One World Archaeology

Donna L. Gillette
Mavis Greer
Michele Helene Hayward
William Breen Murray *Editors*

Rock Art and Sacred Landscapes

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Donna L. Gillette • Mavis Greer
Michele Helene Hayward • William Breen Murray
Editors

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Editors
Donna L. Gillette, Ph.D.
Archaeological Research Facility
University of California
Berkeley, CA, USA

Michele Helene Hayward, Ph.D.
Panamerican Consultants
Buffalo, NY, USA

Mavis Greer, Ph.D.
Archaeological Consultants
Greer Services
Casper, WY, USA

William Breen Murray, Ph.D.
Department of Social Sciences
University of Monterrey
San Pedro Garza Garcia
NL, Mexico

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Contents

Contributors

Daniel Arsenault, Ph.D. Départment of Social Sciences, University of Québec, Montréal, QC, Canada

Margaret Bullen, MA, MB, BChir North Fitzroy, VIC, Australia

Michael A. Cinquino, Ph.D. Panamerican Consultants, Inc., Buffalo, NY, USA

Robert J. David, Ph.D. University of California, Berkeley, CA, USA

Clifford Duncan Elder, Uintah & Ouray Reservation, Roosevelt, UT, USA

Herbert H. Eling, Ph.D. Teresa Long Institute of Latin American Studies, University of Texas, Austin, TX, USA

Donna L. Gillette, Ph.D. Archaeological Research Facility, University of California, Berkeley, CA, USA

Mavis Greer, Ph.D. Greer Services, Archeological Consulting, Casper, WY, USA

Jamie G. Hampson, Ph.D. University of Western Australia, Crawley, WA, Australia

Michele H. Hayward, Ph.D. Panamerican Consultants, Inc., Buffalo, NY, USA

Melissa L. Morgan Oregon Archaeological Society, Central Point, OR, USA

Guillermo C. Muñoz, Ph.D. Candidate University of Trás-os-Montes, Alto Douro, Portugal

William Breen Murray, Ph.D. Department of Social Sciences, University of Monterrey, Garza García, Nuevo León, Mexico

Carol Patterson, Ph.D. Urraca Archaeological Services, Montrose, CO, USA

Frank J. Schieppati, Ph.D. Panamerican Consultants, Inc., Buffalo, NY, USA

Paul S.C. Taçon, Ph.D. PERAHU, School of Humanities, Griffith University, Gold Coast Campus, QLD, Australia

Noel Hidalgo Tan The Australian National University, Canberra, ACT, Australia

Solveig A. Turpin, Ph.D. Texas Archaeological Research Laboratory, University of Texas, Austin, TX, USA

David Vogt, Ph.D. Museum of Cultural History, University of Oslo, St. Olavs Plass, Norway

Yasha Zhang, Ph.D. Rock Art Research Association of China (RARAC), Minzu University of China, Beijing, People's Republic of China

Dagmara Zawadzka, Ph.D. Candidate Department of Art History, Université du Québec à Montréal, Succursale Centre-Ville Montréal, Montréal, QC, Canada

Leslie F. Zubieta, Ph.D. Center for Rock Art Research, University of Western Australia, Perth, Australia

Honorary Senior Research Fellow, Rock Art Research Institute, University of the Witwatersrand, Johannesburg, South Africa

Chapter 1
Introduction to Rock Art and Sacred Places

Donna L. Gillette, Mavis Greer, Michele H. Hayward, and William Breen Murray

Introduction

Rock art imagery occurs worldwide, and much of it is believed to have been created as part of a culture's religion or ritual expression. In 1871 Edward B. Taylor, one of the founding fathers of anthropology, defined religion as "belief in a spiritual being" (Taylor 1920 [1871]:13371). Although his definition may appear simplistic, it encompasses the basis of all human religions, which Taylor went on to suggest were rooted in *animism*, or the belief that spirits and souls (spiritual beings) exist in human as well as nonhuman beings such as animals or trees. In the worldview of many people (past and modern) mountains, rocks, and other inanimate objects are also alive or imbued with a spiritual essence. According to Taylor, religion developed to explain the puzzling phenomena people encountered in their everyday life. The existence of *spiritual beings* continues to remain a core belief in many parts of the world, and these *beings*, especially animals, also comprise a large share of rock art imagery. This volume focuses on case studies of rock art imagery that represent

D.L. Gillette, Ph.D. (✉)
Archaeological Research Facility, University of California, 1147 Vaquero Way, Berkeley, CA 93444, USA
e-mail: rockart@ix.netcom.com

M. Greer, Ph.D.
Greer Services, Archeological Consulting, 2599 Paradise Drive, Casper, WY 82604, USA
e-mail: mavis@greerservices.com

M.H. Hayward, Ph.D.
Panamerican Consultants, Inc., 2390 Clinton Street, Buffalo, NY 14227, USA

W.B. Murray, Ph.D.
Department of Social Sciences, University of Monterrey, Garza García, Nuevo León, C.P. 66238, Mexico

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how humans in the past made sense and interacted with their world within a religious context. Specifically we examine how people recognize when rock art denotes sacred places where ritual occurs.

Religion, Ritual, and Spiritualism

The religions of past peoples have been investigated by cultural anthropologists, archaeologists, religious historians, art historians, and psychologists, and all vary in their definitions and approaches to the subject. In cultural anthropology and archaeology religion is understood to involve beliefs, oral traditions, practices, and rituals, as well as their material correlates including artifacts, landscapes, structural features, and visual representations such as rock art. These terms represent mental constructs devised by investigators to make sense of human thoughts, actions, and material remains that are primarily religious or spiritual as distinct from those that derive mostly from economic, political, or social activities.

The anthropology of religion, ritual, spiritualism, and related topics has a vast literature related to cultural practices and material cultural items (Bell 1997, 2007; Clottes and Lewis-Williams 1996; Douglas 1973; Kyriakidis 2007; Rappaport 1979, 1999; Steadman 2009; Turner 1967, 1969; Whitley and Hays-Gilpin 2008). Here we explore these concepts relative to pictograph and petroglyph images placed on natural surfaces and their role helping individuals negotiate their place and perceived power in the world, as well as obtaining meaning from the world around them. The following chapters demonstrate that the meanings of such terms as religion, ritual, and spirituality need to be particularized with regard to specific cultures in different times and places. The following brief review of certain terms normally associated with religion sets the stage for the studies presented in this volume.

Spirituality

Common definitions of spirituality include a deep regard for religious values; a concern for matters of the spirit; belief in an unseen or immaterial reality; a focus on the soul or self; and as paths toward higher levels of consciousness, self-understanding or communion with the divine (illumen8.com 2008; Merriam-Webster 2011; The Free Dictionary 2011). Religion and spirituality are intricately intertwined with shared beliefs (existence of the divine or immaterial world), practices (meditation, prayers), and organization (rules, structured approaches to self-enlightenment). Even so, certain distinctions can be made. For example, religion is frequently characterized as an external organized system of worship with public practices and formal doctrines that are culturally and institutionally dependent. Spirituality is seen as an internal, private, unenforced, and non-dependent means to similar or the same

goals of religion including experiencing transcendent reality and achieving personal peace (Brown Holt 2006; Chumley 2010; Cline 2009; Thurman 2011).

Traditionally, the relationship between the two concepts has been to consider religion as the outward form and the spiritual as the inward form of faith traditions, where the believer more fully internalizes core values and beliefs that commonly results in inner spiritual advancement. More recently, and especially in regard to the American public, spirituality may be viewed as largely divorced from particular religious traditions with a focus on individual growth. Social reform movements including feminism and transpersonal psychology, as well as encounters among world religions have all influenced the meanings and practices of contemporary spirituality (Cline 2009; Irwin 2010). The traditional inter-linkage between the two concepts is adhered to in the present volume, where religion and spirituality are used interchangeably to reflect the recognition of the divine or otherworldly presence in all living beings and even physical objects.

Ritual

Ritual is sometimes the agent for religious expression, and Catherine Bell takes "… ritual to be the basic social act. …in ritual, the world as lived and the world imagined…turn out to be the same world" (Bell 1997:v). This statement points out that ritual is not easily explained or understood even though it is something humans are associated with on a daily basis, both now and in the past. To understand how rock art had and still has a religious function, it is necessary to focus on ritual because it may lie behind the act of placing images on rock or behind the reason for returning to a rock art site by the same or different cultural groups again and again over the years. Therefore, although ritual and religion are intertwined, they display themselves in a variety of ways, and rock art studies can contribute toward a better understanding of that relationship.

Other anthropologists of the twentieth century have also made significant contributions to the studies of ritual and religion, including Mary Douglas and Victor Turner. Both of these anthropologists were advocates of a symbolic approach to understanding the role of ritual in society (Steadman 2009:33). Douglas was a student of Evans-Pritchard and proponent of symbolic anthropology who, like Pritchard, taught that a culture's most basic values and worldview are represented by "symbolically meaningful components" of ritual and religion (Steadman 2009:31). Douglas (1973) argued that an emic view is needed to unravel the meaning that underlies actions, including rites that make up a religion. As applied to rock art studies this requires an extensive knowledge of a particular cultural group to understand rites portrayed in images. For example, rites of passage sometimes contain a rock art component, such as the girl's puberty rites of the Luiseño's of Southern California, where at the completion of their ceremony, they ran to a nearby rock to place images (usually diamond chains) that represented their spirit helper, the rattlesnake (Du Bois 1908:173–4).

Victor Turner, whose fieldwork was centered with the Ndembu people of eastern Africa (1967), saw symbols as representative of both cognitive and emotional responses (Steadman 2009:33). He viewed symbols (such as rock art figures) as *units of meaning* which could be representative of an *entire cultural structure* (Turner 1967). While symbols may have different meanings to different groups, Turner related that the entire *forest of symbols* was understood by all in the group, and this served to unite the community that shared a complex system of symbolic meaning. In addition to his study of symbols, Turner also focused much of his work on the process of ritual. Turner saw the ritualistic process in the rites of passage as developing a lifetime bond between the participants and the elders they were following, which he referred to as *communitas* (1969).

Gilbert Lewis refers to a puberty ritual among the Gnau people of Papua New Guinea which points out the difficulties that occur when attempting to define ritual (Lewis 1980). He sees the problems encountered as that of understanding the symbols and expressions of other people, and this is certainly relevant to rock art images if, as he suggests, the word *art* is used as an analogy for the word *ritual*. Lewis notes that they pose similar problems in meaning—the separation of a ritual from a game or technique, and to separate art from a craft or an amusement—"So may we choose to say there is a ritual aspect to many actions: and may we choose to see artistry in many artifacts. What are those aspects that we point to by calling them ritual or artistic?" (Lewis 1980:9).

Another good example of the thin line between games, ritual, and religious cosmology are the patolli petroglyphs of Mexico. Patolli was a popular board game like chess or dominos whose symbols and movements were equivalent to a cosmogram of the universe widely shared throughout ancient Mesoamerica. Modern games are rarely defined by religious concepts (unless you really believe in "Lady Luck"), but for ancient Mesoamericans, each move in the game represented the play of celestial beings on a cosmic landscape. Patolli game boards are a special category of petroglyphs found at various sites in west and central Mexico (Mountjoy and Smith 2004).

Rappaport, in his studies of the Maring people of interior New Guinea, views ritual as not producing "any practical result on the external world," but to the "internal construction of the society" where it "gives members of the society confidence" it "dispels their anxieties" and "disciplines their social organization" (Rappaport 1979:17). He identifies ritual as a formal aspect of an event which can include various media—words, gestures, and objects. Joyce (2001:133371) identifies ritual as "repetitive sequences of actions related to beliefs" and emphasizes the importance of contextual analysis, which allows the identification of types of artifacts that can serve as evidence of ritual action. This last definition is especially related to some rock art ritual practices such as the previously mentioned girl's puberty rites of the Luiseño of southern California (Du Bois 1908:173–4), or the Pomo rituals related to fertility (Barrett 1952:386–7), where the same acts, leaving evidence on boulders, are repeated with each ritual act. This kind of ritual behavior has been proposed as the reason that there are hundreds of shield-bearing warrior figures painted and engraved on the walls of Bear Gulch in central Montana (Keyser et al. 2012). In this

case, the site predates written records but comparisons with known ritualistic practices provide the best explanation for the creation of so many images within such a small area. This location appears to have been a place of power, and by drawing an image on the wall in association with religious ritual young warriors gained some of that power for themselves.

Although the Huichol perform rituals at various rock art sites, including one near Monterrey, Mexico, which is identified as part of the creation landscape (Murray 2006), they do not make rock art as part of these rituals. In the Sierra Tarahumara of Chihuahua, and in many parts of central and southern Mexico, these rituals are now linked syncretically to the Christian calendar and have been relocated into new locations, such as the Holy Week celebration of the Rarámuri who dance all night around bonfires in the church plaza to celebrate the Easter passion each year. This ritual includes indigenous elements such as body painting and the use of ritual objects that replicate motifs at nearby rock art sites. Many archaeological sites in Mexico and elsewhere are also now treated as "power centers" in New Age rituals and beliefs and some include rock art as part of their magical landscape.

Sacred Places

Many places in North America and worldwide are considered sacred because of the presence of rock art. In some cultural worldviews (both past and present), the rock itself is a living thing, and the markings on the rock (images) are spiritual symbols (imbued with power) associated with the rock, cave, or other host phenomena and are viewed within the context of the surrounding landscape (Greco 2011). Rock art placed at a location in the past for whatever purpose usually transformed that place into one considered sacred by the group that made the rock art and those (related or not) that came after them to use that space. Conversely, a place may be sacred first for another reason, such as the occurrence of a momentous event or a coming of age vision quest, which is then marked by rock art making the place sacred. A sacred place does not necessarily exclude nonreligious activities at that location for many cultural groups. However, it may mean that special rituals are necessary before entering the sacred place to conduct either spiritual or secular business. The intertwining of sacred places with religious expression and every day mundane work, such as hunting and gathering, undoubtedly occurred in the past as it does today For example, North American tribes make distinctions not only for church buildings but also for outdoor religious activity areas, so that tourism does not usually overlap with times of worship at sacred spaces, such as Devil's Tower National Monument in Wyoming, known as Bear Butte by the tribes who consider it a sacred place. The complexities of what is a sacred place, how one place on the landscape becomes sacred over another even if both have similar natural attributes, and how a sacred place is treated by different cultures through time are often associated with rock art studies throughout the world.

Summary of Contents

In the following chapters one class of material culture—rock art—is employed to address issues regarding the internal and external dynamics of past religion, which encompasses spirituality. An examination of spirituality in past and present societies, along with archaeological data on religion, indicates that religious or spiritual concepts are and always have been a complex worldview composed of living humans and a range of nonhuman spirits or beings, dead ancestors, and animate forces. Recognizing that this totality of life involves interlinked systems of beliefs, behaviors, and physical characteristics, implies that the latter can be used to infer the former. The volume's chapters expand on these ideas with case studies providing well-reasoned and well-grounded arguments for inferring rock art and religious linkages. The studies are drawn from diverse geographical regions—Africa, Australia, Caribbean, Central America, China, Europe, North America, South America, and Southeast Asia—and encompass thousands of years. They are organized according to rock art's role among the following aspects of religion: ritual, beliefs, marked landscapes, practitioners, and formal organization.

In *Rock Art and Spiritualty: Is the Rock Art of 30,000 Years Ago a Window to the Spirituality of the People of the Palaeolithic*? Margaret Bullen addresses the question of continuity of the human mind. She examines whether humans of today have the ability to enter into the prehistoric mind of those who created the art work 30,000 years ago in Chauvet and Lascaux and can we know and understand their worldview. It is her argument that Paleolithic art was created by special people and there are special people in all times and places, and these people have the power to communicate across the boundaries of life and death and perhaps across the boundaries of time and space.

Silence of Signs—Power of Symbols: From Sympathetic Magic Towards Social Semiotic in South Scandinavia Rock Art Research by David Vogt argues that regardless of single or multiple contexts—religious, political, economic, ideological—rock art images communicate messages. A case study from Southern Scandinavia illustrates the utility of this analytic approach to a particular body of rock art, as well as rock art in general. The Late Bronze Age in Southern Scandinavia was a time of dramatic political and environmental change, which is reflected in the rock art. The transformation from forest to vast grasslands was rapid, and coincided with the appearance of thousands of rock carvings. Vogt proposes that this body of Late Bronze Age Southern Scandinavian rock art provides a database for examining the messages of passive religious and active political communication.

Leslie F. Zubieta in *The Rock Art of Chinamwali and its Sacred Landscape: A Pilgrimage to Initiation* analyzes the Chewa matrilineal society of south-central Africa to understand how religious ideas of the Chewa are evidenced in their girls' initiation ceremonies, and how the performance of their rituals have changed through time. Their religious beliefs and rituals are reflected in a specific set of white rock paintings and their placement on the landscape.

Noel Tan and Paul Taçon examine the coexistence of rock art with scared shrines and temples in Myanmar, Thailand, Cambodia, and Laos in *Rock Art and the Development of Sacred Landscapes in Mainland Southeast Asia*. The introduction of Buddhism and Hinduism reconfigured painted landscapes for their own use. Commonalities and differences among these sites suggest that they may always have been regarded as "powerful" or "spiritual" places in varying ways.

In *Spirituality and Chinese Rock Art* Yasha Zhang examines the abundant and diverse rock art of the regions of China relative to their associations with local religious beliefs and worship. Because of the long written history in China, it is possible to make the spirituality connection with more confidence further back in time than it is for many other parts of the world, but even in China the earliest rock art must rely on other means of analysis to determine its function. Different kinds of images were made and used in different regions of the country at different times as people continued to change their ways of thinking, but like other parts of the world, Chinese rock art associated with religion and spirituality is also based on the economics of the region.

Jamie Hampson in *Conflict on the Frontier: San Rock Art, Spirituality, and Historical Narrative in The Free State Province, South Africa* begins with the premise that San rock art was produced within a ritualistic framework based on ethnographic evidence that San paintings and engravings in numerous southern African regions reflect a belief in a tiered cosmos and its interpretation by shamans. Here he examines questions that arise from the study of specific paintings at the Wepener site that can be answered by detailed studies of San beliefs.

In *Spiritual Places: Canadian Shield Rock Art Within Its Sacred Landscape* Daniel Arsenault and Dagmara Zawadzka argue that the physical properties of rock art sites and their placement on the natural features reflect spiritual and cosmological beliefs of Algonquian-speaking peoples, thus creating a sacred landscape. They note that the physical attributes of the site (i.e., properties of the rock outcrop on which rock art is found, the visual and acoustic effects present at the site, the cardinal orientation of the site, and the location near landscape features such as falls) all had spiritual connotations, which enhanced the sacredness of the place and made it propitious for conducting ceremonies.

Ute rock art is the subject of *Concepts of Spirit in Prehistoric Art According to Clifford Duncan, Ute Spiritual Elder* by Carol Patterson and Clifford Duncan. A discussion about spirit and ceremonies of a spiritual nature is offered relative to representations of the Bear Dance at Shavano Valley petroglyph site as interpreted according to Ute Indian traditions. Clifford Duncan, Ute tribal elder, contrasts what he believes to have been prehistoric worldviews with the contemporary Ute worldviews. He presents his concept of spirit from his lifelong study of rock paintings and petroglyph sites as related to Carol Patterson during their visits to these locations.

Old Man Owl: Myth and Gambling Medicine in Klamath Basin Rock Art by Robert David and Melissa Watkins Morgan introduces us to "Owl Site," a petroglyph concentration in southern Oregon and Northern California. Klamath-Modoc shamans believed that characteristics of the owl contained supernatural properties,

and these properties were integrated into their ritual activities. Klamath-Modoc myths, in combination with local ethnographic information, provide specific and detailed explanations why images at the Owl Site are related to power quests in which individuals sought supernatural assistance relative to gambling ventures. They argue that laypersons, as well as the shamans, tapped into this power to assist them in success at gambling.

Trance and Transformation on the Northern Shores of the Chichimec Sea by Solveig Turpin and Herbert Eling focuses on the intimate relationship of prehistoric people with the supernatural universe as expressed in pictographs, petroglyphs, painted and incised pebbles, and painted bones. They view a religious practitioner who is in a trance as having the ability to assume the form of his animal spirit and, through the power of magical flight, travel to the land of the spirits, indicating a far more complex system of beliefs than is denoted by the way they lived.

William Breen Murray in the *Deer: Sacred and Profane* studies the role played by deer in the lives of some northern Mexico groups. Rock art images of deer antlers and hoof prints often occur at good hunting sites and may be semasiographic symbols marking the transformation of these places into ritual settings which relate to the annual solar year which governs antler growth and the entire deer reproductive cycle. Some elements of these deer rituals are well documented and still practiced in modern North Mexican indigenous cultures.

Spiritual Organization in the Late Ceramic Caribbean by Michele H. Hayward, Frank Schieppati, and Michael A. Cinquino applies ethnohistorical accounts coupled with the physical characteristics and iconography of rock art to indicate a shift from a less structured to a more structured organization in studying change and stability of religion/spirituality. Their data indicate that control of ritual objects and places was by the elite, to strengthen their individual and collective influence.

In *Language and Thought in Rock Art: a Discussion of the Spiritual World of Rock Art in Colombia* Guillermo Muñoz stresses the importance of studying rock art in the context of its native cultural setting. Premodern peoples viewed the world, and people and places in it, as more animated and more imbued with spiritual forces and entities than those of the present-day, and thus the spiritual dimension needs to be considered in any interpretation.

Spirituality is not a static concept. The chapters in this volume are only a glimpse at the diverseness of how spirituality and rock art have been viewed by different cultures at different points in time. In the final chapter in the book Donna Gillette and Mavis Greer focus on rock art in North America for *Spirituality in Rock Art Yesterday and Today: Reflections from the Northern Plains and Far Western United States*. In parts of North America there are ethnohistorical and ethnographic records that discuss how rock art's connection with spirituality was viewed by different cultures at different points in time. Although these differed from one tribe to another prior to westernization of the continent, today, for the most part, regardless of the function of a rock art site in the past, it is considered a spiritual place by Native American groups in these regions. How and why this change occurred and under what circumstances reflects the larger cultural landscape within America and how spirituality and rock art serve as an important link to cultural identity.

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Chapter 2
Rock Art and Spirituality: Is the Rock Art of 30,000 Years Ago a Window to the Spirituality of the People of the Paleolithic?

Margaret Bullen

Introduction

Paleolithic rock art such as that of Chauvet Cave (France) reaches out to us across a divide of thirty thousand years with a power that leaves us awestruck. To interrogate it as to its meaning is as presumptuous as to demand an explanation from a present day Australian Aboriginal person of their secret and sacred paintings. Even if a story is offered, we accept that behind those images there are other stories accessible only to those who have the right to know the deeper meanings. Those meanings frequently lie in the realm of the spiritual, described in the introduction to this volume as the "inward form of faith traditions". We are told that much of their art has a sacred meaning for Australian Aboriginal people, but we have no one to tell us if the Paleolithic art was sacred to the people of that time. The question is whether the art itself can reveal the answer.

Spiritualism, animism, and spirituality are all aspects of a belief system that tolerates the idea of a nonmaterial and therefore unknowable other, existing beside the reality that is material and ultimately, knowable.

The core belief of spiritualism is that the spirits of those who have died are able to communicate with the living. This belief has a requirement that the living also have a spirit distinct from their material reality. Materialism, in contrast to spiritualism, is based on the belief that nothing exists except matter and that consciousness is wholly due to material agency. Spirituality is a broader concept which includes religion and concerns itself with matters of the spirit and the sacred as opposed to the profane. Modern science is stripping open the places where the spiritual or numinous aspect could lie hidden. While there is still much to be discovered, the brain is no longer *terra incognita* but a landscape with well-known pathways, nor

M. Bullen, MA, MB, BChir (✉)
191 Rae Street, North Fitzroy 3068, VIC, Australia
e-mail: mubullen@hotmail.com

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can spirit today secrete itself within the closed world of the cell. That too has been illuminated and even genes are reduced to strings of nucleotides. Yet many modern people, from both Western and non-Western societies, despite accepting a scientific underpinning of the world, do not place all existence within the category of "knowable."

Worship of the ancestors is a feature of many religious practices indicating a belief in the power of the departed to influence the lives of the living.

Modern technology allows us to watch astronomers guide a tiny craft an unimaginable distance across space to land on a distant planet and measure the forces that keep the stars in their orbits. Yet the splendor of the night sky, especially when observed away from the light pollution of modern cities, still has the power to inspire awe. Most people living in modern societies neither prostrate themselves in obeisance before the spirits of the night sky nor find it necessary to carry out rituals to ensure that the sun will rise. However, even in the most modern of Western societies, people write letters to their departed loved ones and find comfort in talking to them at the side of the grave. In some societies meals are left for the departed or eaten in their company beside the grave. Messages in the obituary pages of daily newspapers are frequently directed to the person who has died with thanks for friendship and reminiscences of shared experiences.

Even if definitions are fluid, there is a commonality of understanding about what modern human beings mean by spirituality. However, we may question how realistic it is for we of the twenty-first century to interrogate notions of spirituality in the Upper Paleolithic, at a time before ideas and thoughts were recorded in language and the world was a very different place from the one we now inhabit.

We can only dare to be so presumptive if we can be sure that we share enough with the people of thirty to forty thousand years ago. Arms, legs, hearts, and lungs may to all intents and purposes be identical, but what about the brains, the seat of consciousness? Who were those people and are our brains alike enough to theirs for us to hear what it is they have to say? The clues we have lie in their bones and in the technology and artistry they left behind: tools of stone and bone, paintings and carvings in caves and on rock faces, and even musical instruments.

Art is defined by The Oxford Dictionary as "the expression or application of human creative skill and imagination, typically in a visual form such as painting or sculpture, producing works to be appreciated primarily for their beauty and emotional power." This definition does not include art acting as a symbol, standing as a referent for something else, or, in a definition closer to the Latin *ars*, as a skill. Does art begin in the Upper Paleolithic with the great Franco-Cantabrian naturalistic images or much earlier? When does art—two or three dimensional—show evidence of being a symbol? Is it possible to see within the art of the Upper Paleolithic, the mark of spirituality? This paper will attempt to answer these questions and will consider to what extent, from our current knowledge of the modern brain, we can infer how hominids thought and expressed themselves thirty to forty thousand years ago. The role of the shaman both within the community and as a possible maker of art will also be discussed.

When Does It Begin?

As knowledge increases, so too does the time depth of hominid competence. In 1650 according to James Usher Archbishop of Armagh and his colleague John Lightfoot, Vice Chancellor of Cambridge University, the world was created in 4004 BC (Groves 1996). Only 400 years later the Abbé Breuil looked back over four hundred centuries to the beginnings of prehistoric art (Breuil 1974), a generous time span that allowed for the later discovery of the cave of Chauvet, currently dated to at least 32,000 B.P (Clottes 2003).

The rock art of Chauvet is both aesthetically pleasing and emotionally powerful. It is hard to accept that art of this level of sophistication arose de novo, but it is unclear on whose shoulders the artists of Chauvet were standing. Perhaps it began with an early hominid having a flash of recognition of a human likeness in a reddish-brown jasperite cobble (Fig. 2.1) discovered in 1925 in an Australopithecine context in Makapansgat Cave, South Africa (Bahn 1999; Bahn and Vertut 1997).

After dismissing the cobble as of no significance shortly after it was found, thirty years later Dart recognized its nature was foreign to the cave's dolomite and must have been brought into the cave from a source some distance away. The cobble was extensively studied by Kenneth, Oakley, and Desmond, Morris featured it in a major television program "The Human Animal" (Bahn 1999). There was no evidence that the cobble had been altered except by natural processes, and it has been assessed as too large to have been brought into the cave in the gut of an animal (Bednarik 1998). Unless it was brought into the cave by chance, an individual selected the pebble for

Fig. 2.1 Makapansgat cobble (South Africa) (photo by Paul Bahn)

some reason. Today we might comment that the markings look almost like a human face, with two horizontal depressions for the eyes and one below for the mouth. We might even call it a symbol of humanity. Experimentally, faces are recognized as such given the simple features of two round circles, a vertical line for the nose and a horizontal one for the mouth, provided they are in the correct relationship to each other (Ramachandran 2012). Facial recognition is a function of the brain found in nonhuman primates. Specific cells in the temporal lobes of monkeys have been found to fire off when they visualize another monkey's face and also when they see a highly stylized caricature of the face. It is therefore reasonable to assume that an Australopithecine hominid would also have had the neurological capacity to respond to a stylized face. If we allow ourselves to believe that the cobble was transported a long distance because it resembled a face, we can imagine that the individual concerned wanted to keep it because it aroused certain feelings in him or her and perhaps, to share their observations with others.

We cannot assume that the individual made the higher order recognition that the pebble stood for the concept "human," and that it was therefore a symbol. Beads made from marine shells have been found in the Middle Paleolithic site of Blombos Cave, in a layer dated to seventy two thousand years BP and in that context have been proposed as indicators of symbolic reasoning and syntactical language. According to Henshilwood and Dubrei (2009) they had been deliberately pierced, had on them minute traces of ochre and showed evidence of wear from stringing. They were not randomly distributed in the layer but were found in groups with an internal consistency in the manner of perforation and patterns of use wear. It is argued that this evidence for careful selection suggests the beads were not utilitarian and were worn in front of other people and perhaps indicated membership of a particular group (d'Errico and Vanhoeren 2009).

There is no doubt that creating beads from shells requires forward thinking and planning, but they may have just been decorative. Male bower birds decorate their bowers to attract females, some collecting white objects and others blue, and surveys of abandoned bowers would no doubt reveal internal consistency in terms of color. It may be reasoned that the individuals of Blombos Cave were signifying their belonging to a particular group by their choice of shell color and the way they made and wore their beads. It may also be that their choices were purely dependent on how they had learned from others in their closest community. We have no actual evidence for their being anything more than decorative. The same reasoning can be applied to beads found within a Chatelperronian context pushing bead making back to the Neanderthals (d'Errico et al. 1998) but with no evidence that the beads were anything other than decorative.

The recently reported U-series dating of calcite flowstone covering red marks in caves in northern Spain pushes back the earliest dates for art to circa 40,800 BP (Pike et al. 2012). This is the date put on a red disc in the cave complex of El Castillo. The authors note that this is close to the 41,500 BP date for the arrival of modern humans in Western Europe suggesting that decorating caves may have been part of the cultural package they brought with them. However, they also point out that 40,800 BP is a minimal date and the mark might predate the arrival of *Homo*

sapiens sapiens, making it the work of *Homo sapiens neanderthalensis* (Pike et al. 2012). As is the case with beads, decoration of the cave wall with red marks is very different from making a representation intended to stand for something else; a symbol of that other object or being. Neanderthals may have decorated their caves with flowers and put red marks on the walls to make them more pleasing places to live, but the mark has no features that clearly define it as a symbol, nor does it offer any clues as to whether the people held any spiritual beliefs. There is also controversial evidence that they expressed themselves musically. In 1995 the perforated femur of a cave bear, excavated from a site in Slovenia was dated by Electron Spin Resonance (ESR) to between fifty and sixty thousand years ago (Turk and Dimkaroski 2011). Computerized tomography was said to confirm that the holes were artificial and ethno musicologists identified it as a wind instrument with a range of two and a half to three octaves (2011). While the evidence for the bone artifact being a flute has been challenged (d'Errico et al. 1998) even if it were found to be correct this would be evidence of a musical sensibility not spirituality or symbolism. The desire to decorate the body and/or the cave and a "susceptibility to music" (Sacks 2008:xiii) have been threads running through the evolution of *Homo sapiens sapiens* from before the earliest of the great Franco-Cantabrian galleries. In considering how close we of the twenty-first century are to the people who created those galleries a brief look at the evolution of the brain may help.

Evolution

Evolution has been described as parsimonious because what has gone before is incorporated in the next stage of development. In broad terms this can be seen in Paul MacLean's model of the triune brain, the Reptilian, Paleo-mammalian, and the Neo-mammalian (Maclean 1990:9).

The Reptilian is at the base, both in physical and evolutionary terms; but it is what keeps the basic functions of the body going even if the higher centers are not functioning. The development of the Paleo-mammalian brain saw the emergence of the limbic system with its complex relays involving, among other areas, the thalamus, hippocampus and amygdala, interacting with input from the sensory centers. The ability to learn and recall emotionally significant information vital for survival depends on the limbic system, and survival of the individual often depends on the ability of the limbic system, particularly the amygdala, to initiate a response without internal debate through higher centers. However, it was the neo-mammalian brain with its increasingly complex cortical function that allowed a more considered reaction to the emotions evoked by the limbic system. Tracts run from the various components of the limbic system including the thalamus, the anterior cingulate, and the amygdala connecting with each other, with the motor and sensory cortex and with the prefrontal cortex. In order to think about a response to a stimulus from the limbic system it is necessary to have access to an internal script. That requires language.

How early language began in the evolutionary pathway to *Homo sapiens sapiens* is still a contested topic, but it was probably well established by the Aurignacian. It is argued that the development of social complexity would have required complex language, and therefore archaeological evidence for significant local differentiation in lithic cultures in the period from 50,000 to 150,000 years ago indicates the presence of complex language at that time (Matthiesen 2004).

The makers of the art under discussion were fully human possessing both the capacity for a spoken language and for a personal internal script. They were born in the same state of immaturity as humans are today which would have had a similar effect of strengthening the prevailing culture. Humans are born with a brain representing only 25 % of its adult size compared to 70 % in the macaque monkey and 45 % in a chimpanzee. In the chimpanzee 85 % of adult brain size is reached 1 year after birth while it takes 6 years in the human (Hublin 2005:62). During that long postnatal period of cerebral development thousands of connections between brain cells, or neurons, are being created by the process of synaptogenesis. The connections themselves are dependent on the presence of thousands of proteins on both sides of the junctions known as the synapse complement (Ryan and Grant 2009). While these proteins are found from the most primitive to the most complex organisms it is thought that the evolution of the synapse complement has enabled an increase of neuronal cell types and in the neuronal network complexity of the human brain (Ryan and Grant 2009). Research on the level of protein expression in human and primate brains has identified numerous proteins that are specifically up regulated in humans, but as Ryan and Grant state they can only speculate on the function of these human specific proteins and why their selection sometimes is associated with an increased vulnerability to some psychiatric disorders (Ryan and Grant 2009). We do not have access to either the brain or the genome of the artists of the Palaeolithic although partial sequencing of the Neanderthal genome has been achieved (Green et al. 2010). There are enormous problems to overcome including contamination with modern DNA and microbial DNA but it is not out of the question that DNA may, in the future, be retrieved from earlier hominids.

Synaptogenesis can be divided into four stages. Stages 1 and 2 are early intrauterine phases and of relatively low density, while stage 3 is fast and dense. It lasts for 14 days in the rat, 30 in the cat, 136 in the macaque and 470 in the human. Most importantly, while stage 3 starts before birth, it, and stage 4, continue well into the postnatal period. At that time the infant is exposed, not only to a different physical environment but to one with a social and cultural content. The transmission of culture from one generation to the next is highly dependent on the enormous number and complexity of synapses and their selection in the postnatal period (Changeux 2005). An extended time for synaptogenesis is a characteristic of modern humans that was probably shared by the earliest Homo *sapiens* (Hublin 2005).

About 40,000 years ago human beings had brains that were anatomically close to ours. The brains of their infants had a similar opportunity to develop their synaptic networks and for the cells to learn to respond to visual and auditory cues as do those of today. But the building blocks, the proteins transmitting their messages and storing memories, were probably not identical, and the verbal and visual cues in their physical and cultural experiences would have been very different.

The genetic blueprint encoded in DNA was for a long time considered as the sole and immutable determinant of an individual's identity. It was understood that it was changes in genes through mutations that could bring about changes in offspring, not environmental and behavioral events. The study of epigenetics has profoundly altered that thinking. Epigenetics is about changes to the DNA that do not involve changes to the actual amino acid sequences but rather to the behavior of gene regulating attachments (Francis 2011). These effects start even before the infant is born. Something in the internal or external environment of either or both parents will alter the expression of genes in the fetus, but these epigenetic effects are particularly powerful in utero. Some effects can be passed on directly, but more commonly they result in cultural changes which are then adopted by the descendants, bringing together the influences of nature and nurture. These epigenetic effects will have been acting on the human genome over the past forty thousand years, and the more people dispersed, the more varied those effects will have been.

The discovery of mirror neurons, initially found in macaque monkeys, has added to our understanding of how culture is transmitted. The same cells in an area of the premotor cortex of the monkeys were observed to become active both when an animal carried out an action such as reaching for an object and also when it observed another animal carrying out the same task (Rizzolatti and Giovanni 2005). The mirror neurons in humans were observed to respond also to intransitive but meaningful movements; they were not only mirroring the goal but also the pathways to achieving it.

Other types of mirror neurons have been discovered in humans, not only motor but also sensory. The cingulate cortex is part of the brain's limbic system and is involved, among other things, in the emotions. The anterior part of the cingulate cortex has been found to be particularly involved in conflict situations including pain. Cells in this area, which have been identified as responding to painful stimuli to the skin, were observed to become active when an individual watched another person receiving a painful stimulus. Motor neurons not only allow a person to experience, and learn from, an action carried out by another person but also to feel their experience (Ramachandran 2012). This is perhaps the mechanism of empathy.

A novel idea will only become incorporated into the culture of a society if other people have observed the activity and try it for themselves. Just because one person observes another carrying out a task does not mean they will automatically copy them. If the activity is not copied by others it may never be incorporated into the skill set of the community. The larger the community, the more chance there is that another member will copy a novel activity and it will then become part of the culture.

Assuming that the Makapansgat cobble was carried to the site by an Australopithecine individual, was that individual the only one to have a response to the "image" of a face or did others share the response? Finding the cobble in the deposit was a serendipitous discovery and maybe other individuals also curated objects with a "likeness."

Bead making was clearly an activity that was shared among members of communities at least as far back as *Homo sapiens neanderthalensis*, making use of the ability to learn by observation.

Art will only reflect what is present in a society. Spirituality may exist in a society and not appear in its art, but evidence of spirituality will only be found in its art, if a society, either individually or collectively, engages with a sense of the spiritual. It is likely that, as societies became more complex, specialist practitioners emerged who played a particular role in the spiritual life of their communities.

Shamans and the Unknown

The world of early *Homo sapiens sapiens* must have been full of the inexplicable and the uncontrollable: floods and droughts, plenitude and hunger, shooting stars and eclipses, sickness and death. Their lives may appear to have been essentially materialistic, concerned with finding enough to eat, avoiding being eaten themselves, and procreating; yet they left evidence of a life far richer than one of just survival, a treasure trove of sculptured images, paintings, and carvings.

If there is so much in the world that cannot be explained and over which humans have, apparently, no control, the idea that there is something or somebody external to the experienced world, which or who does have such control, could be both frightening and reassuring. The unknown and unknowable is frightening, but by reifying it, giving it an identity and even more powerfully a name, it can be brought under some measure of control. It can then be appealed to, bribed with gifts and rituals, and become the central point of a hierarchy of power. It might also be approached more safely through intermediaries; those who have left the earthly world and gone on some unknown journey could be ideally suited to fill that role. The intermediaries would need to be approached with care, and special people with special gifts might be needed to make the approach.

Modern religions have many of these features; a priestly class, specially trained, usually operating in an environment with restricted access and often using a language not understood by the majority of the community, invokes spiritual powers. Requests for help, advice or victory over enemies may be sought and offerings made often through such intermediaries as saints, people who once lived and frequently suffered on earth. Latin is still used in many traditional Roman Catholic churches and long passages of Pali are intoned by priests in some Buddhist funerals. In the church of the *Convento di la Merced* in Santiago, Chile, the walls, altars, and any other likely spot are covered in notes conveying a myriad of messages to the saints from thanks for recovery from illness to requests for help in exams. A trajectory from the living to the highest unseen powers is assumed by this behavior. Science can now explain the mechanism of a full solar eclipse, but earthquakes and tsunamis sweep away whole communities and cannot be controlled. People still feel, and frequently are, helpless in the face of catastrophes not of their own making and so turn to a greater power for assistance.

Thirty thousand years ago there was no science to explain why at some times the land was dry and barren and at others it was rich with plant and animal life. From a twenty-first century perspective it would seem reasonable that they would invoke

help from other worldly sources if they had the ability to access them. At what stage in hominid development it was recognized that some individuals in the community had special gifts that allowed them to appeal to the unknown powers, we shall never know. Their skill may have evoked both respect and fear in other members of the community. The ability to experience trance, to shift temporal and spatial realities, is a universal human capacity which can be described as an intense form of focal concentration with a reduction in peripheral awareness (Siegel and Siegel 1978). Trance ability follows a normal distribution curve and in modern societies between 5 and 10 % of the population have a high ability which can be demonstrated in many ways including their capacity to undergo major surgery without anesthesia or chemical analgesia. The trance state alters the way an event is experienced; for example, no pain may be felt despite a severe injury and no fear in a terrifying situation. People, and particularly those with a high innate ability, are more likely to go into a state of spontaneous trance in times of great stress or emotion. Trance not only allows individuals to shift their own reality, but it may also allow them to seek out help for others and to make perilous journeys to distant lands and, most dangerous of all to the "after world." Most importantly, the trance practitioner becomes the interlocutor, seemingly able to bridge the divide between the living and the dead. We will never know when the belief developed that some part of an individual lived on in another reality after death. It was another step to imagine that the other reality might hold answers to the myriad uncertainties of life.

Shamans, medicine men, Australian Aboriginal Men of High Degree (Elkin 1977) and traditional healers all made use of trance in their various activities.

Fortunately, in a time when so-called progress tends to destroy anything that seems irrelevant in our modern world, these people have survived well enough to pass on some of their lore and provide some inkling of how it may have been for early human societies. The word *shaman* really applies to special religious persons from Siberia and Central Asia (Eliade 1964) but also has been used to describe practitioners from many other places and practices including those from the distant past. According to Eliade, the shaman has special qualities. He is a magician as are many others, but not all magicians are shamans. He (or she) is a healer like many others, but not all healers are shamans. In the shaman's trance "his soul is believed to leave his body and ascend to the sky or descend to the underworld" (Eliade 1964:5). The Australian Aboriginal "men of high degree" were also special. They too were said to be able to leave their bodies and travel across the country to obtain information. We know that the process of becoming a man of high degree involved hardship, deprivation and pain, and that only those with the power to shift their reality, that is, those with high trance ability, could endure (Rose 1956).

We are seeking evidence in the art of thirty to forty thousand years ago not only for the presence in the community of such practitioners but also that they were involved in the production of rock art.

The ability to create art is a very special gift and great artists are few and far between. Since writing began their names have come down in history and while we do not have signatures below the images on the walls of Chauvet, Altamira, and Lascaux, we recognize that they too are the works of great artists.

Despite a time lapse of perhaps thirty thousand years the lions of Chauvet still have the power to captivate the viewer; we sense their power and lion-ness. Why? Is it that they are imbued with spirituality and through them we can recognize a connection to some greater power or is it that they are imbued with the quality of mind which philosophers call qualia? Qualia are experiential (Ramachandran 2012). It is impossible to describe to someone else how one experiences the taste of a peach or the perception of a color. Qualia are intangible, an enigma to both philosophers and scientists but can they be equated with spirituality? In his discussion of the quality of vitality in art, Roger Fry uses the term spiritual to mean "all those faculties and activities which are over and above our mere existence as living organisms" (Fry 1962:38). This does not imply the necessity for a mystical or religious underpinning but rather "images of mental representations expressed through an artistic code" (Francfort 2001:250).

The individuals who painted images such as the lions were great artists in that they captured the essence of the animals so that the lions touch us across time. The techniques they used of exaggerating certain features characteristic of an animal, such as the bison's small head and large hump, evoke a response in our visual cortex. The same techniques are used by modern artists to create a caricature, or "peak shift" (Ramachandran 2012:42). Artists have long created caricatures deliberately; a politician with big ears or nose will have that feature emphasized so they are instantly recognized. The Paleolithic painters did not have photographs to copy; they drew the mental representations they had formed from their observation. They were using their innate skill at visual imagery to take an image of the animals into the cave. Their visualized image would emphasize the most striking components of the object or scene and those most relevant to the observer. Some people will have been better at doing this than others.

The oldest period of art in Chauvet is currently dated to between 32,000 and 30,000 years ago in the Aurignacian (Clottes 2003), while that of Lascaux is dated to the Magdalenian with dates around 17,000 years ago (Bahn and Vertut 1997). There are striking naturalistic images at Lascaux as awesome as those of Chauvet; among them horses, bulls, and reindeer, but it is the scene of the falling man in the chamber at the bottom of the shaft which arouses different feelings.

The components of the scene are a small bird-headed, ithyphallic, four fingered male figure that appears to be falling backwards, a bird-headed staff, and a disemboweled bison (Fig. 2.2). There is a small hooked stick near the male figure and a long barbed spear across the body of the bison. Placement at the bottom of a pit suggests the scene was of restricted access and yet the patina and polishing on the walls suggest it was much visited (Marshack 1991:277). We would like to know the story behind the images, and we can easily read into this a shamanic scene. As Marshack suggests, the disemboweled bison could be trance imagery or a ritual killing, while the bird-headed figure and the bird on the stick may be images of the shaman with his bird helper. Birds are well known as guides in the modern shamanic world and have the liminal quality of being of the land and of the air and in some instances also of the water. However, it is not necessary to label the male figure a shaman to accept that this scene is about something out of the ordinary. These