

Rock sculpture and symbolic geography in the Middle Magdalenian

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My PhD research investigates the spatio-temporal structuring of the Middle Magdalenian, from a rock art angle (Bourdier 2010a). How this graphic/symbolic expression is involved in the double process of unification and/or regionalization that characterizes this chrono-cultural entity? To ensure the chrono-cultural context of the images, I decided to study decorated and occupied sites, with a focus on sculpted sites. Inside the about ten sculpted sites attributed to the Middle Magdalenian in France, the chrono-cultural attribution matters forced me to work on a small corpus of four rock-shelters: Roc-aux-Sorciers (Angles-sur-l'Anglin, Vienne), Chaire-à-Calvin (Mouthiers-sur-Boëme, Charente), Reverdit (Sergeac, Dordogne) and Cap-Blanc (Marquay, Dordogne) (Fig. 1).

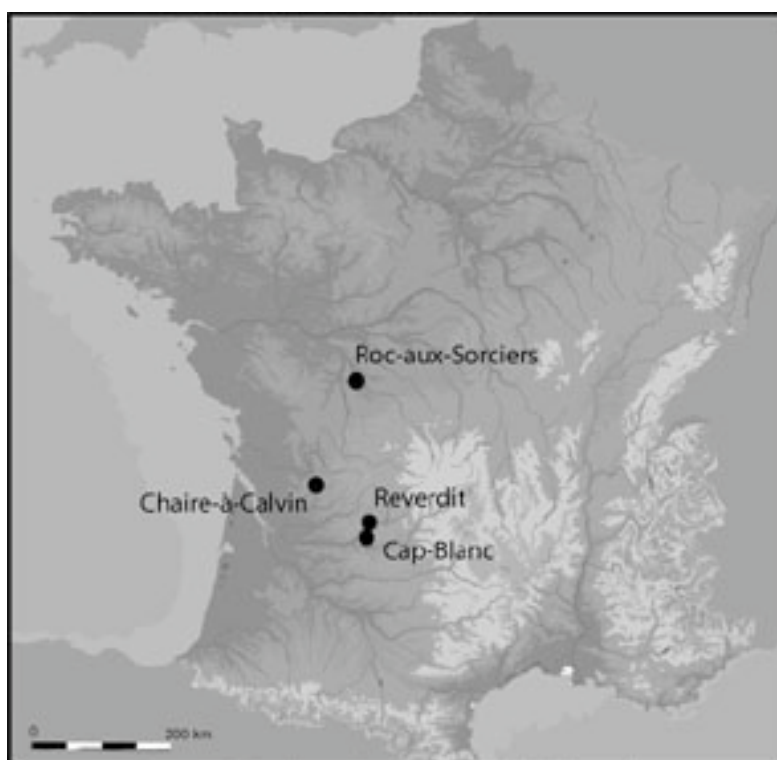


Fig. 1. The four sites considered in the study.

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These sites belong to two graphic/symbolic groups traditionally defined for the Middle Magdalenian: the Eastern Vienne group (Roc-aux-Sorciers) and the Périgord-Charente group (Chaire-à-Calvin, Reverdit, Cap-Blanc).

My work is based on a comparative techno-stylistic analysis that takes into account several criteria concerning technique, theme, formal conventions (outline, internal details, perspective, attitude) and composition (distribution, orientation, position, themes associations) (Fig. 2). However, the alteration of these sites, lesser at Roc-aux-Sorciers, restricts the formal variables. At Chaire-à-Calvin, Reverdit and Cap-Blanc, the walls are strongly altered, so that numerous designs are partial and most of their internal details cannot be perceived anymore (Roussot 1972; Bourdier 2008; Delage 2010). This study has to put the formal treatment of heads and hooves aside. The selected variables were analysed both in the qualitative and quantitative modes, with the help of simple statistics tools (elementary statistics, factorial analyses).

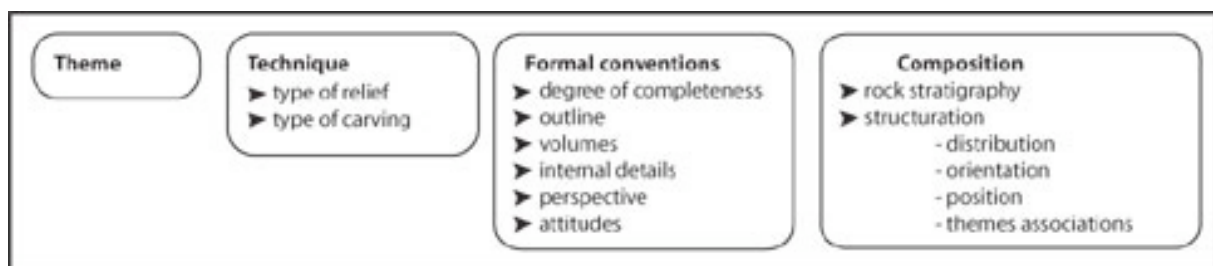


Fig. 2. Criteria of the techno-stylistic analysis.

1. A rock sculpture tradition in the Middle Magdalenian

The four graphic sets show a common background concerning their technique as well as themes, formal codes and composition.

1.1. An absolute technical mastery

All types of relief are present, from engraved relief to high-relief (Iakovleva & Pinçon 1997; Tymula 2002), the latter however being rare (Fig. 3). This variety of techniques is also found inside each design, especially to highlight certain parts of the bodies: heads, chests and buttocks usually have a thicker relief and a deeper carving.

1.2. Monumental designs

The big size of the designs is a main characteristic of the Middle Magdalenian rock sculpture which can be defined as monumental art (Roussot 1989). Some images are life-size, such as the women and ibex of Roc-aux-Sorciers, and the horses of Cap-Blanc (Roussot 1972; Iakovleva & Pinçon 1997). At Roc-aux-Sorciers, Chaire-à-Calvin and Reverdit, the bodies are between 70 and 80cm long. They reach 100-150cm at Cap-Blanc.

1.3. A figurative sculpture

The sculpted register is only figurative, the abstract patterns completely missing. The signs (dots, straight lines, filled quadrilaterals) are engraved at Roc-aux-Sorciers and Reverdit, painted at Roc-aux-Sorciers and Cap-Blanc (?) (Abgrall 2010; Bourdier *et al.*, *in press*). At Chaire-à-Calvin and Cap-Blanc, the bestiary merely

consists of three animals: horse, bison + ibex/aurochs/reindeer, whereas only bison and horses are identified with no doubt at Reverdit (Rousot 1972; Bourdier 2008; Delage 2010). Roc-aux-Sorciers differs in the high number of human representations (Iakovleva & Pinçon 1997; Fuentes, PhD *in progress*).



Fig. 3. Horse forequarters in Roc-aux-Sorciers. (© MAN, cl. J.G. Berrizzi.)

1.4. The formal concepts

This sculpted rock art is characterized by a strong formal homogeneity. Each theme is modelled on a set of very precise conventions. Moreover, the representation fits two essential formal concepts, shared by the four sites: a realistic trend and the assertion of the animal strength. This realistic trend appears in the outline, in the body proportions and in the profusion of internal details represented (organs, muscles, skeleton) which formal treatment is nevertheless very conventional (Fig. 3). Complete in most cases (when not fractured), the outlines are well proportioned (except for the bison) and shapely. The four legs are represented, joined or slightly shifted. When the head is preserved, its main organs (eye, mouth, nostril, ears) and internal reliefs (cheek, masseter) are reproduced. Horns and ears are affected by a 45° torsion, in a double mechanism of deformation and assertion of reality. At Roc-aux-Sorciers, special attention has been given to the muzzle, also affected by a 45° torsion which reveals the two oval nostrils and the sculpted bridge of the muzzle that links the nostrils and the shapely lips together (Iakovleva & Pinçon 1997).

On the other hand, coats are not much represented. The horse mane is never outlined with a nape line. Only the coat of the bison is stressed with the representation of the bun and the beard as well as the dewlap drawn in the shape of a strip in relief or hatched. The internal filling is minimized, whenever painted or engraved. Contrary to what is usually said, the sculptures were not coloured, except for the hooves of some bison and ibex at Roc-aux-Sorciers that were painted black (Abgrall 2010).

The animal strength is emphasized by a prominent chest, with the use once again of a 45° torsion (excepted the bison of Cap-Blanc). Subtle tricks accentuate its massivity: a slight atrophy of the head, a little shortening of the forelegs, a descendant or curved stomach line, the straightening up of the neckline (ibex). For bison, the chest emphasis is included in a global hypertrophy of the forequarters, with a large back hump. The muscular masses take also part in the glorification of this strength, mentioned by internal volumes and/or a stylised outline (Fig. 4). Shoulders and croups are modelled, their relief sometimes being emphasized by a concave flank. An arc of a circle or a loop reproduces the folds of the chest muscle and of the groin.



Fig. 4. Stylised representation of the chest muscles in the shape of loops, on an ibex of Roc-aux-Sorciers.
(© DRAC Poitou-Charentes, in *Iakovleva, Pinçon 1997, fig. 139.*)

Inside this general formal frame, each theme has its own conventions. Hence, the felines of Roc-aux-Sorciers and the bison of Cap-Blanc are characterized by a more schematic trend. Moreover, each design differs in the number and the depiction of its anatomical details. In addition, each site has specific formal codes, such as the shape of the bison back hump.

1.5. The frieze

The four graphic sets are structured in friezes. The representations have the same size, are juxtaposed on the same horizontal plane and have the same preferential

orientation. These compositions take the wall characteristics into account: the images are distributed in panels delimited by vertical edges at Roc-aux-Sorciers, a ledge is used as a virtual ground line at Reverdit. At Roc-aux-Sorciers (abri Bourdois) and Cap-Blanc, two figurative sets coexist: the main frieze composed of monumental sculptures is associated with a second set, in the lower part of the wall, made of small light-carvings with a more schematic trend. This second set includes an original theme, absent from the main register: the feline at Roc-aux-Sorciers, the bison at Cap-Blanc. Rings, most of them currently broken, are found in the separation line of these two sets (Iakovleva & Pinçon 1997; Bourdier *et al.*, *in press*). Once again, inside these common structural rules, each site shows a specific composition, in the distribution and the association of the themes.

1.6. Heterogeneous graphic sets: sculpture renewals

Finally, these graphic sets are characterized by renewals, illustrated by fragmentary sculptures and representations with mixed anatomical elements. They all show at least two successive graphic sets (Laming-Emperaire 1962; Leroi-Gourhan 1965; Roussot 1972; Iakovleva & Pinçon; 1997; Bourdier 2008; Bourdier *et al.*, *in press*; Delage 2010). These interventions were aimed at changing themes, with the introduction of a new taxon and/or a redistribution of the themes inside the frieze. At Chaire-à-Calvin, Cap-Blanc and maybe Reverdit as well, bison are replaced by horses, whereas ibex succeed them at Roc-aux-Sorciers where the place of the horses inside this wall chronology is still questioned (Fig. 5). At Cap-Blanc, monumental low-reliefs of bison were destroyed and replaced by the current monumental high-reliefs of horses, but small lightly carved bison were re-introduced in the lower part of the wall. It seems that there was a symbolic recoding with the evolution of the main theme in favour of the horse. Even if the rhythm of these changes cannot be defined, the strong technical and formal (conventions, dimensions) unity of these successive designs underlines the chrono-cultural unity of these consecutive graphic sets.



Fig. 5. Example of a sculpture renewal in Roc-aux-Sorciers. An ibex is made out of a previous sculpture of bison which back line is still visible. The hind quarters and the trunk were re-used, only the head and the back line were modified. (© MAN, fonds S. de Saint-Mathurin.)

2. Regional specificities

Inside this common frame specific of the Middle Magdalenian rock sculpture, some divergences appear that reveal strong affinities between Roc-aux-Sorciers and Chaire-à-Calvin on the one hand, and distinguish Cap-Blanc on the other hand.

2.1. Roc-aux-Sorciers and Chaire-à-Calvin: deep similarities

Roc-aux-Sorciers and Chaire-à-Calvin sculptures use the same techniques: they are thin reliefs (less than 5cm thick), made with an oblique and narrow carving. Their internal volumes are quite flat, mainly depending on the natural reliefs of the wall in a process that S. Tymula called “art of the outline” in Roc-de-Sers (Tymula 2002: 265).

The representation of the ibex also seems to be significant: common in these two rock-shelters, this animal is absent from the southern sites (Roussot 1989). Roc-aux-Sorciers differs from Chaire-à-Calvin by the importance of human representations, in terms of frequency and visual impact inside the frieze (Iakovleva & Pinçon, 1997). Its wider diversity of themes (felines, bear) has to be moderated because of Chaire-à-Calvin small corpus (5 designs).

The animals have the same formal conventions. Except for horses, these figures are explicitly gendered with primary and/or secondary sexual attributes. This interest on gender stands out with the so-called sense of modesty of European Palaeolithic rock art, and emphasizes the realistic trend of the two friezes. The internal details show similar elements of stylisation: a loop (bison, ibex) or an arc of a circle (horse) for the chest muscle, a triangular relief joining the volumes of the arch of the eyebrow and the masseter (horse) (Fig. 6), or the rounded convexity of the eye-socket roll (bison, ibex). Other more subtle conventions are also shared (shape of the stomach line for instance). The similarities also affect the already mentioned dynamism of the animals (Iakovleva & Pinçon 1997; Azéma 2003). Furthermore, the attitudes given are strictly identical: horses bending their heads (Fig. 3 & 6), jumping ibex, bison with bending heads and raised tails.



Fig. 6. Similarity of the formal conventions of the Roc-aux-Sorciers and Chaire-à-Calvin horses.
(Chaire-à-Calvin: © G. Pinçon, C.G. de la Charente, cl. A. Maulny; Roc-aux-Sorciers: © MAN, cl. J.G. Berrizzi.)

Finally, the size of the sculptures in these two friezes are nearly identical. In this respect, the homothetic comparisons done on the friezes 3D models are very significant. They give the opportunity to compare the forms as well as the volumes of the sculptures, with also the calculation of the margin of difference (Pinçon & Bourdier 2009; Pinçon *et al.* 2009). The superimpositions between the Roc-aux-Sorciers female ibex and the Chaire-à-Calvin two central animals are striking (Fig. 7). There is a little difference with the Chaire-à-Calvin headless quadruped whose hind quarters are slightly longer, but whose trunk matches that of the Roc-aux-Sorciers female ibex. On the other hand, the volumes of the Chaire-à-Calvin second animal are strictly similar to the Roc-aux-Sorciers female ibex. Moreover, the Chaire-à-Cavin and Roc-aux-Sorciers horse heads also have the same dimensions.

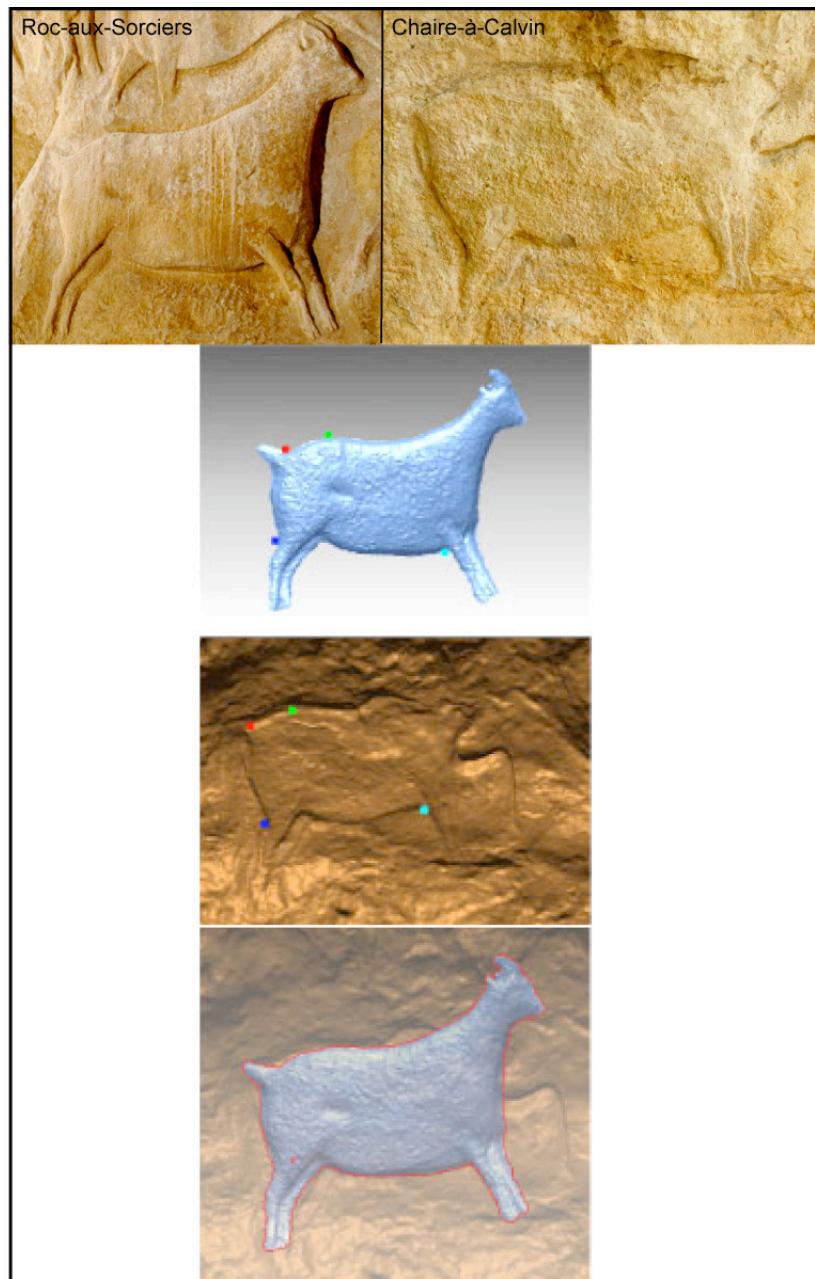


Fig. 7. 3D homothetic comparison between a female ibex of Roc-aux-Sorciers and the headless quadruped of Chaire-à-Calvin. (© G. Pinçon, 3D database Arts Graphiques et Patrimoine.)

2.2. Reverdit: specificities and connections

Rock sculpture looks more heterogeneous in Périgord. Actually, Reverdit and Cap-Blanc share the same themes –with the duet horse-bison associated with a third animal (reindeer? aurochs?)– and the same technique. Their sculptures are thick reliefs (several cm at Cap-Blanc), most of them made with a deep and wide carving (Fig. 8). Their volumes strongly contrast with Roc-aux-Sorciers and Chaire-à-Calvin sculptures. Their internal masses are very prominent. This work on the volumes differs from the stylised representation of the muscles found at Roc-aux-Sorciers and Chaire-à-Calvin. For instance, the chest muscular strength is not reproduced with a geometric line, but with a thicker relief. This “art of the volume” contrasts with the “art of the outline” at Roc-aux-Sorciers and Chaire-à-Calvin. One can ask the question whether this difference in technique results from the nature of the limestone. The heterogeneous rock at Roc-aux-Sorciers (oolitic) and Chaire-à-Calvin (upper turonian) certainly impacted the carving because of an irregular fracturing. On the contrary, Reverdit and Cap-Blanc homogeneous limestone (upper coniacian) must have encouraged a deeper carving (Aujoulat 2002; Lorenz & Gély 2009).



Fig. 8. The central bison of Reverdit. (© I. Castanet-Daumas, cl. A. Maulny.)

The Reverdit rock art is difficult to study because of its intense alteration (Bourdier 2008). However, it differs from the other sites by an original theme: abstract patterns made of cupules associated with engraved lines under several combinations (Fig. 9). These elements remind us of the painted or engraved dotted quadrangulans at Roc-aux-Sorciers (Bourdier, to be published). The specificity of the Reverdit rock art also comes from the formal conventions for bison. The current frieze presents two bison, characterised by a very strong forequarters hypertrophy due to a large and high back hump whose square shape is quite unusual (Fig. 8). The first animal also shows a vertical pointed beard, and shapely shoulders and buttocks.

A second bison morphotype coexists, illustrated by a subject reduced to its lower part (from the hind legs to the beard), on fallen blocks (Bourdier, *soumis*) (Fig. 10). It is a thin low-relief made with a flat carving. Its techno-formal treatment contrasts with the animals in the current frieze: an oval beard that points forward, a dewlap in the shape of an in-relief strip, a flat shoulder. It has a lot of similarities with the Roc-aux-Sorciers sculptures. The comparison with one of them is striking: the outline, the internal details and the attitude are identical (Fig. 10). The stylised representation of the dewlap is particularly significant as it is one of the typical conventions of the Roc-aux-Sorciers bison. Even their size is very close.



Fig. 9. The cupuled patterns of Reverdit. (© MNP, cl. Ph. Jugie.)

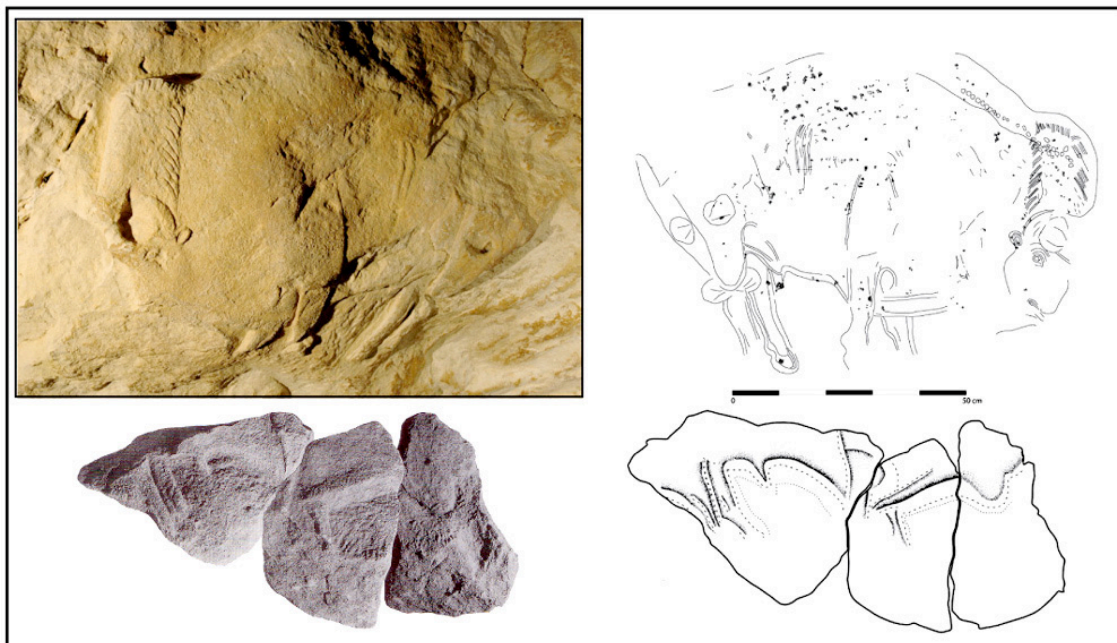


Fig. 10. Techno-formal similarity between the lower part of a bison on fallen blocks in Reverdit and a bison of Roc-aux-Sorciers. (Roc-aux-Sorciers: © G. Pinçon, DRAC Poitou-Charentes, cl. O. Fuentes, tracing V. Feruglio; Reverdit: cl. B. & G. Delluc in Paillet 1999, tracing C. Bourdier.)

Even if it shares common elements with Cap-Blanc (themes and technique), the Reverdit rock art stands out by its formal codes. Nevertheless, a sculpture makes the situation more complex by showing important technical and formal parallels with Roc-aux-Sorciers.

2.3. Cap-Blanc individuality

Cap-Blanc rock art differs by the central place given to the horse which prevails numerically and visually with its monumental representations that occupy the main set (Roussot 1972). These animals are the biggest found in European Palaeolithic rock sculpture, with bodies between 100 and 150cm long, reaching 220 cm for the tallest. Correlatively, the volumes of these sculptures are unequalled (several tens of cm) (Fig. 8). These sizes contrast with the Reverdit designs. Does this difference actually reflect a specificity of the Cap-Blanc rock art, or do the reduced dimensions of the Reverdit animals illustrate an adaptation to the wall constraints? In Reverdit, the vertical frame of the frieze is limited, on the one hand, by a horizontal ledge on which the animals lean, and on the other hand by the ceiling of the shelter. The situation is far different in Cap-Blanc where the potential graphic field is much wider.



Fig. 11. Horse forelegs of Cap-Blanc. (© CMN, cl. C. Bourdier and O. Huard.)

Cap-Blanc animals stand out by their schematic trend, with their linear outline and only few internal details (Fig. 11). Whatever the degree of entireness, the outlines are stiff, especially the legs whose bone and muscle curves are not shaped. Some representations only show two legs, one for each quarters, sometimes ending in a point. The subjects are not gendered, at least no primary sexual attribute can be identified. The mane is not sculpted: the relief stops between the withers and the forehead. Only the bison beard, a typical attribute of the animal, is clearly shaped

which is not the case of its dewlap. The head has a more detailed and meticulous figuration, with the reproduction of some organs (ears, nostril, lips?) and internal volumes. The linear outlines go well with the fixity of the animals, with still legs and its head slightly bent. The Cap-Blanc frieze shows an original composition, repeated twice: the head of a horse partially covers the hindquarters of a second one as if it was lying on its croup in a perspective effect (Roussot 1972). It is hard to make clear whether this arrangement simply results from a composition effect or illustrates a precise behaviour.

Cap-Blanc rock art appears to be quite particular in relation to the other sites. Nevertheless, the differences with the Reverdit frieze have to be moderated: the deep alteration of its sculptures strongly restricts the perception of their formal treatment, especially for their internal details. Maybe more complete representations could increase the common features between the two sites.

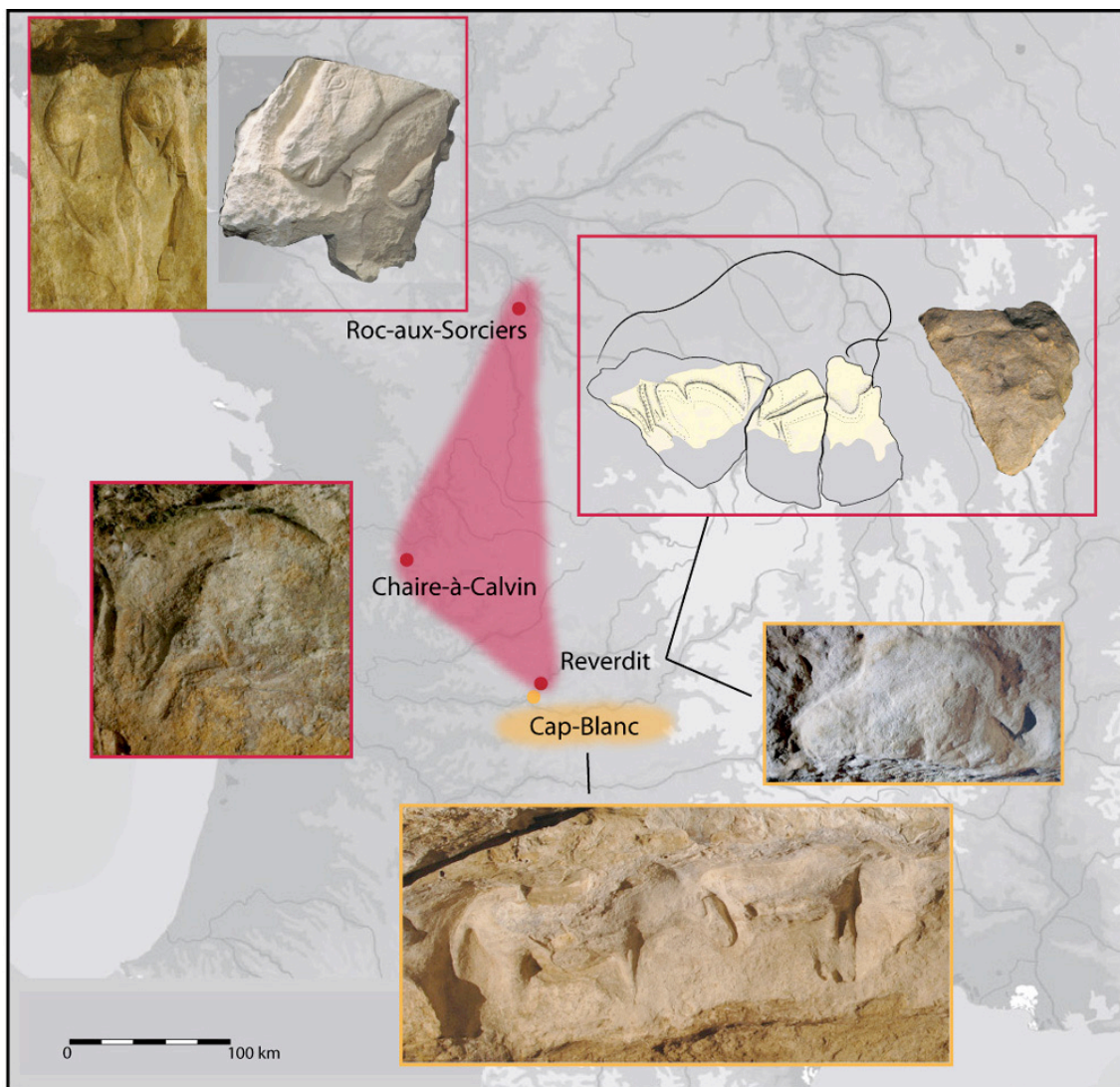


Fig. 12. Two graphic/symbolic groups inside the Middle Magdalenian rock sculpture, with Reverdit rock art at the interface. (Roc-aux-Sorciers: © G. Pinçon, DRAC Poitou-Charentes, cl. G. Pinçon; © RMN, cl. J.G. Berrizzi; Chaire-à-Calvin: © G. Pinçon, C.G. de la Charente, cl. A. Maulny; Reverdit: © C. Bourdier, I. Castanet-Daumas, tracing C. Bourdier; Cap-Blanc: © CMN, cl. C. Bourdier & O. Huard.)

3. A more precise symbolic geography for Western France

This study yields evidence of a rock sculpture tradition in the Middle Magdalenian in which two graphic/symbolic groups emerge (Fig. 12). A group extends from Vienne to Eastern Périgord, gathering the Roc-aux-Sorciers and Chaire-à-Calvin friezes as well as part of the Reverdit rock art, currently on fallen pieces of the wall. This research changes our perception of the symbolic geography in Western France, since the decorated sites of Vienne had always been seen as a specific graphic/symbolic group, isolated from the southern sites of Charente and Périgord.

The strong similarity of Chaire-à-Calvin and Roc-aux-Sorciers sculptures raises the question of their author(s) (Pinçon & Bourdier 200; Pinçon *et al.* 2009; Bourdier 2010b; Pinçon 2010). Such a similarity is all the more exceptional in Palaeolithic rock art as it concerns the whole Chaire-à-Calvin frieze. In the absence of a precise chrono-cultural context in the Chaire-à-Calvin rock-shelter, how can this close correspondence between two 150km-distant sites be interpreted? A phenomenon of convergence does not seem convincing given the degree of similarity on the one hand, and the chronological and spatial proximity on the other hand. The essential issue is the exact reproduction of two designs. Are they the product of a single “hand” or of two different “artists”? The studies on the identification and characterization of Palaeolithic artists are contradictory. In J.-M. Apellaniz’s opinion, each artist has his own style, stable in time (Apellaniz 1991). More recently, M. Groenen, D. Martens and P. Szapu claimed that the exact similarity of two images proves they were copied from a common model, and thus underlines the existence of two different “artists” (Groenen *et al.* 2004). However, an artist can also use a model, and then produce similar designs. Actually, it seems difficult to make a distinction between what comes under the graphic conventions of the group, and what illustrates the artist individuality. Our corpus is too reduced to carry out such an approach.

In the event of a same “artist” at Roc-aux-Sorciers and Chaire-à-Calvin, was the mobility collective or individual? The argument of itinerant specialized “artists” or “craftsmen” would illustrate both a specific social status for these individuals and the cultural (and economical?) influence of some sites (Bahn 1982). The hypothesis of different “artists” infers the strict transmission of formal and technical codes, and thus the absence of freedom for the artist inside the rules imposed by the group. Actually, there are contexts in which the traditional techno-formal codes have to be meticulously followed and respected, otherwise the work is not accepted and the artist is rejected. What were the origins (exchange, borrowing, imitation, trips...) and the means (learning, mobile prototypes) of this transmission? On another aspect of the Magdalenian society, learning is well attested in the lithic industry, among others by N. Pigeot’s researches at Étioilles (Pigeot 1987, 2004).

The similarities with Reverdit are less numerous. They show the extension of this graphic/symbolic group as far as Périgord, and focus the discussion on the notion of diffusion, of graphic/symbolic community. Once again, what were the directions and the nature of this diffusion between Poitou and Périgord? With regard to its richness and extension, can Roc-aux-Sorciers be considered as a creation centre, a seat of influence according to D. de Sonneville-Bordes’ hypothesis about Le Morin in the Upper Magdalenian, and J.-M. Apellaniz’s about La Madeleine (Sonneville-Bordes & Laurent 1986; Apellaniz 1990)?

Cap-Blanc differs from this group. Reverdit low-reliefs show technical similarities with the Cap-Blanc sculptures, but the two sites do not seem to share formal

conventions (anymore?). Reverdit differs with its hypertrophic square hump bison, and its cupuled designs. Cap-Blanc could belong to another graphic/symbolic community.

These two groups can illustrate two variables: geographic and/or chronological. The diachrony question is central. Only Roc-aux-Sorciers rock art is well situated between 15,000 and 14,000 BP (18,000-17,000 cal. BP) (Iakovleva & Pinçon 1997). The chronology of the other friezes remains problematic. The occupation during the Middle Magdalenian is attested, but the place inside this chrono-cultural entity has to be precised. At the interface of the two groups, the Reverdit rock-shelter appears to be crucial in this discussion on chrono-spatial dynamics. But the question remains unsolved as the sculptures illustrating the two groups are not associated on the wall anymore. Two hypotheses can be put forward. Two graphic/symbolic groups could have coexisted, one extending from Vienne to Périgord, the other only identified in Périgord for the moment. This synchronic hypothesis would highlight a phenomenon of regionalization during the first phase of the Middle Magdalenian (15,000–14,000 BP, i.e. 18,000-17,000 cal. BP). This contemporaneity raises several questions as to the function of the sites that associate the two graphic styles, Reverdit in this research. Are they meeting/exchange places? Are they alternatively occupied or visited by these different populations? A diachronic perspective would underline an evolution of the graphic codes (themes, techniques, formal conventions) during the Middle Magdalenian. At Reverdit, all the elements belonging to the “Roc-aux-Sorciers group” are on fallen wall pieces. Were they destroyed to create the current frieze?

4. Towards the identification of two socio-cultural groups?

This differentiation between the Roc-aux-Sorciers and Cap-Blanc rock art also occurs in the archaeological material (Fig. 13). The technical (lithic armatures, osseous industry) and symbolic (*art mobilier*, personal adornment) products differ. Roc-aux-Sorciers truncated bladelets contrast with Cap-Blanc scale bladelets (Chehmana & Beyries 2010; Chehmana *in progress*). The Lussac-Angles projectile points, typical of the Roc-aux-Sorciers antler industry, are not found at Cap-Blanc (Roussot 1972; Pétilion *in progress*). At Roc-aux-Sorciers, the specific *art mobilier* and personal adornment (*stomach-beads*, engraved foal incisors, lithic sculptures) do not have any allochthonous elements (Bourdier 2010; Pinçon dir. 2009; Pinçon 2010). At Cap-Blanc, connections appear with Gironde (Saint-Germain-la-Rivière) and the French Pyrenees (Enlène SDM, Isturitz) (Bourdier *in progress*).

The supply of shells and lithic raw materials accentuates this separation. It is turned to the North and the West in Roc-aux-Sorciers (Touraine, atlantic coast, Claise valley, Cher valley) (Cordier 1956; Taborin 1993; Chehmana & Beyries 2010; Vercoutère 2009). The territories of supply are more difficult to evaluate in Cap-Blanc in the absence of a precise chrono-stratigraphy related to the rock art, and because of stratigraphic mixings during the old excavations. However, the lithic raw materials are mainly local, with some exogenous stones (Bergeracois, Corrèze, Eastern Charente) (Castel & Chadelle 2000). The shells have different origins, but come from two main orientations: the West (Atlantic coast, Gironde) and the South-East (Mediterranean coast) (Taborin 1993).

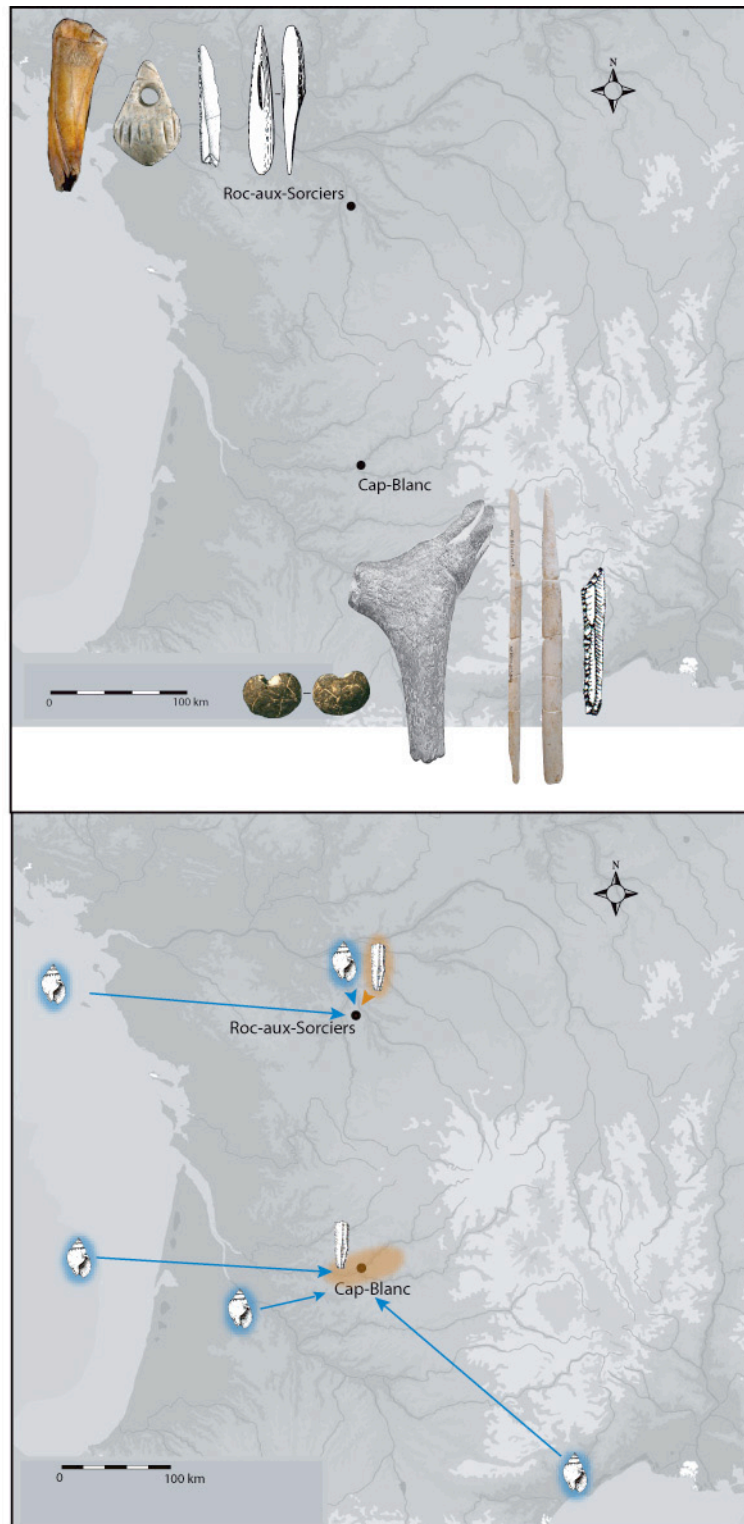


Fig. 13. Differentiation between the technical and symbolic artefacts of Roc-aux-Sorciers and Cap-Blanc, and their supply territories. (*Roc-aux-Sorciers*: fig. in Mazière 2009; Chehmana & Beyries 2010; Sacchi 1986; *Cap-Blanc*: cl. C. Bourdier, J.-M. Pétilion; fig. in Roussot 1994.)

The symbolic and technical artefacts as well as the origins of the raw materials reveal that Roc-aux-Sorciers and Cap-Blanc could have been part of different socio-economic networks, organized on a North-South main road (Vienne-Périgord) for Roc-aux-Sorciers and on an East-West main road (Corrèze-Gironde) for Cap-Blanc

(Fig. 13). Could the two symbolic groups illustrated by the rock friezes correspond to two socio-economic groups? The situation is not that clear in Chaire-à-Calvin and in Reverdit: they are obviously poised between several technical and symbolic groups, and their lithic raw materials show a local supply and connections between Périgord and Charente (Morala 2007; Bourdier 2010b; Chehmana in progress). But one has to keep in mind the stratigraphic mixings and the loss of part of the archaeological material in these two sites. Nevertheless, inside a regional symbolic group such as our “Roc-aux-Sorciers group”, the coexistence of several technical groups must not be rejected. The different fields that make up the material culture could cover different spatial scales, which would make its perception even more complex. From this angle, rock symbolic expression would thus become an element of socio-cultural unity.

Conclusion

This research modifies and complicates our vision of rock art geography in the Middle Magdalenian, connecting Vienne, Charente and Périgord in a large regional symbolic group. Until then, Vienne decorated sites seemed to form an isolated group, closed to the Southern influences. This study yields evidence of a symbolic community extending as far as Périgord. But for all that, particularities still individualize local identities (the realistic human representation in Vienne, the cupuled designs in Reverdit). Some small local geographic unities emerge inside these graphic/symbolic groups which fundamental cohesion must probably be ensured by strong socio-economic networks.

This work brings new questions on the structuration of the symbolic space in Northern Aquitaine and on its chrono-spatial dynamics. These first data have to be precised, enhanced by the current studies made on the occupations of these sites. Moreover, a comparison with the other decorated sites –drawn, engraved, painted– attributed to the Middle Magdalenian will be necessary to provide a completed and refined vision of its symbolic geographies. The choice to focus on rock sculpture especially forced us to leave the Pyrenean sites aside. Their unity in terms of themes, techniques and formal conventions has been documented for a long time, as well as their connections with the cantabric sites (Sieveking 1978; Vialou 1983; Clottes 1989; Fritz *et al.* 2007; Sauvet *et al.* 2008). The current works on Marsoulas rock art question the unity of this group, revealing notably similarities with Périgord (tectiform sign, facing reindeers) (Fritz & Tosello 2001, 2004). Similarities have also been observed with Roc-aux-Sorciers, through the red doted signs and more generally the separated use of paints (Abgrall 2010). Are these parallels part of the rock art tradition in the Middle Magdalenian? Did the “Roc-aux-Sorciers group” extend as far as the French Pyrénées? Did two symbolic groups coexist in the Pyrénées, or did they follow one another?

Finally, we see the contribution of rock art in the evaluation/understanding/recreation of the palaeolithic cultural geographies, since the differences between Roc-aux-Sorciers and Cap-Blanc friezes seem to illustrate a wider distinction between two socio-economic groups. This attempt highlights the essential scientific interest of the occupied and decorated sites, especially in the rock art studies.

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