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COMPARATIVE ANALYSIS OF ART MOTIFS IN THREE HUNTER-GATHERER  
SOCIETIES

by

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## ABSTRACT

### COMPARATIVE ANALYSIS OF ART MOTIFS IN THREE HUNTER-GATHERER SOCIETIES

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The appearance of art by hunter-gatherer societies has long captivated scholars, as it represents significant advances in human symbolic expression. In this thesis, I will address the question of why there are repeated patterns seen among different cultures. To what extent of the images and motifs are epiphenomenal and how many are patterned from the natural environment, religion, play, leisure, or a number of other possibilities. I will employ an inter-disciplinary approach with a data set that includes: Paleolithic sites in France, which consists of Lascaux, Chauvet, Les Trois Freres and others in addition to the Aboriginal art of Australia and to the art of the San Bushmen of Southern Africa. It can be stated that there are similarities and differences in their cultural expression. These people expressed themselves in a variety of ways, from the decorative art of Australia, to the deep remote frescoes of France to the rock art in

Africa. Despite different genetic lineages, geographic and temporal separation, these three hunter-gatherer groups use the same recurring motifs in their respective art. Those shared characteristics that crosscut these natural and cultural boundaries demonstrate symbolic representations seen among these three groups. One of the foremost explanations of this shared aesthetic mentality is done by the formal analytical approach of neuropsychology. Whether functional or simply epiphenomenal, this form of symbolic expression serves a practical purpose among its user to form a social value and help them through their battle for existence.

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## CHAPTER 1

### WHAT IS ROCK ART?

#### 1.1 Background Information

While looking at three completely different hunter-gatherer societies it becomes evident that there are similar motifs created on the rock surface. By systematically comparing the three societies of the San Bushmen from Southern African, the Aborigines of Australia and the people of Upper Paleolithic France working from the known to the unknown is possible. Perhaps then to make sense of the images depicted, and understand if they are epiphenomenal or serve a functional purpose. Is it simply art for art's sake, or to please an aesthetic desire? Did these images serve a particular function that supported the society? The reasons behind why the images were created lay the ground work for why there are similarities seen in these three societies. It is the foundation of the culture that drove these hunter-gatherers to create this certain media.

##### *1.1.1 Rock Art*

Rock art is “landscape art.” It involves the use of pictures, motifs, and designs placed on natural surfaces. They are found on cliff and boulder faces, cave walls and ceilings and the ground surface. It is also referred to as cave art or parietal art. Rock art contains pictographs, (paintings and drawings), petroglyphs (engravings and carvings) and earth figures (intaglios, geoglyphs, or earthforms). Intaglios are incised carvings found on the rock face. Geoglyphs are usually drawings on the ground or when

materials, such as stones are placed on the ground surface to produce a motif. Some geoglyphs can be found in Western Australia. The petroglyphs and pictographs are found on panels created from the rock surface. These areas are often flat surfaces that are fractured and weathered planes on the natural rock outcrop. The majority of the images were created during certain rituals. These rituals included events like honoring ancestors, entering into trances or performing initiation rights.

Nearly all of the images were created by hunter-gatherers (Whitley 2005, 3). They created what is defined as art. David Whitley defines art as “an aesthetic or artistic activity...that in its course or in its direct result possesses an immediate emotional factor” usually a pleasurable experience. “Aesthetic activity is therefore not entered upon as a means toward an end outside of itself, but as in itself the end.” It is the exact opposite of a practical activity (Grosse 48).

### 1.1.2 *Techniques*

The pictographs include drawings and paintings. They are seen worldwide and made with common mineral earth and natural materials. Red is the color seen most often. It is typically made from ground ochre. Black is made from charcoal, but sometimes from other materials like manganese dioxide. The oxides occur in condensed forms making it difficult to wash off. The whites come from the natural chalk, kaolinite clay, or diatomaceous. The other less frequently used colors are made from natural minerals and plant sources. To make the colors the materials are ground up and then mixed with some liquid or a binder. Usually easily accessible liquids are used. These include: animal blood, water, urine, saliva or egg yolk (Whitley 2005, 4).

These paints can be applied either wet or dry. The dry paint would be similar to the use of charcoal as a pencil. It is easy to tell the difference between wet applications versus a dried application. During a wet application a continuous process is noticeable, even over rough surfaces. They were applied with a brush, finger or stamp. The brushes were made from the tips of small animal tails, or from small plant material. Again it is easy to tell the difference between someone who used a finger or a brush. The finger motifs are cruder. Also finger dots are seen in the area. For the dried application a concentration of certain high spots on the rock surface is seen (ibid 6-7). Whitley then describes the “technology of rock art production is best understood not so much as technological manufacture but as ritual action. The creation of rock art was a ritual act, and its associated symbolism involved much more than the graphic image, which is the remnant archaeological record of this ritual behavior” (ibid 13).

Petroglyphs or rock carvings are made with a hammerstone that is directly battered against the rock surface. Virtually any rock could be utilized as a hammerstone. Another less common type of petroglyph is the incised style. This is when the image is scratched into the rock face. The image consists of fine lines that are hard to see. They would have been scratched with lithic blades or flakes (ibid 13). There are many ways in which these hunter-gatherer artists shaped the rock face to get the image they desired.

### 1.2 Motifs

Different types of motifs are determined based on individual design, patterns or elements that are repeated in the art being studied. Each type matches and is in a

typological classification that correlates to a certain mental iconographic category in the culture of the responsible artist. These types include both motifs and motif attributes. A motif would be classified as anthropomorphic or human-like figure, while an attribute would comprise of the positioning of the arms. It is important to see recurring styles, since each artist has their own technique of creating these images. Does the range of differences fall into obvious clusters or are the differences particular qualities? Even simple geometric designs need to be scrutinized and broken down to the smallest parts. Circles, grids and zigzags all need to be considered different motifs that show up in most rock art. One explanation of this is the neuropsychological model proposed by David Lewis-Williams and Thomas Dowson. This model involves seven key geometric images that are produced while in a shamanistic trance. During the visions or dreams these geometric light images are called entoptic designs, and are generated in the individual's optical and neural system during a trance (ibid 44-5). The shapes that appear are "circles, dots, and flecks; parallel lines and tick marks; concentrics and spirals" and these images give insight into the idea that they were created out of a shamanistic trance (ibid 45).

### *1.2.1 Styles*

Even more specific styles occur in the art motifs. Meyer Shapiro has defined style as being:

The constant form-and sometimes the constant elements, qualities and expression-in the art of an individual or a group.... For the archaeologist, style is exemplified in motive or pattern which helps him to localize and date the work and to establish connections between groups of works or between cultures: styles here is a symptomatic trait, like the non-aesthetic features of an artifact (qtd. in Whitley 2005, 43).

### 1.3 Dating

Determining the age of rock art is important to its understanding and interpretation. There are several techniques that are used to acquire dates. Chronometric techniques are used for engravings. They unveil numerical, correlated, calibrated, and relative dates. Radiocarbon also yields numerical ages. Even with certain petroglyph motifs, we can determine a relative age by matching the motif to an event that occurred in a particular region. For example, the introduction of the horse in Europe can provide a relative dateable motif. Also the use of superimposition can offer a relative date for a motif (Dorn 167).

#### *1.3.1 Chronometric Dating*

Excavation is one way in which archaeologists obtain dates. Sometimes a panel of art can be buried. This situation enables archaeologists to dig and use the stratigraphy to get a relative date. Furthermore, during the excavation organic materials, such as wood or charcoal can be found and then radiocarbon dates can be acquired. This in turn provides a minimum age for the buried art. The opposite of this concept involves erosional geomorphic settings. In these certain setting the sediments have eroded overtime, making the motifs higher and out of reach of modern peoples. It is important to have excavations because the dates obtained from sites can then be cross-referenced with the motifs and a relative date can them be determined. These types of dating techniques have proved effective in Upper Paleolithic France. Certain dates have been obtained by employing radiocarbon dating. The organic charcoal used on the cave walls is then dated. In Australia radiocarbon-dated calcium carbonate has

been used to provide a minimum age for engravings. Also in Australia the use of superimposition has proved both effective and difficult in dating. This involves understanding the manufacturing of one motif on top of another and again providing a relative date. Stylistic correlation is another way to reveal a date. Symbols in the archaeological record can be correlated and yield a certain age. However, this stylistic analysis has yielded some controversy. Another more accurate way of obtaining dates is by employing Cosmogenic nuclides that are created *in situ* within minerals when they interact with cosmic rays. The production rates of the CN's are constant and can be dated just in the same way, as radiocarbon material is a constant. For example, if a panel is buried the cosmogenic clock stops and provides a minimum age for the entire panel (ibid 169-70). Overtime, natural rock coatings occur on engraved rock art. These engravings can then be dated directly. "These ages are best interpreted as minimum-limiting constraints, because the onset of coating must post-date the engraving" (ibid 173). In both Southern Africa and Australia the use of Cation-ratio dating has proved to be successful. This involves the mobile elements in the rock. These elements, such as potassium and calcium, varnish over time and are leached by capillary water at faster rates than the immobile element of titanium. The ratio of the rate of loss over time of potassium and carbon correlated with titanium yields a date by measuring the cation-ratio at sites with independent age control generating regional cation-ratio curves. This is a less expensive dating technique that can then be crosschecked with other methods. Another method that is relatively inexpensive is the process of measuring microlaminations. Rock varnish accumulates over time in layers called visual

microlaminations (VML). When these layers are viewed in ultra thin sections ( $<5\mu\text{m}$ ) with a transmission light microscope, orange-yellow and black layers appear in the varnish. The orange-yellow layers indicate drier periods recorded from the environment. The black layers tell of wetter periods. When the VML areas have been calibrated they can yield correlated ages. For example, these dates can be correlated to the wetter days of the late Pleistocene or the drier days of the Holocene, giving archaeologist's reliable dates (Dorn 175-77). One chronometric technique that has been useful in dating Australian rock art is the uranium-series dating. It is used on material that is older than 40,000 years old. It is based on the radioactive decay of the two naturally occurring isotopes found in uranium. The decayed products are known as "daughters" of the parent element. Overtime, the uranium parent element breaks down into lead. This breakdown cannot be measured on a human timescale, but rather an archaeological one. Therefore this dating technique is well suited for prehistory (Schwartz 159-61). Another technique is optically stimulated luminescence. This is when sediments are heated and luminescences are omitted from the sample. Several minerals emit thermoluminescence, principally quartz, feldspar and calcite. With optical dating the signal that is measured is obtained by using infrared radiation and exposing the sediments to a beam of blue/green light (Aitken 183). Lately this technique has been helpful with dating of cave art in Australia by Bert Roberts. He is able to date the mud wasp nests that have built around the rock art. By dating both the nests, which have been made out of natural materials, above and below the rock art, a maximum and minimum date is obtained.

#### 1.4 Interpretation

Can rock art be interpreted? Yes, that was the goal of its creator. It was meant to be interpreted by the viewer in the absence of the artist. The emic approach is one way to observe the images in combination with the ethnographies or the etic approach of looking at the social function of the art to uncover the meaning. Rock art, in a certain area, shares a social origin to the land that it was created in. It includes certain meanings and messages that meant something to the inhabitants of that land at one time. Before interpreting the art the interpreter must possess a knowledge and understanding of how the particular symbolic system operated. The first way to determine how a symbolic system operates is to dissect its communication function. Communication serves a social purpose. These images then function usually in a consistent, coherent and logical manner. Most symbols are based on natural models:

These are natural phenomena. Like animal behavior, that served to structure the logic underlying aspects of religious symbolism and ritual, usually by some form of analogical reasoning. In this sense, the thought underlying these models is rational and systematic. When natural models are based on phenomena that themselves involve invariant principles, uniformitarian laws, or timeless characteristics, the models have the potential to inform our understanding of truly prehistoric religious phenomena, without benefit of informants' exegesis, and sometimes even without ethnohistorical connections (Whitley 2005, 81).

It is important to use the knowledge of the work from Africa and Australia to interpret what was happening in Upper Paleolithic France. Since these three societies share several similar traits, it is reasonable to make the connection and decipher what the artist was creating.

## CHAPTER 2

### HUNTER-GATHERERS

All three of the cultures assessed in this thesis are hunter-gatherer societies. That is the main underlying characteristic that they share. A great working definition of a hunter-gatherer society is one with a “subsistence based on hunting of wild animals, gathering of wild plant foods, and fishing, with no domestication of plants, and no domestication of animals except the dog” (Conwy 2). Two other important aspects of hunter-gatherer societies are the social organization and a cosmological worldview (ibid 4). Hunter-gatherers are organized in “bands”. Bands consist of usually less than a hundred people. Kinship ties connect the people to one another. Marriage and family relationships are what keep them together. They live in temporary camps and must move seasonally with the animals they hunt. They are also moving to follow the water sources. When people first discovered cave paintings left by these people conveying their lifestyles, especially their hunting activities, they could not believe that these “primitive” people “could have been responsible for, or capable of, the creation of the lively, dynamic, even aesthetically powerful images of curled, perhaps charging or dying bison in browns, reds, and blacks painted upon and using the natural shapes and protuberances of the cave” (Conkey 267-8). The scholars of the early twentieth century provided a way to explain these images. Supported by work done by Baldwin Spencer

and F. J. Gillen in Australia (1899) they found a way to “explain” the phenomenon of “hunter-gatherer art.” They believed the images were ritual acts created to gain success in the hunt. They are described as a primitive hunting magic. Another idea behind the images is that the animals were “good to eat” and they were trying to capture the animals by painting them. The painted geometric shapes were then associated with this idea and believed to be traps, hunters’ huts, weapons or wounds (ibid 268). We see evidence of art at living sites. The sites that sustained larger populations had more art objects than smaller sites. This is hypothesized because hunter and gatherers generate these objects during the “context of seasonal aggregation, when most ceremonies such as marriage and initiation to adulthood occur. It is also frequently a time of storytelling and intense ritual in which ‘art’ objects play a key role” (White 85-6). Another reason for the large number of finds is that people congregate in larger numbers to work. Art is seen in areas where butchering, cooking, bone boiling, marrow extraction and dumping of garbage occurred (ibid 86).

### 2.1 People and Culture

The most underlying characteristic that the people of Upper Paleolithic France, the San Bushmen of South Africa and the Aborigines of Australia have in common is they are all *Homo sapiens sapiens*. They have the same cognitive capacities. There is a “complexity of attributing meanings, and the rich symbolic and cultural worlds of meaning-making within which hunter-gatherers, like most other humans, create, perpetuate, and transform a visual culture, creating what we might often call ‘art’” (Conkey 269). Many objects are classified also with hunter-gatherers these include:

“carved boxes and implements in wood, ivory, antler, and other materials; sand drawings; baskets and textiles; pictographs and petroglyphs on rock surfaces all around the globe; statuettes of animals and humans; beadwork, decorated hides and clothing; and shell ornaments” (ibid 276). Many of these objects are lost in the archaeological record; however, the important fact is that they at one time were created. People are driven to create objects of meaning and function to express their culture.

Robert Layton believes that the art from Australia is concerned with the totemic identity of ancestors, and the art from Africa is more about interpersonal relationships. A core aspect of Aboriginal life is the concept of making art that is used for a functional purpose. Margaret Conkey has stated that a core aspect of Aboriginal life is the:

Symbolic, semantic, ritual, and everyday relationships between people, the land, and ancestral beings. The making of rock art is the making of meanings; it is the evocation of meanings and cultural facts about specific connections- ‘ancestral connections’...art is integral and necessary, required and unquestioned as part of what it means to be an Aboriginal and to the reproduction of social life (ibid 279).

In European Paleolithic sites, André Leroi-Gourhan has proposed that there is an “underlying ‘mythogram’, a set of unspecified mythological meanings that underlay the empirically observed fact that certain animals (especially horse and bison) were selected for depiction and that certain animals tend to be placed in certain parts of the cave, and/or in association with certain other animal species” (ibid 280). Then there is the work that has been done in South Africa by Lewis-Williams and Dowson. They have studied that art created by the Bushmen of Africa. They explain the depictions as being the reproduced images from shaman after they have entered a trance state and then have

re-entered the everyday world. In the rocks they draw the images as if they are escaping and seeping out of the cracks that occur on the natural cave face. These cracks may be where the power to heal is accessed.

Another key part of the hunter-gatherer life is the shaman. A shaman is one who uses his/her powerful connection with the supernatural. These individuals enter into trances and perform certain tasks in the spirit world. These tasks usually concern healing the sick, providing rain and controlling the hunt. From the ethnographies it is known that both the San and the Aborigines had some form of these individuals. Then from the evidence of ceremonies found in the “sanctuary” caves of France, it can be presumed that those people also practice some kind of shamanistic characteristic.

Scholars are able to take an ethnological look at primitive people because, “the scanty stock of culture that can be gained by a hunting people necessarily exhibits similar points everywhere because it is everywhere the result of the same simple and uniform conditions” (Grosse 42). They must all be unsettled to follow their hunting and gathering subsistence industry.

## CHAPTER 3

### THE SAN OF SOUTHERN AFRICA

#### 3.1 Geography

The San Bushmen of Southern Africa are hunter-gatherer societies that have been in Africa from around the 16<sup>th</sup> century to the present. One of their most important occupation sites is that of Drakensberg Africa. Drakensberg is a classical African painting site. It lies in a mountain range that stretches some six hundred miles from Transvaal to the Cape. It divides South Africa and the independent African state of Lesotho. This range in Afrikaans means “Dragon Mountains,” either because of the legends in former days of a dragon who use to roam about the mountain, or the peaks resemble the scales along the spine of a dragon. The finest of the paintings reside at the wedge of the mountain. The height of this area averages around nine thousand feet and includes about one hundred miles of range. Here also the Great “Mountain of Springs” is the Continental Divide of South Africa. Here two rivers flow within a few miles of one another. The Khubedu turns into the Orange River and flows across the continent to drain into the Atlantic, while the Tugela flows over the escarpment to be one of the largest waterfalls in the world that then flows into the Indian Ocean. The entire area is a watershed surrounded by streams and rivers, which grow lush grasses to support game. All of these environmental factors make Drakensberg one of the best natural canvases for cave painters.

This geologic canvas started its preparation at around 150 million years ago with the help of Gondwanaland. After this great continent broke up, the face of the earth cracked and molten lava spewed out through the fissures and cooled as it met the seawater. This basaltic lava layer was thirty-six hundred yards thick. Underneath this entire layer lies the cave sandstone. The outsides of the caves have been eroded away and have created a honeycomb façade. In these caves, still today, live the Bushmen (Ritchie 119-120). This area is littered with wildlife. It is also assaulted by big game, as evident in the paintings. Drakensberg is considered the most artistically rewarding of all the paint sites in Africa.

### 3.2. Paintings

The painting sites are strategically placed within the hunting grounds and near the streams. The caves number over seventy and thirty-six of them are of extreme importance. The First Period of paintings is believed to have started before 1620. At this time, thin human figures and animals appear in a reddish brown or maroon. During the Second Period, which lasted from 1620 to 1800, there were more subjects and a polychrome technique was applied. The images include animals and men in peaceful positions. They have shaded bodies and are in reddish brown, black or white. Some of these individuals are joined with tall figures wearing animal masks. These are believed to be sorcerers or warriors clad in their spoils. These images are also known as therianthrope images. They represent half-man, half-animal beings. Below in figure 1 the concept of the therianthrope image is seen from the painting.



Fig. 1. Therianthrope images from Drakensberg Africa.

Also there are scenes of animals shaded for initiation rights. Period Three from about 1800 to 1830 included colored paintings without shading. At this time domestic cattle appear frequently. With them also the Ngoni invaders are portrayed. These people crossed the Drakensberg in the early nineteenth century. Then a little later in time Europeans are depicted with their humpless cattle. Uniquely, at Drakensberg the depiction of the Bushmen decline as being portrayed. Here images of British soldiers and Boer commandos rush across the cave face in the late 1870's. The British, Boer and Bantu killed off the Bushmen. They ran them away from their lands and forced

them into a refuge situation. They were constantly fighting with each other. The battle scenes found at the Battle Cave especially support this concept of continual conflict. The Bushmen's art changed over time. They gave up traditional depictions, because they knew the end was near (ibid 121-2).

### 3.3 Shamans

During the nineteenth and twentieth century scholars began to analyze the depictions of the San Bushmen. The meanings behind the rock were embedded in their rituals and myths. According to Thomas Dowson, the images are polysemic, having more than one meaning, and the:

Context of their production was shamanistic beliefs and practices. Overwhelmingly, the art depicts shamanistic rituals, symbols of the supernatural potency that shamans harness, animal 'helpers', and the shamans' multi-faceted visions. These painted and engraved images were, more over, not simply 'reflections' of religious beliefs, they were also reservoirs of supernatural potency on which shamans could draw. The images did not merely depict things; they also did things (Dowson 1994, 333).

With the new threat of the colonist's, images of wagons, horses and rifles began to infiltrate the rock walls at a higher frequency. The shamans are believed to use the images to help them with their rituals. The rock art would help them enter into the spirit world. In the spirit world the shamans could attack this new threat. Also they believed by touching the wall itself they could gain more power and make contact with the spirit world, which resided behind the wall, evident by the handprints in figure 2.



Fig. 2. Hand prints from Southern Africa. The Metropolitan Museum of Art. 20 March 2007. <[www.metmuseum.org/toah/images/h3/h3\\_sroc\\_4.jpg](http://www.metmuseum.org/toah/images/h3/h3_sroc_4.jpg)>.

### *3.3.1 Eland*

One of the most polysemy image used by the San is the eland. This is an African antelope that has long spirally twisted horns. It is associated with the ritual rights of passages of both boys and girls. The boys were depicted for their first kills and the girls for their puberty rights. It also was used for marriage, curing, trances, dances and other shamanistic rituals. The eland was believed to be the most potent animal that would help the shaman enters into trances. In figure 3 there is an excellent example of an eland depiction. It is in hierarchical form, this means the most important figure is bigger in the painting. They were depicting the life force of the animals. Elands also ran in herds, which increased their potency (Ritchie 77).

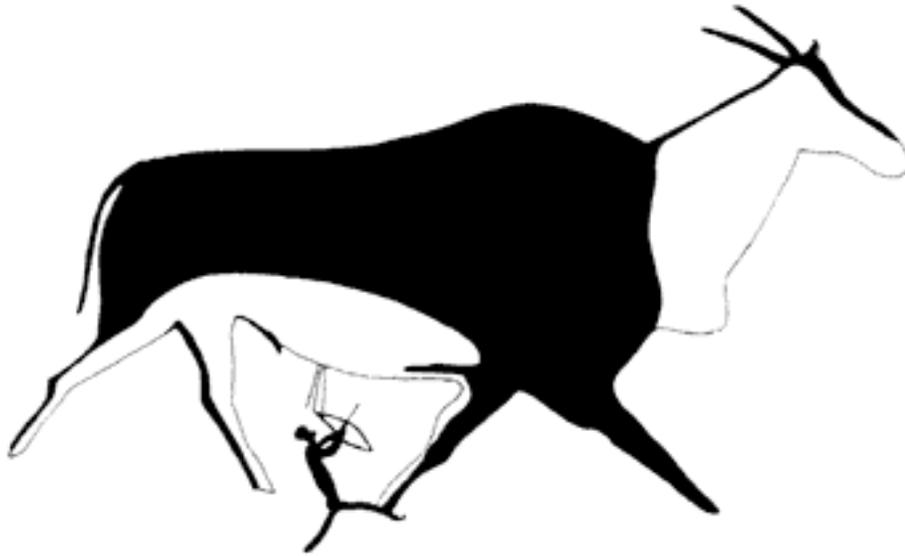


Fig. 3. Eland being hunted by a San from Lariston, Barkly East, Lesotho. Steven Taylor.  
“The San and the Eland.” Dreamflesh. 23 March, 2007.  
<<http://dreamflesh.com/essays/saneland/>>.

### 3.4 Neuropsychology

David Lewis-Williams and Thomas Dowson proposed one of the foremost ideas behind rock art, known as the “Neuropsychology model.” This model uses the idea of entoptic visions. These visions occurred or were located within the eyeball. The visions are tied in directly with the shamanistic religious and spiritual side of these hunter-gatherers. When these shamans enter into their trances they experience entoptic visions via a number of causations. Some of these causations include: psychoactive drugs, fatigue, sensory deprivation, intense concentration, auditory driving, migraines, schizophrenia, hyperventilation and rhythmic movement. These visions are caused when the retinal blood vessels form a shadow in front of the eyeball. They appear to the shaman “as a range of luminous percepts that are independent of light from an external

source.” These visions were believed to be more than dust. They can be classified into four different categories. These categories came about and were done by two different researchers in the 20<sup>th</sup> century. This enabled scientists to get a better understanding of what was going on in these altered states of consciousness. An altered state of consciousness (ASC) is defined by Chippindale, Smith and Taçon as a situation in which:

A person perceives visions and suffers experienced not of the usual state of consciousness but of an ‘other’, more hallucinatory nature. This state can be stimulated in many ways: by ingestion of psychoactive substances, by hyperventilation, rhythmic movement, percussive sound, fatigue, sensory deprivation, intense concentration, dream incubation, schizophrenia and so on. Everyone is capable of attaining some form of ASC... In the past, as now each (sensation) will have been perceived and explained in terms of local cultural knowledge, but the neurological experience will have remained largely constant (qtd. in Clegg 175).

In the 1920’s Heinrich Kluver began a systematic study of this phenomena. He himself would have mescal hallucinations caused by peyote in the controlled environment of a lab. Then in the 1970’s another scientist, M. Horowitz, was doing separate studies and he began getting redundant elements from these altered states. Despite different lab settings and different settings in the actual environment, these visual phenomena appear in the same geometric forms. They are seen as grids, zigzags, concentric circles, dots, parallel lines, and catenary curves. They are seen as shimmering, incandescent, moving and rotating and sometimes as enlarging patterns. They even began to grade upon one another causing unusual visions. These visions can be broken down even further into two types. One kind of visions is known as phosphenes. These visions can be caused by physical stimulation, such as pressure on the eyeball. These are thus entophthalmic

“within the eye.” The others are form constants. These derive from the optic system, but probably from the eyeball itself. But again, the overall trend is to umbrella both of these terms under the term “entoptic phenomena” (Lewis-Williams 1998, 202). In regards to the certain images, the six listed are the most common seen by neurologists.

These images are:

(1) A basic grid and its development in a lattice and expanding hexagonal pattern, (2) sets of parallel lines, (3) dots and short flecks, (4) zigzag lines crossing the field of vision (reported by some subjects as angular, by others as undulating), (5) nested catenary curves (in a developed form the outer arc comprises flickering zigzags), and (6) filigrees or thin meandering lines (ibid 203).

Then these images are perceived in seven different ways. This includes: “replication, fragmentation, integration, superpositioning, juxtapositioning, reduplication, and rotation” (ibid 203). This is just how the images relate to one another. Sometimes the images appear on top of one another or next to one another. Next, these images can be broken down into different stages describing how the individual receives them. During the first stage the subject experiences the entoptic phenomena. It occurs alone with the eyes opened or closed. The images appear at a reading distance, but they appear to be receding and advancing. The visions cannot be controlled and seem to have a life of their own. They are then characterized as having vivid and saturated colors. The rate of change of the phenomena differs for people and hallucinations, but generally characterized as happening quickly. Over time one can become experienced with these visions and be able to train and become familiar with them to increase their powers of observation and description. During the second stage the individual tries to make sense

of the images. They usually do this by associating the image with an iconic form that is familiar to them. For example, if the subject is hungry they may perceive the image as an orange. The nervous system is acting as a “sixth sense.” The third stage involves some kind of vortex or rotating tunnel that surrounds the subject. A lattice of squares marks the sides of the vortex. This symbolizes the first stage of iconic hallucinations that are occurring. These symbols eventually over power the entoptic visions. These iconic visions are again tied to the memory of an individual. These are images that are familiar to them and are related to their culture and what they know. They are often associated with powerful emotional experiences. The images at this stage are becoming more vivid. However, the entoptic images do not desist. They are now merely the backdrops of these iconic visions. These stages are not sequential. Some people never move past the first stage. Nonetheless, the entoptic visions are associated directly with the first stage. Using mescaline and LSD these three stages were tested. The ethnographic evidence from the Tukano in the Amazon further supports this concept of the different stages. They describe their three stage visual experiences in the same manner.

This approach can then be tied with the San shamanistic art. Again from the ethnographies we know that they do create shamanistic art and these individuals are entering into altered states of consciousness. They would usually enter into these trances by large dances and with women clapping or by more solitary circumstance (ibid 204). Again tied to this idea of sympathetic magic these shamans were entering into these trances to make rain and control animals. Today, we see what is left over

from these activities. The artists would depict the actual trance dance itself, the symbols of supernatural potency; the hallucinations experienced by the shamans while in the trance, and lastly the entoptic phenomena. From the ethnographies we know that the shaman were not in the trances when reproducing these visions. They were in relative states of tranquility and they may or may not have been the artists themselves.

By systematically working from the known to the unknown we can extrapolate these six known entoptic visions from Africa and apply them directly to the art of Upper Paleolithic France (ibid 205). Since all six geometric images do appear it stands to reason that some of the art was probably produced out of altered states of consciousness. By no means does this correlate to the idea that all the art was formed this way. Lewis-Williams and Dowson took one of the images in particular and looked at the depictions more closely. They looked at the catenary curve. These curves resemble chains. In figure 6 all three stages are presented on the chart and the forms can be assessed. The curves appear as a more complex form “it is a boat-shaped area of invisibility with a flickering, zigzag outer arc.” It is then “fragmented into two parts: the navicular area of invisibility and the outer zigzag (ibid 208). It is known that the curves were seen to the shamans in one of the three stages and then the image was rendered on the rock surface. The first row shows replications of the entoptic phenomena. The San example is seen as a series of red boat-shaped images. The second row shows the images broken into what are known as chevrons. The containing lines are noted from Kluver’s work (ibid 208). The third row shows the integration of two of the entoptic phenomena. In the San work we see the grid and the zigzag

combined. In the second stage the shaman is trying to make sense of the entoptic images. The shaman interprets the honeycomb as an entoptic image, which appears on the San rock. It is known that bees are a potent symbol of supernatural power harnessed by the shamans to enter into the trance. Another symbol that appears in the San art and is associated with the shamans is the buck-headed serpents. The zigzag form transforms into these snakes and is commonly seen with blood falling from the nose. Often times the southern shaman suffer from nasal hemorrhage when they enter into trances. Another association that the shaman and these snakes share is that they both “go underground.” The snakes actually do this, while the shamans go underground and appear elsewhere in their out-of-body experience. Overall the entoptic visions are directly associated with the San’s shamanistic beliefs (ibid 210).

In the last stage of altered consciousness the iconic visions are spontaneous and can be broken down into two categories. The categories consist of ones with humans and the other with animals. Sometimes when they depict humans they are depicted as actually participating in the event. For example, the man depicted with zigzag legs, had described that his legs felt like this because when he enters into these trances his arms and legs shake. This is also tied with the entoptic visions he was experiences simultaneously. The other example is of the man who identified himself with the grid pattern that he was seeing. When it came time to depict himself, he described himself as looking like the grid he encountered in his entoptic phenomena.

### *3.4.1 San and France*

By working from the known to the unknown we can then compare the San art to that of Upper Paleolithic France. In figures 4 and 5 the shared similarities are evident from both the San depictions and Paleolithic art. The first entoptic images are easy to assess. They are replicated unadorned catenary curves. The next image in the chart is continuous overlapping zigzags. Then a grid system has been placed next to a zigzag. In the second stage we see the ibex image from Lascaux tied in with the entoptic zigzag images, this is similar to what is seen in the San art. The animal's heads are the zigzags tied to movement and analogous to the flickering entoptic zigzags. The third stages of the entoptic images are superimposed on the iconic images and harder to identify. It is not known if the entoptic visions were done separately from the iconic. When we see an image of a horse that is surrounded by dots it is impossible to say if this image originated from the same altered state or different ones. Another good example of the shared similarities with the San and Upper Paleolithic is seen with the depictions of the human's figures. In the Upper Paleolithic the zigzag designs appear on top of the human. "The striking universality of this combination, whether by integration or superposition, is further evidence for somatic and visual synesthesia operating in similar ways in different cultures" (ibid 212). Secondly, a great example of the similarities is by combining two iconic images. Integrating a human and animal image into a single figure most commonly does this. This is known as a therianthrope image. These therianthrope images are most commonly products of hallucinations. Many times in the controlled lab environments the subjects would think of an animal and then they

themselves would transform into such an animal. The majority of the time these images are interpreted as hunters or shaman wearing masks. However, there is little ethnographic evidence to support this. In Africa since the images are numerous unrealistic looking, they are associated with hallucination rather than realistic paintings. Again since it not certain the people of Upper Paleolithic France may have attached antlers to their heads for hunting or rituals; they are more commonly associated with hallucinations. They like the South Africans have clearly non-realistic features. These images did not arise in the nervous system, but are again two iconic images. It is the shaman participating and integrating himself with his own visual imagery in an altered state of consciousness (ibid 212).

By and large what Lewis-Williams and Dowson have been able to do is tie the significant components of the Upper Paleolithic art with the San entoptic phenomena forms. It can be argued, “that the model exposes the neuropsychological order underlying the seemingly chaotic integrated, superimposed, juxtaposed, fragmented, and reduplicated iconic and geometric depictions of these two art” (ibid 213). These painted and engraved images are in fact informed by the human nervous system in an altered state of consciousness. By systematically working from what is known about shamanistic art and applying this model to Upper Paleolithic France we can look at all of the images created and state with confidence that a significant component of the art was created out of altered states of consciousness and from the many signs of entoptic visions. To further support this, the images and categories formed about the entoptic phenomena were done by independent neuropsychological research and not from the art

itself. The two religions of France and Africa may not have been the same; however, one of the parallels is that of the altered states. The two societies were hunter-gatherers and shamanism is associated from this, therefore standing to reason that they share this trait. The neuropsychology model just simply provides a more reasonable way of addressing the art produced in Upper Paleolithic France (ibid 213). Another big correlation between the San of African and the people of France is with the location of the images. From the ethnographies of the San we know they believe in the potency of the images to help them enter the trance world. For example, one way of doing this is by touching the eland depictions. The eland again is the most depicted and potent animal of power to the San. These images of the eland were reproduced from entoptic visions. One way to enter into these trances and then receive the visions is by employing sensory deprivation. This is where we get another parallel with Upper Paleolithic France. Many of the images of France were done in dark caverns. Shamans are known to frequently meditate in remote places and caves to bring upon the visions. The caves of France would be pristine places to induce entoptic phenomena and hallucinations. There is also evidence in these “sanctuaries” of repeated touching on the walls of the entoptic and iconic images. These individuals may have entered the caves “on a vision quest, reached out to the existing depictions to absorb their power and to trace their own visual percepts during or after their altered state of consciousness” (ibid 214). In conjecture with the placement of images we have an explanation for the dangerous animals that are seen depicted in the depths of the caverns in Upper Paleolithic France. It is believed that the greater depths of the caverns would have

brought on a greater sense of fear and therefore the shamans would have tended to hallucinate these dangerous creatures. As for the large galleries seen, they are believed to be the locations of more elaborate ceremonies that may have prepared the shaman for the individual adventure waiting further down in the caverns. They were about to see entoptic visions, therianthropics and other powerful animals they were hoping to hallucinate. It is believed these animals were the spirit helpers from which the shaman gained power.

Iconic and entoptic geometric images are intrinsically tied together. This is how the human nervous system works. When an individual enters into an altered state the elements are mixed together. The images are further associated with their locations on the walls. The images are found on the cave walls and ceilings. The iconic images are sometimes associated with “afterimages” that are projected onto a flat surface like a movie after the trance is over, even for months on end. They were “fixed” images that could just be traced from what was being seen. They did not have to invent drawing, but rather use what was neurologically provided for them. Overtime the images would have gained a cultural significance and represented something greater. This is one explanation behind the touching of the images (ibid 215). Then people who have never entered into an altered state would duplicate these images. Overtime we get the entoptic traditional images associated with the more naturalistic animal images. This is also noticed with the San art. “The accurately delineated animals of San art show that realism is not incompatible with the imagery of altered states.” The iconic and entoptic images were really experienced by the humankind of both Upper Paleolithic France and

the rest of the world. To take this idea even further it can be applied to the petroglyphs of Southern Australia and enable scholars to analyze the repeated patterns seen (ibid 218-19).

Again these are not the only visions; they are the ones that appear most often. Regardless of any different cultural background the entoptic images are embedded in the human nervous system. This is one reason why scholars see these geometric motifs in all three societies despite different time periods, genetic lineages and temporal zones. To increase the support of the neuropsychology model proposed by David Lewis-Williams and Thomas Dowson, it can be seen by looking at how the images interact with the rock face. Also the use of connecting lines with the red dots and the bleeding from the nose in the depictions support the shaman acts. There are numerous examples where animals, humans and lines are depicted as going in or coming out of the rock face. Serpents are commonly depicted as slithering out of cracks or from beneath rocks. Sometimes these serpents have horns or antelope heads, and number of them bleed from the nose. Many times rain-animals appear from the rocks (Lewis-Williams 1990, 6). Shamans of the rain enter into trances to catch one of these animals from the spirit world. They are to capture one of these hallucinatory animals and lead them across the countryside. During their trance vision they kill the animal and its blood and milk become the precipitation. The animals are usually depicted as amorphous quadrupeds. They sometimes resemble hippopotamuses or antelope, and especially eland. Occasionally, fish and humans surround these images. The humans are represented in postures that resemble ones indicative of shaman trance rituals (Dowson 2000, 333-4).

Sometimes the rain-animal emerges from a crack, steps or from blotches of paint. At times numerous heads of the animals emerge from two sides of the rock. Then above these images red ochre dots and zigzags appear. To support this idea the literature and ethnographic evidence has various examples of how the San use the rock art to give the impression of the depictions entering and leaving the wall of the rock shelter. To further support the idea of neuropsychology is seen in the ability of the shamans to harness the potency to enter the trances. It is seen in the symbols of the supernatural with the depictions of the hallucinations and activities associated with the San shaman. Again there is ethnographic data to support the conclusions that the artists were shamans and they were depicting their own spiritual insights and experiences. Further evidence is in the depictions. One is of the kneeling human figures. This is the posture that the shamans assume after they have fallen into a semi-conscious trance. Shamans are often portrayed in this position. Additionally, the figures have their arms in a backward trancing position. Shamans from the Kalahari say this is the position they utilize when they are asking God for the supernatural potency. Another example is the red line that appears. This line is representing the hemorrhaging of the nose that occurs by the San shaman. With a closer look at the lines drawn they are believed to be a symbol of the supernatural potency. Maybe even the transformation of the shaman himself. The serpents discussed earlier are also considered to be the shamans transformed with hemorrhaging. Also depicted are flywhisks, these are artifacts that are closely related to trance rituals. The trance can be entered by dance or in solitary circumstances. To get a deeper understanding of these paintings it is useful to apply the

neuropsychology. This model is used to explain the imagery used when people enter an altered state of consciousness. Since all the people who make the images have the same neurological background, despite their cultural and environmental background they experience the same kinds of hallucinations.

#### *3.4.2 RainMaking*

Another idea put forth by Thomas Dowson is that the snakes and other animals were used for rainmaking rituals. In Africa snakes are associated with water and would help explain their appearance in the art. The tradition of rainmaking rituals is a common ritual seen all throughout Africa (Dowson 2000, 75). In Bushmen myth snakes have power over the rain. These snakes also have the ability to change shapes during hallucinations. These snakes are associated with shamanistic trances that are endured during rainmaking rituals. These myths are drawn out and painted on the walls. By reading the ethnographic research these rituals are understood, they explain how the “shamans entered trance (went ‘under water’ and were ‘spoilt’) at a trance dance and - in the spirit, or hallucinatory, world – captured the rain in the form of a creature of some kind” (ibid 77). These men were also the ones who received the nosebleeds that are also depicted on the walls. These men are shamans identified by the nosebleeds. Other significant markers of shaman include the arms in a back posture, a hand raised to the nose, kneeling in a shamanistic posture and having one leg raised (ibid 77). Overall the depictions of rain animals are never the same. They are however, determined by the culture that shapes them. Each scene has its own specific

combination of features. It is a mixture of the real world and the trance world in which the hallucinations have transpired.

By and large the images of Southern Africa can be associated with magical and supernatural shamanistic events. This model is then applied to Upper Paleolithic images as well, showing the similar characteristic.

## CHAPTER 4

### THE ABORIGINES OF AUSTRALIA

The early inhabitants of Australia are known as the Aborigines. They believe their ancestors rose in situ from the continent, and that the powerful Ancestral Beings, like Yingarna in Arnhem Land, created the first peoples and distributed them into certain locations. He then told them the languages they should speak. Archaeological evidence suggests that the first people to enter Australia were anatomically modern humans and did so by sea between 60,000 to 120,000 years ago. They are believed to have occupied Australia for the past 40,000 years. They originally entered the continent from the north coming from Southeast Asia. They are *Homo sapiens*; however they have been biologically isolated and therefore are unlike any other human racially (Sutton 1988, 5). While here they began to explore the countryside and stayed near the coast and rivers. They would use red ocher to create their “art” or picture making. All of this began in the area known as the Kimberley region. These people were hunters and gatherers. They would forage widely in flexible bands with varying members.

#### 4.1 Social Order

Despite the shifting of members throughout time, these people had a stable religious background. Both men and women belonged to small descent groups called clans. They each possessed a distinct body of spiritual property. These possessions included “sacred sites,” these included: waterholes, rocks, caves and other geographical

features throughout the landscape. These sites contained the spiritual power of heroic beings that had crossed the landscape during creation. Each site would be deemed a clans estate. Associated with these unique sites were legends detailing how they were created. Specific art motifs would depict the hero as a human or an animal form in body decoration. Since the heroes at one point were human or animal the clans have a totemic relationship with the hero's animal progeny. Clans are linked together by marriage, shared dialects and overlapping foraging lands. These heroes would travel great distances setting up "dreaming tracks" that would cross the land of more than one clan. The clans are distinguished from one another by the nexus of their dreaming tracks. Inside these tracks certain legendary events have occurred, which give the clans certain rights and associations with certain paintings (Layton 1992, 31). Specifically, this concept of depicting ancestors who established the clans in the cave paintings shows up with the people of the Wandjina cult of the Western Kimberley's. This includes tribes of three languages, which consist of the Worora, Wunambal and Ngarinyin tribes. These clans are fixed in their landscapes and their estates. This ownership is depicted in their cave art. The cave contains "paintings of their Wandjina and of the animals and plants associated with these ancestral heroes. Each estate also has spirit centers, where children are conceived, and rock formations said to have been made by the Wandjina, when they transformed the countryside to leave a record of their activities" (ibid 33). The Wandjina represented social order. It created the estates by demarcating standing stones or by decorating caves. A social relationship has been established with the totemic associations. Both the Worora and Ngarinyin tribes have

similar cosmologies that appear in the rock art. They both recognize a supreme leader called the “first being.” They also acknowledge malevolent beings that live in the bush. They are neither human or spirit. Together the Wandjina and malevolent images left rock paintings, sometimes in the same shelters. These paintings represent two opposing themes in the western Kimberley’s culture (ibid 33). Ngadjaiya or Walanganda is the Supreme Being. Described by a Wunambal is a description of this great being:

In the sky lives Walanganda, Lord of Heaven and at the same time the personification of the Milky Way. Of Walanganda it is said that ‘he made everything’. At first there was nothing on earth, and only Ungud (the serpent) who lived inside it. Walanganda poured fresh water upon earth ... In those primeval days all the beings whose image Walanganda painted had neither eyes nor mouth. These they were still to receive from Ungud. Walanganda is still going on creating and dreaming, and never lets his creatures on earth die out. He is constantly sending fresh ‘soul force’ down from heaven (ibid 34).

Ngadjaiya made the world, then sent down Wandjina and made the rock paintings. These images appeared according to the Wunambal when the people were not acting right and there was much mischief and this created death. “If people had been all right in the beginning there would have been no death. But there was a lot of mischief, that’s why there was death. That’s when the images (rock paintings) were made; God said: ‘You got to act properly’ ” (ibid 35).

#### 4.2 Australian Rock Art

For about the past 60,000 years the Aborigines have been altering the environment they live in to create cultural meaningful landscapes. Thousands of rock sites include: engravings, paintings, stencils, prints and motifs that were made from the local beeswax and resin applied to the cave wall and ceilings (Taçon 531). Throughout Australia there

are over 100,000 rock art sites in over 30 major regions. The oldest of the rock art consists of cup-like markings called “cupules.” These are found on boulders, rock faces and platforms. These circles are pecked and pounded into circular depressions. They occur in tightly packed rows and are superimposed beneath later paintings, printings and stenciling. They usually range between 2-3 cm in diameter on the rock faces and 6-7 cm on the boulders. Recently, a cupules has been discovered and dated to between 58,000 and 75,000 years ago using thermoluminescence at Jinmium in the Northern Territory (ibid 534). Cupules occur in great numbers in the Kimberley region.

Following the cupules in frequency and time is the “Panaramitee” engravings. This “style” would soon become a stamp of human exploration throughout the continent. “This form of art consists of pits, cupules, circles, concentric circles, animal tracks, and occasionally a human track or footprint. Essentially it is a tracker’s art, one that mimics natural sign of the land, such as bird, macropod and other animal tracks, as well as the circles, concentric circles, and pits seen in pools of water or sand when it rains” (ibid 540). Then around 20,000 to 30,000 years ago the introduction of pigment rock art sequence seems to be capitalized on. Handprints, grass prints and stringy pigment soaked silhouette objects appear on ceilings throughout many sites all through the greater Arnhem Land (ibid 541). The first appearance and date of figurative art is yet to be known. However, it is known that it was introduced during the Pleistocene. Similar to Europe the first figurative phase was dominated by animals and human figures were rare. This Naturalistic Animal style-period of the Arnhem Land and the Irregular Infill Animal form of the Kimberley’s are two main examples of this figurative art. Then

during the next phase people would paint themselves into the pictures and would dominate the art. At this point animals are rarely depicted and if they are they are in association with the humans. When depicted they are being hunted, resting, part of an elaborate scene or worn as a headdress. The art moved in a new direction from the cupule depressions. Now during this new phase the first mythological beings, often animal-headed human figures appear suggesting a move towards a religious motivation in the art. This would become a dominant theme in Australian art (ibid 543-4).

Rock art of Australia opens us up to the specific history of the people. Here we see the first evidence of warfare, organized religion and other facets of humanity (ibid 555). One specific attribute of Australian art is the re-marking of the images. The surfaces are constantly changing with countless episodes of re-touching.

By looking at the art of “primitive” people it enables scholars to uncover the foundation of art and obtain a true sense of it as imperative. Archaeology has given scholars, however fragmentary, much of the evidence they need to tackle this question. Ernst Grosse uses ethnology to give us information about the history of art. He looks at different cultures and compares them together to obtain insight. He first looked at Australia. Their clubs and shields are found with ornaments. However, these ornaments are a form of crude writing informing the carrier. These are not used for an aesthetic purpose, but for a practical intent (Grosse 23). Despite these incidents, religious ornamentations seem to be executed to carry out a somewhat aesthetic requirement. Referring back to the Australian shields it is quite feasible that the emblems refer to tribes or property marks, however, they are nonetheless works of art.

“Why should the primitive man, to whom aesthetic needs are no more foreign than to civilized man, not try to make his marks and his symbols as pleasing as possible” (ibid 24)?

#### 4.3 Dreamings

Most of the Aboriginal art comes from religious performances and social networks. The art is also related to their mythic narratives and wider symbolism of daily life and belief (Sutton 1998, 14). At this point art is tied closely to the art that is found in both Africa and France. This kind of art is known as “Dreamings.” Dreamings are Ancestral Beings, and these Ancestral Beings are individuals that contain all human qualities. The term dreaming is confusing, but these people are not usually communicated with by dreams, however, sometimes they are. These ancestors represent the totems of the clans and are recognized all throughout Australia. These people share a common link to their spiritual ancestor. It provides them with an identity and entitlement to land. In the myths the Dreamings are born, live and sometimes die, however, they are always eternally present. The Dreamings remain in a domain referred to as the “Dreamtime.” At the Dreamtime is where these people formed the beginning of the world, and have created all the plants and animals. They have also created the environment that their descendants live. In addition to the world the Dreamings have created marriage, religious ceremonies, rules, food taboos and other laws of human society. They have created the law. Since the Dreamings contain human attributes their faces and “images of these beings, their places of travel and habitation and their experience, make up the greatest single source of imagery in

Aboriginal art” (ibid 15-16). When depicted they are most often seen as animals and plants of Australia.

#### *4.3.1 Sympathetic Magic*

One of the main ideas behind the art of Australia is behind the idea of success in the hunt. From Aboriginal informants it is suggested that the painted images of “fish, birds, animals, or reptiles may express the Aborigines’ desire for success in the hunt, and also his belief that drawing the picture gives certainty, and even power over the creature sought. A man sees a fine fish in the river; he paints it in a gallery, and then is certain he will see it again and spear it” (Edwards 101). Then tied back to the totemic paintings, they were done with superimposed images to increase the power of these ancestors to help the hunters. Anthropologists believe the Aborigines had a philosophy that saw a personal and spiritual relationship between humans and nature. To them it was not enough to trail a kangaroo and hunt it; no they needed to depict the animals being hunted. To achieve success they performed rites, ceremonies, charms and paintings. During the rites, men of the hunt would pour their blood onto symbols of the species they were hunting. Then for the time being the men would become the ancestors that created the world. Now these men would become the life-givers and nature will be productive and the food-species will multiply. This is man doing his part in the cycle of the world. Man does the rituals and nature produces the food (ibid 102). In the Arnhem Land region the idea of ritual is expressed with the main increase centers. These centers are a main focus of the tribal religion and ritual action. Ronald Berndt has stated during his studies in this region: “they are more than mere pictures:

they represent the very essence of the spirit of the beings and creatures depicted. In the caves are pieces of rock symbolizing parts of their bodies and their ritual act of painting or touching them up released sacred energy or power: bringing on the Wet, sending out spirit children or sprits of edible plants and natural species” (ibid 103). Also they would retouch the ancestral paintings to bring rain. In the Oenepelli region of Central Australia three accounts of an increase ritual had occurred. Mountford, the anthropologist, was shown the image of a water snake, then he was told “when the aborigines want to increase the supply of water-snakes in the lagoons, they choose the correct season, and standing before the painting, beat it lightly with a bough to hunt out the spirits of the water-snake, directing them meanwhile to go to the various waterholes and there become large water-snakes’ ” (Layton 1992, 47). These increase rituals are associated with sympathetic magic. Therianthropic images are found in Australia as well and again associated with controlling the environment. In figure 7 a therianthropic image from Eagle’s Reach, Australia. Many half-human, half-bird images are found here.



Fig. 7. Therianthrope image from Eagle's Reach Australia. "A New Australian Rock-Art Area Bordering Sydney." Inora Online. 1 April, 2007. <[www.bradshawfoundation.com/.../tacon-fig-2.jpg](http://www.bradshawfoundation.com/.../tacon-fig-2.jpg)>.

#### 4.4 Altered States of Consciousness

More recently a theory proposed by John Clegg is that many of the depictions of the geometric figures were themselves used to induce an altered state of consciousness. Images that have a shimmering quality are especially valued in Australia (Clegg 167). The Aborigines know it as *bir'yun*. It is translated as brilliance or radiance. It is associated with cross-hatching. These patterns, which consist of fine parallel lines, will

start to move to the viewer and according to Paul Taçon will generate “rainbowness.” When the eye is steadily fixed on the image for a relative amount of time the lines break down into serpentine lines and take on red, yellow, green and blue tints. *Bir’yun* also represents ancestral power. The colors of these images show life and radiate a feeling to the viewer (ibid 168). By concentrating on these detailed images long enough they can cause a light trance, which can then turn into a deeper trance associated with the entoptic visions and the altered state of consciousness (ibid 171). Below in figure 8 these geometric images are noticeable and are associated with entoptic visions. The concentric circles, catenary curves, dots and grid forms are present. The shimmering images are associated with the religion of the aborigines. These images were both used to create trances and were caused by the after images of those trances.

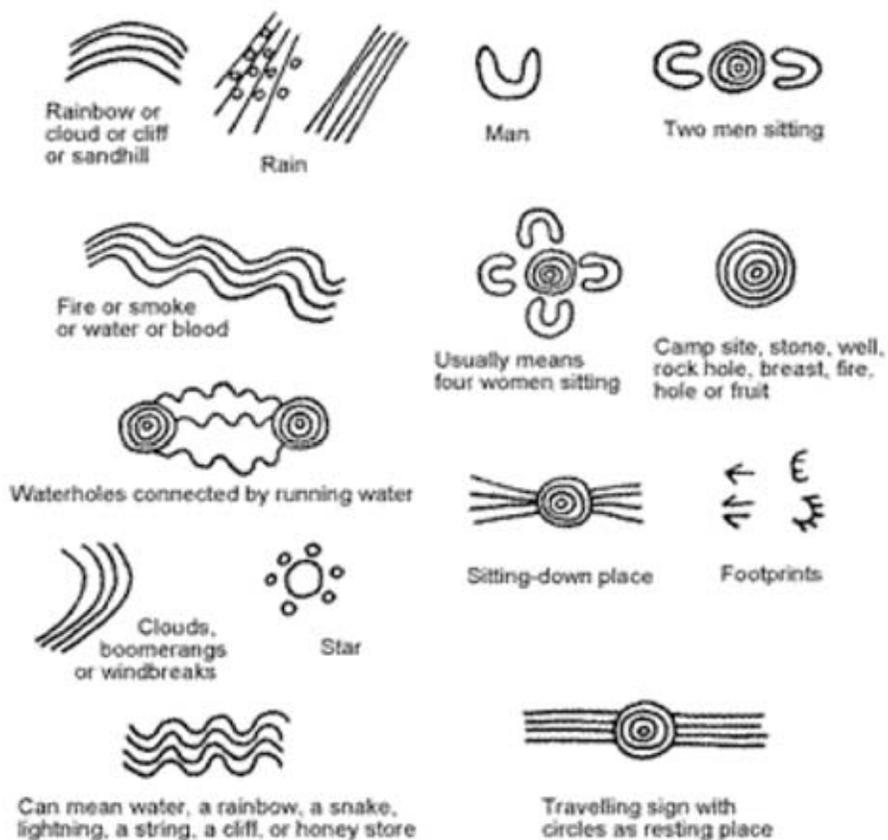


Fig. 7. Symbols used in Papunya Central Desert art, from "Papunya Tula" by Geoffrey Bardon. [Aboriginal Art Online](http://www.aboriginalartonline.com/.../iconography.gif). 20 March, 2007. < [www.aboriginalartonline.com/.../iconography.gif](http://www.aboriginalartonline.com/.../iconography.gif)>.

## CHAPTER 5

### THE PEOPLE OF UPPER PALEOLITHIC FRANCE

France is a harder place to acquire the cultural background. Here scholars are not fortunate enough to have ethnographic evidence. To really get at their background we must start at the very beginning. This is the time period from about 300,000 to 12,000. On the geologic time-scale this time period is broken down into several categories. The main time period is during the Pleistocene Epoch. It is in the Phanerozoic Eon, the Cenozoic Era and the Neogene Period. The Pleistocene Epoch is broken up into the Early, Middle and Late ages. The Pleistocene is best known for its glacial periods in the earth's history. It is also known as the Ice Age. At this time glaciers covered the majority of the continents. The glaciation periods were not continuous, but were broken up with interglacial periods. During these times the glaciers would recede and the sea level would increase. A mild climate would then exist. We are concerned only with the Middle and Late Pleistocene. In Eurasia the environment has been described as tundra. At this time, around 500,000 years ago, the glaciers would advance down from the north. At around 75,000 years ago the last glacier period, called the Würm glaciations existed till about 12,000 years ago in Europe. This time period is also known as the "late Ice Age" (White 13). It consisted of windy grasslands and "animal associations in various art caves could be taken as accurate reflections of real faunal assemblages of that period, from which we can gain

ecological insights” (Guthrie 21). Nearly 200 caves bearing wall paintings and engravings are now known from southwestern Europe, especially from France and Spain. In addition, perhaps 10,000 sculpted and engraved objects are known from across Europe and as far afield as Siberia and from several locations in Africa. Upper Paleolithic people mastered a wide range of artistic media: stone, bone, antler, ivory, wood, paint, clay, sound and movement. The visual art ranges from naturalistic to abstract, but encompasses relatively few themes. Animal images are clearly the most important (ibid 103). Uniquely, at this time Europe has the highest animal biomass in the history for hunter and gatherers. There are around 200 caves throughout the world that contain Paleolithic art. The number of portable carved art is in the thousands. During this time period humans created all these pieces of art that survived today. However, there must have been thousands of other examples of art that was lost when the giant ice sheets advanced back down and whipped out evidence of human habitation. Currently, at this time the Bering Sea and the English Channel were drained because all the water was locked in the ice sheets. It is conceivable that humans occupied these areas until the ice advanced again, causing the evidence to be lost forever (ibid 22). While living through the tempestuous conditions of the Pleistocene humans were “required to readapt to changing environmental conditions by altering their diet, their hunting and gathering strategies, their technology, and their knowledge of the world around them” (ibid 28). With all these distraction they still created art.

During the Upper Paleolithic we see an explosion of creative expression. The art created by these people is over 30,000 years old. Researchers do know that at this

time the artists were modern humans. Here parietal cave art during Paleolithic France will be addressed. Lascaux is one of the most well-known Paleolithic cave art sites. At this site artists began making art around 30,000 years ago. The images depicted in France mostly consist of animals. This makes sense, because these people were hunter-gatherers. Throughout this time period the primate population outnumbered the human population. This may help to explain why humans are rarely drawn and when they are depicted they are crude beings. One of the main techniques utilized on the cave walls in France were engravings. Then often these engravings were painted.

### 5.1 Different Theories

Unfortunately, there is no one agreeable explanation behind these images. One suggestion is that the caves were painted to initiate the young into adulthood. Specifically, at Le Tuc d' Audoubert, a deep cave in the French Pyrenees, footprints are interpreted as being an act of the inhabitants dancing off the main corridor half a mile into the cave. Further down in the cave two bison are in a mating scene for ritual purposes intended for initiation ceremonies (ibid 97).

The occurrence of art found in deep caverns is another puzzling feature of French art. Claude Levi-Strauss attributes this to the connecting link between the two elements of the “above-ground: below-ground” binary opposition. It is a focus on cosmology. Matters of religion and ritual may be epiphenomenal and are still of great importance of Upper Paleolithic life. In these dark caves people went into the unknown. Possibly they even went to the underworld during their hallucinations (Lewis-Williams 2002, 209).

One of the foremost scholars of Upper Paleolithic art was Abbé Breuil. He came up with the idea of mystical symbolism. This is also known as sympathetic magic, believing the images gave the hunter luck and skill. He believed that images in the caves had accumulated over time from many magical rituals. The artists of France were hunter-artists. They would depict the animals that they were hunting. By doing this they were learning their prey. Many times the animals were depicted as being speared and bleeding. Also the bones from these animals were found in Paleolithic middens. Tied to this is the newly accepted idea of shamans. This is then tied to this magico-religious paradigm that surrounds Paleolithic art. Now shamanistic magical rites and trance visions are viewed (Guthrie 8). This is now supported more from the work from Lewis-Williams and Dowson, and the entoptic visions that occur and are depicted from the trances. These people may have been entering into trances and as a bi-product of the trance, produce these geometric images.

One defining characteristic of *Homo sapiens sapiens* is the ability to experience the world through complex conceptual frameworks that are frequently mutually unintelligible between cultures. Art is culture-bound. It is “a shared body of ideas, conceptions, and experiences.” Interesting to scholars is the “fact that Ice Age humans, using visual media, were conveying ideas so complicated as to totally confound us indicated that the nature of the human adaptation had begun to change” (White 104).

It is apparent that humans of Upper Paleolithic Europe “had at their command a body of technological knowledge as sophisticated as that of any modern hunting and gathering people. This knowledge was passed down through hundreds of generations of

anatomically modern humans, who added to it and improved upon it. Such continuity and intergenerational communication cannot exist, however, without means of organizing people and production so as to ensure both social and biological reproduction (ibid 81).

## CHAPTER 6

### SHARED MOTIFS AND CHARACTERISTICS

One of the most common art motifs that are seen throughout all the sites is the use of handprints. In Australia at 20,000 to 30,000 years ago they appear in great numbers. This is also seen at one specific Upper Paleolithic site. At the Pyrenean cave in France, more than 200 handprints have been discovered (Powell 2). In the Chauvet cave of France there are hundreds of negative handprints. One such panel has been discovered in Park, Queensland, Australia where both negative handprints and boomerangs were depicted together. One of the suggestions behind the handprints is the idea that the wall itself has potent powers and these people were placing their hands on the walls to obtain these powers. This is explained in Africa; again from both the ethnographies and depictions, this theory makes sense. These hunter-gatherers believed the spirit world resided behind the wall itself. Evident by the images of animals emerging and disappearing from cracks in the walls. There are three different types of hand print techniques. The first is to cover the hand in paint and press it against the rocks surface. Second, the artist can create a design, like a spiral, by drawing the image on the hand and press the coated hand against the surface. This type is found in Africa. The third technique involves blowing dry pigment onto the surface with a tube. The artist will place their hand on the surface and then blow the paint onto their hand and the surrounding area. This results in a negative print of the hand in an outline. In

Australia this is referred to as a stencil. This technique has also been applied and used for other motifs. At the Upper Paleolithic site of Pech-Merle in France this technique was employed to create pictographs of spotted horses. Helpers at the site placed their hands strategically to assist in shaping the outline of the animals while the artist blew the paint. In addition, the Australian Aborigines created other objects than just hands with the airbrush technique. They made feet, boomerangs, axes and geometric patterns. They also utilized other objects: plants, twigs and leaves to composite other images (Whitley 2002, 11).



Fig. 9. Australian handprints near Tunnel Creek. Patty Ryan. 20 April 2007. <[www.ryanphotographic.com/handprints.jpg](http://www.ryanphotographic.com/handprints.jpg)>.

In both Australia and France there are abstract finger drawings (Powell 33). In Pech Merle there are horses depicted with red dots as well as animals in Africa created in this manner. Since horses rarely have spots that look like these, the spots are

associated with magic. In figure 10 the handprints around the horse are noticeable. This image correlates with the idea of sympathetic magic. By touching the wall and the image it was a way for the people to control their environment and their prey.



Fig. 10. Horse with circles and handprints at Pech Merle France. [Humanities-Interactive.org](http://www.humanities-interactive.org/.../ex038_05d.jpg). 20 March 2007. < [www.humanities-interactive.org/.../ ex038\\_05d.jpg](http://www.humanities-interactive.org/.../ex038_05d.jpg)>.

In France as well as the other two sites the geometric symbols are seen. The meanings behind the images will probably never be known, but it meant something to them. These images are linked with the neuropsychology model. The model can be applied to all three places to explain the similar geometric images.

The local biotope always plays a huge role in the local myths of the people. They in turn use these myths in their art. This is seen with the snakes from Africa to the horses of France and to the alligators of Australia. It is known that all three had myths, magic and initiations. All of these ideas contributed to their art. Specifically, the idea of superimposition is used extensively in Australia. By superimposing images onto one another it is believed to increase the power of the image itself. In figure 11 all the years of applying the images is evident.



Fig. 11. Superimposing over centuries. Mt Borrodaile, Arnhem Land - Northern Territory. "The First Australians." [Library.thinkquest.org](http://library.thinkquest.org). 16 March, 2007. <[library.thinkquest.org/.../Pmag\\_Image21\\_WEB.jpg](http://library.thinkquest.org/.../Pmag_Image21_WEB.jpg)>.

Both in Africa and Australia, the inhabitants reuse the previous art sites and increase the power of the ancestors. By superimposing images on the older ones the power of the image is amplified (Le Quellec 189).

Dale Guthrie's main idea is that all humans despite any differences in dreams, hormones, environment and cultural histories we all have the ability to reason. This is our main tie to humans past and present. It is an ability to imagine an absolute reality outside our subjective selves (Guthrie 12). Reason and art of imagination are central to all humans and connects us all. Another motif that is seen in all three case studies is the therianthropic images. These images are half-man, half-animal figures. One example comes from the Les Trois Frères in Ariège, France. The image is called the "sorcerer." It has the limbs of a human, the face of an owl, the tail of a horse, and the antlers of a reindeer (see fig. 12) (Leroi-Gourhan 1981, 51). There are several theories behind these images. In the Drakensberg region of Africa another therianthropic images is seen. These therianthropic depictions are believed to be the hunters dressed up like the animals they are hoping to kill. Another theory is that these images are the hallucinations created by the shamans' subconscious. It is then known from the ethnographies that these images are drawn while the shamans are in a relative state of tranquility. Overall these images are used to help the people take control over their prey.



Fig. 12. The “Sorcerer” from Les Trois Frères. Encyclopedia Britannica. 20 March 2007. < [cache.eb.com/eb/thumb?id=4763](http://cache.eb.com/eb/thumb?id=4763)>.

People of the Upper Paleolithic practiced art that was similar to that of the twentieth century. There is a behavioral package that goes along with people and art. “Refined stone-tool technology that went beyond the purely functional to signal group identity, body adornments that conveyed information about personal and group identity, elaborate burial of certain dead, fully modern language, and the making of images” (Lewis-Williams 2002, 101). This paleopsychology idea began in Africa.

Lewis-Williams uses the idea that these hunter-gatherer societies share a shamanistic religion and this is why there is a similarity in art. They share a universal human neurological inheritance that allows the central nervous system to lead them into

altered states of consciousness resulting in dreams and hallucinations within this foraging way of life. With this said, he believes that there was a shamanistic religion in place in France during the Upper Paleolithic. The evidence found in the caves backs this hypothesis. The occurrences of geometric animal motifs are seen in the Apse in Lascaux. The images are adjacent to one another and some superimposed. The use of both types of imagery, geometric and representational, occurs during episodes of hallucination caused by the human nervous system. As seen throughout the Upper Paleolithic world this dichotomy forms the foundation for all classifications of art during this time period. They both represent mental imagery, not things in the material world (ibid 204-8).

The Aborigines use dreams to create their art, however just like the shamans each dream is different and the end product is unique. Again, there is a shared culture and environment that determines what will be produced. These three groups are controlled by their unconscious, environment and culture.

In the end preservation must be added into the larger picture. Wood and other such materials are rare and nonexistent in the archaeological record. These artifacts are lost to us; however that does not mean they did not exist at one time. Also carvings are going to last longer than paintings, therefore the archaeological is biased to longer lasting materials. All of this hurts our interpretations.

## 6.1 Conclusion

The idea of art in the West is conceived to be made as art for art's sake. Most of the art is created to evoke some emotion. This idea is one of the unique functions of western art. The images produced in Australia, France and Africa I believe are not art for art's sake. These images are epiphenomenal of some greater power that controlled the artists. They are products of something much larger than just emotions. They were produced to serve a certain function. In the case of the San they were produced out of trances. In Australia their purpose is to help connect the Aborigines with their heritage and connect themselves to the land. In France, despite some scholar's beliefs, the images served some kind of hunting and initiation function. Again not art for art's sake. There is much more going on than pretty images created to make an aesthetically pleasing atmosphere. If there is no hunting of animals in a society, there is no naturalistic rock art found.

This idea of a specialized and unique purpose behind the art is one of the things these three hunter-gatherer societies have in common. They made meaningful art that is used by them individually; however, they have shared components between the three. The images that were created were interpreted to fit their certain culture. It is true that they were making similar images for similar reasons. Then these images were adapted and took on a deeper meaning that could make sense to the people who would use them. For the Aborigines the geometric symbols became comparable to a language that was written on the walls. The underlying push behind the creation is different, but there is an overall goal in all three. The art was used as sympathetic magic to manipulate the

animals in their everyday lives. These animals were the mainstay of their diet, tool kits, lives, joy and deaths. It is reasonable to see the art created as a second phenomenon to wanting to control their natural environments. Lastly, overall it is known that all three societies were hunter-gatherers and practiced some aspect of the shamanistic religion enabling them to enter into altered states of consciousness to control their environment by using the images as sympathetic magic. In general, there is no one explanation behind the art that was created. It is truly a multi-faceted theory that can explain these depictions. However, the same images are appearing despite different time periods and different people. It was more than art for art's sake; it was an integral element within their cultural systems.

## ILLUSTRATIONS

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	ENTOPTIC PHENOMENA		SAN ROCK ART		COSO
	A	B	ENGRAVINGS	PAINTINGS	
			C	D	
I					
II					
III					
IV					
V					
VI					

FIG. 1. Six categories of entoptic phenomena compared with San and Coso rock-art depictions. Redrawn from the following: IA, Siegel (1977:138a); B, Richards (1971:93); C, Thackeray et al. (1981:fig. 3); D, Manhire, Parkington, and Yates (1985:fig. 4); E, Grant (1968:82); IIA and B, Siegel (1977:138d and e); C, Fock and Fock (1984:fig. 258); D, Pager (1971:fig. 307); E, Grant (1968:102); IIIA and B, Siegel (1977:138b and k); C, Fock (1979:pl. 100); D, Lewis-Williams (1981a:fig. 20); E, Wellmann (1979a:pl. 164); IVA, Siegel (1977:138e); B, Horowitz (1975:fig. 2); C, Fock and Fock (1984:fig. 259); D, Pager (1971:fig. 338); E, Grant (1968:66); VA, Siegel (1977:138i); B, Richards (1971:91b); C, Wilman (1968:pl. 59); D, Lewis-Williams (n.d. b); E, Grant (1968:28); VIA, Horowitz (1975:fig. 2); C, Fock and Fock (1984:fig. 251); D, Lewis-Williams (1981b:fig. 2); E, Grant (1968:101).

Fig. 4. The geometric motifs of the entoptic phenomena seen with the San. Lewis-Williams, J. David, and Thomas A. Dowson. "The Signs of All Times; Entoptic Phenomena in Upper Paleolithic Art." *Current Anthropology* 29.2 (1998): 206.

PALAEO LITHIC ART			
MOBILE ART		PARIETAL ART	
F	G	H	I

FIG. 2. Six categories of entoptic phenomena compared with Upper Palaeolithic mobile and parietal art depictions. Redrawn from the following: (I) F, Marshack (1972:fig. 34); G, Marshack (1979:fig. 34); H, Marshack (1985:fig. 17); I, Leroi-Gourhan (1968a:fig. 73); (II) F and G, Marshack (1972:figs. 4 and 36); H and I, Leroi-Gourhan (1968a:figs. 157 and 126); (III) F, Marshack (1972:fig. 12); G, Marshack (1972:fig. 36); H and I, Leroi-Gourhan (1968a:figs. 64 and 165); (IV) F, Marshack (1972:fig. 43); G, Marshack (1972:fig. 200); H and I, Leroi-Gourhan (1968a:figs. 152 and 710); (V) F, Marshack (1979:fig. 29); G, Marshack (1972:fig. 84); H, Leroi-Gourhan (1968a:277); I, Marshack (1977:pl. 45); (VI) F and H, Marshack (1977:pl. 10 and 32).

Fig. 5. Geometric motifs in Paleolithic art. Lewis-Williams, J. David, and Thomas A. Dowson. "The Signs of All Times; Entoptic Phenomena in Upper Paleolithic Art." *Current Anthropology* 29.2 (1998): 207.

		SAN	COSO	PALAEOLITHIC
<b>STAGE 1</b> ENTOPTICS	I			
	II			
	III			
<b>STAGE 2</b> CONSTRUAL	IV			
<b>STAGE 3</b> ENTOPTICS AND ICONICS	V			
	VI			

Fig. 6. The different stages of the entoptic phenomena. Both the San and Upper Paleolithic images are seen. Lewis-Williams, J. David, and Thomas A. Dowson. "The Signs of All Times; Entoptic Phenomena in Upper Paleolithic Art." *Current Anthropology* 29.2 (1998) : 209.

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During Jenny's time at the University of Texas Arlington she has earned an Honors Bachelor Degree in Anthropology with a minor in German. She was a member of Alpha Chi National College Honor Scholarship Society, Lambda Alpha Anthropological Honor Society, National Society of Collegiate Scholars, Golden Key International Honor Society, Phi Sigma Theta National Honor Society, the National Scholars Honor Society, the National Dean's List, the University's Deans List and the Honors College. She was a member of the German Language Society, Vice President of the Anthropology Club and Secretary of Lambda Alpha her senior year. Her projects included her honors thesis and presenting at the Annual Celebration of Excellence by Students (ACES) under the supervision of Dr. Rose. She won first place in her category. She was then invited to present her work at the Great Plains Honors Council conference at Oklahoma City University in Spring 2007. During the summer of 2006 she studied in Greece with the Honors College. She will graduate Magna Cum Laude. After she graduates she will study in Australia and plan to attend the University of Sydney and receive her Master of Philosophy degree in archaeology.