

The Concept of Artification

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The ancient markings found on boulders, cliff walls and in caves are usually referred to as “rock” (or “rupestrian” or “parietal”) *art*. But what does “art” mean in this context—or indeed in any other? If the term is examined carefully, it reveals a landmine of irrelevant and confusing assumptions. As recently as the nineteenth century the term “art” could be applied to almost anything. It meant skill, in the sense of fully understanding the principles involved in an endeavor—such as the art of Japanese cooking, the art of boat-building or—today—even the “art” of medical diagnosis or psychoanalysis. While skill is involved in all these disciplines, it is evident that the term “art” also implies that even scientifically based fields make use of intuitive, emotional, and non-rational expertise.

In addition to skill and intuition, other qualities and characteristics pervade ideas about art today:

- *artifice* (something contrived, “artificial” rather than natural, imitative rather than the real thing)
- *beauty and pleasure* (admiration and enjoyment)
- the *sensual quality of things* (color, shape, sound)
- the *immediate fullness of sense experience* (as contrasted with habituated, unregarded experience)
- *order or harmony* (shaping, pattern-making, achieving unity or wholeness)
- *innovation* (exploration, originality, creativity, invention, seeing things in a new way, surprise)
- *adornment* (decoration, display)
- *self-expression* (presenting one’s personal view of the world)
- *a special kind of communication* (conveying information in a special kind of language; symbolizing)
- *non-utilitarian* (made for its own sake, having no function)
- *serious and important concerns* (significance, meaning)
- *make-believe* (fantasy, play, wish-fulfillment, illusion, imagination)
- *heightened existence* (exalted emotion, ecstasy, self-transcendence)

Which of these meanings or connotations are included in our notions of rock art? Philosopher Denis Dutton has offered a “cluster” definition of art considered as a universal cross-cultural category.¹ He lists twelve characteristics, most or all of which he claims will be found in artifacts and performances that are typically called art. Dutton’s list includes features of works of art themselves as well as qualities of the experience of art. These are:

- giving direct pleasure
- skill and virtuosity
- style
- novelty and creativity
- a critical language of judgment and appreciation
- representation
- a special focus or bracketing-off from ordinary life
- expressive individuality
- emotional saturation
- intellectual challenge
- art traditions and institutions
- imaginative experience

Dutton’s characteristics are the result of serious and careful thought, and are worthy of consideration. However, each can be applied to obvious non-art (which Dutton admits), and scholars of rock art will question the applicability of at least some of these, such as pleasure, novelty, representation, individuality, emotional expression, or intellectual challenge in many or all of the markings that they study.

Because of all the baggage this tiny word carries, it is not surprising that most archaeologists who study ancient marks on rocks make a great effort to avoid the term “art” altogether. To them it smacks too much of aestheticism and subjective judgment, connotations that, in their eyes, ultimately render the field of rock art studies “unscientific.” To remedy the stigma, they offer instead substitute terms ranging from simple “pictures” or “images” to such esoteric appellations as “ideomorphs,” “graphemes,” or “symbolic graphisms.” Some scholars point out that the word “art” can be used neutrally (as in “child art” or “chimpanzee art”—and by extension, “*rock art*”) rather than evaluatively (“X is a work of art”). But even this distinction seems useless: why not just say “scribbles” or “paintings” or “carvings” or some other descriptive term and avoid the problematic connotations of the word art?

1. Shifting Focus from Noun to Verb

¹ Dutton 2009.

We advocate continuing to use the term “rock art,” but with a qualification—that “art” be considered as an abbreviation, as it were, of the abstract noun “artification,” from our newly coined verb *artify*. This reconceptualization considers rock markings not as things—objects, images, or works that can be called art—but as the outcome of an activity. This completely new way of thinking about art requires what might be called a Copernican shift in one’s approach to aesthetic matters. Unlike the modern Western concept of art with its elite idea of *beaux arts* or *fine arts*, artification emphasizes the act of making, not the result—an activity that will be described more precisely in the following discussion.

In this book, the act, not the product, of artifying applies to every instance of what is today called rock art. By conceptualizing art(ifying) as a verb, I think we come closer to most languages in the world, which have verbs for individual activities such as drawing, painting, carving, singing, dancing, and so forth, but do not have a noun that refers to these activities as all belonging to a super-category.

Artification refers to *what people do* when they make images, engravings, paintings, and so forth. It is a *behavior* or *process* that allows us to understand rock markings as the result or residue of an activity that—like language and toolmaking—evolved over millennia to help our ancestors adapt to their ways of life as foragers (a term that we use interchangeably with “hunter-gatherers”). Artification is not a method for identifying or interpreting individual marks or styles, which is another, different, matter—one we do not address here.

The concept of artification provides a broader scope and firmer basis for treating the art-like endowments (like dancing, singing, mark-making, etc.) of our species than does the tangled mix of meanings that the concept of art has acquired over the centuries. Questions such as “What is art?” or “Is rock art ‘art’?” can be phrased in other ways: “What do people do when they make art?” “Is this an instance of artification?” In using a verb rather than a noun, the emphasis shifts from labeling the artifact to describing the behavior.

It is essential to understand that the word artification is not a synonym for art or art-making. As used here, the concept of artification rests on the capacity of human beings to make ordinary everyday experience (or “ordinary reality”) “*extra-ordinary*” or special. Although artifying is something that all people, even children, do, it has been overlooked (or underappreciated) by scholars who identify distinctive characteristics of our species. As mentioned in the Introduction, neither the word “art” nor the activity of making art is found in Donald Brown’s list of human universals. Decoration, dance, music, and poetry are represented there, even though they are, like art, categories of things whose precise nature is not always easy to identify cross-culturally. Like rock markings, they are the *results* of the broader, universal capacity, not shown by any other animal, of artification.

The concept of artification arises from the observation that humans everywhere, unlike other animals as far as we know, differentiate between an order, realm, mood, or state of being that is mundane, ordinary, or “natural,” and one that is unusual, extra-ordinary, even “supernatural.” Virtually every ethnographic account of a premodern society anywhere in the world suggests or states outright this distinction. In Native American cultures, for a few examples, Dennis and Barbara Tedlock specifically cite Hopi *a;ne himu* [sic], Sioux *Wakan*, Ojibwa *manitu*, and Iroquois *orende*; they additionally mention “other worlds” of Tewa, Zuñi, Wintu, and Papago.² Some scholars have argued that in many aboriginal and other small-scale societies, the two realms of ordinary and extraordinary interpenetrate and may have done so in the worldviews of our early ancestors.³ This argument is well taken. However, even in the technologically simpler groups that ethnographers have described, people employ special practices that access a supernatural realm, indicating that there is a distinction in thought and behavior between quenching one’s thirst and imbibing a ritual drink, or between walking around in the forest and dancing in thanks to the forest. In the latter cases, ordinary behavior is altered, made special, *artified*.

Artification is not the same thing as cultural transformations of nature. Humans, for example, take raw food and transform it for their use by cooking it. Similarly, they take other materials from nature—fiber, stone, wood, bone, clay, animal skin—and make shelters, tools, utensils, weapons, clothing, and the various other things needed for their lives, such as hand axes from flint or microchips from silicon. Herbert Cole, an American historian of African art, has memorably utilized Claude Lévi-Strauss’s famous title, *The Raw and the Cooked*, by speaking of the raw, the cooked, *and the gourmet*. Artification can be likened to Cole’s addendum. For, in addition to transforming nature by means of culture, humans at some point in their evolution apparently felt that in some circumstances such merely utilitarian transformations were not sufficient. They additionally made their shelters, tools, utensils, weapons, clothing, bodies, surroundings, and other paraphernalia extraordinary or special by shaping and embellishing them beyond their ordinary functional appearance. They “artified” these things, typically when the items or the occasions for their use were considered important.

When did humans begin to artify? Before developing a capacity to make an ordinary thing into something extraordinary, they had to first *recognize* the extraordinary. Of course, all animals know when ordinary reality is no longer ordinary—an unusual sound or smell could signal that a predator is nearby. But beyond reflex alertness to possible dangers, humans at some point began to notice things in their environment that attracted attention for being special in a way that did not call for a reflex response and did not affect immediate survival. About three million years ago, an *Australopithecus* individual perhaps noticed a

² Tedlock and Tedlock 1975: xii-xvi. Correct spelling of the Hopi phrase is *a’ni himu*..

³ E.g. Tonkinson 1978: 96; Hodgson 2012.

“face” in the famed Makapansgat pebble.⁴ Other unusual stones, such as concretions or shiny minerals, are in this category, and it is known that exotic quartz crystals were transported by hominins as early as 800,000 to 900,000 years ago.⁵ Some 250,000 years ago, in what is now England, an archaic human picked up and carried to his or her dwelling site a piece of fossil coral that bore an unusually attractive all-over pattern that today is called “starrystone.”⁶ Other examples of striking fossils or minerals carried from their original locations have been found in occupation sites from many different times and places.

Cognitive archeologists and prehistorians put forth different dates for the earliest examples of art, depending on what they consider to be “art”: cupules, beads, pendants made of perforated shells or bone, incised ocher fragments, bones with engraved parallel lines. The Lower Paleolithic site of Bilzingsleben in present day Thuringia (Germany) is noted for its rich archaeological horizon and engraved non-utilitarian artifacts associated with *Homo erectus* bones in the age range of 400-300,000 years ago.⁷ Its famous elephant tibia artifact with deliberately incised parallel lines in groups of seven and fourteen⁸ was described by archaeologists Dietrich and Ursula Mania, who note that these markings “provide the first unequivocal evidence that *Homo erectus* produced incipient art—thousands of centuries before the advent of Upper Palaeolithic art.”⁹ If we are looking for evidence of artification (rather than art), any of the just-mentioned artifacts will serve.

Perhaps the earliest trace or suggestion of making ordinary things extraordinary is the occurrence of red ocher in hominin occupation sites in southern Africa. In Wonderwerk Cave in the Northern Cape region (also a *Homo erectus* site), every level of the excavation from nearly a million years ago (circa 900,000 to 800,000 years ago) has yielded ocher fragments.¹⁰ It is not known whether these particular bits were used to make ordinary bodies or objects extraordinary, but certainly, over succeeding millennia, ocher—sometimes modified by grinding or rubbing or even being shaped into crayons—is a common find in hominin

⁴ Dart 1974; Bednarik 1998.

⁵ Oakley 1981.

⁶ Oakley 1981.

⁷ Steguweit 2003.

⁸ For photos of the drawn bone fragment, see Meller (2005:12-13).

⁹ Mania and Mania 1988: 91. For photos of additional deliberately incised bone finds at the Steinrinne site near Bilzingsleben, see Mania and Mania (n.d.35). For some reason, the site is not included in von Petzinger’s “world’s largest database of geometric signs” (2016:264.)

¹⁰ Beaumont 1990, 1999. McBrearty (2001) reports ocher mining at 285,000 years ago in what is now Kenya.

sites. Pieces of stone from 125,000 years ago bear ochre markings in Bambata and Pomongwe Caves in Zimbabwe,¹¹ and a “paint processing kit” comprised of abalone shells with ochre residues inside, quartzite tools (to hammer and grind ochre into a powder), oil from seal bones (evidence of marrow extraction for binding the materials), bone implements to turn and lift the paint pastes, charcoal, grindstones, and hammerstones, was discovered in 2008 at Blombos Cave and dated to 100,000 years ago.¹² Dwellers in these early sites may have decorated their bodies, clothing, and other perishable materials with this pigment, although this use remains only conjecture. If they did do so, they were artifying and thus were “artifiers” rather than “artists” (who are generally thought of as possessing the same associations of high skill, originality, and high status as does “art” in the common modern concept).

Although for decades our Neanderthal cousins were said to lack ritual and art, three recent discoveries have challenged this assumption. At Bruniquel in southwest France, the opening to a cave that had been naturally obstructed since the Pleistocene was discovered by a fifteen-year-old boy and first explored in 1990 by archaeologist François Rouzaud.¹³ In a large chamber 336 meters from the entrance, he found two annular (ring-like) arrangements composed of broken-off stalactites and stalagmites. Unfortunately, Rouzaud died prematurely in 1999 and access to the cave was restricted until 2013, when a team led by Jacques Jaubert was able to date the regrown tips of the broken stalagmites as being over 175,000 years old, making these constructions the oldest known well-dated fabrications made by humans, and, what is more, the first known incursion into a deep cave by Neanderthals.¹⁴ Whether or not the two rings of broken stalagmites can be called an early example of ritual propensity or art, they are most certainly examples of making a place (in this instance, a remote chamber far inside the entrance to a cave) special—again, of artifiers artifying.

The usefulness of the concept of artification in dealing with early art-like productions is also evident from two paleodesigns attributed to Neanderthal hominins. The first is a zigzag incision on a 47,000 year-old bone fragment recovered from the Mousterian shelter of Bacho Kiro in Bulgaria.¹⁵ The second example is an engraved cross-hatch motif found in Gorham’s Cave in Gibraltar under an undisturbed sediment layer with Neanderthal-made stone tools dated to 39,000 years ago and described by some as resembling a hashtag design or tic-tac-toe board. The significance of the non-utilitarian petroglyph is seen as

¹¹ Jones 1940; Cooke 1963; Klein 1978.

¹² Henshilwood *et al.* 2011.

¹³ Rouzaud *et al.* 1996

¹⁴ Jaubert *et al.* 2016

¹⁵ Bahn and Vertut 1997:25.

definitive proof for the “Neanderthals’ capacity for abstract thought and expression” (Rodriguez-Vidal *et al.* 2014).

Perhaps the most unexpected early mark of all was found in a cache of fossil freshwater mussel shells that had been collected in the early twentieth century at a *Homo erectus* site called Trinil on the bank of the River Solo in Java, Indonesia, and placed in a museum collection. More than a hundred years later, an archaeologist looked through the collection and photographed some of the shells. To his surprise, there were incised zigzag marks on one of them. They have been dated to 540,000 to 430,000 years ago.

Although some paleoarchaeologists have interpreted abstract patterns of this date and kind as key evidence for human symbolic ability (and hence “cognitive modernity”), zigzags and grids are part of the inherent graphic repertoire found in drawings by small children. There is no need to attribute these or similar deep-time paleomarkings to an intellectual capacity for symbolism or abstraction. These markings are more parsimoniously explainable as natural products of the innate universal human predisposition for artification, without invoking symbolism at all.

Such simple, even crude examples of paleoart may not interest theorists who are concerned with the exceptionally skilled cave paintings and drawings that were made much later. However, the motivation for what the later “artists” did and its personal significance may not be substantially different from that of earlier artifiers, or indeed from the artifications of ordinary people in all times and places. Even today, when people care about something—say, an important occasion like a marriage proposal or a significant anniversary—they are often moved to make things associated with it special, unusual, even strange or weird, using materials or techniques that are beautiful, costly, excessive, or otherwise extraordinary. That is to say, artifications, unlike examples of “art,” may be unskilled, unoriginal, or even pedestrian. Not all love poems or holiday decorations would pass the “art” test, but all are examples of artification. Similarly, many markings on rock surfaces are also undistinguished.

2. What Do Artifiers Do?

The concept of artification—art as a behavior, not a thing—was initially developed for explaining the evolutionary origin of performing arts, specifically singing and other forms of music-making, including dancing.¹⁶ Because these arts take place in time, vanishing after their performance, it is easy to think of them as “behavior” in an ordinary as well as ethological sense. Visual art, in contrast, is static (once it is completed). It is not so obvious that it is the product of behavior, yet it can be considered as the lasting residue of the “performance”

¹⁶ Dissanayake 2000b, 2008

of mark-making, which—like singing or dancing--also vanishes when the activity stops.

The extraordinariness of artification is achieved by means of at least five “aesthetic operations” (that will later sometimes be called “proto-aesthetic operations”) used by all artificers (including makers of marks on stone surfaces):

Formalization (a term that includes shaping, composing, organizing, simplifying, forming a pattern or comprehensible whole, rather than leaving the “ordinary” thing—a rock wall, a stone surface—as it is naturally),

Repetition of elements of the marks—lines or motifs—often in a regularized, even rhythmic manner, different from natural marks that may be on the surface,

Exaggeration of lines or motifs, whether by enlarging or deepening them,

Elaboration (or dynamic variation) of lines or motifs, as with stripes, colors, ornamental additions, and, in some instances,

Manipulation of the perceiver’s expectations, as when a mark is made in an unexpected place or strongly contrasts with an adjoining mark.¹⁷

Readers who are familiar with ethological concepts will recognize these operations as characteristics of “ritualized behaviors” as described in writings by ethologists such as Julian Huxley, Irenäus Eibl-Eibesfeldt, Niko Tinbergen, and others.¹⁸ These devices are evident in many animals, even in some birds and reptiles, when ordinary physical characteristics (like feathers, crests, antlers, or tails), sounds, and body movements become extraordinary during courtship and territorial displays.

In ritualized displays by birds, these operations serve to *attract attention* to a (usually male) individual and to *sustain interest* and *create emotion* in a (usually female) observer. I suggest that in humans, the same operations comprise the behavior of artification, with the same effects. The operations are relevant to the behavior of artification in general and its application to mark-making in particular.

3. Why Use a New Term, “Artification”?

The concept of artification provides a fresh, new way to approach the subject of early abstract-geometric mark-making. Shifting focus—from consideration of a

¹⁷ Dissanayake 2009

¹⁸ Huxley 1914; Hinde 1982; Eibl-Eibesfeldt 1989: 439-440; Tinbergen 1952.

lasting artistic end product (the mark) to the vanished temporal activity that brought it into being (a behavior of mark-making)—seems especially appropriate to rock art study. To begin with, we don't have to use the concept "rock art," which cannot help but imply the irrelevant connotations of Western views of art. Indeed, some Native Americans consider the term "art" degrading and/or offensive because it so easily projects Euro-American values and belief systems on imagery they hold sacred and spiritual in character. As archaeologist Polly Schaafsma points out, "they narrowly misconstrue art as a Western concept confined to secular pieces, framed and hung on the walls of galleries and museums, signaling out in particular its commercial properties."¹⁹

The notion of artification allays this sort of criticism by being more inclusive than the Western concept of art, even when the latter is now often routinely applied to non-Western objects and cultural phenomena. Artification refers to a universal human behavior that is more comprehensive than any particular instance of it, rather as the word "language" refers to the faculty of speech but is unconcerned with particular languages or the various purposes to which speaking is put. Similarly, artification can embrace modern Western notions of the arts as being the product of creativity and originality, or as having aesthetic qualities such as beauty, skill, and representational accuracy. *But it need not.* This is not to discount these topics and qualities, but only to say that they are less relevant to early mark-making than to specialist discussions of objects that are typically called "art."

Another advantage of a concept of artification is that looking for the beginning of "art" does not require that one find evidence of symbolizing ability. It similarly has no problem embracing "crudely" or "awkwardly" executed pictographs and petroglyphs composed of the simplest geometric markings. Even the smearing of ochre paste onto an implement or body or the hammering of a simple cupule on a plain rock surface may intentionally make that tool or surface different and extra-ordinary compared to its original, ordinary state—and if so, it is artified. Although such a predisposition may seem rudimentary, I point out that only humans (including preverbal children) do this, they have done it from very early times, and it is the first principle of art-making, even of the most contemporary or sophisticated kind.

It is of course possible to look at examples of non-iconic rock art without caring whether they should be called "art" or "artifications" or, for that matter, anything at all. However, apart from offering a neutral term to describe rock art, we find that the ethological, evolutionary, and cross-cultural framework of the concept offers a fruitful starting point for reassessing some contentious questions of why archaic and other rock markings were made in the first place and what they were for—that is, questions of motivation, function, and meaning. The notion of artification can contribute to long-standing questions in paleoarchaeology

¹⁹ Schaafsma 2013: 4.

about the early human mind, in general, and its mark-making proclivity, in particular.

The concept of artification differs from other approaches to the arts, including rock art, and is supported by the following axioms.

1. Humans are animals.

Understanding our present and past requires a grounding in biology. Ethological and evolutionary thinking are essential to understanding human cognition and behavior. Paleoamericans, like their Pleistocene ancestors, would have been motivated to secure the physical and psychological necessities for their lives: nourishment, health, safety and comfort, status, predictability, sexual partners, healthy offspring, and social relationships that are reliable and reciprocal. Considered in this way, as fundamental hominin needs and goals that arise from basic subcortical emotional systems, it is clear that, even before being able to articulate them in language, the concerns of our ancestors reflected their desire to cope with biological requirements that were uncertain, difficult, and sometimes dangerous to meet.

2. The requirements of several million years of hunter-gatherer life remain active in human psychology.

Although early evolutionary psychologists spoke of the “environment of evolutionary adaptedness”—a time in the Pleistocene past when what is called human nature was being embedded in our genes—it is now recognized that foragers of the past, as well as their recent descendants, inhabit a multitude of environments and cannot be forced into one generic category. Nevertheless, even science writer Nicholas Wade, one of the main proponents of hunter-gatherer diversity, finds overlap, if not identity, noting that the “principal lineaments of human nature are the same in societies around the world, suggesting that all are inherited from a single source.”²⁰ In addition, it is not unwarranted to assume that the ways of life and modes of thought of recent forager and small-scale horticultural societies bear greater resemblance to those of prehistoric individuals than our lives do.²¹ It is reasonable to extrapolate from what we know of recent traditional societies to our speculations about the past.

If we take into account our affective (emotional) value systems, there are regularities (even “universals”) to be found in the psychology and emotional needs of individuals that warrant our speculations about ancestral psychology. Despite differences in stature, body shape, skin color, physiognomy, allergic reactions, and so on, early hunter-gatherers bequeathed to us important traits (a

²⁰ Wade 2006:66.

²¹ Clottes and Lewis-Williams 2007.

“Pleistocene psychology”) that developed and were adaptive over hundreds of thousands of years of forager life.²²

Regardless of the dates one accepts as relevant for describing the behavior of early *Homo sapiens* and its forebears, it seems that they all relied on local resources for subsistence—plants and animals (including fish), as opposed to tilling the ground. As British evolutionist Robert Foley says, there needs to be a term that refers to this way of life.²³

Most anthropologists would agree that despite diverse climates and environmental challenges, the general ways of life of foragers share important characteristics. All live in what have been called “societies of intimates”²⁴ (as contrasted with “societies of strangers,” the larger and more complex groupings that began to develop slowly in different parts of the world around 12,000 years ago and depended on agriculture). Their mode of subsistence as foraging nomads requires a restricted territory and a small group size—in some cases, fewer than 15 people and occasionally as many as 50 to even 150. At either end of this population scale and at all stages in between, individuals have face-to-face acquaintance with each other. There is cultural homogeneity and stability, and an egalitarian social structure with consensual leadership and kinship-based social cooperation.²⁵ In general, technology is not specialized except for tasks that require the physical strength of males, who are also more mobile than females, who bear and tend young.

Other evolutionary adaptations of the forager way of life, some shared with other primates, can also be detected in spontaneous behaviors of infants and children:²⁶ the seeking and establishing of close dyadic (two-way) relationships with adults,²⁷ observable in infant attachment behavior and even earlier in the mother-infant dialogue.²⁸ Another evolved psychological predisposition is for group affiliation and in-group favoritism; and fear of and hostility toward strangers (related to in-group belonging). These behaviors, essential for reproductive success and survival in Pleistocene times, are clearly still evident in contemporary humans who live in a complex, pluralistic world.

²² Dissanayake 2007:784.

²³ Foley 1988:213. Foley also reminds us that although very early hominins may not have been hunters in the same ways as later ones, the former were, in any case, not directly ancestral to modern humans.

²⁴ Givón and Young 2002.

²⁵ *Ibid.*; Boehm 1999.

²⁶ These are described by Bjorklund and Pellegrini (2002:265, based on Harris 1995).

²⁷ Dissanayake 2000a.

²⁸ Dissanayake 1999, 2000a, 2000b.

Mutuality and affiliation are developed and reinforced in play, an evolved behavior, before they are employed in adulthood. Play is one of several features that are not often mentioned in inventories of characteristics that paleoarchaeologists find relevant to a predisposition to make marks. Forager children (and adults) play, and we can easily assume that even the earliest hominins, being primates, also must have played. Playfulness is so obvious as not to require mentioning, although if it is not mentioned, theorists may overlook its implications for adult motivation and behavior.

Similarly, it is obvious that everything needed in forager life is obtained or constructed with one's own body and hands. Although all wild-living animals use their bodies (and their paws, as with raccoons or squirrels), humans are unique among other species and even other primates for their flexible, dexterous hands, left free by bipedalism to develop the precision grip and opposable thumb that make skilled tool making and tool use possible. The untaught and highly pleasurable impulse to use one's hands and explore their many possibilities is unmistakably evident in babies and small children as well as in many contemporary adolescents and adults who feel satisfaction when making or repairing things. Lacking motivation to use one's hands would have been maladaptive to ancestral people.

The hunter-gatherer way of life, then, predisposed people to artify and, what is more, to artify in similar circumstances or for similar reasons. Because sharing and cooperation were necessary, communal relationships were encouraged—coordinated and reinforced through periodic, often frequent, rites or ceremonies. Artifying (as singing, dancing, and elaborating the body and surroundings) is an essential and primary feature of ceremonial ritual. Distinguished archaeologist and prehistorian Jean Clottes, has proposed that the *Homo* species' name, *sapiens* (wise), be replaced with *spiritualis*, because he aptly considers our species' taxonomic name to be “really too optimistic.”²⁹ He suggests that *Homo spiritualis artifex* might be a more appropriate appellation because of the close bond between spirituality and art.³⁰

3. All humans alive today and from at least 100,000 years ago are members of the same species, Homo sapiens.

If raised from infancy in a specific culture, each of us would have grown up to be participating members, accepting the values and customs of our group. Differences in beliefs and practices of one group can seem vast to people of another, but all arise from the same evolved human nature. Underlying the

²⁹ Clottes 2016:29

³⁰ Ibid.:34.

variety of cultures are diverse but universal commonalities.³¹ Just as each language is different but all humans are predisposed to learn to speak, the arts of a society are different but all humans are predisposed to artify and will do so if the surrounding culture enables it.

4. Artification is an adaptive (evolved) behavior.

That is to say, it is a universal behavioral predisposition like other characteristic behaviors such as language, tool-making, attachment in infants, maternal care, adult pair bonding, group living, ritual/religious practices, warfare, ethnocentrism, and many other behaviors that are found in all cultures. Artification includes appreciation (what has been called “aesthetic experience”) but is based on active making and participating. Like other evolved behaviors, it arises from brain activity whose biological purpose is to motivate and reward appropriate responses to one’s environment—to things that are good (positive) or bad (negative) for our survival and reproduction.

5. All humans are cultural creatures.

Being acculturated is biologically predisposed. Adult psychology and experience (of arts or anything) grow from and build upon inborn capacities, motives, and preferences.

6. Preverbal affective and aesthetic mechanisms continue to influence human cognition and language.

They are also critical, if neglected, components of scientific studies of the arts, including rock art. Typically, scientific studies of our ancestors are concerned with cognitive capacities of the mind. Yet nonverbal and emotional concomitants of forager life are equally influential and relevant to the motivations for mark-making as those described in axiom 2—the pleasure to be found in play and hand use.

For example, it is clear (but rarely mentioned) that foragers must be alert to their surroundings. Their hunting success and safety depend on observation and interpretation of the world they inhabit—its weather, seasons, terrain, the behavior of the animals they track and kill. As it has been observed that nomadic herders of cattle in East Africa find their animals’ coat colors and shapes of horns endlessly fascinating,³² we can assume that ancestral foragers were similarly preoccupied with the animals they feared or hunted for food.³³ Once language

³¹ Atran 2001:375.

³² Lienhardt 1961.

³³ Guthrie 2005.

evolved, they perhaps told and listened to stories or recitative-like “animal songs” that could have arisen from vocal impersonations of animals as one finds today in North American native cultures.³⁴

In their precarious, subsistence way of life, ancestral hunter-gatherers had to be mutually interdependent in ways that are not required of members of large settled and anonymous populations who, especially today in the West, extol individuality and personal liberty. As with their observations of other animals, their observations of one another in varied circumstances and the tacit intimate knowledge that comes from shared intense experiences would have drawn upon (and contributed to) nonverbal but intimate interpersonal and social skills.

Although language certainly became important, the work of neuroscientist and psychiatrist Allan Schore has established that the early developing right brain (“the emotional brain,” “the social brain”), and not the later-maturing linguistic left brain, remains dominant in human experience,³⁵ although in modern highly literate societies we may not be aware of it.

Schore’s pioneering work describes the shift in theoretical perspective in psychotherapy from the *behavioral* framework of the 1960s and 1970s to the dominance of the *cognitive* paradigm that arose in the 1970s and 1980s. The latter observed not only maladaptive external behavior but internal cognitive processes such as memory, attention, perception, representational schemas, consciousness, narrative, and language—with the goal of changing the patient’s cognitions. Schore’s work has been paramount in the most recent emphasis from the mid-1990s to the present on bodily-based emotional and psychobiological states: that is to the shift from cognitive to emotional development.

According to Schore, the most fundamental problems of human existence cannot be understood without addressing this primal realm.³⁶ Implicit, nonconscious survival functions of the right cerebral hemisphere, and not the language and analytic functions of the left, are dominant in development and in psychotherapy. Among these are the highest and most complex human functions—stress regulation, intersubjectivity and empathy, compassion, humor, morality, creativity, and intuition.³⁷ Surely one half of human brain function should not be overlooked when we try to understand ourselves or the early human mind.

7. Western preconceptions about the arts are largely irrelevant to rock art studies.

³⁴ Keeling 1992

³⁵ Schore 1994, 2003.

³⁶ Schore 2003.

³⁷ Schore 2012:7. See also McGilchrist (2009).

This conclusion is an obvious one to reach after reviewing the previous six axioms. Taken together, they suggest that the prevailing and mainstream views of early human minds by modern cognitive and evolutionary scientists are unconsciously influenced by their own academically trained minds, which are characteristic of only a miniscule proportion of the entire population of all humans who have ever existed. A provocative and widely cited paper by three psychologists at the University of British Columbia identifies the preponderance of studies by and about Western, Educated, Industrialized, Rich, and Democratic (WEIRD) people, and concludes that the usual subjects of these studies—university undergraduates—are “among the least representative populations one could find for generalizing about humans, and that there are no obvious *a priori* grounds for claiming that a particular behavioral phenomenon is universal, [if the claim is] based on sampling from a single subpopulation.”³⁸ Certainly, all WEIRD scholars, including the authors of this book, must rigorously review our own assumptions about the universal components of human nature.

For example, the relatively new field of evolutionary aesthetics (sometimes called “Darwinian aesthetics”) is suffused with modern Western notions about art. So far their speculations about rock art are few.³⁹ However, neuroscientific analyses of the visual perception of works of art are typically illustrated by Western masterpieces—“Art” with a capital A—static entities perceived by static individuals.⁴⁰

In the case of early mark-making, based on anthropological reports about the context for visual art in many societies, the concept of artification includes the possibility that making marks may well have been part of a larger event, an occasion for (or a way of) accessing a nonordinary realm, consecrating a special place, or accomplishing some desired aim. From what we know of the production of visual artifacts in aboriginal societies of the recent past, rupestrian images are unlikely to have been made solely or even primarily for private contemplation. On the contrary, they were probably components of a ceremonial occasion that included other artified behavior—chant, song, dance, performance. For example, recent findings that the most densely painted areas of Upper Paleolithic caves in Western Europe are also those with the best acoustics suggest that painted images may have been accompanied by vocalized or other sound and perhaps dancing.⁴¹ Archaeologist Dale Guthrie contends, however, that many representational images in Ice Age art were indeed made for private pleasure.⁴²

³⁸ Henrich et al. 2010.

³⁹ However, see Varella et al. (2011) and Hodgson (2012).

⁴⁰ See examples in Zeki (1999) and Solso (1994).

⁴¹ Ouzman 1998, 2005; Reznikoff 2008; Clottes and Lewis-Williams 2007.

⁴² Guthrie 2005.

Evolutionary aesthetics and neuroaesthetics are both concerned with preferences for visual or other sensory perceptions that signal biological reward. These emphases are important, but they address only half of the human art impulse: they ignore significant emotional aspects that are the motivation for the activity of artifying in the first place, apart from any perceived biological “meaning.” Concentrating on the neural mechanics of visual perception overlooks contexts that may be preverbal, presymbolic, cross-modal, supra-modal, participative, temporally organized, affective, and affiliative. These aspects are central to the concept of artification.

Researchers in both evolutionary aesthetics and neuroaesthetics often assume that art can be characterized by (or even be considered synonymous with) beauty, talent or virtuosity, originality, and creativity. Yet studies of recent and contemporary small-scale societies indicate that tradition is typically valued over novelty and creativity,⁴³ and power may be a more important attribute than beauty.⁴⁴

By reconceptualizing art as a behavior of making ordinary reality extraordinary, the notion of artification includes types of rock markings that do not fit into the assumptions of “art” held by theorists in neuroaesthetics or evolutionary aesthetics. Some rock markings to be discussed in the following pages—cupules, the Gault incised plaquettes, and very early marks discovered elsewhere in the world—may not strike us with their beauty or show evidence of virtuosity, originality, and creativity. They are frequently assumed to be “symbolic,” although in many instances this is only conjecture.

Spoken language, religion, art, and symbolic thought set humans apart from other animals. But each of those traits is not an all-or-nothing ability. If the Western concept of art (as depicting real and symbolic referents) is based on the more elementary capacity of artification, then language, religion, and the use of symbols also occur on a spectrum of complexity and sophistication. Apart from other imputed qualities, they have their own intrinsic value as early instances of the universal impulse to artify.

NOTE: For copious color images of rock artifications, and further development of the ideas in Chapter 1, see the original publication. Full bibliographic references can also be found there.

⁴³ Coe 2003.

⁴⁴ Anderson and Kreamer 1989; Aiken 1998; Taçon 1991.