somewhat overshadowed by the new discoveries. Furthermore, questioning the authenticity of certain groups of parietal art fostered the interdisciplinary study of these sites, especially in order to obtain data about the chronology of graphic manifestations (for example Zubialde; Altuna et al., 1992), although IAC was not the object of study *per se*.

Even nowadays, an integrated approach is still not typical of the work undertaken in caves exhibiting Paleolithic rock art. Although the approach is gradually gaining more attention, cases in point being the work conducted on the French caves of Chauvet (Geneste et al., 2005), Cosquer (Clottes et al., 2005), Tuc d'Audoubert (Begoüen et al., 2009), the Quercy region (Lorblanchet, 2010), Trois Frères (Bégouën et al., 2014) and Cussac (Jaubert et al., 2016b), the predominance of graphical manifestations over other archaeological remains is an enduring feature of the archaeological interpretation of caves.

3. Methods

Various researchers have recently argued for a thorough and interdisciplinary study of Paleolithic rock art sites in order to obtain a full understanding of the prehistoric behavior and activities developed in these inner zones (Jaubert et al., 2012; Pastoors and Weniger, 2011; Paillet, 2014; Medina-Alcaide and Sanchidrián, 2014; Garate et al., 2015b; Balbín-Behrmann et al., 2016). This involves the integral recording of the totality of archaeological evidence present in the endokarst (the part of a karst system that is underground [Gilli and Fandel, 2011]). In order to facilitate this task, some classification systems for the analysis of IAC have been proposed (Rouzaud, 1978; Jaubert et al., 2012). In this paper, the different types of evidence comprising the IAC of caves with Paleolithic graphic manifestations are classified in accordance with the human activity they involve, so as to ensure that the content is presented in the clearest way possible (Table 1, columns 1-2).

- **Thermal change**: (a) burnt surfaces (with remains of combustion) such as host rock, native materials (for example, speleothems) or introduced materials, (b) charred materials, both vegetable and animal.
- **Impression of a human anatomical part or of an object**: print left on a soft surface by hands, fingers, feet, heels, knees, objects and other unusual impressions (slipping, vegetal impression, etc.).
- **Geomorphological transformation**: shape or spatial modification of the endokarst, in terms of fractures, displacements and stacking/structures of the elements comprising the subterranean landscape.
- **Extraction of raw material**: the removal of endokarstic substances for their possible exploitation as raw material, such as iron oxides, manganese oxides, clays, flints, speleothems and others (concretion fragments, animal bones, etc.)
- **Deposition of material:** the introduction of various kinds of material to the endokarstic space, differentiating between: (a) paleontological remains of animal origin, which include macrofauna, microfauna, malacofauna, ichthyofauna, avifauna, and human remains; (b) ochre (including the remains of this mineral and stones with ochre stains such as "*palettes*" and "*godets*"); (c) worked artifacts, whether osseous, lithic, vegetable or shell; (d) portable graphical objects; (e) other endogenic elements where pebbles or blocks without anthropic modification are in evidence.
- **Application of coloring material**: the addition of pigment to endokarstic surfaces, differentiating between two types: (a) figurative and non-figurative graphic manifestations (clear strokes and signs); (b) parietal evidence, including color markings of an anthropic nature that are not figurative marks, elaborate or simple signs or clear strokes.
- **Surface removal:** superficial removal of material from endokarstic surfaces, such as carvings, bas-reliefs, etc., differentiating between two types: (a) figurative graphic manifestations; (b) non-figurative (signs and strokes).

Defining this typology, we seek to unify criteria to facilitate the future exchange of results between different research teams. We therefore use the most neutral language possible, to avoid *a priori* interpretations lacking empirical support. For example, rather than cave art we prefer to talk about the application of coloring material, since there are other types of archaeological remains that involve the application of coloring material but that are not necessarily linked to artistic activity (Medina-Alcaide et al., in press; Galant et al., 2007; García-Díez and González-Morales, 2003).

The archaeological study of the IAC, as it is practiced in a totally subterranean area (inner zones), has characteristics that differ from more extensive investigations conducted in occupation sites in the external zones of caves. Subterranean archaeology requires the adoption of a specific methodological approach that fits these necessities: it requires the knowledge of speleological techniques, and it is conducted in an unusual environment that requires detailed knowledge of the geological processes affecting archaeological remains, their preservation, and detection. There are various phases in the interdisciplinary and integrated study of the IAC of caves with Paleolithic graphic motifs:

- **Data gathering**: The internal areas of caves are spaces of highly variable morphology in which human activity is generally slight and the archaeological remains accordingly exhibit a notable degree of dispersion and disintegration, quite unlike the situation existing outside the cave. Sedimentation processes, when they occur, are fundamentally due to natural causes (displacements of rock, the formation of speleothems, etc.) and to a far lesser degree to anthropic causes. Systematic surveying of the surface and test excavation are thus the main tools for gathering data, always accompanied, however, by researchers' detailed knowledge of the geomorphological processes that have taken place in the cave. The fracturing of speleothems for example may be overlooked by inexpert eyes lacking any prior knowledge of karstology, as may archaeological remains covered by crust.

Such activity takes place in accordance with a series of guidelines adapted to the specific circumstances of each cave (Sanchidrián, 1994). These guidelines have been reformulated to incorporate computer-based methods, simplifying tasks and markedly improving their quality. In order to systematize the process, the underground space is divided into geomorphological sectors (natural sectors) where work is done by