Palaeolithic cave art in Europe

A distinction is usually made between three types of prehistoric art: portable art, open-air rock art, which is rarely preserved, and cave art. This presentation will therefore focus on cave art. Decorated caves are known mainly in France (150 caves), Spain (130 caves) and, to a lesser extent, Italy (20 caves). The representations were created by nomadic hunter-gatherers in the Upper Palaeolithic, between 40,000 and 14,000 cal. BP.

Techniques: engraving and sculpture

For practical or symbolic reasons, prehistoric artists used various techniques to add (painting), subtract (engraving and sculpture) or modify (modelling) matter.

Engraving is very common. There were two distinct methods: either by striking the wall to obtain a set of holes, or by notching the rock using the fingers or a tool (burin, blade). Representations were sometimes both engraved and painted (fig. 1).



Fig. 1. Horse, Gabillou cave (Dordogne, France)



Fig. 2. Horse, Cap Blanc rock shelter (Dordogne, France)

The first sculptures in the caves date back to 33,000 years. This technique reached its peak during the Magdalenian period (from 21,000 cal. BP) in south-west France, with highly realistic depictions (fig. 2).

In the Pyrenees, some representations were also modelled in clay (fig. 3).



Fig. 3. Bison, Bédeilhac cave (Ariège, France)



Fig. 4. Two-coloured bison, Font-de-Gaume cave (Dordogne, France)

These blocks were sometimes used directly as pencils (fig. 5). They could also be scraped or ground into powder. This powder was either blown onto the walls from the mouth, perhaps using a tube (fig. 6), or mixed with water or animal fat and applied using the fingers (fig. 7), brushes (fig. 8) or pads. These choices depended on practical (characteristics of the rock) or symbolic factors.



Fig. 5. Manganese pencil

Techniques: painting

Most palaeolithic paintings were black or/and red (fig. 4), and a little more rarely yellow or brown. Black comes from charcoal or manganese oxide. Hematite was used for red, goethite for yellow and limonite for brown representations. Hematite can be obtained by heating goethite:

 $2 \text{ FeO(OH)} \rightarrow \text{Fe}_2\text{O}_3 + \text{H}_2\text{O}$



Fig. 6. Hand stencils, Caves of Gargas (Hautes-Pyrénées, France)



Fig. 7. Finger dots, Cave of Niaux (Ariège, France)



Fig. 8. Ramiform made with a brush, Cave of Niaux (Ariège, France)

Themes in cave art: geometric signs

These geometric forms were very common in cave art. They are usually classified into two groups: simple signs (dots, lines and sometimes angular signs) and complex signs (fig. 9).



Fig. 9. Typology of signs in cave art



Fig. 12. Two angular signs on a bison, Cave of Niaux (Ariège, France)

Simple forms were the most frequent and were present throughout the Upper Palaeolithic. Complex signs were less numerous in the oldest decorated caves, but then multiplied. Some of them were typical of a specific period or region: for example, claviforms are only known during the Magdalenian in the Pyrenees (fig. 10). The geometric forms were often close to other signs (fig. 11) or animals (fig. 12).



Fig. 10. Claviform and dots, Cave of Niaux (Ariège, France)



Fig. 11. Group of signs, Cave of Niaux (Ariège, France)

Although many hypotheses have been proposed (sexual symbols, individual or group "signatures", narrative function, landmarks, ritual activities...), their meanings remain a mystery.

Themes in cave art: animal representations

Animals were abundantly represented by artists, often in a highly realistic and mimetic way, since the beginning of the Upper Palaeolithic. Horses (26%, fig. 13) and bison (19%, fig. 14) were the most depicted, followed by ibex (fig. 15) and mammoths. Other animals, such as the rhinoceros (only 2%, fig. 16), were rarer.



Fig. 13. Horse, Portel cave (Ariège, France)

But, there were major differences between periods and regions. For example, mammoths, rhinoceroses and felines were more present in the oldest decorated caves in eastern France, while horses were the most represented in the Magdalenian period, along with reindeer (in south-west France) or bison (in the Pyrenees).



Fig. 15. Pyrenean ibex, Cave of Niaux (Ariège, France)



Fig. 14. Bison, Cave of Niaux (Ariège, France)



Themes in cave art: mammoth representations

Palaeolithic cave art includes around 500 painted, engraved and sculpted mammoths. They therefore represented around 10% of animal representations. They can be found at 47 sites, almost all of them in France (only 15 mammoths in Russia and 6 in Spain). This means that mammoths were present in only 12% of the decorated caves. But when they were represented, they were very abundant, for example at Chauvet or Rouffignac.

We can classify mammoths into two groups, depending on whether they were depicted during an ancient (around 40,000-20,000 cal. BP) or a recent (around 20,000-16,000 cal. BP) phase of cave art:

- Ancient phase: Mammoths were often represented in absolute profile, with one long leg per pair (fig. 17). The eye was absent. The coat was often depicted in Périgord and Quercy (fig. 18), but was absent further east (fig. 17).
- Recent phase: Half the images of mammoths were limited to a silhouette with no legs (fig. 19). The eye and tusks were often present. Only 5% of all mammoth representations were complete, with four legs and tusks (fig. 20).



Fig. 17. Mammoth, Baume-Latrone cave (Gard, France)



Fig. 20. Mammoth, Rouffignac cave (Dordogne, Périgord, France)

Themes in cave art: human representations

In the broadest sense, human representations include hands (mostly hand stencils, fig. 6), vulvas (fig. 21), penises, composite figures (half humans, half animals, fig. 22) and anthropomorphs, which were usually simplified (fig. 23 and 24).



Fig. 21. Possible vulva, Bédeilhac cave (Ariège, France)



Fig. 23. Anthropomorph, Portel cave (Ariège, France)

Excluding hands, humans accounted for 9% of figurative representations in cave art.



Fig. 24. Anthropomorph, Cougnac Caves (Lot, France)

References (in French)

Djindjian, F., 2012. Fonctions, significations et symbolismes des représentations animales paléolithiques. In: *L'art pléistocène dans le monde* (ed. J. Clottes): 1807-1816. IFRAO congress 2010.

Paillet, P., 2006. Les arts préhistoriques. Rennes: éditions Ouest-France.

Plasssard F., 2018. Les mammouths dans l'art des grottes. In: *Mémoire de Mammouth*: 102-111. National Museum of Prehistory, Eyzies-de-Tayac.

Plassard, F., 2023. Le mammouth dans l'art paléolithique. *Archéologia*, 617: 42-43.

Robert, E., 2006. *Les signes et leurs supports pariétaux.* Thesis, Panthéon-Sorbonne University, Paris.

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Fig. 22. Human with bird head, Lascaux (Dordogne, France)