

CHAPTER 4

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THE ROCK ART OF SUB-SCANDINAVIAN EUROPE

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PALAEOLITHIC ROCK ART AND THE BEGINNING OF ROCK ART RESEARCH

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IN Western Europe, during the middle of the nineteenth century, Edouard Lartet began to unearth portable art from archaeological excavations at sites such as La Madeleine and Laugerie-Basse (Dordogne, France), with similar findings also being made in other regions including the Pyrenees between Spain and France, Belgium, and Great Britain. The art was quickly attributed to the Upper Palaeolithic and soon broadly accepted for its great age (Lartet & Christy 1864), but this was not to be the case for on-wall (parietal) art whose initially suggested Upper Palaeolithic antiquity received considerable resistance: discovered in 1878 at Chabot Cave and 1879 at Altamira by Marcelino Sanz de Sautuola, it was not until 1902 that on-wall cave art was finally recognized as Upper Palaeolithic art (Cartailhac 1902). This delay was a consequence of the evolutionary thinking that prevailed during the late nineteenth century, together with a lack of precedence for such arts. From an evolutionary perspective that required the earliest European art to be rudimentary, the attribution of complex artistic phenomena to 'primitive' Ice Age societies was pretty much inconceivable and too problematic to be acceptable for the leading scientists of the day (Moro & González Morales 2004).

Early in the twentieth century, rock art research became strongly influenced by the discovery of many sites in two regions especially: the Iberian Peninsula (e.g., Altamira, El Castillo, Hornos de la Peña, La Pasiega, La Pileta) and France, mainly in the Dordogne and the Pyrenees (e.g., Les Combarelles, Font-de-Gaume, Gargas, Marsoulas). These discoveries prompted researchers to think of Upper Palaeolithic art as an art of the caves that were almost exclusively located in the Franco-Cantabrian region.

Through the course of the twentieth century, research on Upper Palaeolithic rock art began to spread beyond France and Spain onto other parts of Europe: Italy, Romania (Cuciulat and more recently Coliboaia), Russia (Kapova), and Portugal (Foz Côa). Foz Côa is an open-air site discovered in the late 1980s, and it signals an end to the consideration of Upper Paleolithic art as an exclusively deep cave art. The early years of the twenty-first century saw the discovery of Upper Palaeolithic cave art in the United Kingdom, at Creswell Crags in 2003 (Bahn & Pettitt 2009), and in Germany at Gondershausen in 2014. Upper Palaeolithic rock art is now known from about 400 sites spread across nine European countries. Most of these sites are in Spain (195) and France (178).

Initial study focused on the art's documentation and culture-historical (chronological) classification, with Henri Breuil (1952) being particularly influential. Chrono-stylistic frameworks were devised to order the available information along frameworks that were usually also applied to other kinds of material culture, in particular stone artefacts.

Breuil was involved, sometimes on his own and at other times with other researchers, in many of the great discoveries and investigations carried out between 1901 (Font-de-Gaume) and 1940 (Lascaux). He was the principal author of monographs on important cave art sites such as Altamira (1906), La Pasiega (1913), Les Combarelles (1924), and a great compendium of Cantabrian caves in 1911. In successive publications, Breuil developed what became an influential chronological sequence of rock art phases applied across Spain and France, in due course synthesized in his influential *Quatre Siècles d'Art Parietal* (1952). There, he advocated a twofold evolutionary model for all of Europe's Upper Palaeolithic cave art: a gradual refinement of perspective in faunal depictions and a change from monochrome to polychrome art through time (Moro & González Morales 2004).

From the early 1940s, two significant events put Breuil's proposed chronology into doubt. First, the discovery of Lascaux in 1940 (Breuil 1940) saw Breuil attribute its art to the Aurignacian-Perigordian, a view that was soon contradicted by Séverin Blanc who considered the on-wall depictions to be Solutrean or Magdalenian, as implied by the evidence unearthed from the archaeological excavations at the site. The ^{14}C dating of charcoal samples from the excavations (the black paintings could not be directly radiocarbon dated as they were made with manganese, not charcoal) yielded a Magdalenian chronology, seeming to confirm Blanc's interpretation. Second, the detailed publication of El Parpalló (Valencia, Spain) in 1942 highlighted the presence of a considerably more elaborate Solutrean art than Breuil had allowed for in his evolutionary model.

The application of structuralist theories to prehistoric art, carried out by Annette Laming-Emperaire and André Leroi-Gourhan, saw major changes to the treatment of European Upper Palaeolithic rock art, beginning with the publication of Laming-Emperaire's doctoral thesis in 1962. They saw Upper Palaeolithic cave art as a structured system with syntax, one where the depictions and the rock media together form a whole whose meaning(s) we could not (yet) decode.

In his major synthesis *Préhistoire de l'Art Occidental* (1965), Leroi-Gourhan proposed a set of principles concerning how the art was structured within the caves. His premise,

which saw the structural principles behind the art as unchanging through the course of the Upper Palaeolithic, was based on (1) the immutable syntax of themes and (2) the regular distribution of motif forms through the caves (see later discussion). The syntax was argued to have been founded on a male–female opposition that applied to both a horse/bison and to a narrow–wide abstract depiction ('signs') binary distinction. These conclusions were made from a 'rudimentary' statistical analysis (Sauvet & Włodarczyk 2000–2001) performed on the art of 62 caves that showed certain animal depictions and associations to have been preferentially positioned in certain parts of caves but not in others. In addition, Leroi-Gourhan proposed a new chrono-stylistic model for the art following the same evolutionary premises that had earlier been adopted by Breuil. Leroi-Gourhan thus formulated a linear evolutionary model that began with formal simplicity, progressing through time to greater technical and aesthetic complexity, as expressed in Upper Palaeolithic cave art through formal and technical variability.

Leroi-Gourhan's structural explanation soon raised serious criticism, especially his use of an essential sexual binary opposition to explain all of Western Europe's Upper Palaeolithic cave art. The binary structure of animal depictions and abstract 'signs' and their structured layout within caves left some issues unresolved, such as the possible noncontemporaneity of associated images, low sample numbers, and the potential existence of kinds of associations other than those accountable by a binary logic or through the positioning of adjacent motifs. The notion of European Upper Palaeolithic styles following a simple, unilinear evolution from technically and aesthetically simple to complex, considered by him clear and evident, was criticized from the perspective of the New Archaeology that began to emerge in the 1960s because such a view detached the art from its behavioural contexts (Conkey 1987). The structuralist proposals of Leroi-Gourhan were thereby considered archaeologically decontextualized, based on present-day categories and intellectual concerns, and thus artificially reducing Upper Palaeolithic art to extant academic preoccupations and interests rather than to how it related to Upper Palaeolithic processes. Despite these criticisms, Leroi-Gourhan's structuralism and chrono-stylistic seriation remained predominant in European Upper Palaeolithic rock art research until the final years of the twentieth century, and indeed many French and Spanish researchers continue to uphold his conclusions to this day.

Current Approaches to Upper Palaeolithic Art

The onset of accelerator mass spectrometry (AMS) radiocarbon dating in the 1990s (e.g., Valladas et al. 1992), and in particular the discovery of Chauvet Cave on the heel of the finding of Cosquer Cave (Clottes et al. 1992), required researchers to rethink many of the assumptions and conclusions that had been made about Europe's Upper Palaeolithic rock art. The animal paintings of Chauvet and Cosquer Caves were among the most anatomically precise, detailed, and nuanced depictions known from the Upper Palaeolithic, yet they were among the oldest, as revealed by radiocarbon dates undertaken directly on charcoal paintings. Additionally, unusual theme combinations (such as a predominance

of rhinoceroses and lions) substantially altered traditional views of what Aurignacian art consisted of (cf. Sauvet, Fritz, & Tosello 2007). These findings of the mid-1990s were in direct opposition to the more traditional view that Europe's Upper Palaeolithic rock art had progressed from the simple to the complex over time. According to Michel Lorblanchet (1995: 58), 'it seems that the whole of the technical possibilities of additive (painting), subtractive (engraving and sculpture) or shaping of a mouldable surface (modeling and digital tracing) processes were straightaway discovered by the first creators of images' (our translation).

Despite these developments, structuralist approaches emanating from Leroi-Gourhan's findings remain alive and well. Some authors, such as Georges Sauvet, have employed complex multivariate statistics to work out structural patterns in the art. His theoretical and methodological framework accepts a key premise of Leroi-Gourhan's structuralism, according to which the art within and between caves follow fixed rules that have been maintained over long periods of time and across broad expanses of space. Sauvet's main contribution lies in the incorporation of more sophisticated reasonings and statistical analyses informed by semiotics and computational linguistics (Sauvet & Włodarczyk 2000–2001).

The study of portable and on-wall art is currently witnessing a fresh lease on life as a result of a new generation of statistical analyses. The application of novel three-dimensional (3-D) recording methods now allows a more nuanced—and more accurate—consideration of the rock media on which the art is found (Angás & Bea 2014; Fritz et al. 2010). High-definition recordings and digital enhancement technologies have considerably improved our understanding of Upper Palaeolithic imagery, and, in this regard, special mention should be made of the contribution of key researchers such as Michel Lorblanchet, Gilles Tosello, and Carole Fritz (e.g., Fritz & Tosello 2007).

Another significant approach to the study of Upper Palaeolithic art has emerged in recent decades, derived from the concept of *chaîne opératoire* as coined by Leroi-Gourhan (1964). The *chaîne opératoire* concerns the sequence of technical gestures undertaken to produce objects (including portable art and rock art) as a means of investigating social meaning. The reconstruction of technical gestures allows researchers to determine social know-how. Such technical knowledge is perpetuated through learning systems that are used to reproduce cultural traditions. A major advance in the employment of *chaînes opératoires* in rock art research has been the identification of stages of apprenticeship (Rivero 2016). Such an approach has focused on the transmission of graphic and technical codes by which artworks were produced during the Upper Palaeolithic.

We now know European Upper Palaeolithic art to be a complex system of structured codes in which each part is interrelated in the creation of social messages: form, technique, medium, and composition are each implicated. The total graphic system was learned and transmitted socially and communicated across varied spatial scales, carrying with each act of transmission notions of appropriate themes, skills, and media.

European Upper Palaeolithic rock art has been radiocarbon-dated from as early as c. 37,000 to 36,200 cal. BP (Chauvet Cave, France) (Quiles et al. 2016), to c. 13,500 cal. BP for the most recent dates (Ojo Guareña, Spain) (Corchón et al. 1996). Uranium-series

dating has also yielded very ancient dates for some calcite deposits over rock art depictions in Cantabrian Spain (Castillo and Altamira, among other sites) (Pike et al. 2012). However, the validity of the method and results are currently undergoing intensive debate (cf. Pons-Branchu et al. 2014). The radiocarbon dates for Western Europe’s Upper Palaeolithic cave art indicate more than 25,000 years of artistic activity, a period of time that is too long to be reasonably treated as a single and unchanging cultural phase. We can, however, think of this period in two major temporal blocks: a pre-Magdalenian phase that covers the Aurignacian, Gravettian, and Solutrean, with the internal boundaries between the subphases usually being difficult to distinguish; and a better-known Magdalenian phase that contains many radiocarbon dates and for which numerous items of portable art are known from archaeological excavations.

For each of these phases and subphases, most of the rock art is nonfigurative (Figure 4.1A). The difficulty of classifying and interpreting from the lived world these

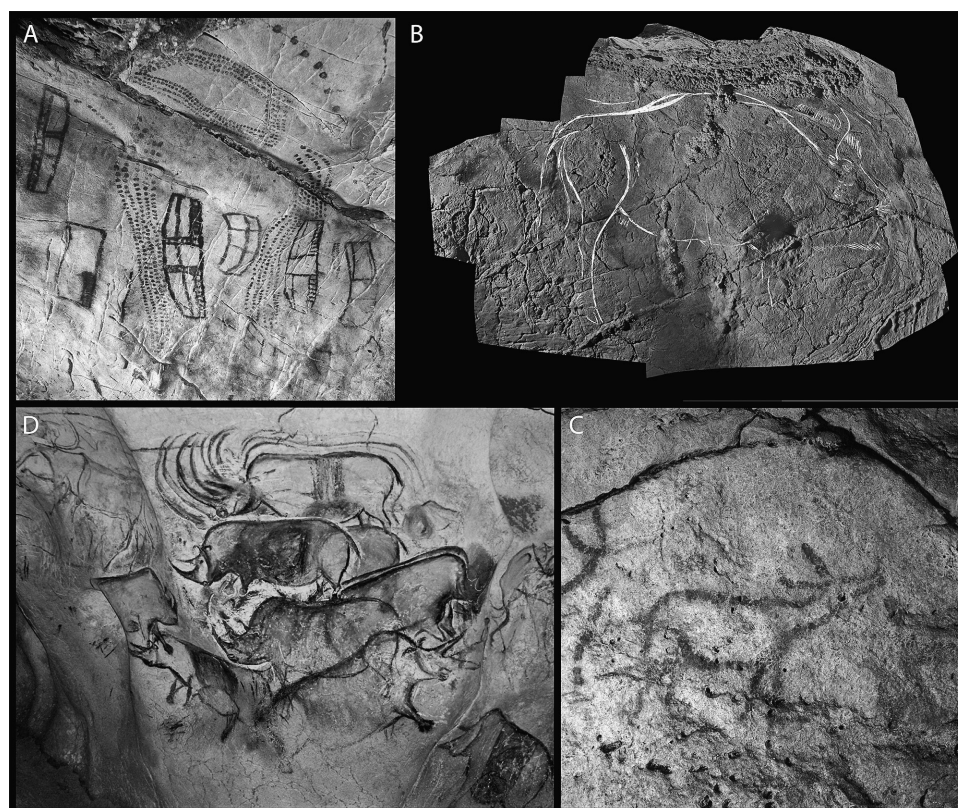


FIGURE 4.1 A. Abstract red “signs” from El Castillo, Cantabria, Spain. © Pedro Saura/Consejería de Educación, Cultura y Deporte. B. Engraved Magdalenian bison from Alkerdi Cave, Navarra, Spain. © Olivia Rivero. C. Red-dotted hind from Covalanas, Cantabria, Spain. © Pedro Saura/Consejería de Educación, Cultura y Deporte. D. Black painted rhinoceros from Chauvet Cave, Ardèche, France. © Carole Fritz.

abstract motifs has caused researchers to focus more on the figurative depictions, especially the quadrupeds, in the construction of chrono-stylistic models for Western Europe's Upper Palaeolithic art. These faunal motifs changed through time, including through cultural drift and population dynamics. As Sauvet and Włodarczyk (2000–2001) showed, with the widespread depiction of horses come other motifs, such as bison that are characteristic of some regions and phases, in particular Cantabrian Spain and the Pyrenees during the Middle Magdalenian (Figure 4.1B). In contrast, the hind is commonly found in Cantabrian Spain during pre-Magdalenian times (Figure 4.1C), as are mammoths, rhinoceroses, and lions in the north of France and Rhone-Languedoc region during Aurignacian and Gravettian times (Figure 4.1D). Despite this regional variability, the themes depicted in Upper Palaeolithic tend to repeat themselves, and only a relatively low number of associations between zoomorphs were actually depicted (199 of 6,461 possibilities).

While quadrupeds (horse, bison, goat, auroch, deer/doe, reindeer, bear, mammoth, lion, rhinoceros, and occasionally taxa such as fox, wolf, chamois, megaloceros, seal, saiga antelope, hare) predominate faunal assemblages in the art, other animals are also depicted: birds (vultures, owls, penguins), marine fauna (fish, marine mammals, jellyfish), and, exceptionally, snakes and anthropomorphs (male, female, and unsexed depictions) (Figure 4.2A). Human hand stencils and prints also occur.

Both the figurative and abstract motifs can occur as pictographs, stencils, prints, engravings, and sculptured and modelled clay. These techniques are usually not restricted to any particular artistic phase. Pigment art consists of a relatively limited colour palette: red, sienna, purple (obtained from ores of iron as haematite and goethite), and black (charcoal and manganese). The most common method of painting is with the hand, tracing the outline with a finger and filling in with internal colour inserts.



FIGURE 4.2 A. Engraved male anthropomorph from Hornos de la Peña, Cantabria, Spain. © Olivia Rivero. B. Sculpted reindeer and hind from Isturitz, Pyrénées-Atlantiques, France. © Olivia Rivero.

Sometimes coloured areas are blurred with the fingers. The use of sticks as painting tools has only recently been documented, at Pech Merle in France.

Engravings were incised into the rock with sharp-edged tools such as burins and other kinds of stone flakes. Fingers and other tools were also dragged into moonmilk and sometimes thin clay films of soft limestone walls to make ‘finger flutings’. Engravings of various kinds often produced colour changes in those parts of the wall surfaces where surface layers were removed, as lighter areas of the rock came through the weathered surface. Bas-reliefs are also found throughout the Upper Palaeolithic and include several methods by which 3-D motifs were shaped (Figure 4.2B). Clay modelling was more restricted in time and space, being found only as free-standing or nearly free-standing sculptures during the Middle Magdalenian (c. 18,500 cal. BP) in the Pyrenees (e.g., at Montespan, Tuc d’Audoubert).

In short, both changes and continuities in motifs, motif associations, techniques, and style can be seen over time in the art of the European Upper Palaeolithic. Noticeable for us today are apparent continuities that lasted more than 25,000 years, perhaps indicating the important role of graphic symbols to the success of survival strategies soon after anatomically modern humans arrived on the European continent shortly before 40,000 cal. BP. Nevertheless, significant changes are also evident, such as innovative stone artefact and bone technologies of the Magdalenian/Epigravettian and the spread of portable art and rock art across the continent as climates began to warm at the end of the Ice Age. In some respects, it appears that terminal Upper Palaeolithic peoples had begun to develop new strategies for postglacial times, with early Mesolithic traditions such as the Azilian, Creswellian, and Romanellian emerging directly from terminal Upper Palaeolithic practices. The question remains as to what happened with the art: did it also trend into the Mesolithic, or did it suddenly stop to disappear without a trace?

PLEISTOCENE FORAGERS IN TRANSITION: A CASE OF CHANGING SYMBOLS?

The end of the Upper Palaeolithic is commonly depicted by rock art researchers and archaeologists more generally to have involved a radical shift in symbolic expression among hunter-gatherers adapting to significant environmental changes. Those hunter-gatherer graphic expressions, from the beginning of the Upper Palaeolithic to the end of the Mesolithic, all have symbolic content, even as they are also positioned in their own socioeconomic and ecological contexts. Continuities and changes in graphic expressions intimately lie in symbolic worlds.

Since the beginning of the twentieth century, prehistorians have highlighted that the kinds of cave art made during the Upper Palaeolithic quickly ceased to be made after the Magdalenian and that symbolic expressions of subsequent cultures dating to the very end of the Upper Palaeolithic and to the Mesolithic, such as the Azilian and Asturian,

had become radically different (Breuil 1952; Leroi-Gourhan 1965). Pebbles painted with red dots and lines from Mas d'Azil (Ariège, France), Los Azules (Asturias, Spain), and other contemporaneous sites of the terminal Pleistocene were utterly unlike the former symbolic productions of the last stages of the Upper Palaeolithic, so it was assumed and sometimes explicitly argued that those painted pebbles marked the disappearance of an earlier world of Upper Palaeolithic cave art. This conclusion accorded well with the linear evolutionary paradigms of the time, which considered that, following a period of Upper Palaeolithic artistic efflorescence, the Mesolithic brought about a period of artistic decay.

This evolutionary paradigm was widely maintained for decades. This vision may have been a result of the small sample size, with most art sites coming from France and Spain, where the pattern seemed clear. But does it still stand, and can it be applied more broadly across Europe and beyond? By the end of the 1990s, it had become clear that symbolic productions across southern and Western Europe were more complex than previously known, even for Upper Palaeolithic times. Open-air engravings and paintings of Upper Palaeolithic age began to be discovered in Spain and Portugal, making it apparent that Upper Palaeolithic hunter-gatherer symbolic behaviour had parallels with Mesolithic (and later) uses of open-air rock shelters. That is, Upper Palaeolithic rock art was not just cave art, but also involved open-air sites, in common with Mesolithic and later times.

The past few decades have also revealed much evidence that calls into question the complete disappearance of figurative depictions akin to those of Upper Palaeolithic traditions. There are increasing numbers of incised slabs from sites in France, Spain, and Portugal that have images reminiscent of Upper Palaeolithic art; both motifs and techniques recall that earlier art. Roussot (1990) emphasized these continuities, defining a new stylistic tradition that he calls *Style V*, following Leroi-Gourhan's standard four-part model of Upper Palaeolithic art. Additionally, several rock art assemblages have now been radiocarbon or stratigraphically dated in the Iberian Peninsula and in Italy, filling the supposed chronological gap between the final stages of Upper Palaeolithic art and that which has been attributed to subsequent Mesolithic cultures.

Today, many questions remain, such as why the making of art in deep caves ceased towards the end of the Upper Palaeolithic, or why portable objects became progressively less decorated with figurative depictions while the incidence of geometric motifs proportionally increased, and, especially, the hypothetical links of these terminal Upper Palaeolithic traditions with the various assemblages that have been identified across Western Europe between the end of the Ice Age and the commencement of the Neolithic. Many of the twentieth-century paradigms constructed chrono-stylistic pigeon-holes into which the art of individual sites could be fit, but those classifications gave little, if any, voice to continuities and successions, as if each transition between chronological styles could entirely do away with its historical precedents. Yet there now appear to be more continuities between Upper Palaeolithic and subsequent rock art traditions than previously thought.

Late Upper Palaeolithic and Early Holocene Imageries in Mediterranean Europe

Paolo Graziosi (1956) defined a Mediterranean province of Upper Palaeolithic art whose typical features among faunal motifs include linear outlines with limited anatomical details and, for bulls, forward-pointing parallel bent horns. A few decades later, the Mediterranean Upper Palaeolithic figures were better described (Villaverde 1994, 2004) following consideration of the art sequence at El Parpalló (Valencia, Spain). Here, a large assemblage of engraved and painted slabs allowed a detailed study of formal changes from the Gravettian to the Magdalenian. Across this Mediterranean province, a limited number of animal taxa were depicted (wild bulls, horses, ibex, deer), with a total absence of cold-environment fauna such as bison, mammoth, lion, and rhinoceros that were often depicted further to the north in Cantabrian and French caves or even in central Spanish sites such as Cueva de los Casares (in Guadalajara).

Stylistic traits of the Mediterranean Upper Palaeolithic continue to appear in the rock art of the Late Epigravettian (Romanellian) in Italy and Epimagdalenian in Spain, regional phases that immediately follow the end of the Upper Palaeolithic. With increasing research, more and more sites are falling into these early periods of the Holocene. Most of these sites contain engraved art—portable and/or on-wall art—but paintings also occur. Here, the general pattern is marked by simplified depictions of animals with elongated bodies and small heads, often accompanied by geometric designs such as groups of zigzags, parallel lines, and ribbon-shaped motifs. The engraved slab and on-wall art of Grotta Romanelli is a good example of this post-Palaeolithic art that contains clear similarities with the earlier, terminal Upper Palaeolithic Mediterranean style. This kind of geometric designs can be found in Riparo Dalmeri (Dalmeri et al. 2005) in northern Italy, where several dozen painted slabs with animal depictions are associated with schematized anthropomorphs and geometric motifs reminiscent of similar artworks from the nearby Epigravettian site of Riparo Villabruna (Aimar et al. 1992) and from the engraved stone slabs of Grotta del Cavallo (Skeates 2005). These latter slabs were retrieved from an archaeological level radiocarbon dated to c. 13,200 cal. BP.

Other Italian sites such as Cala dei Genovesi, l'Addaura, and Giovanni, all in Sicily, are especially interesting because the radiocarbon determinations (Tusa et al. 2014) suggest that here similar stylistic traits to those of continental Italy were still in use c. 12,000 cal. BP. Furthermore, a number of authors (Bovio-Marconi 1955; Graziosi 1973) have suggested that anthropomorphs of Grotta dell'Addaura have an early Holocene age and that they exhibit formal continuities from late Upper Palaeolithic times. Here, new artistic expressions are clearly evident: human depictions in active stances interact in complex scenes, a theme that is absent from Upper Palaeolithic cave art elsewhere in Europe. Several of the human figures, some with what appear to be bird-shaped heads or masks, interact with people restrained in unnatural poses, perhaps prisoners or slaves at the hands of their captors or masters (Figure 4.3A). These complex, anthropomorphic scenes reveal a new treatment of people in cave art, one not previously seen in the earlier

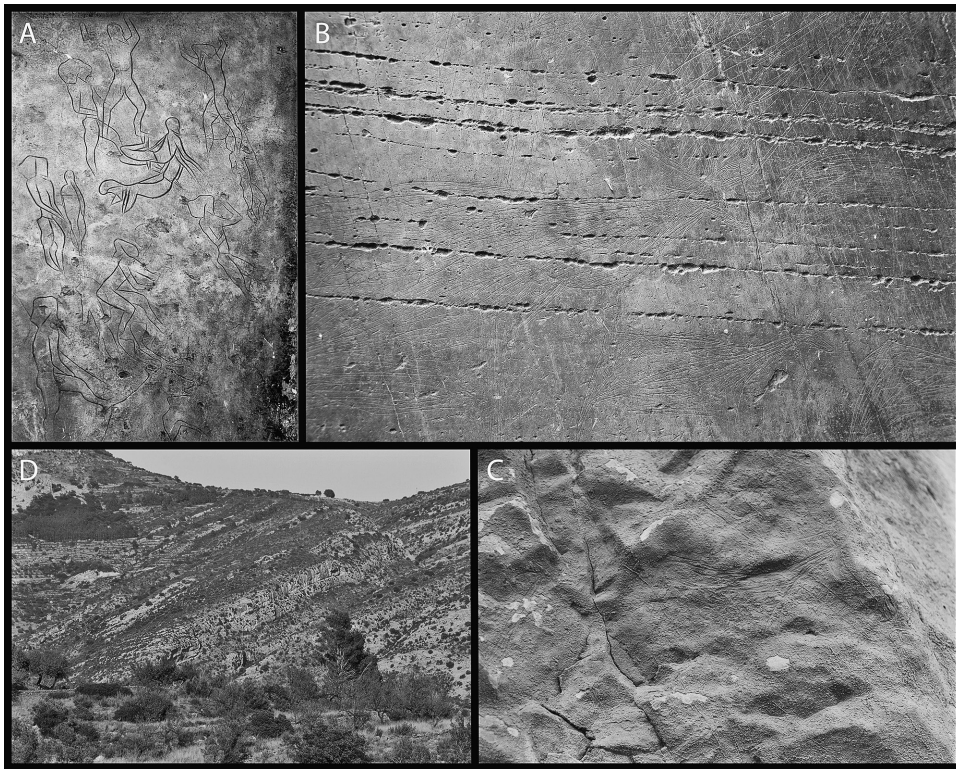


FIGURE 4.3 A. Incised human and animal depictions from Grotta dell'Addaura, Italy. Replica from Museo Regionale Archeologico, Palermo. © Bernard J. Scheuvs/Wikimedia Commons/CC BY-SA 2.5. B. Stylized incised deer infilled with thin striated and parallel lines in Rousset's Style V (Bueno, Balbín and Barroso 2016) from the site of Jose Esteves (Foz Côa, Portugal). © Olivia Rivero. C. Incised depictions from Abric d'en Melià (Castellón, Spain). This kind of engraving, found in several sites of the eastern Iberian Peninsula, is thought to be characteristic of the Epimagdalenian period (Martínez, Guillem and Villaverde 2008). © Georges Sauvet. D. Abric d'en Melià (Serra d'en Galceràn, Castellón) is located in a ravine of a middle mountain landscape, close to other sites that include Levantine-style engravings. © Juan F. Ruiz.

Upper Palaeolithic art; people become the primary characters, the centres of attention, rather than the animals that often defined the Upper Palaeolithic panels. Other incisions at Grotta dell'Addaura exhibit the typical features of other Mediterranean Upper Palaeolithic images, but a radical change is now becoming evident, one that soon after becomes apparent in open-air rock art across Europe, including in the Levantine rock art of Mediterranean Spain.

In central and southern France, a similar phenomenon of cultural and artistic continuity can also be observed in a group of sites with evidence of both Magdalenian and early Epipaleolithic occupation. The incised bones and slabs that inspired Rousset's Style V came from Pont d'Ambon (Célérier 1998), Borie del Rey (Coulonges 1963), and l'Abri Morin (Deffarge, Laurent, & de Sonneville-Bordes 1975). There are typical Magdalenian

engravings on other portable objects from these sites, but the early Holocene levels witnessed a clear shift away from the naturalistic depictions of fauna to images with elongated bodies, small heads, short legs, and static poses. A particular feature of these later incised motifs are bodies infilled with short, thin lines sometimes used to delineate an animal's contours, sometimes in association with sets of zigzag lines. In the case of the site of Pont d'Ambon, such incised images came from late Azilian levels, with a flint core deeply engraved with a geometrical pattern being found deeper down in early Azilian levels; engraved cores of this kind have also been found at several Italian Mesolithic sites (Skeates 2005: 57). However, typical Azilian elements in the form of pebbles painted with simple lines and dashes are completely absent at Pont d'Ambon. A recent discovery at Rocher de l'Impératrice (Naudinot et al. 2017), in northwestern France, further emphasizes continuities between Upper Palaeolithic and subsequent rock art practices. Here, Magdalenian-style engravings of aurochs and horses combined with geometric themes were retrieved from slabs excavated from Azilian levels, in association with radiocarbon dates of *c.* 14,000 cal. BP, suggesting that painted pebbles were not the only type of art produced in France during the early Azilian.

Comparable trends can also be identified from the Iberian Peninsula. The classic Cantabrian sites with Azilian decorated pebbles, including El Pindal and Los Azules (Fernández-Tresguerres 1994), have recently been added to by the discovery of numerous engravings on portable objects excavated from Peña de Estebanvela, in central Spain. These objects share similar kinds of decoration as found in Azilian art—sets of parallel lines arranged in symmetric patterns along the longer axes of pebbles—while they also include animal depictions clearly akin to those of the Magdalenian; they came from stratigraphic levels dated to Late Magdalenian times (13,720–12,610 cal. BP). These engravings emphasize the outline, a simplified anatomy, show just two limbs of quadrupeds, and contain straight-line infills that tend to parallel the outline (García & Cacho 2015). Such decorative features are also found on more recent portable and on-wall arts. For example, black charcoal paintings were dated to 11,638–10,689 cal. BP at Ojo Guareña (Corchón et al. 1996), and a minimum age of 9000 cal. BP was obtained from a painting at Cova Eirós (Steelman et al. 2017), in northern Spain. This latter example consists of a poorly preserved incision of an animal superimposed by a black charcoal painting; the radiocarbon date comes from the charcoal, thereby giving a minimum age for the underlying incision. The stylistic features of the underlying engraving resemble images of Epimagdalenian age.

Another important set of incised motifs akin to Upper Palaeolithic images can be found at Foz Côa, both on portable items and on open-air rock walls. A slab with incised animals with long bodies infilled with thin parallel lines was found at the site of Fariseu (García & Aubry 2002). Here, the animals are shown in profile, with few anatomical details depicted; it is uncertain whether the small size of the slabs restricted the amount of detail that could be shown. Similar engravings can be seen on the walls of other sites in the same valley. Examples include Penascosa, Vermelha, Canada do Inferno (Baptista 1999), and Val do Jose Esteves (Bueno, Balbín, & Barroso 2016), where the motifs show a more naturalistic treatment akin to that of sites in the eastern

half of the Iberian Peninsula (Figure 4.3B). The slabs from Fariseu have been dated by thermoluminescence to *c.* 10,800–11,800 years ago by stratigraphic association (Aubry et al. 2010). Examples of this kind of engraving consisting of thin lines, both for outlines and infilling, can also be seen at Siega Verde (Salamanca, Spain) near Foz Côa (Bueno, Balbín, & Alcolea 2008). Here, the finely incised images are superimposed over Upper Palaeolithic engravings. All of the above sites of northern Iberia have been attributed to Rousot's Style V because of their stylistic similarities (Bueno, Balbín, & Alcolea 2008). Of major interest along and across these regions is the evidence for artistic continuity from pre-Magdalenian to Epipalaeolithic times and thus for perseverance-with-change in aspects of Upper Palaeolithic traditions.

Along the eastern coast of the Iberian Peninsula, increasing evidence for a late survival of Late Magdalenian graphic conventions is coming to light. In Mediterranean Spain, these late conventions are referred to as belonging to the Epimagdalenian—early postglacial times—and are associated with archaeological deposits dated to *c.* 13,700–11,500 cal. BP (Villaverde et al. 2012). They include both portable objects and engraved and painted rock art sites. Incised slabs have been known since the mid-twentieth century: at Sant Gregori, Abric del Filador (Fullola, Viñas & García-Argüelles 1990), and Molí del Salt (Martí et al. 2002) can be seen examples of animal depictions with stylistic traits akin to those of Style V described earlier from France and Iberia, including the characteristic elongated animal bodies and striated infills and geometric motifs made of thin parallel and subparallel lines. Some of these figures show formal affinities with French examples, but they resemble also the art of El Parpalló and other Upper Palaeolithic sites of that region. A group of open-air sites with incised engravings and some paintings from the northern Castellón province (Martínez, Guillem, & Villaverde 2008) has been considered to be in the same style as the art on the slabs of Sant Gregori and Molí del Salt. In this context, the most significant site is Abric d'en Melià (Martínez, Guillem, & Villaverde 2003, 2008), where Iberian ibex and stags were engraved with slender lines, with conventions of elongated bodies, long necks, striated parallel-line infills, triangular heads, and an absence of anatomical detail on the legs, all conventions that closely resemble Rousot's Style V (Figures 4.3C, 4.3D).

ROCK ART OF MESOLITHIC EUROPE

The graphic arts of the period following the earliest stages of the Holocene (*c.* 11,000–8000 cal. BP) and before the arrival of Neolithic settlers to the western Mediterranean remain poorly known. This paucity in knowledge could be a result of difficulties in dating open-air rock art. Nevertheless, a number of interesting art assemblages have been attributed to Mesolithic cultures, although further investigation is required to better understand this early post-Upper Palaeolithic art across Western Europe.

A case in question is the Fontainebleau Massif rock art complex, where a group of sandstone caves contain engravings of a range of ages. Apart from a small number of

Upper Palaeolithic-style engravings, most of the art is Mesolithic in age (Guéret & Bénard 2017), although it is likely that here the caves were also used during Neolithic to very recent times. The Mesolithic images are mainly geometric motifs such as grids and, it seems, include anthropomorphic figures. They were deeply engraved into the rock. Within the caves, almost every available space was filled with overlapping engravings, creating a sense of *horror vacui*, quite similar to the use of space in some slabs and cobbles of the Epigravettian and Azilian.

Several Mesolithic rock art assemblages are known from the Iberian Peninsula. One of these is Cueva de la Cocina, in Valencia. This is a key site as it allows us to understand formal temporal changes for eastern Iberia. A number of incised slabs were excavated from late Mesolithic levels, dating to just before the appearance of Neolithic pottery. These limestone slabs are completely infilled with engraved lines, sometimes on one face only, sometimes on both. The engravings consist mainly of straight parallel lines forming bands, or converging radiating lines. Some of these designs form symmetrically arranged, angled parallel lines that extend beyond the margins of a central, striped band (Figure 4.4A, see colour insert 1). These designs are reminiscent of Epigravettian and Mesolithic ribbon-shaped motifs and of grids in the Fontainebleau caves (Martini, Baglioni, & Poggiani Keller 2009; Mattioli 2006). The geographically widespread use of these kinds of design suggests long-distance cultural spheres dating to Mesolithic times, similar to the networks used for the dispersal of personal ornaments across Western Europe (Newell et al. 1990).

Large groups of engraved sites in western Iberia, near the contemporary border between Portugal and Spain, preserve a long-term sequence involving motifs and artistic conventions that range from the Upper Palaeolithic to the Bronze Age. The reutilization of the same areas and panels for such a long period of time has been considered as proof of the persistence of hunter-gatherer traditions (including megalithic practices) well into the Neolithic (Bueno et al. 2010). The most important of these sites are located in the Tagus and Guadiana River basins, both of which have now seen the construction of dams. While the Upper Palaeolithic works of art in those basins may have parallels in the region of Foz Côa, those attributed to the Epipalaeolithic exhibit a range of distinctive features unlike any described earlier, although slender and elongated depictions of animals appear to be in common (Gomes 2007: 91). Most of these motifs were pecked on horizontal slate boulder surfaces and are characterized by oval shapes infilled with thick parallel lines or grids, small heads, schematized antlers and horns, and short legs. Similarities, and therefore social connections, with Levantine art have been suggested for the more naturalistic examples, while more schematized animals with large globular bodies (Collado 2006) have also been compared with some of the less characteristic of the animal depictions found in Levantine art (Collado & García 2011). Many of these more naturalistic motifs are associated with thinly incised geometric designs.

The Levantine art of Mediterranean Iberia is probably the best-known rock art style of Mesolithic Europe, despite its actual age still being uncertain. Levantine rock paintings are a key to understanding the purported increasing complexity of post-Upper Palaeolithic artistic symbolism in Western Europe. It is also associated with the

spread of new artistic styles introduced into the western Mediterranean by Neolithic seafarers.

Levantine Rock Art: A Junction of Symbolic Worlds

Several hundred open-air rock shelters are found across the eastern half of the Iberian Peninsula, from the Pyrenees to the southern Mediterranean coast. Here, thousands of paintings are found in upland sites. Levantine-style rock art includes animal depictions and human figures variably stylized. There is a high degree of formal variability that is likely to indicate a range of regional particularities and to relate to the long duration covered by Levantine art. One of this broad and poorly defined style's most characteristic features is the dynamic stances of both the individual figures and of the complex scenes that sometimes contain dozens of anthropomorphs and zoomorphs. These scenes vividly render various aspects of social life, including scenes between people and between people and animals. Hunting and war scenes are well-known examples, but other kinds of interactions are also represented, such as foraging scenes, the moving of camps, and violent acts (e.g., executions, people being restrained, dismembered bodies) (López-Montalvo 2015). Less common are dances, child-feeding, and childbirth scenes. Animals tend to be naturalistic, with stylized bodies, necks, and legs. A detailed rendering of the anatomy of animals is one of the main features of this style, paying attention, for example, to the annual growth of the antlers of deer. Five broad taxa (Iberian ibex, red deer, aurochs, horses, boar) make up more than 95% of the animals represented. Among the zoomorphs, males are more often depicted than females. On the other hand, the human figures are depicted less naturalistically than the zoomorphs, and clearly identifiable females are less common than males, although the sex of many motifs was not depicted. Archers are the most common type of human figure, as well as often being the main characters of scenes.

Levantine art is essentially a pictorial style, with the exception of some groups of engravings discovered in recent years in Barranco Hondo (Utrilla & Villaverde 2004) and other sites. Levantine paintings were primarily painted in red and include a range of infill types, ranging from solid area infills, partial infills, and striated infills to simple outlines without infilling. Striated infills are reminiscent of the technical features of Rousset's Style V and Epimagdalenian engravings (Viñas, Rubio, & Ruiz 2010; Bueno, Balbín, & Barroso 2016). These shared technical traits and motifs have been argued to signal cultural connections between Style V, Epimagdalenian, and Levantine paintings (Figures 4.4B, 4.4C, see colour insert 1).

The discovery of Levantine-style engravings at Barranco Hondo (Teruel, Spain) was a major surprise. For decades, Levantine art had been considered by most researchers as a painting style, ignoring the incised outlines that were subsequently painted following Levantine conventions, for example, those of Albarracín and El Cogul (Cabré 1915). At Barranco Hondo, Levantine-style human and animal engravings are infilled with incised lines and scratches. Newly found engravings are confirming that incisions were

probably in use during the earlier phases of this style. At Abric de Llaberia IV (Tarragona) (Viñas & Sarriá 2010), a group of deer with striated infilling, long necks, small triangular heads, short and undetailed legs, and slightly elongated bodies are thought to be of the Levantine style (Viñas & Sarriá 2010). These deer have similar features to the animals of Barranco Hondo and to a small hind from El Cogul (Viñas, Rubio & Ruiz 2016). Some authors have proposed close similarities between these Levantine-style engravings and those attributed to Roussot's Style V at Foz Côa and Siega Verde, and even with Epimagdalenian motifs of Mediterranean Iberia (Bueno & Balbín 2012; Mateo 2011). Two other rock art sites with incised engravings of animals and abstract motifs and with Levantine paintings, Cañada de Marco and Abrigo de los Borriquitos (Teruel), are currently under study. The engravings of these two rock shelters are technically and formally similar to those attributed to Levantine art, Epimagdalenian, and Style V. Here, patterns of superimposition show that engravings are older than paintings and thus that engravings represent a precedent or temporal link that connects Levantine-style paintings with Epimagdalenian and Style V engravings.

This is relevant for the establishment of accurate chronological frameworks for the origin of Levantine art. Upon its discovery at the beginning of the twentieth century, the Levantine style was considered to be of Upper Palaeolithic age (Breuil 1908), but, decades later, Spanish researchers proposed a Holocene timeframe because of the absence of glacial-period fauna in the art (Hernández-Pacheco 1924). Today, we are aware of the absence of such fauna in the art of Mediterranean Upper Palaeolithic sites as well. Since the 1980s, a new paradigm has arisen, one that renders Levantine art contemporaneous with the appearance of 'Schematic' and 'Macroschematic' painting styles (see later discussion) of the Early Neolithic (Martí & Hernández 1988), and, subsequently, that gives it a pan-Neolithic chronology (Hernández 2011). The past few decades have seen an increasing number of researchers supporting such an idea that this art spans much if not all of the Neolithic, although the art's origins remain in question. Its stylistic connections with Epimagdalenian and Style V engravings are argued by some researchers to indicate a Holocene antiquity (Mateo 2011).

A lack of consensus about the age of Levantine art signals the difficulties of reliably dating open-air rock art both here and elsewhere. The direct dating of charcoal paintings is of limited use here, given the scarcity of black pigment art and the small size of the motifs (López-Montalvo et al. 2017). An alternative method that has been applied is the radiocarbon dating of calcium oxalate crusts (Ruiz et al. 2006). These have yielded pre-Neolithic ages at Marmalo III (Cuenca) (Ruiz et al. 2009) and Abric I d'Ermites (Tarragona) (Viñas et al. 2016). Preliminary uranium-series ages for motifs that were thought to be examples of the earliest Levantine art from Cova Centelles (Castellón, Spain) suggest minimum ages that are several millennia older than the Early Neolithic of this region. Many absolute ages are now required to resolve this issue. At the same time, an in-depth revision of superimpositions between Levantine paintings and those of clearly Neolithic pictorial styles (in so-called 'Schematic' and 'Macroschematic' styles) will be necessary (Figure 4.4D, see colour insert 1), especially given that the presence of a small number of cases of Levantine art under more securely attributed Neolithic

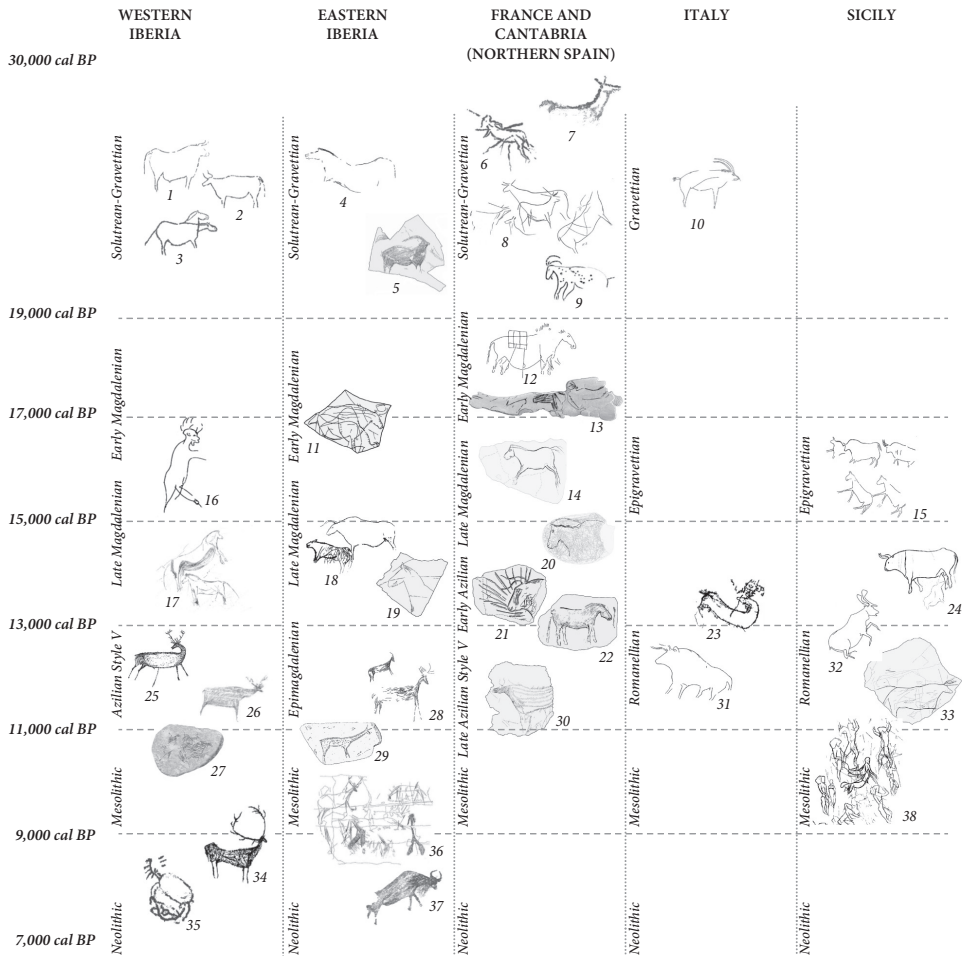


FIGURE 4.5 Continuities and discontinuities in faunal motifs in southwestern European rock art. 1—Wild bull (Fariseu: Baptista 2001). 2—Wild bull (Canada do Inferno: Baptista 2001). 3—Wild bull (Fariseu: Baptista 2001). 4—Horse (Cova de les Meravelles: Villaverde, Cardona & Martínez 2009). 5—Wild goat (Cova del Parpalló, Slab 16113A: Villaverde 1994). 6—Wounded human (Cougac: Lorblanchet 2010). 7—Hind (Cueva de Arenaza: Gárate 2010). 8—Deer (Cueva del Castillo, Alcalde del Río: Breuil & Sierra 1911). 9—Wild goat (Grotte des Fieux: Lorblanchet 2010). 10—Wild goat (Grotta de Paglici: Graziosi 1973). 11—Wild bull and horse (Cova del Parpalló, Slab 19349A: Villaverde 1994). 12—Horse (Lascaux: Glory 1979). 13—Hind (Cueva del Cierro: Rivero 2016). 14—Horse (Limeuil: Tosello 2003). 15—Wild bulls and horses (Grotta Niscemi: Bovio Marconi 1955a). 16—Horses (Ribeira de Piscos: Baptista 1999). 17—Horses (Canada do Inferno: Baptista 2009). 18—Wild bull and feline (Cueva de Los Casares: Cabré 1934). 19—Horse (Cova del Parpalló, Slab 20115: Villaverde 1994). 20—Horse (Grotte de la Colombière: Paillet & Man Estier 2010). 21—Wild bull (Rocher de l'Impératrice: Naudinot et al. 2017). 22—Horse (Rocher de l'Impératrice: Naudinot et al. 2017). 23—Deer (Darfo-Boario Terme, Rocce 34A: Anati 1982). 24—Wild bull (Romito shelter: Graziosi 1973). 25—Deer (Vale do Cabrões, Rocha 1: Baptista 1999). 26—Deer (Val de Jose Esteves: Baptista 2008). 27—Deer and other animals (Fariseu: García & Aubry 2002). 28—Deer and wild goat (Abric d'en Melià: Martínez, Guillem & Villaverde 2008). 29—Hind (Sant Gregori del Falset: Vilaseca 1934). 30—Wild bull (La Borie del Rey: Coulonges 1963). 31—Wild bull (Grotta Romanelli: Acánfora 1967). 32—Deer (Grotta dell'Addaura: Graziosi 1973). 33—Wild bull (Grotta di Cala dei Genovesi: Graziosi 1956). 34—Deer (Cachão do Algarve: Gomes 2007). 35—Deer (Molino Manzánéz: Collado 2006). 36—Deer and human figures (Barranco Hondo: Utrilla & Villaverde 2004). 37—Bull (Peña del Escrito I: Ruiz 2017). 38—Human figures (Grotta dell'Addaura: Graziosi 1973).

images has been crucial to the identification by some researchers of Levantine art as exclusively Neolithic art. The vivid depictions of Levantine scenes offer unique clues into the social world of the artists, but a reliable chronological framework is required before the artworks can be used to shed light on the interactions of hunter-gatherers and Early Neolithic settlers in the western Mediterranean.

CONCLUSION

For decades, rock art specialists have imagined a fundamental stylistic discontinuity at the end of the Upper Palaeolithic: it appeared as if the Upper Palaeolithic traditions of rock art had suddenly vanished without a trace. Today, there is increasing evidence by which to connect Late Magdalenian depictions with those of subsequent early Epipalaeolithic peoples in France, Italy, and the Iberian Peninsula (Figure 4.5). This period of transition includes shared motifs and techniques—in particular engraved animal depictions and geometric motifs—across a broad swathe of Mediterranean Europe.

The application of Rousot's Style V to some Iberian rock art assemblages is putting into question previous assumptions about regional rock art sequences and opening new avenues of enquiry by which to reassess stylistic connections between painting and engraving styles that were previously not thought to be related. In this sense, Levantine rock art, with its considerable number of sites and wide geographical coverage, appears to be a key to understanding how geographically disparate Holocene traditions may have been connected socially. The impacts of farming and animal husbandry on the last foragers of Europe is currently a key topic of research across much of Europe. Rock art can provide an independent yet complementary source of information about this period and the interregional processes at stake (Olalde et al. 2015; Szecsenyi-Nagy et al. 2017). Nevertheless, additional research into the absolute age of the art and stylistic and chronological connections between rock art assemblages at a regional scale are now required to achieve these aims.

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