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Art—Paleolithic

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Abstract: In light of recent archaeological discoveries in Africa, scholars in a growing number of disciplines are reviving interest in Paleolithic (Old Stone Age) art. Their debates address fundamental world history questions that involve the origins of human art making; the physical, mental, social, and cultural conditions that made it possible; and the fact creating art has endured and become increasingly integral to our existence.

Humans have practiced the visual arts in whatever part of the globe they came to inhabit. Within the context of world history the earliest manifestation of these arts in the Paleolithic era merits attention. The basic questions of when and how the visual arts had come into being raised considerable interest among students of art history, archaeology, and anthropology in the decades surrounding 1900. But for most of the twentieth century discussion about the earliest art forms was relegated to the margins of academic concern, due in part to the highly speculative character of the various theories that proposed to account for them. Today questions concerning Paleolithic art have become topical again, although speculation remains. One important impetus to rejuvenating the

field are the archaeological discoveries that have recently been made in Africa. These discoveries prompt us to completely reconsider early artistic behavior in terms of both time and place. Various new theories attempting to explain the emergence of art making add excitement to the field. This article introduces some of the latest developments in Paleolithic art studies.

The Beginning of Aesthetics and Meaning

The Paleolithic era, or Old Stone Age, starts when humans begin making stone tools, some 2.5 million years ago. The art historian David Summers has provocatively suggested that art history, too, starts at this moment. Whatever art is, he theorizes, it refers to something that is made—it is an instance of what he calls “facture.” Rudimentary as the earliest stone tools from East Africa may be, they do present the first material evidence of the human capacity to transform a medium, in this case to shape a stone by working it with another. By employing the qualifying term *art*, however, we usually imply additional characteristics, most frequently either “aesthetics” or “meaning,” and quite often both. “Aesthetics” requires that an object have a captivating appearance for it to be called art. Visual artistic behavior then refers to such activities as modifying human bodies and objects so as to give them heightened visual interest by means of shape, color, or line. When emphasizing “meaning,” we require an art object to have referential content (which may in itself be captivating). Artistic behavior then refers to such activities as drawing, painting, sculpting, or otherwise creating visual stimuli that evoke perceptual and/or semantic referents—a bird, a deity, the concept of ten, and so on—in a human beholder. Clearly the boundaries between these two analytical sets of activities are often hard, if not impossible, to establish, as when modifying the human body’s appearance implies both aesthetic effects and signals social status, or when a visual representation of a deity is made to look as handsome, or as fearsome, as possible.

From around 1.4 million years ago onward, early humans started to produce a new type of stone tool, the so-called hand ax. By 500,000 to 400,000 years ago, some of these pear-shaped artifacts displayed a striking symmetry, both en face and in profile. Although the imposed symmetry allowed the object to sit comfortably in the hand, some scholars argue that the

symmetrical design went beyond utilitarian requirements and introduced an aesthetic element. In addition, the material from which these exquisitely crafted objects were made seems to have been carefully chosen, partly for its visual effect (often glistening stone, exceptionally with a fossil in the middle of the finished product). Although we will never be sure of the impact these objects had on contemporary viewers, the symmetrical hand axes may have been the first material evidence of the human tendency to create objects that command attention through their visual qualities.

These hand axes, however, were already disappearing from the archaeological record when “anatomically modern humans” arose in Africa some 200,000 years ago. The creation and use of art is especially associated with this new species, *Homo sapiens*. Nonetheless, until very recently research suggested that we had to wait until some 30,000 years ago before modern humans became involved with “art and personal ornamentation” after arriving in Europe. New evidence continues to revise this picture considerably.

Finds from the Blombos Cave

Recent finds from Blombos Cave, a coastal site at the southernmost strip of the African continent, are central to present-day discussions on early artistic behavior. Excavations led by Christopher Henshilwood have yielded, among other things, a piece of flattened ochre showing cross-hatched marks that appear to be framed by incised lines. When the finding was announced in late 2001—the engraved Blombos piece dated to about 75,000 years ago—archaeologists considered it the earliest unquestionable example of a human-made geometric pattern known so far. Its discovery led to considerable attention in the popular press. Newspaper headings hailed the Blombos ochre as “the world’s oldest art object,” and it was claimed that because of this find “art history doubles”—an assertion referring to figurative cave paintings of Chauvet in southern France, estimated to be some 32,000 years old. Meanwhile in 2009, findings were published about additional engraved pieces of ochre from Blombos, the oldest dating to some 100,000 years ago.

We do not know whether the geometric patterns from Blombos were created to please the eye. Scholars observe, however, that in order to make sense of their visual environment, humans

long ago evolved to become sensitive to such features as straight lines and repetitive patterns.

Purified versions of such geometric features would then hyper-stimulate the brain and increase the pleasure that follows the detection of visual regularity. The brain's innate response to visual patterning might then shed light on why humans started creating geometric designs, once the prerequisite motor and mental capacities had developed.

Some scholars, however, see the geometric patterns from Blombos predominantly in terms of symbolism, as a form of an intentional visual referencing that would represent a major step in human cognitive evolution, especially if the relationship between signifier and signified is established on a conventional or arbitrary basis (that is, when it is "purely symbolic"). Although what the designs might refer to remains unclear, this symbolism would demonstrate that the Blombos people were capable of "abstract thought," and that they were able to store, as well as retrieve, information outside the brain. The mental capacities involved are in themselves often held to presuppose the existence of syntactical language, not so much because it is similarly symbolic but rather because language would be required to establish link between the engraving and its stipulated meaning.

Adherents of a symbolic reading of the Blombos ochre also draw attention to another find in the cave: some forty deliberately perforated estuarine shells (*Nassarius kraussianus*) that show signs of having been strung and worn as beads. Archaeologists, inspired by studies in ethnography, almost universally regard such beads as symbolic and emphasize their social role in signifying individual and collective identities. Beads may signal the wearer's age, kin group, marital status, and so on, thus visually marking and accentuating social differentiations.

When the discovery of the Blombos shells was first announced in 2004, it was considered as spectacular as that of the ochre, in that generally the perforated shells, likewise dated to 75,000 years ago, were held to have almost doubled the age for human bead production. This led to claims that the Blombos beads were too anomalous to allow significant conclusions to be drawn about human behavior during the time period concerned. Meanwhile, deliberately perforated shells, some

of which are ochered, have been discovered in a cave in Taforalt, Morocco, and they have been firmly dated to some 82,000 years ago. Excavations in the cave continue with findings of shell beads that are 86,000 years old. A few other perforated shells from northern Africa and adjacent parts may even be older. Interestingly, all these beads are made from *Nassarius* shell, as are the Blombos beads from southern Africa, and they were found up to 200 kilometers (about 124 miles) from the sea, implying transport and probably exchange or trade.

Although archaeologists consider beads to be symbolic, in describing their probable use in necklaces they do use terms like “ornament” or “decoration,” implying that the wearing of beads also had an aesthetic effect. Indeed, the shells used as beads in Paleolithic contexts exhibit visual qualities such as bright color and luminosity. A repetitive pattern emerges when similar-sized beads are strung together; alternation of color might add to the pattern as well. Aesthetic and symbolic functions do not rule each other out, and may in fact be mutually strengthening.

Individuals who managed to secure particular types of shell and were dexterous enough to make them into beads by means of perforation—a feat not easily accomplished by present-day experimenters—may have worn these precious possessions themselves, as a form of visual display demonstrating self-awareness. They might also have presented them to others, for example in the context of courtship; beads could as well have been instrumental in creating and maintaining intergroup contacts. If worldwide practices today are anything to go by, the wearing of shells or other pendants might also have early acquired a protective function, or served as a talisman to bring good luck.

As do some older perforated shells, four of the Blombos beads show traces of red ochre, a possible result of deliberate coloring or perhaps due to the shells having been worn on ochered bodies. Ochre is found in large quantities at African archaeological sites associated with anatomically modern humans, although its first use predates the arrival of *Homo sapiens* by at least tens of thousands of years. Some pieces of ochre have clearly been rubbed against surfaces. Research suggests that ochre might have been used for preparing hides, for medicinal reasons, or as

an adhesive. Many archaeologists make a more popular “symbolic” interpretation, however, assuming that ochre was applied especially to human bodies in ritual contexts. Although this interpretation is mainly based on contested parallels with present-day hunter-gatherers, ochre is likely to have had some “significance” for early modern humans; its use in burials, for example, is attested from ca. 100,000 years ago onward.

Iconic Representation

The application of ochre to surfaces would at some point also result in geometric and figurative images. Figurative imagery brings us to a subject that some call “iconic representation”: the two- or three-dimensional rendering of humans and other animals, or, to be more precise, the representation of things resembling those in the external (or imaginary) world(s)—fauna especially, but also flora, topographical features, built environments, and other human-made objects.

Specialists seem to agree that producing and perceiving three-dimensional figurative images takes less exacting cognitive ability than creating and making sense of two-dimensional iconic depictions. To understand such phenomena, consider what we presently know about the first human creation of figurative or iconic images in the round: as yet no unambiguous evidence exists that early modern humans in Africa produced three-dimensional figurative imagery, although the few indications we do have give some credence to the speculation that they might have done so using such perishable, nonrecovered, but more easily modified media such as mud or vegetal materials including wood. Similarly for this period, we lack information on any ephemeral forms of modifying the body’s appearance, involving, say, flowers, feathers, and plaited fibers (but also hairdressing), or about such possible practices as drawing in, and perhaps with, sand.

Two controversial modified stone objects can serve as examples of early iconic representation, both dating, in fact, to before the arrival of the anatomically modern humans we presently conceive. One is an object discovered near the Moroccan town of Tan Tan, found in layers that are provisionally dated to between 500,000 and 300,000 years ago. The so-called Tan Tan figurine is a small stone whose natural shape resembles that of a human being. Some of the

object's natural grooves, which are in part responsible for its anthropomorphic appearance (e.g., a groove separating the "legs"), seem to have been accentuated artificially in what is interpreted as an attempt to enhance the human semblance. Interestingly, red pigment appears to have been applied to the object's surface. The second, the "Berekhat Ram figurine" found in present-day Israel in an archaeological context dated to 233,000 years ago, presents a similar but even more contentious case of semi- or proto-sculptural activity.

Exceptional and controversial as these objects may be, they indicate that hominids have long been capable of discerning human features in natural objects. The oldest specimen to-date is a naturally weathered pebble resembling a hominid face that was found at a three-million-year-old occupation site in Makapansgat in South Africa, probably having been brought there from a nearby riverbed. Given humans' evolved sensitivity to the visual appearance of the human body, particularly when choosing a mate, it is not all that surprising that their increasing capability to modify materials eventually led to the further elaboration of objects bearing a natural resemblance to human features. The late arrival in hominid evolution of this type of behavior, however, should warn us not to think too lightly of the combined capacities involved.

Natural objects suggesting the shapes and outlines of animals, such as cave walls, appear to have held a similar appeal. Apart from European cave paintings, we may rely for evidence here on a 2006 report about a large piece of rock found in a cave in the Tsodilo Hills in Botswana that resembles the body and head of a python. The surface of the rock shows hundreds of artificial indentations that might have been applied to evoke a snake's scales. The indentations appear to have been made by stone tools excavated in the cave, and which are provisionally dated to more than 70,000 years ago.

"Out of Africa"

Somewhere between perhaps 80,000 and 60,000 years ago, modern humans left Africa to colonize the rest of the world (where they would gradually replace earlier humans, such as *Homo neanderthalensis* in Europe and descendants of *Homo erectus* in Asia). Following a coastal

trajectory, groups of humans are likely to have migrated along the present-day Arabian peninsula via India to Southeast Asia and on to Australia, a continent that in all likelihood had not yet been populated by hominids. Other migrants, at some point turning north, would colonize Eurasia, following river courses at first.

In Australia, where modern humans arrived perhaps some 50,000 ago, shell beads in all likelihood continued to be worn, with the oldest finds so far including perforated shells that are dated to more than 30,000 years ago. From around this time we also have burials containing human bones covered with ochre. Red ochre was used as well for what is claimed to be the oldest evidence for rock painting in the world today: an ochered piece of rock, found in Kimberley, in northwestern Australia, a region famous for its rock paintings, and dated to around 40,000 years ago.

Is this indeed the first evidence we have of humans applying paint to rock? If so, could this mean such activity developed only after modern humans had left Africa? Africa's oldest paintings yet discovered were found in a cave in Namibia, where images of animals appear on slabs of rock. The paintings are traditionally dated to approximately 28,000 years ago. Recent scholarship suggests, however, that the images may in effect be some 60,000 years old. If so, this increases the possibility that Africa is the birthplace of two-dimensional figurative imagery. This would suggest in turn that the ability to produce such imagery might have been part of the neurocognitive (although not necessarily behavioral) repertoire of modern humans moving out of Africa.

For the oldest indisputable examples of three-dimensional imagery discovered so far we must turn to western Eurasia. Recent excavations of the earliest levels at the site of Kostenki, on the river Don in present-day Russia, suggest that modern humans first arrived in this part of the world at least 45,000 years ago. The excavations have yielded shell beads and a worked piece of mammoth ivory that may represent a human head. Less ambiguous are recent finds from Vogelherd in southwestern Germany, including a small ivory figure of a woolly mammoth and an animal interpreted as a lion. The figures date to between 38,000 and 32,000 years ago. From roughly the same period are the figures that were discovered a few years back in Hohle Fels cave, also in

southwestern Germany. Here archaeologists dug up three small ivory carvings: the oldest known representation of a bird, the head of an animal resembling a horse, and a sculpture interpreted as therianthrope (combining feline and human traits), which is compared to the roughly contemporaneous, but much larger figure known as the “Lion Human” from Hohlenstein Stadel, found in 1939.

Until very recently, the so-called Venus figurines from Upper Paleolithic Europe, typically representing corpulent or obese women, were thought to be a somewhat more recent phenomenon, with the most famous example, found in Willendorf in 1908, being dated to about 25,000 years ago; this limestone figure, fitting in the palm of a hand, is covered with red ochre. In 2009, however, archaeologists announced the finding of an ivory figure of a headless woman, with large breasts and buttocks, that was made at least 35,000 years ago and that might in fact be several millennia older. This figure, from the oldest level of Hohle Fels Cave, is considered the earliest indisputable representation of a human body known to date. The function and meaning of the “Venus figurines” remains unknown, with speculations ranging from fertility symbols to early forms of pornography.

Like their relatives who migrated to Australia, the newly arrived modern humans in Europe not only made shell beads (as well as other beads and pendants) but their activities included engraving and painting images on rock. Depictions of animals and geometric designs found in Chauvet Cave in southern France, the earliest of which are assumed to be some 32,000 years old (which makes them roughly twice as old as the famous examples of Lascaux and Altamira), attest to this, as do other findings. Until the early years of the twentieth-first century, Europe was in fact considered the cradle of human artistic behavior, with scholars employing such expressions as “creative explosion” for what was regarded as the sudden advent of bead making, painting, and sculpture in this region some 30,000 years ago.

Farther afield, in the site at Mal'ta, to the west of Lake Baikal in Siberia, archaeologists found ivory sculptures depicting the human form and birds, which are estimated to be some 23,000 years old. The majority of the anthropomorphic figures seem to represent women, some wearing

clothing. Most of the avian sculptures depict birds in flight (they are interpreted as swans, geese, and ducks). Like some of the human figures, they are perforated. By analogy with nineteenth- and twentieth-century Siberian hunter-gatherer practices, the perforated sculptures have been interpreted as “spirit helpers” that were attached to a shaman’s costume.

Interpreting Paleolithic Art

Other Paleolithic art forms, too, are today interpreted in the context of shamanism, with special reference to David Lewis-Williams’ intriguing theory on the beginnings of human image making. The research published in his *The Mind in the Cave: Consciousness and the Origins of Art* (2002) suggests that the images characteristic of Paleolithic art, namely animals and geometric designs, find their origin in hallucinations or “altered states of consciousness,” especially as experienced by “shamans” in a state of trance (induced by ritual, sensory deprivation, or psychotropic drugs), and thus that the first human images were created to “fix” shamans’ hallucinatory experiences.

In proposing his theory, Lewis-Williams draws on shamanistic practices found today in hunter-gatherer societies all over the world. He argues that present-day humans have basically the same brains as their Paleolithic ancestors tens of thousands of years ago. Now when we perceive the world it is ultimately the brain that generates the images we experience. The brain may in fact produce images even in the absence of external visual stimuli, as in mental visualization and perhaps more vividly in dreams or other altered states of consciousness (but also, for example, when one slightly pushes the eyeball, resulting in the visual experience of various geometric or abstract shapes in different colors, something experienced more intensely by people suffering from migraine).

Research also suggests that images, specifically of animals, which were generated and experienced by the brain in trance-like conditions, would have been interpreted as pertaining to phenomena existing on another plane, as glimpses or visions of beings that populated “alternative realities.” Indeed, Lewis-Williams argues that the modern human brain is not only able to self-generate images, but it is also able to remember these and to share and discuss them with others

through both verbal language and the visual images that serve as records of what shamans powerfully experienced when sojourning in “other realms.”

Shamanistic rituals can involve not only experiencing spirits in the form of animals, but the shaman’s transformation into such a spirit being. This might shed light on the occurrence of therianthrope images in Paleolithic art. Some researchers object to such a theory, however, saying that not all artifacts interpreted as therianthrope represent actual mixtures of humans and other animals: the so-called Lion Human of Hohlenstein Stadel, for example, might as well be a depiction of a bear standing upright. Furthermore, some of these images, which are said to be actually quite rare, may in fact render a human in disguise, pretending to be an animal in the context of the hunt. But scholars also argue that the scientific literature on hallucination is less supportive of Lewis-Williams’ neuropsychological theory than suggested.

R. Dale Guthrie, a specialist in Arctic biology, presents an alternative account of Upper Paleolithic art but does not, however, address the preconditions or origins of human image making. Guthrie, focusing on Ice Age Europe, proposes that the images of animals on cave walls, but also on portable objects, result from their creators’ fascination with the local wildlife. Countering the prevailing “magico-religious paradigm” in prehistoric art research, Guthrie posits that many images might in fact have been made by male adolescents who were inspired by what he calls “testosterone moments,” such as the excitement of the hunt or the confrontation with large predators. This profane perspective on Paleolithic art making is also deployed to elucidate the sexual imagery frequently found in cave paintings, rock engravings, and other artistic expressions. Featuring mainly women and female sexual organs, this prehistoric “graffiti” could present young men’s sexual fantasies or experiences. Guthrie’s views share elements with the interpretation developed by John Onians, who bases his analysis on recent neuroscientific findings.

Paleolithic art has always been and continues to be a fascinating field of competing interpretative theories. One currently debated topic concerns the question of whether or not early art forms had an “adaptive function,” meaning whether or not artistic behavior contributed to the

survival and reproduction of those who practiced it. Could it be that, once having come into existence, the tendency to create visual art was able to spread because it turned out to confer some evolutionary advantage on individuals or groups so inclined? Among the proponents of an adaptationist perspective on art, a distinction may be made between those who favor an explanation of art's role in the competition among individuals (specifically for mates, in which case art would serve as a way of showing off one's skill and creativity) and those who argue for the social benefits of art's presence, such as its effects on group solidarity, cooperation, and the intergenerational transmission of knowledge (for example, by making messages more memorable). Scholars who deny that visual art may be assigned an adaptive value suggest that it evolved as a byproduct of capacities and tendencies that in themselves are probably adaptive, such as the ability to create and manipulate tools and the positive innate responses to certain colors, lines, shapes, and subject matters that better helped humans to survive and reproduce.

The Future of Paleolithic Art Studies

After decades of relative neglect, Paleolithic art and the concomitant issue of the origins of art are today hotly debated by specialists from an ever-growing range of disciplines, including archaeology, art history, and anthropology, as well as evolutionary biology and neuroscience. While new archaeological discoveries are being published at an increasing rate, this interdisciplinary group of scholars is bringing new conceptual tools, interpretative frameworks, and research methods to bear on a fundamental set of questions in world history: when and where did human beings begin making and using visual art, what conditions made this behavior possible (physical, mental, social, cultural), why has this artistic behavior been retained in human history, and how has art increasingly become integral to our existence?

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