

Structuring the Unstructured: Databases for Paleolithic Art

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Studies on Paleolithic art always face the problem of subjectivity. Artistic expressions are difficult to describe, are often multilayered or contradictory. They arise from a creative process, have no or not always clear practical functions and are ambiguous. But the situation is not hopeless. Works of art have parameters that can be determined and described using database technology. It is possible to differentiate between e.g. mobile and parietal art, determine the production technique or the used material (Dutkiewicz et al. 2020; Dutkiewicz 2021a). However, determining the topics and relationships between them remains the greatest difficulty. Even if figurative representations are supposed to be easy to understand, it does not necessarily mean that, for example, a horse only represents one horse. Depending on the cultural context, a lot of information can be conveyed using the representation of a horse. Although the taxonomic determination is clear in most cases, the meaning remains obscure (Sauvet 1994; Sauvet et al. 2018). Does the representation of a mammoth in the form of an ivory statuettes from the Aurignacian around 40,000 years ago have the same meaning as the 15,000 years old drawings on cave walls at [Grotte de Rouffignac](#) (Conard et al. 2007, 2015; Plassard and Bosinski 1999)? Another point, especially when it comes to rock art, is to understand which pictures belong together. It has been proven that the caves have been visited repeatedly and that figures have been added at different times (e.g., Lorblanchet 2000; Clottes 2001; Pettitt and Pike 2007). If we get a temporal resolution at all, what does that tell us about the scenes we supposedly recognize? Another difficulty lies in the so-called signs. These are usually geometric, abstract motifs that often accompany the figurative representations, but in many cases also stand alone. These signs are difficult to read because what is reflected in them is not immediately apparent (Sauvet 1993; Dutkiewicz 2021a). It could be, for example, as [Henri Breuil](#) (1952) and others have suggested, shortened representations of real objects. It could be fixed symbols, which, similar to characters, bear certain information (e.g., Marshack 1991). It could be notations and counts or just decorative elements.

Here, I present some examples of current projects that have set themselves the task of structurally considering all aspects of Paleolithic art. Supra-regional and diachronic analyzes are intended to show connections and differences in the course of the Upper Paleolithic, which lasted several 10,000 years. On one hand, the project [SignBase](#) (Dutkiewicz et al. 2020), which deals with geometric signs on mobile objects, and on the other hand, a recently launched international project, which deals with animal representations in parietal and mobile art in Central and Western Europe (Dutkiewicz 2021b).

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