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1 *See how they fly ! Some considerations on symbolic transfers and territories at the end of Upper Paleolithic*

2  
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8 Abstract

9 Paleolithic portable art is constitutive of social and cultural identities, as images create a link between  
10 territories and men. Therefore, the study of some symbols can lead to a better understanding of the status  
11 and the complexity of symbolic territories. In this paper we present the history of diffusion of two symbols  
12 from Upper Magdalenian, macrocephalic horses and complex signs coming from a specific site. After a  
13 theoretical reflections on the status of symbol, we are considering what criteria should be taken into  
14 account for defining each of these symbols and understand how they have diffused - or not - in their  
15 immediate or more distant environment. The focus upon designs shareable but that haven't been  
16 transferred around suggests new perspectives for thinking the investment of human groups in their  
17 symbolic territory, through their artistic production. Therefore, we aim at demonstrating that immobility of  
18 images should, as their mobility, be taken in account in the cultural geography of the Upper palaeolithic.

19 Key-words

20 Upper Palaeolithic, Magdalenian, Portable art, Symbols

21  
22 1. Introduction

23  
24 Natural spaces and landscapes constitute a general structure of territories culturally transformed by  
25 humans. The anthropization of natural lands is being realized according to two complementary dynamics,  
26 opposing fixation and mobility of human groups (Vialou 2005). Nature is being sedentarized, especially  
27 places of habitat, and is lived and certainly thought differently than the traveled nature, being considered as  
28 a network of economy, acquisition, subsistence or exchanges itineraries. The visual appropriation of  
29 landscapes by parietal or portable images is carried out according to the same processes. Thus, within the  
30 space of Palaeolithic territories, we can dissociate or differentiate the physical immobilization of parietal and  
31 rock-art symbols and the mobility of art objects, perhaps together with the symbols they convey. Both are  
32 constitutive of social and cultural identities, as images create a link between territories and men and exert  
33 on these territories a unique and powerful cultural influence and mediation. Images transcend the primary  
34 economic relationship established by men with landscapes. Therefore we consider that sharing and  
35 exchange of graphic symbols from one human group to another provides valuable information about social  
36 relations through distance. Symbols constitute a mean of clarifying the real nature of networks of  
37 exchanges, offering to go beyond the material or technological dimension and highlighting possible  
38 fluctuations at the end of the Late Glacial (circa 14 000 yBP). Portable artworks are powerful cultural  
39 markers that also fortify thinking on the territorial influence of symbols and, more broadly, on the frames of  
40 human and social geographies they help to define. Through the notion of symbolic territory, wondering  
41 upon new relations to the daily physical, economic and social space is led possible. Last, images question

1 the modalities of their own diffusion together with phenomena of borrowing, transfer or symbolic  
2 convergence, rules governing inter-group exchanges and social relations within groups. Images thus play  
3 an essential role in cultural identification and characterization.

## 4 5 6 2. Background

7  
8 If we wish to apply the notion of "symbol" to prehistoric graphic evidences, which are distant and often not  
9 very explicit, it is necessary to have a semantic discussion on this term whose definition could be complex.  
10 In linguistics, the term "sign" is generally preferred to "symbol". This word is very early defined (de  
11 Saussure, 1912) as an association of a signifier (the form) and a signified (the background, the meaning).  
12 In semiotics, a science dedicated to the analysis of signs, the term takes on a different dimension. In  
13 general, visual communication that it carries is recognized as a multiparty association of the signifier (the  
14 image in its materiality), a referee or "object" (Peirce, c. 1894) coming from the real or imaginary world (the  
15 model) and the signified (the meaning). Several authors have sought to define with precision the functioning  
16 of this relation (e.g. Peirce, 1895, Morris, 1964, Sonesson, 1988). The term "symbol" can then be  
17 distinguished from the sign, corresponding either to the case of a motivated relation between image and  
18 sense, or on the contrary to the case of an arbitrary sign (Peirce, c. 1894). According to the definition of U.  
19 Eco (1988), already applied to prehistoric archeology by M.J. Rossano (2010) and specifically on  
20 prehistoric art by G. Sauvet (1990), we propose to consider that symbol exists as soon as a specific  
21 relationship exists, between an object – whether coming from the real world or part of emotional world of  
22 the author, called the referee, a graphic demonstration – the signifier – and a meaning known by the  
23 transmitter and surely shared with others persons – the signified. The existence of shared graphic  
24 conventions, through perceptual codes or striking characteristics, being described as traits of recognition  
25 (Eco, 1988) or "identification keys" (Man-Estier, 2011, Man -Estier et Paillet, 2013) allows the symbol in  
26 question to being appropriated by the group. Thus, one could propose that a paleolithic representation of  
27 Deer becomes a "symbol" when some criteria (anatomical, ethological, etc.) of cervids are present and are  
28 graphically represented in a particular way. The hypothesis of existence of such symbol seems therefore  
29 conceivable only in a case of sufficiently extended and coherent corpus.

30 We also propose to take some distance with the distinction between figurative and abstract, usually  
31 prevailing in the study of prehistoric art (Sauvet, 1990). Indeed, it seems to us that a "figurative"  
32 representation, that is to say referring to a referent coming from the author's environment, can be  
33 fundamentally conventional and connotative, just as much as a geometric or abstract pattern. With no doubt  
34 it may have had a different meaning than the denoted information offered to view. Moving away from the  
35 object to which it refers and from its material dimension, the image becomes a symbol, inaccessible to our  
36 understanding. Processing is the same for rock art symbol, that are able to travel as much as portable  
37 artworks, despite their fixed conditions (see for instance Bourdier, 2013 ; Bourdier and Pinçon, 2016). The  
38 message may become even more confusing when the image is surrounded by a multitude of meanings and  
39 connotations. Finally how can one attest that a bison image, especially if it gathers several original  
40 production standards, really meant "bison" in the mind of its creator?

## 41 42 3. Goals

1  
2 From this general definition of "symbol", and by examining two types of conventional and standardized art  
3 production, specific of the end of the Upper Palaeolithic (Upper Magdalenian) in the great south-west of  
4 France, we wish to evaluate the territorial dynamics of a figurative image (macrocephalic horses) and an  
5 apparently non-figurative design (Rochereil complex patterns). These two symbols have been created by  
6 Magdalenian groups which have in common, besides their geographical implantation, some raw materials,  
7 some lithic and osseous productions and certain know-how. The symbolic material is being analyzed and  
8 relocated within the framework of the phenomena of mobility, fixation, diffusion or transfers that regulate  
9 visual communication at a territorial scale.

10 Hypothesis on the question of symbolic territories have already been proposed, often based on the  
11 existence of codes of representations, morphological criteria or shared themes (for instance Bahn, 1982 ;  
12 Feruglio, 2014 ; Fortea Perez et al., 2004; Fritz et al. 2007 ; Fuentes, 2013 ; Sauvet 2014 ; Welté and  
13 Lambert, 2004). We can mention specifically studies on front views animals (Sauvet and al. 2008) or  
14 feminine schematic figures (Aujoulat and Feruglio 2001) at the end of Magdalenian.

#### 15 16 4. Materials

17  
18 The corpus studied is located in the actual territory of Périgord, which corresponds more or less to the  
19 geographical limits of the administrative department of the Dordogne (South-west of France). The  
20 chronology is restricted to the end of the Upper Palaeolithic and more precisely the Upper Magdalenian. It  
21 is coming from several open air sites along the valleys of Vézère and Dordogne with an epicenter around  
22 the rockshelters of La Madeleine and Laugerie-Basse, and the Isle and Dronne valleys, in the northern part  
23 of the region, around the small cave of Rochereil (figure 1).

24 The first of the symbols we have chosen to study is the macrocephalic horse, sometimes referred to as  
25 "hypertrophied" or even "barygnath", that is to say, bearing heavy jaws. It seems we can propose to link this  
26 pattern to the sequence of the Late Glacial such as it is known within the site of La Madeleine (layer F,  
27 dated between 16236 and 13991 years cal BP (D'Errico et al. 2011 and Bouvier, 1977)). In the current state  
28 of knowledge, there are 108 representations of macrocephalic horses, spread over 42 objects, and coming  
29 from 9 sites in Dordogne and Gironde: La Madeleine, Laugerie-Basse, Limeuil, Le Soucy, le Morin,  
30 Raymondin, Jolivet, Rochereil, La Peyzie (Appelanz, 1990 ; Deffarge et al. 1975 ; Man-Estier and Paillet,  
31 2014, Paillet, 2014a, Sieveking, 1987). Three more distant sites (Montastruc and Fontalès in the Tarn-et-  
32 Garonne and Mas-d'Azil in Ariège) offered other horses (4 at Montastruc, 5 at Fontalès and 3 at Mas d'Azil)  
33 evoking the macrocephalic representations, but whose formal characteristics and technical choices do not  
34 quite correspond to the referential corpus (Appelanz 1990, Aujoulat and Feruglio, 2011).

35 The second type of representations we are willing to study comes from the little cave of Rochereil (Grand-  
36 Brassac, Dordogne). The site was excavated in the first half of the 20th century (Jude, 1960) and since  
37 2011 has been subject of a Collective Research Project (Paillet 2014b ; Paillet and Man-Estier 2013, 2014)  
38 aiming at a new evaluation of ancient series (lithic and osseous material), fauna and numerous non-  
39 utilitarian productions. The corpus gathers today nearly 270 portable art objects. The archeostratigraphic  
40 context of these productions (layer A of the old and new Magdalenian superior) is contemporary with layer  
41 F of the Madeleine (age of 15027 – 14081 years cal BP : Mallye et al., 2014).

42

## 5. Results

### 5.1. macrocephalic horses

This conventional representation (figure 2) is essentially, but not exclusively, concerning horses. Cervids can be found represented with the help of the same formal code. It is characterized by a disproportionate treatment of the animal's forms, mainly its head whose size is exaggerated. It owes its name to this artifact of recognition, even if the morphotype fluctuates, in a certain graphic and expressive continuity, between more or less realistic representations and others that are frankly schematic. Some are also incomplete (heads, anterior part of bodies).

Considering these formal characteristics, J.-M. Appelaniz (1990) suggests to retain in the macrocephalic corpus only figures which head's length scores at least 1/4 of that of the body. We can add that some extremely dilated heads occupy up to 1/3 of the total length. From this ideal morphotype, macrocephalic horse assumes other formal characteristics. The body is angular, giving the impression of being stretched. It is often completed by stiff and unfinished anterior and posterior limbs, figured alone or in contiguous pairs, frequently stretched backwards. They dynamically project the animal forward, thus breaking with the stiffness of the legs. When present, the tail is long, narrow and pointed. Rarely, it is completed with a brush or presented disheveled (Lartet and Christy 1865-1875). It is however always detached from the buttock and placed diagonally, in extension. Other technical, graphic and anatomical details complete the typical portrait of the macrocephalic horse. The heads have an angular appearance at the level of the muzzle and the cheek. Their silhouette is polygonal. Frequently, nostril, mouth, eye, and sometimes rock at the back of the latter, as well as the zygomatic, are well indicated. The chin and the cheek are heavy, which underlines the pre-cited "heavy jaw" character. According to E. Lartet and H. Christy, the heads of these animals are heavy and "sounded", that is to say stiff (Lartet and Christy, 1865-1875). On the neckline, the jugular is firmly underlined. Ribs are sometimes indicated by oblique incisions along the back. The mane, bearing an "English style" (Lartet and Christy 1865-1875), frequently stands as a helmet and / or is being separated from the neck by a deep incision. Individuals wear shoulder lines; others have features that mark the belly and the kidneys.

From a technical point of view, contours and details are almost systematically obtained by deep incisions of asymmetric profile. Animal then appears on its medium in a slight or raised relief. Finally, except when mediums are fragmentary, the macrocephalic animals are rarely isolated. They are most often organized in a row of two to five individuals, never opposed. There isn't indication of any particular ethological character. In their individual and collective expression they seem to strictly conform to the constraints of the mediums, on one or two faces of the objects (spear points, chisels). On bored sticks, both faces aren't systematically decorated but the horses are also arranged in file and often occupy the entire length of the body of the object, sometimes even integrating the hole. The macrocephalic horses are thus framed in all available fields. They are even sometimes so reduced, especially on chopsticks, that they lose anatomical details like legs or top of the neckline.

This ideal portrait of the macrocephalic horse is then an animal whose fore-hand is hypertrophied, and certainly not a "degenerate" figure (Breuil, 1905, 1907). The symbol, with its internal details meets strict formal and aesthetic standards, which seem not to have been questioned during production's period and within its geographical area of influence (Rivero and Sauvet, 2014).

1 Another interesting aspect of the subject is that of medium invested by these representations. They are  
2 almost always made of reindeer antlers, on beam or on chopsticks. The corpus recorded 29 spearpoints, 3  
3 chisels and 10 bored sticks (Appellaniz, 1990; Man-Estier and Paillet, 2014). It seems that the medium,  
4 limited to a small number of possibilities offered to the artist, plays a role in the composition of the symbolic  
5 concept of "macrocephalic horse".

6 The conventional model of the horse seems to be coming from an artistic production limited in the time of  
7 the old and new Upper Magdalenian. According to the research conducted by J.-M. Appellaniz (1990), this  
8 design could find its origin in La Madeleine that gathers the main quantity of material. Moreover, on the  
9 basis of an iconographic analysis backed by statistical methods, this researcher has tried to objectify his  
10 method of determining the author of this symbol by applying it to what he supposes to be the "school" of  
11 the engravers of the Madeleine. This concept of "school" or "workshop" applied to the production of  
12 macrocephalic horses is important since it mobilizes other notions such as learning, acquiring and  
13 transmitting know-how.

## 14 15 5.2. Rochereil complex signs

16  
17 The observed mobility and the apparent success encountered by macrocephalic horses in southwestern  
18 France can be contrasted with the apparent fixation of another system of representation composed of  
19 certain structured and original motifs, placed in the blur limits of the figurative and non-figurative, coming  
20 from Rochereil (figure 3).

21 Throughout this second corpus we have been able to individualize a large number of original  
22 representations, rather geometric in appearance, structured from oval or rhombus forms. In the body of the  
23 pattern, or at its periphery, are aggregated (according to the definition of Sauvet, 1990), through very  
24 varied graphic formulas, internal fills or excrescences. These representations have been interpreted  
25 successively as "degenerations" of animal figures (Breuil 1905, 1907), phytomorphic or foliaceous motifs,  
26 or even animals seen from the front (Man-Estier et al., 2016; Paillet and Man-Estier, 2016). Out of 501  
27 graphic entities, spread over 267 decorated objects (mainly on osseous material), we have identified more  
28 than 400 motifs answering the same general set. Their common characteristic lies in the rigorous  
29 production standard that seems to govern its composition. They are elaborated from a geometrical body  
30 (parenthesis, oval, lozenge ...), endowed with internal graphic elements (lines, unidirectional hatchings,  
31 cluster of forms), and external elements concatenated. The latter are generally organized in the form of  
32 one, two or three excrescences, juxtaposed with the main body and placed in its prolongation. They can  
33 thus be interpreted, according to their shape and the sense of reading given to the image, as horns, legs or  
34 even fins seen in front view. Several patterns are also prolonged by a curved line, located in the median  
35 axis of the body and which delimits symmetrically the space. We have estimated at more than 4000 the  
36 possible combinations of these different elements, to which we must add the innumerable juxtapositions of  
37 the motives between them.

38 The types of mediums invested are less limited than in the previous example. They correspond to a  
39 majority of tools or weapons on reindeer antlers (115 objects) (such as spear points, chisels, barbed  
40 points), but other media are also concerned. We have counted 4 bored sticks, an ellipse, as well as raw  
41 antlers or waste (24). Bones material is also numerous (105 of which only 9 tools). Despite this variability  
42 of the mediums, complexity of representation and its relatively coherent formal architecture make us

1 consider these images, in their unity and their variability, as one of these "shareable" symbols, according to  
2 the definition proposed above.

## 3 4 6. Discussion

5  
6 Therefore we can wonder about the differences of diffusion of these two symbols. Concerning the last, it is  
7 indeed very surprising not to find similar patterns within the contemporary and geographically close sites.  
8 With the exception of two objects, one from La Madeleine (Dordogne) and the other from Murat (Lot), our  
9 revisions of the classical series did not allow us to identify formal equivalents. Despite an intense and  
10 standardized production, even remarkable if it is linked with the site's modest dimensions, the symbol  
11 invented at Rochereil didn't spread and doesn't seem to have been shared or borrowed, except may be in  
12 a strict domestic context. Its formal and certainly symbolic immobilization, which reflects a form of local  
13 idiosyncrasy, is in radical opposition with the extreme mobility of other symbols such as the macrocephalic  
14 horse, also existing in Rochereil.

15 As we mentioned above, macrocephalic horses are also known further away, in Quercy (Tarn valley) and  
16 in the Pyrenean foothills (Appelaniz, 1990). But the small number of these documents (12 graphic entities  
17 on 3 objects) and especially the modes of representation, quite different from the main corpus (rounded  
18 heads, abundant coat, bone mediums...), could carry an hypothesis of diffusion through a new space,  
19 distinct from the usually frequented one, by the group at the initiative of the symbol.

20 In this context, the evolution of image allows us to consider that the transfer of the image and its referent  
21 has been accompanied by a loss of its meaning, or at least a loss of the iconographic convention linking  
22 the meaning to the image. Independently of this somewhat anecdotal aspect, the appearance of the  
23 symbol "macrocephalic horse on reindeer wood", mainly along the valleys of the Dordogne and Vézère can  
24 appear as a rather successful example of diffusion. But it wouldn't be silly to take here in consideration  
25 also the own will of the producers of the symbol, that is to say the artists themselves but perhaps also the  
26 "decision-makers", and therefore considering, after A. Gell (1998) the artwork as a media of social agency.  
27 This would allow us to a better understanding of the actual status of this dissemination and its role at the  
28 time. Why did some people want to produce similar objects, decorated with the same pattern? Why and  
29 how has this symbol been transmitted to other groups? What kind of value was associated with it? Even if  
30 the answers to these questions are not touchable, we can simply repeat that the mobility of this symbol,  
31 which retains an excellent homogeneity despite its travels, is a strong testimony to the existence of cultural  
32 territories such as we seek to apprehend.

## 33 34 7. Conclusion

35 Through these two examples is being constructed the image of a complex symbolic territory at the end of  
36 the Magdalenian. The existence of social exchanges at medium distance along the valleys of the Vézère  
37 and the Dordogne seems coherent with the spread of the symbol of the "macrocephalic horse". This  
38 mobility of the image can be perceived as a vector of unification of systems of representation, each site  
39 retaining its originality.

40 In Rochereil, the coexistence of a symbol coming from elsewhere, well diffused, together with an original  
41 endogenous symbol, prompts us to question the functioning of the regional cultural network in the Upper  
42 Magdalenian. Without being able to attest that this is a failure of diffusion, its absence elsewhere than on

1 the site princeps prompts us to reconsider our way of perceiving the exchanges of content and production.  
2 Only systematic revision of corpus and indexation on extremely fine time scales will be able to remove  
3 highlight reality of the areas traveled by symbols, by men, and by ideas. Territory, both symbolic or natural,  
4 seems now to need to be perceived as much through the mobility of groups that through the apparent  
5 sedentariness that emerges from some productions, at least on the short time scale of a man's life.

6  
7



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2

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1 Figures

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3 Figure 1 – map of the site mentioned in the text (CAD E. Man-Estier). 1. Abri Morin, 2. Le Soucy, 3. Limeuil,  
4 4. Laugerie-Basse, 5. La Madeleine, 6. Jolivet, 7. Raymondens, 8. La Peyzie, 9. Rochereil.

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6 Figure 2 – macrocephalic horses examples from La Madeleine (up) and Rochereil (bottom), pictures trustees  
7 of the British Museum (up), MNHN – JCDomenech (bottom).

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9 Figure 3 – complex signs from Rochereil, tracings P. Paillet.

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11 Figure 3 – complex signs from Rochereil, tracings P. Paillet.





