

Chauvet: Analyzing Prehistory with a Modern Eye

In December 1994, three amateur speleologists in Vallon-Pont-d'Arc, France traced a mysterious air current to a narrow passageway on the face of a limestone cliff.<sup>1</sup> After slowly chipping their way into the cave, they discovered what, at the time, was considered the world's oldest example of prehistoric cave art.<sup>2</sup> The drawings, made in charcoal and red ochre, were striking in both their mastery and their scale: over 400 drawings cover 1,300 feet of panels in the cave, dubbed "Chauvet" after one of its discoverers.<sup>3</sup>

The most accurate estimates of the Chauvet cave's art have been made through the use of radiocarbon dating. Carbon-14, a radioactive isotope of carbon, is formed in the earth's upper atmosphere and absorbed by plant matter during photosynthesis.<sup>4</sup> In turn, animals ingest plants and receive that organisms' stores of carbon-14.<sup>5</sup> Because of its radioactive nature, the isotopes of carbon-14 begin to decline at a steady half-life of 5,730 years.<sup>6</sup> By measuring the amount of carbon-14 within a sample of organic matter, factoring in the isotopes' half-life, archaeologists can estimate the time period at which an organism was once alive. Radiocarbon dates published in 2016 found that charcoal marks in the Chauvet cave occur during two distinct periods: the first, from 37,000 to 33,500 years ago, accounts for the majority of the impressive cave art; and the second, from 31,000 to 28,000 years ago, during which simpler marks were made on the

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<sup>1</sup> Joshua Hammer. "Finally, the Beauty of France's Chauvet Cave Makes its Grand Public Debut." *Smithsonian Magazine*, April 2015.  
<https://www.smithsonianmag.com/history/france-chauvet-cave-makes-grand-debut-180954582/>

<sup>2</sup> Joshua Hammer. *Smithsonian Magazine*, April 2015.

<sup>3</sup> Ibid.

<sup>4</sup> Philip Bulman and Danielle McLeod-Henning. "What Is Carbon Dating?" National Institute of Justice. March 26, 2012. <https://nij.gov/journals/269/pages/what-is-carbon-dating.aspx>

<sup>5</sup> Bulman and McLeod-Henning. "What Is Carbon Dating?"

<sup>6</sup> Ibid.

cave's walls with torches.<sup>7</sup> In that same study, twenty-three charcoal drawings in the cave were sampled, and only two were attributed to the more recent time period.<sup>8</sup> Among the drawings dated to the period 37,000 to 33,500 years ago were those of the Horse Panel in the Hillaire Chamber, and multiple drawings of bison and felines in the End Chamber.<sup>9</sup> The red ochre used in some of the cave drawings cannot be radiocarbon dated because it is made of inorganic material that does not contain carbon-14.<sup>10</sup>

These recent dates of the art at Chauvet make it one of the earliest examples of cave art ever discovered. They also place the creation of the art during the Aurignacian period (40,000 to 28,000 years ago), when Neanderthals and Homo sapiens still coexisted, perhaps signaling an evolutionary shift on the part of the Homo sapiens.<sup>11</sup> The complexity of the art, with forethought given to shading and placement on the cave walls, along with a clear sense of movement, challenges common beliefs about the backwardness of prehistoric peoples. Though the Chauvet cave drawings predate written language by thousands of years, they were deliberately made to communicate from one human to another, to express an idea—be it reverence or fear—of the forms depicted.

Theories as to why prehistoric humans braved the depths of caves to create drawings, markings, and sculptures vary. French prehistorian Jean Clottes is often credited with forwarding (though not introducing) the theory that the Chauvet drawings are closely connected to rituals in

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<sup>7</sup> Anita Quiles et al., "A high-precision chronological model for the decorated Upper Paleolithic cave of Chauvet-Pont d'Arc, Ardèche, France," *Proceedings of the National Academy of Sciences of the United States of America* 113, vol. 17 (April 26, 2016): 4670-4675, <https://www.pnas.org/content/113/17/4670>

<sup>8</sup> Deborah Netburn. "Chauvet cave: the most accurate timeline yet of who used the cave and when." *Los Angeles Times*, April 12, 2016.

<https://www.latimes.com/science/sciencenow/la-sci-sn-chauvet-caves-timeline-20160412-story.html>

<sup>9</sup> Quiles et al., *Proceedings of the National Academy of Sciences* 113, vol 17.

<sup>10</sup> Netburn. *Los Angeles Times*, April 12, 2016.

<sup>11</sup> Joshua Hammer. *Smithsonian Magazine*, April 2015.

which shamans attempted to connect with the underworld<sup>12</sup>, perhaps aided by hallucinogens, similar to rituals practiced by tribal shamans today in South America and Australia.<sup>13</sup> The walls of the cave, Clottes argues, were seen as porous portals to the underworld, and the stencils of handprints in a certain location could indicate “they were summoning a force beyond it,”<sup>14</sup> as Judith Thurman of *The New Yorker* explains. The fact that, often, the cave walls’ contours were incorporated into the outlines of the drawings (creating a crude sense of bas-relief), also lends to Clottes’ shaman theory. Perhaps the natural fissures and formations of the rock were seen as places from whence animals from the underworld were springing forth. If Clottes’ theory holds true, it would indicate that animals were held in spiritual regard or had a more significant connection to the otherworld than humans did; after all, only one partial human figure appears in the Chauvet cave<sup>15</sup>: the vulva and legs of a woman, her stomach covered by a bison head.<sup>16</sup> Clottes theorizes that animals were spiritually significant to Paleolithic peoples because they were “sources of both sustenance and terror.”<sup>17</sup> The fearsome physical power of bison, large felines, and other animals that roamed Pont d’Arc 37,000 years ago may have led to their association with spiritual power. Similar depictions of animals, and stencils of handprints made with red ochre, are found in caves across Western Europe, including the Lascaux cave complex

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<sup>12</sup> Judith Thurman. “First Impressions.” *The New Yorker*, June 23, 2008.

<https://www.newyorker.com/magazine/2008/06/23/first-impressions>

<sup>13</sup> Joshua Hammer. *Smithsonian Magazine*, April 2015.

<sup>14</sup> Thurman. *The New Yorker*, June 23, 2008.

<sup>15</sup> Julian Bell. “Dreams from Underground.” *The New York Review of Books*, June 9, 2011.

<https://www.nybooks.com/articles/2011/06/09/dreams-underground/>

<sup>16</sup> Joshua Hammer. *Smithsonian Magazine*, April 2015.

<sup>17</sup> *Ibid.*

in France<sup>18</sup> and El Castillo in Spain<sup>19</sup>, which could suggest that shamanistic beliefs existed across a variety of prehistoric cultures.

Jean-Michel Geneste, who succeeded Clottes as the scientific director at Chauvet<sup>20</sup>, also believes the drawings have some spiritual significance, though they may not have been the product of a hallucinatory vision quest. Geneste conducted an experiment at Lascaux in 1994 in which he brought four Aboriginal elders to visit the cave and tell him what they believed the site was.<sup>21</sup> The elders believed it was clearly an initiation site, similar to their tribes'; the geometric patterns on the walls could serve as tribal emblems, and the animal figures conjured associations with Aboriginal creation myths.<sup>22</sup> These interpretations could be applied to the similar patterns and drawings found at Chauvet, such as the pattern of circles made in red ochre with palm prints. Geneste also argues that these caves were not only initiation sites, but possibly the equivalent to a church, where people would travel to participate in rituals and admire the impressive art.<sup>23</sup> The location of Pont-d'Arc, Geneste says, is like "a great beacon in the landscape"<sup>24</sup> and would have drawn many to the site. However, he also qualifies his claim by stating "the richness of graphic expression in the caves was satisfying to lots of different people in different ways—familial, communal, and individual, across the millennia—so there is probably no one adequate

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<sup>18</sup> Eleanor Beardsley. "Next To The Original, France Replicates Prehistoric Cave Paintings." NPR, January 2, 2017.  
<https://www.npr.org/sections/parallels/2017/01/02/507549682/next-to-the-original-france-replicates-prehistoric-cave-paintings>

<sup>19</sup> Ker Than. "World's Oldest Cave Art Found—Made by Neanderthals?" *National Geographic*, June 14, 2012.  
<https://news.nationalgeographic.com/news/2012/06/120614-neanderthal-cave-paintings-spain-science-pike/>

<sup>20</sup> Joshua Hammer. *Smithsonian Magazine*, April 2015.

<sup>21</sup> Thurman. *The New Yorker*, June 23, 2008.

<sup>22</sup> *Ibid.*

<sup>23</sup> *Ibid.*

<sup>24</sup> *Ibid.*

explanation, no unified theory, for it.”<sup>25</sup> Though the purpose of the drawings at Chauvet and other cave sites will never be completely certain to modern viewers, it continues to arouse interest because of the very nature of visual art: itself a language that communicates across millennia, evoking the same sense of power as it must have the day it was created.

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<sup>25</sup> Joshua Hammer. *Smithsonian Magazine*, April 2015.