



The World's Oldest Expressions: Using an Intersectional Framework to Re-investigate Prehistoric Parietal Art

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The World's Oldest Expressions:
Using an Intersectional Framework to Re-investigate Prehistoric Parietal Art

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A Thesis in the Field of Anthropology & Archaeology
for the Degree of Master of Liberal Arts in Extension Studies

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Abstract

Prehistoric parietal art are examples of some of the world's earliest human creations. While largely Westernized and modern ways of thinking about art, I believe there is much more to be discovered about such emotional expressions both displayed and received by experiencing prehistoric art. Previous research has largely focused on the tangible aspects of prehistoric parietal art and has just begun to move away from a Eurocentric worldview. While broader conclusions may ultimately require additional research on this fascinating topic, for the purposes of this thesis, I will be comparing two prehistoric parietal art sites: the petroglyphs and pictographs of Columbia Hills State Park in Washington state and Cueva de las Manos in Santa Cruz, Argentina using an intersectional approach with descriptive, semiotic, contextual, phenomenological and heritage management components. This collective approach will allow us to explore the meaning(s) of these works, the roles they may have played in expressing emotion, and a general approach to examining rock art in many contexts. With my background as a psychiatrist trained in furthering mental health and the treatment of mental illness, my phenomenological observations of both sites provide a unique view on how both sites may be experienced by present-day populations. While we may never be able to fully understand the meaning and emotion expressed by prehistoric parietal art, this intersectional approach is proposed as a standardized way for future enthusiasts to systemically study previously uncovered and as-yet-to-be discovered artworks left by early humans.

Acknowledgments

I would like to extend my sincere gratitude to my thesis and research advisors, Dr. Rowan Flad and Dr. Richard Martin. This thesis would not be possible without your guidance and expertise.

Dedication

I would like to dedicate this thesis to my mother and father, Chung and Sai Jin Park, who I consider my life advisors. This thesis would not be possible without their love and support.

I would also like to thank my friends Jennifer O., JJ and Dorian for making Cueva de las Manos a part of our Argentina trip – this thesis would not have been possible without your friendship. I love you guys! Thank you also to my friend Jennifer M. for your constant interest and encouragement. And last but not least, to my wonderful boyfriend, Dominic – thank you for being in my life.

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Chapter 1:

What is Prehistoric Parietal Art?

Approximately 40,000 years ago, prehistoric humans began to create what we think of as art¹ (Froese 2017). Some anthropologists argue that these *Homo sapiens* species (referring to anatomically modern humans) truly evolved into fully cognitive-mature individuals when they displayed this ability to store symbolic information outside of the brain in such artistic works² (Brumm and Moore 2005), including caves adorned with paintings, or pictographs³ (Fagan 1998) and rock faces engraved with motifs, or petroglyphs⁴ (Bahn 2010). Whatever their exact meaning and purpose may have been, early humans found these works were important enough to allot time away from

¹ Other forms of prehistoric art (specifically referring to the Stone Age) include small sculptures (including ivory carvings and Venus figurines) and megalithic art (usually associated with arranging large stones) (Visual Arts Cork 2023).

² Most recently in the news, discoveries of rock etchings allegedly left by an ancient primate, *Homo Naledi*, in South African caves (Gibbons 2023) directly challenged the idea that only *Homo sapiens* (and perhaps only some of their direct ancestors, like *Homo neanderthalensis*, or Neanderthals, our closest extinct relatives) could have been capable of creating art. These findings remain controversial and have been highly disputed (Callaway 2023).

³ A pictograph is defined as an image painted onto a stone surface, usually using natural, primarily mineral-based pigments, as well as charcoal (Bahn 1998). Occasionally, other organic materials including bat guano (Bulgaria), powdered ivory (Angola), red cochineal (an insect from which carmine is derived from) in the Andes, and beeswax (Australia) were utilized by prehistoric artists (Bahn 1998). Due to their delicate nature, pictographs are typically found in caves or other areas which provide shelter from the elements (Utah National Park Trips 2022).

⁴ A petroglyph is defined as an image carved, incised, abraded or scratched into a stone surface (Utah National Park Trips 2022). Alternative definitions include cupules, or cup-shaped grooves in rock (much like the inner surface of a carved-out mortar) to be a type of petroglyph (Visual Arts Cork 2023). As a rule of thumb, engravings – cut into the rock surface with a sharp tool have commonly been found in European caves dating from the Stone Age; in contrast, petroglyphs are often found in the open air and in rock shelters – they were created using stone or metal tools (Bahn 1998).

essential, life-sustaining activities, including hunting, acquiring food and the procurement of shelter to shield them from the elements⁵.

A Brief Prehistoric Overview

Prehistory is usually thought of as the period between the advent of stone tools used by hominins⁶ and the development of the first written languages, approximately 2.5 million years before present (BP) to 1,200 BCE (Before the Common Era) (Kennedy 2019). While the following terms (and particularly the date ranges) primarily refer to European prehistoric studies, the period of prehistory is often divided into three archaeological epochs named for the primary materials used for tools and weapons: the Stone Age (2.6 million years BP to ca. 3,300 BCE), the Bronze Age (ca. 3,300 BCE to ca. 1,200 BCE) and the Iron Age (1,200 BCE to 600 BCE). In Eurasia, the Stone Age is further subdivided (from oldest to youngest) into the Paleolithic⁷ (2.6 million years BP to 10,000 BCE), Mesolithic (10,000 years BP to 5,000 BP) and Neolithic eras (4,000 years BP to 3,200 years BP) (World History Encyclopedia 2023), whereas in Africa, the terminology that is usually adopted is Early Stone Age (ESA), Middle Stone Age (MSA), and Later Stone Age (LSA). The Eurasian Paleolithic era is further divided into (from

⁵ In various parts of the world, far from simply being historical relics, these artworks are part of ongoing cultural practices. For example, in Australia, some accounts note Aboriginal people often incorporate prehistoric rock paintings into current day rituals, leading to superimposition (the layering of one image on top of another) (Yusoff 2014).

⁶ This term refers to early, non-anatomically modern human pre-*Homo sapiens* (Lewin 2005). Scientists generally consider the following characteristics to define an anatomically modern human: lighter skeletons, narrow torsos, shorter digestive tracts, absence of heavy brow ridges, lack of prognathism (a jaw structure that juts out) and much larger brains (approximately 1300 cubic centimeters). The larger brain was made possible by the evolution of a thinner, higher skull with flatter foreheads (Smithsonian National Museum of Natural History 2023). The endocranial cavities of the earliest *Homo sapiens* specimens from 160,000 years ago discovered in Ethiopia show that brain size (if not function) was largely similar to those seen in contemporary humans (Zollikofer et al. 2022).

⁷ It is also important to note that the term Paleolithic usually refers to studies of the Old World and may not necessarily apply to the New World (the Americas and beyond).

oldest to youngest) Lower Paleolithic (2.6 million years BP to ca. 300,000 BP), Middle Paleolithic (300,000BP to 30,000 years BCE) and the Upper/Late Paleolithic (50,000 years BCE⁸ to 10,000 BCE) (World History 2023) (see Figure 1.1). The African sequence adopts similar breaks between the ESA, MSA and LSA, albeit with slight variations. Within these sequences, the oldest known rock art in the world (setting aside for the moment some earlier examples of portable art) date to the Upper Paleolithic, with the earliest example known to date coming from the island of Sulawesi in Indonesia (Brumm et al. 2021).

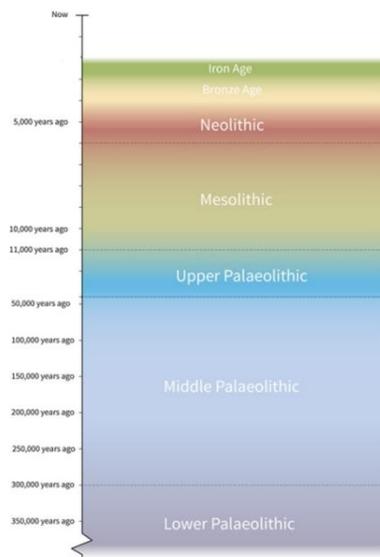


Figure 1.1 Stone Age timeline

A timeline of the Paleolithic (or Palaeolithic), Mesolithic and Neolithic time periods of the Stone Age. (<https://heritage.candle.digital/prehistory/>)

⁸ There may have been an overlap between the end of the Middle Paleolithic period and the beginning of the Upper/Late Paleolithic periods (World History 2023).

Notable hominin species from this time include (but are not limited to) *Homo erectus* (existing between 1.89 million to 110,000 years ago), *Homo heidelbergensis* (widely regarded as the direct ancestor of Neanderthals and Denisovans⁹, existing between 700,000 to 200,000 years ago) and *Homo neanderthalensis* (also known as Neanderthals, existing between 400,000 to 40,000 years ago). The time period spanning from 800,000 to 200,000 years ago is marked by a rapid increase in overall brain size for early humans, which may explain these species and their accomplishments. *Homo erectus*, the earliest of these species, is significant because they are the oldest known early human species that displayed increasingly modern human-like characteristics, namely longer legs, shorter arms and an expanded braincase. *Homo erectus* is also associated with the earliest known hand axes¹⁰, a major development in tool-making technology and cognitive capabilities (Smithsonian National Museum of Natural History, 2023). A commonly held evolutionary view, the “Out of Africa” model, suggests that *Homo erectus* first evolved in Africa and went on to colonize most of Europe and Asia (Shelach-Levi 2015).

Homo heidelbergensis is thought to be the earliest known human species to create deliberate shelters of wood and rock for protection against the elements (Smithsonian National Museum of Natural History 2023). The later species of Neanderthals (descended from *Homo heidelbergensis*) lived in ranges spanning from Europe to southwestern/central Asia. Denisovans (also descended from *Homo heidelbergensis*) are

⁹ Referring to members of an extinct hominin group related to Neanderthals, known from fossil fragments found at Denisova Cave, Siberia (Chen et al. 2019). Their genes live on in Asian, Australian and Melanesian populations (Chen et al. 2019).

¹⁰ The Stone Age was characterized by stone toolmaking dating back at least 2.6 million years. Such tools include hammerstones, choppers, hand axes, projectile points and awls. In the later Stone Age, early humans also incorporated other materials into their toolmaking, including bone, ivory and antlers (Smithsonian National Museum of Natural History 2023).

thought to have lived in Europe, possibly parts of Asia and eastern/southern Africa – their exact phylogeny remains unclear as remaining fossil delineating their species remains sparse (Zhang et al. 2022). According to current understanding, Neanderthals are *Homo sapiens*' closest extinct human relative, as our own species emerges much later, from about 300,000 years ago to the present, during the Middle Stone Age / Middle Paleolithic (Smithsonian National Museum of Natural History 2023). Neanderthals and Denisovans are important to this discussion as significant evidence exists that they interacted and interbred with *Homo sapiens* (Callaway 2021; Zhang et al. 2022), and recent discoveries suggest that they were also capable of creating abstract art (discussed in later sections).

Homo sapiens, like *Homo erectus*, also evolved in Africa then spread out to other parts of the world, gradually supplanting existing early human populations (Shelach-Levi, 2015). Between 80,000 and 60,000 years ago, *Homo sapiens* reached Asia; 70,000 years ago, *Homo erectus* became extinct. 40,000 years ago, *Homo sapiens* reached Europe, and by 28,000 years ago, Neanderthals became extinct. By 17,000 years ago, all other types of early human had gone extinct, leaving *Homo sapiens* as the sole human species on the planet. 15,000 years ago, *Homo sapiens* had spread across the world and reached the Americas (Smithsonian National Museum of Natural History 2023).

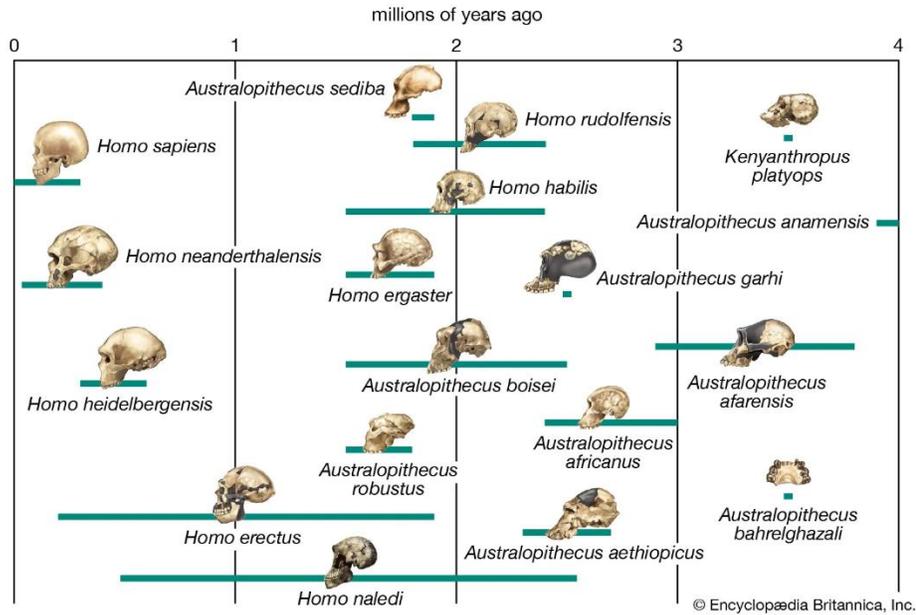


Figure 1.2 A timeline of human evolution

A graphic depiction of human evolution including hominins, with Homo sapiens on the far top left, with Homo neanderthalensis (Neanderthals) and Homo heidelbergensis (widely regarded as the direct ancestor of Neanderthals and Denisovans) directly beneath. Note the position of Homo Naledi (Britannica 2022).

While discussion of all aspects of human evolution remains lively, there is a particularly energetic debate regarding the migration of Homo sapiens to the Americas. According to Clark et al. (2022), one commonly held theory is that humans traveled from Siberia to what is now North America approximately 13,000 years ago via an overland route called the Ice-Free Corridor. This corridor was created by warming temperatures causing retreating margins of the Cordilleran and Laurentide ice sheets. This school of thought is also called the “Clovis-first model,” named after material tradition of Clovis

stone points, the principal diagnostic artifacts of a North American late Pleistocene¹¹ Paleoamerican culture spanning approximately 11,000 years before present (Sholts et al. 2012; Shott et al. 2021). However, as Clark et al. (2022) have described, this frequently referenced model has been contested by others, citing evidence from North American sites including Cooper’s Ferry in Idaho, being occupied as early as 16,000 years ago and numerous human footprints in White Sands National Park, New Mexico, which have been dated to approximately 20,000 years ago (Bennett et al. 2021). Clark et al. (2022) notes that this evidence is problematic as it precedes the earliest proposed opening of the Ice-Free Corridor approximately 15,400 years ago (with its final opening by 13,800 years ago) by at least several hundred years. They go on to highlight a proposed alternative “pre-Clovis” theory, called the coastal migration hypothesis, suggests that these findings can be explained by an earlier migration of humans by boat along the Pacific Rim from Northeast Asia, then subsequently down the western coasts of both North and South America, sustained by kelp and other coastal ecosystems.

Recent research on prehistoric remains in South America denotes a time range between 16,600 and 15,100 years before present as the most probable timeframe of the first *Homo sapiens* arrival into South America (Prates et al. 2020). If accurate, this date would be difficult to reconcile with the Ice-Free Corridor theory, although it still would align with early humans first entering North America from Siberia and then migrating on to South America.

¹¹ An epoch that lasted from 2.6 million to 11,700 years ago and colloquially known as the Ice Age (Ono and Pawlik 2020)

Modern vs. Prehistoric Notions of Art

Before we delve further into a discussion about prehistoric art, the individuals who may have created such artworks, and the possible motivations behind them, it is important to understand a variety of definitions and distinctions. Firstly, what is art, exactly? According to some sources, art can be defined 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 or emotional power” (Oxford Languages 2018). Another way of defining art would be as “something that is created with imagination and skill and that is beautiful or that expresses important ideas or feelings” (Miriam Webster 2021). Some suggest that these definitions are far too simplistic, asserting something must meet several criteria before being art, including being aesthetically pleasing, emotionally expressive, intellectually stimulating, and communicating in an intentional way (Gaut 2005). Others focus on the cognitive aspects of art, noting that higher systems of thinking are necessary to not only create such artworks, but to have them be innately and universally appreciated (De Smedt and De Cruz 2011).

However, these modern-day definitions may not be applicable to studying prehistoric art, as its aim (or aims) may never be completely known¹². As described by one prehistoric art researcher, it may be more useful to conceptualize art simply as “visual communication resulting from voluntary and conscious human intervention as

¹² On this point, Bahn has indicated, “...[a] common perception of art as ‘an achievement of human skill, the aim of which is to give pleasure rather than utility is likewise of little use in archaeology, where the aim of most art --- particularly in prehistoric periods – remains unknown” (Bahn 1998, p. xiii). He goes on to elaborate one of the key dangers for scholars of prehistoric art – mistakenly imposing contemporary ideas onto prehistoric societies (Bahn 2010).

opposed to natural phenomena” (Bahn 1998, xiii). Bahn adds that art should also simply be thought of as “a deliberate communication through visual form, a message expressed in durable form, an expression or group mentality and of an artist’s inner world.” In a somewhat more nuanced way, other authors opine that; “The prehistoric artist can be understood as attempting to commune with infinite chaos and bringing back varieties that no longer constitute the mere reproduction of the sensory in the organs (i.e., perceptions) but rather establish the ‘being’ of the sensory, a ‘being’ or sensation (i.e., the percept) upon a radically inorganic aesthetic [sic] plane of composition...in this sense, the artist must allow, through an act of co-creation...for a passage of the visual into their work, for it to be ‘captured’ as ‘sensation.’” (Ambrose 2006, 142, 145). Despite the differences in these various definitions, a common idea appears universal: art (and its pursuit) are processes that are both seen and felt (Janik 2020).

Art (at least how we think about it currently) can further be divided into several categories. In terms of functionality, art can be utilitarian or transactional, or both (Rubin 1989). Utilitarian functions include objects that act as containers (for example, pottery), implements and supports; transactional functions often refer to intangible concepts including markers (things that denote boundaries or territories or proclaim social roles and status) and transformers (things that actualize otherworldly phenomena, including religious rituals) (Rubin 1989). Another description relating specifically to prehistoric art, rock/cave art is defined as “parietal” or wall art, which by its nature is fixed and immovable¹³. While smaller, “portable” artworks were mobile and taken from place to

¹³ While parietal art predominantly refers to that on walls and rocks, it can also include those on ceilings and floors (Bahn 1998). Parietal art exists in contrast to portable or mobile art, describing either abstract or graphic representations found on mobile objects, including Venus figurines (Tosello & Villaverde, 2020).

place amongst groups of people, prehistoric rock/cave artworks remain in the same places they were created.

Additional ways of categorizing art include describing the work as figurative or abstract. Figurative art is defined as representational and depicting something already present in reality – for example, a human, object, or animal. Such figurative artwork requires an understanding that the design symbolizes both an object itself *and* something other than itself (De Smedt and De Cruz 2011). This differs from abstract art, which is defined as depicting something non-representational and non-recognizable from nature).¹⁴ Therefore, in summary, prehistoric rock/cave art can be utilitarian, transactional, transformative, parietal and either figurative or abstract¹⁵.

The Globality and History of Prehistoric Parietal Artwork Studies

When one searches online resources for “prehistoric rock art” or “prehistoric cave art,” the most numerous results resoundingly point to those of European origins¹⁶. According to current archaeological data, *Homo sapiens* arrived in Western Europe approximately 30,000 years ago (Knüsel et al. 2023). This early human is referred to as Early European Modern Humans or EEMH (formerly known as Cro-Magnons, after a

¹⁴ Some examples would include red lines found the walls of various Spanish caves, which have attributed to Neanderthal artists (Appenzeller 2018). While the dating of these artworks also been disputed (Aubert et al, 2018), these findings support the idea that figurative/representational prehistoric art remains firmly in the domain of the *homo sapiens* species (for now).

¹⁵ This is not to suggest that prehistoric art must be sharply delineated into figurative or abstract – in fact, many global sites have both forms of art co-existing, sometimes even superimposed on top of one another within the same artwork (Clottes 2008).

¹⁶ There may be several explanations for this. The first involves the likelihood of conservation: Geologically speaking, the high number of caves in Europe naturally lead to higher numbers of well-protected prehistoric parietal art, in contrast to the eroding and decay of rock art left out in the open (Gray 2010). Another more plausible reason is that Western Europe, and Europe in general, has garnered the most archaeological interest and therefore, research funding (Gray 2010). Such factors will invariably contribute to a skewed knowledge base.

cave in France where their remains were first discovered) (Partiot et al. 2020). Prior to their arrival, the area had been previously occupied by Neanderthals, who may have interbred with, and then were gradually replaced by EEMH (Straus 2020).

It is claimed that prehistoric parietal art in Europe truly exploded after the arrival of these fully anatomically modern humans. The caves of Chauvet and Lascaux¹⁷ in France, as well as those of Altamira, Spain are among the most famous examples of Upper/Late Paleolithic cave art (Moro Abadia and Morales 2020) and have been repeatedly lauded for their creativity and technical mastery (Chauvet 1996, Clottes 2016) (see Figures 1.2 -1.4). However, such hyperfocus on the prehistoric art of one region of the world (and one species) suggests that others have long been overlooked. The discovery of these and other European caves beginning in the 1800s led to a primarily Eurocentric¹⁸ standard in the study of cave art for the following reasons (Bednarik, 1996; Pettitt, 2002). Firstly, despite the fact that there was an overwhelming dearth of paleoanthropological work outside of Europe (Moro-Abadia and Morales 2008; Abadia and Morales 2013), scholars contended that Europe was the “cradle of civilization” (Pettitt, 2002) and the birthplace of “the dawn of art”¹⁹ (Moro-Abadia and Morales 2008). These ethnocentric ideas led to the belief that all prehistoric artifacts found outside of

¹⁷ Radiocarbon dating is the most widely known technique in archaeology. It measures the age of organic material (meaning containing carbon, or put another way, something that was once alive) by measuring the rate of decay of carbon, which does so at a defined, regular rate (Green and Moore 2010). Using this technique, artifacts in these caves (but not the cave walls themselves as rocks do not contain carbon) were initially found to be approximately 39,000 years old (Chauvet 1996). More recent debate has intensified regarding the validity of these findings, opining these dates were derived from questionable sampling of charcoal fragments and invalid dating techniques (Pettit and Bahn 2015).

¹⁸ Monton-Subias and Hernando (2018) note that the history of archaeology was not only Eurocentric, but also androcentric.

¹⁹ Georges Bataille, a French philosopher, wrote that Lascaux was a transitional site where animal became human, “the place where we emerged”, because it ‘is situated at the start of humanity achieved’; ‘it is the perceptible sign of our presence in the universe’; ‘never before Lascaux did we achieve the reflection of that inner life which art – and art alone – takes upon itself to communicate’” (Lorblanchet 2007).

Europe (including Africa) were merely evidence of *ex Europa lux* (translated to “the light from Europe”), and therefore, somehow originally inspired by the peoples of Europe (Pettitt, 2002). Secondly, scholarly interpretation of art was largely Westernized and based on naturalistic ideals (Abadia and Morales, 2013). European scholars opined the most realistic art (like those in the aforementioned caves) to be the most evolved. More abstract, non-representational and what was then considered primitive (or indigenous) images were mostly devalued²⁰ (Moro Abadia and Morales, 2020).

However, depreciating ideas toward non-European prehistoric art are being increasingly overturned. For example, the claim that prehistoric cave art began in Europe and spread outward was definitively debunked in 2014 when uranium-thorium dating²¹ of artwork in an Indonesian cave found it to be at least 45,000 years old, pre-dating many European caves (Brumm 2021). The Indonesian cave art is currently the oldest cave figurative art in the world (see Figure 1.5). We also now know that prehistoric parietal art exists in every continent other than Antarctica, and occurred via convergent evolution²², without diffusion (Bahn et al. 1998, Abadia and Morales 2013). In addition,

²⁰ For example, such ideas were promoted with such strength that the Gwion Gwion, a series of exquisitely detailed 12,000-year-old prehistoric paintings found in the Kimberley Region of northern Australia (Aubert 2012), dating from the very beginning of Holocene era (11,650 years ago to present) have been continuously mired since the late 1800s in ongoing controversy surrounding their origins and authenticity (McNiven 2011). Inherent racism and colonialist attitudes have led to proponents of a “mysterious race theory,” alleging that creators of the Gwion Gwion are not ancestors of contemporary Aborigines, but an advanced civilization (including a type of Caucasians) who preceded them. It is notable that these conclusions were based on morphological observations alone and not supported by dating techniques, and these assertions are far from being the only instance where Eurocentric ideals actively sought to disinherit indigenous people from their culture.

²¹ A technique which dates rocks back to the Pre-Cambrian geological period (earliest part of Earth’s history) by measuring the ratio of uranium isotopes to those of thorium. As uranium decays to thorium at a set rate, this uranium/thorium ratio can be used to extrapolate the age of a rock sample (Green and Moore 2010). This technique works particularly well on stalagmite calcite.

²² While a well-known concept in biology, in archaeology and anthropology, convergent evolution refers to the appearance of similar cultural practices in different places due to their independent invention (Groucutt 2020). This is the opposite of cultural diffusion theory, where one culture’s beliefs and practices either spreads among members of the same culture or a different one altogether. Convergent evolution explains how some forms of art emerged independently and at differing time periods globally, in places where it

mounting archaeological evidence shows that the unilinear progression theory, or the idea that prehistoric art evolved from abstract to figurative art, is false (Lorblanchet 1999, Moro Abadia and Morales 2008). Rather, as various styles of art exist concurrently today, each style was simply one representation among many (Abadia and Morales 2013). These discoveries played an important role in undermining the Eurocentric view of the beginnings of prehistoric art.



Figure 1.2 The Horse Panel from Chauvet

A panel depicting aurochs, horses and fighting rhinoceri (Bahn and Vertet 1998)

would not have been feasible for ancient peoples to travel to and from. For example, figurative cave paintings appear earlier in Europe around 33,000 years BP (Chauvet Cave, France) than in Africa (27,000-25,00 years BP, Apollo 11 Cave, Namibia) (De Smedt and De Cruz 2011), but later than those found in the limestone caves of Indonesia (Leang Tedongnge, Leang Timpuseng, etc, 45,000 years BP) (Brumm et al. 2021).



Figure 1.3 A mural from Lascaux

A panel depicting deer, aurochs, dots, quadrangular signs and horses (Bahn et al. 1998)



Figure 1.4 A painted ceiling at Altamira,

A panel depicting multiple bison (Bahn et al. 1998)

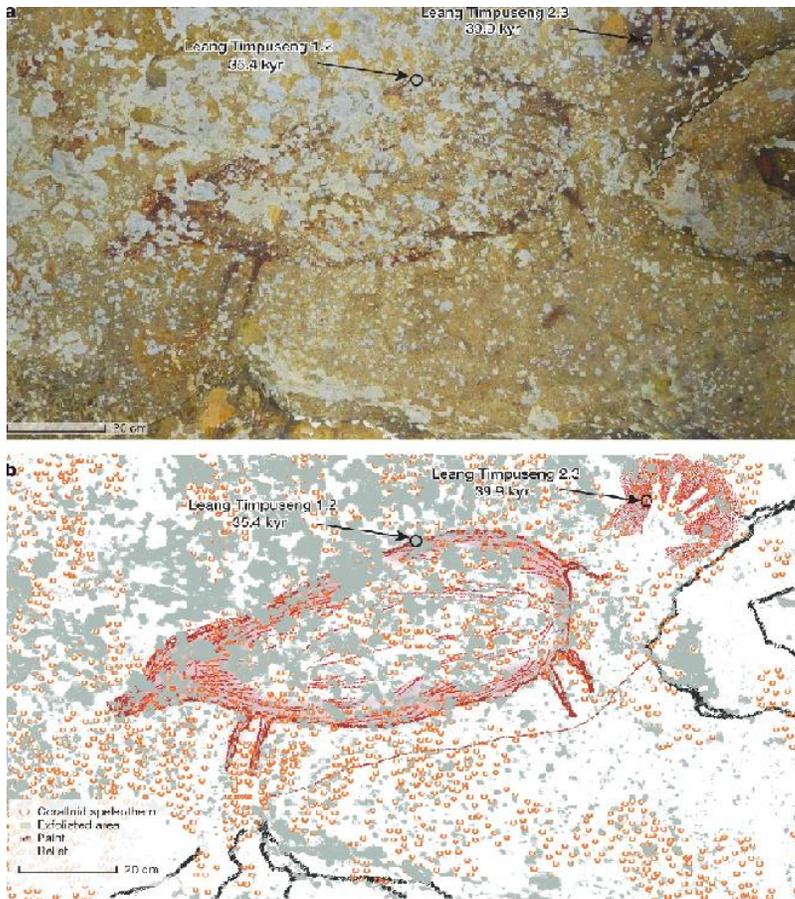


Figure 1.5 Oldest figurative art discovered in in Sulawesi, Indonesia

Photograph (top) and tracing (bottom) of a female babirusa (horned pig) indigenous to the region (Aubert et al. 2014)

Not only are conceptual frameworks about how to think about prehistoric parietal art changing, but archaeologists are also being forced to confront the idea that prehistoric art may no longer be solely the domain of the *Homo sapiens* species. While the advent of art was previously regarded as the so-called unlocking of fully evolved humanhood, increasingly recent global discoveries have challenged both the idea that modern human

behavior was a revolutionary phenomenon (McBrearty and Brooks 2000) and the idea that parietal art only occurs in the Upper Paleolithic modern human context.

In 2018, researchers in Tibet began to study hand²³ and footprints in travertine deposits (a soft, impressionable surface pre-lithification) – their findings using uranium-thorium dating noted that the prints were created approximately 200,000 years ago, with their creators most likely to be Denisovan²³ children (Zhang et al. 2021) (see Figure 1.7). These and other researchers concluded that the marks were not a result of locomotion (i.e. grasping the rock surface for balance while moving) and therefore, were deliberately placed²⁴ suggesting that this is an example of the world’s earliest parietal art (Zhang et al. 2021). In a perhaps less ambiguous example (at least in terms of what can be agreed upon as being art), another 2018 study reported that uranium-thorium dating results from three Iberian caves in Spain sampling various red and black abstract paintings (including an array of lines and a hand stencil) pointed squarely as their artists being Neanderthals (see Figure 1.8) (Hoffman et al. 2018) – making these the world’s earliest known abstract art. For some, these findings count as validation that Neanderthals were the cognitive equals of *Homo sapiens* (Zilhao 2007), a conclusion that remains disputed.

²³ These would be considered examples of “positive” handprints, in contrast to “negative” hand stencils, a common motif in prehistoric parietal art, created by placing a hand on a rock surface and spitting pigment around it to create an outline (Hodgson and Pettit 2018).

²⁴ This is an example highlighting Bahn’s opinions regarding the risks of denoting art as anything artificially created and specifically human (1998). He wrote, “...[this definition] may be more useful for a consideration of prehistoric art since it avoids any differentiation of the diversity of forms, content or intention. However, such a description would necessitate the inclusion of all kinds of artifacts which do not look like ‘art’ to us in any normal sense of the word” (Bahn 1998, xiii).



Figure 1.7 Hand and footprints left by Denisovan children

Left in travertine, thought to be the oldest depiction of an example of “art for art’s sake,” or a reminder that “I was here” (Zhang et al. 2021)

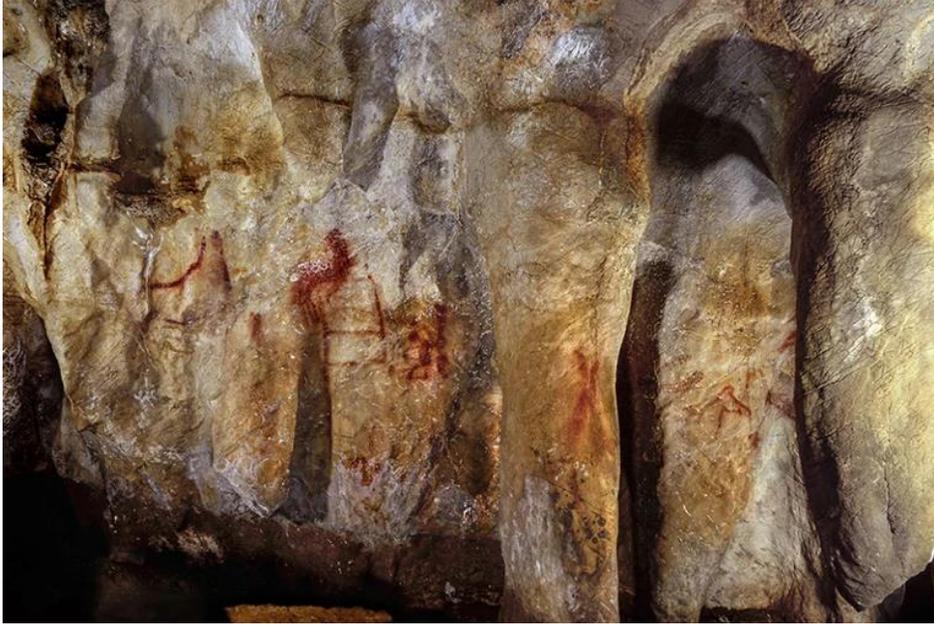


Figure 1.8 Neanderthal abstract art

Red abstract ladder-shaped paintings found in Spain, attributed to Neanderthal artists (Hoffman et al. 2018)

Prehistoric Peoples and Emotions: The Evidence?

Other than leaving beautiful artworks, is there other evidence that prehistoric people were capable of expressing and communicating emotions? Being an intangible concept, while it must be gathered indirectly (Tarlow 2000), several examples of grief, compassion and empathy in prehistoric populations most certainly exist.

In prehistoric studies, the presence of grave goods are often pointed to as an example of grief, and a related belief in the afterlife (Dettwyler 1991). The contested nature of Neanderthal burials, for example, is one context where this concern has been discussed, and archaeological studies of burials generally frequently wrestle with the ways in which belief come into play in burial practices (see, for example, Insoll 2004;

Steadman 2009). However, this understanding has not necessarily always extended to the examination of human mummies. Recently this has started to change in the context of the continuing archaeological discoveries related to the Chinchorro people, a preceramic people who inhabited the Pacific coast in southern Peru and northern Chile from 7050 to 1450 BC (Standen et al., 2016). These people developed a series of sophisticated mummification techniques beginning around 5000 BC, predating Ancient Egyptian practices by approximately 2000 years.

Researchers have hypothesized that like most prehistoric people, the Chinchorro suffered from a host of ailments. In particular, the surrounding volcanoes produced large quantities of arsenic that subsequently seeped into their water supply (Arriaza 2005). Arsenic is a colorless, odorless, and tasteless toxin. Even today, the Rio Camarones has on average, 1000 μ g/L arsenic levels, which is a hundred times higher than 10 μ g/L, the accepted standard by the World Health Organization. In addition, arsenic tends to accumulate in the roots of aquatic plants, including the reeds the Chinchorro used to create mats and baskets (Arriaza 2010).

When ingested, arsenic exponentially increases the incidence of teratogenic abnormalities and miscarriages. Researchers estimate the rate of spontaneous abortions and stillbirths among the Chinchorro was thirty times higher than the rate for other Andean mothers of their time (Arriaza 2005). All Chinchorro mummies excavated to date show evidence of chronic arsenic poisoning, based on hair samples (Arriaza 2010; Byrne et al. 2010). As a prehistoric people, the Chinchorro would have had a limited understanding of why their offspring were dying at such high rates, which would have significantly impacted group survival and population growth (Arriaza, 2005). As the first

Chinchorro mummies were those of fetuses and newborns, this has led researchers to hypothesize that the initial impetus for mummification was borne out of overwhelming grief. Mummification became the sole way to prolong the children's presence on earth, and the practice eventually spread to all members of their society as the Chinchorro displayed an egalitarian view toward their mortuary rituals (DeAraujo et al. 2016).

According to Spikins et al. (2018), there is also archaeological evidence for compassion among prehistoric cultures. One such example involves explanations for how Neanderthals may have cared for injuries by providing both medical treatment and healthcare to one another. This is substantiated by discoveries of Neanderthal remains which showed either developmental deformities or injuries that occurred years before death. These types of disabilities would have resulted in limited mobility and therefore presumably, decreased ability to participate in manual tasks, however there is evidence that even such infirmed Neanderthals survived to an advanced age. According to Spikins and others, this is evidence of caring and societal development among Neanderthals, which enabled to them to care for such disabled individuals, proving that prehistoric hominins (and perhaps even older species) could feel and express complex emotions.

Approaches to Understanding Prehistoric Parietal Art

Ongoing research about indirect evidence of prehistoric emotion put aside, myriad theories have sought to provide an explanation for why prehistoric peoples worldwide created parietal art. These explanations vary widely, ranging from the art as a natural byproduct of evolutionary cognitive psychology, simple straightforward depictions communicating information, those meant to provide hunting magic (Ambrose 2006),

shamanistic practices²⁵, depictions of mythologies, signaling territorial practices to outside groups (Gittins and Pettit 2017), sexual selection rites or even simply a past-time practice (Gray 2010). Less commonly accepted, some researchers have concluded that all prehistoric art consists of three types of universal archetypes: pictograms, ideograms and psychograms²⁶ (Anati 2007) and exist as a form of language waiting to be decoded.

Others caution that blanket explanations are to be meticulously avoided, noting that global variations of art diverge in nearly all aspects, including style, subject, technique, placement, age and regional distribution and cannot be explained by a single, universal explanation (Bahn 2010). However, some researchers agree that all of the previously mentioned theories can roughly be organized into one of the four following categories of interpreting prehistoric parietal art: 1) art for art's sake²⁷ (Clottes 2011), 2) sympathetic magic²⁸, 3) mythical illustrations and 4) shamanism²⁹ (Lewis-Williams and David 2002, Bahn 2010, Moyes 2013).

Within this thesis, I am proposing a methodical framework to interpreting prehistoric parietal art using five distinct yet intersectional approaches that would

²⁵ While oversimplifying the importance of such discoveries, previous researchers have surmised that the hard-to-reach locations (i.e. high up on ceilings or through vast, winding mazes of inaccessible cave networks) point to the potentially profoundly sacred nature of the art and those deemed important enough to create and view it (Fagan 1999, Froese 2019).

²⁶ Anati defines pictographs as recognizable figures (either real or imaginary, anthropomorphic or zoomorphic), ideograms as repetitive and synthetic signs) and psychograms as as-yet unrecognizable signs appearing to express perceptions or sensations (Anati 2007).

²⁷ Proponents of this approach assert that there is an innate need for humankind to create esthetic expressions, and that prehistoric art is evidence of these instincts (Clottes 2011).

²⁸ Keyser and Whitley (2006) describe magic as utilizing supernatural agents to bring about a specified desired result in the realm of reality (i.e. akin to casting a love spell on the object of one's attractions). They elaborate that sympathetic magic exerts an effect which closely resembles its cause.

²⁹ North American parietal artwork in particular has been proposed to be depictions of cosmologies and other supernatural beliefs (Comba 2013); however, this is by no means, a ubiquitous explanation for the totality of North American prehistoric art.

encompass nearly all aspects of the artwork being studied³⁰: 1) descriptive (visually observing and relaying the characteristics of each site), 2) semiotic (investigating potential symbolic meanings of each site), 3) contextual (exploring the historical and sociocultural backgrounds of both sites), 4) phenomenological (describing how I, myself, as a current day observer of both sites have interpreted my experiences) and lastly, 5) heritage management (exploring pertinent questions of ownership, cultural legacy and the presentation of such sites – to the modern day public). As such, I will provide an explanation of each approach below.

Descriptive

While it may be impossible to conclusively ascertain the motivations of why prehistoric people created their parietal artwork, shifting the focus from “understanding” or “decoding” the motivations behind these works to other, more reliable factors may prove more illuminating (Bahn 1998; Bahn 2010). In other words, the evidence that can be gleaned from direct observation and study of art may provide much more reliable information than speculation (Bahn 1998). Proponents of this literal interpretative school note that the ethnographic³¹ research of modern-day populations to decipher symbolic meaning of prehistoric artwork is inherently flawed and biased (Bahn 1998). In addition

³⁰ While previous researchers have expressed the need for a clearly integrated approach and have focused on elements including cave structure, the perception of light within the cave and contextual information to be gleaned from prehistoric remains (Pastoors and Weniger 2011, Pizzato 2013), to my knowledge, there have not been previous discussions on the integration of these five approaches specifically.

³¹ Ethnoarchaeology is a simultaneous study of present-day use and significance of artifacts, buildings and structures within living societies. It also studies the ways that these pieces of evidence are then incorporated into the archaeological record. In summary, it is an indirect way of looking at present-day societies and cultures to interpret the past. One danger of ethnoarchaeology however, is imposing modern-day human interpretations on prehistoric artifacts. We must be mindful of our own biases and cultural considerations, not allowing them to prematurely color our perceptions of prehistoric art.

to the danger of modern-day practices being completely unrelated to prehistoric cultures (even within the same region), such conclusions may not be generalizable to other populations (Bahn 2010).

Descriptive aspects of prehistoric parietal art include noting the location, categories of image (i.e., human/humanoid, animals, and tracks – both human and animal) and associations (or groupings) of images – singular artworks vs clusters (Bahn 1998), sexual or violent imagery (Bahn 2010). Some researchers focus heavily on the elements of light, shadow and natural features of the rock being incorporated into prehistoric artwork (Intxaurbe et al. 2022; Nyland and Steberglokken 2020). However, there are limitations with this descriptive approach – for example, even with what appear to be clear depictions, art may not express to our modern eyes what was intended in the past. There is no homogenous interpretation that can be gleaned from each image; its meaning can only be constructed from the context which created it (Defrasne 2023). Without the descriptions of a prehistoric artist guiding us, it is an unfortunate fact that we may never know their true intended messages, but this visual approach will provide us with the most concrete information from which to draw conclusions.

Semiotics

An introduction of common ways to look at prehistoric parietal art would be remiss without discussing semiotics. According to Preucel (2006), put simply, semiotics is the study of the innate human capacity to both produce and understand communicative signs, defined as both intangible things like words, ideas, and sounds, as well as tangible objects and images. These signs are systematically organized for humans to express their life experiences, emotions and ideas in either icons, indices or symbols (Glazer 2017).

Icons also possess an analogical relationship to the object and a type of resemblance (Glazer 2017). For example, a road sign for falling rocks would be considered an icon; it bears a resemblance to the actual event being warned against. Indices are characterized by a physical resemblance to the object, as well as communicating a cause-and-effect relationship. For example, the presence of smoke can be indicative of fire (Defrasne 2023; Glazer 2017). While both icons and indices may bear some physical resemblance to the object or event being portrayed, in contrast, a symbol does not; a symbol bears no resemblance to the object meant to be portrayed and the meaning must be acquired through habit, culture or convention (Glazer 2017). An example is the musical artist formerly known as Prince changing his name into an unpronounceable symbol that had previously not been used in any capacity.

Focusing more specifically on emotional experiences in semiotics, Glazer (2017) writes that emotional expression should be considered a type of symbol – that is, if we are to assume artistic expression evokes emotion, while broad, this definition of art should encompass all artifacts that convey any sort of emotion to its observers. In addition, in keeping with the definition of a symbol bearing no resemblance to the portrayed object, Glazer extrapolates that the emotion expressed by the artwork should be portrayed independently of what we think of as natural expressions of emotion (i.e., physical behaviors that occur spontaneously as part of emotional episodes, like crying, laughing, or posturing). “The Old Guitarist,” a famous painting from Picasso’s Blue Period, is a good example of this: while the man portrayed does not display an overtly sad expression, the hue (while a largely Westernized cultural context, blue is thought to signify sadness, as in the term “I feel blue today”), the man’s advanced age, drooped

head, threadbare clothes, emaciated body habitus and listless hand positioning all collectively communicate profound despair (See Fig 1.9). While we largely lack cultural context to decipher such emotional expressions in prehistoric art – thinking of semiotic theory as encompassing emotional expression can be an indirect but useful tool in interpreting sine such intangible aspects of prehistoric parietal art.



Fig 1.9 The Old Guitarist by Pablo Picasso (late 1903-early 1904)

Painted during a period of Picasso's deep depression, the work depicts profound sadness and hopelessness (Art Institute of Chicago, 2018)

Another way semiotics is important to prehistoric art research is described by Defrasne (2023). Semiotics and its related fields are of particular interest for scientists

studying abstract or symbolic art, as the intent and subjects of figurative (or representative art) can often be more easily ascertained. As semiotics also considers the production process, in the case of prehistoric art, the time and effort spent on such artworks can be inferred and considered – for example, fingermarks (i.e., handprints or simple dots made with a fingertip) indicate faster execution than a petroglyph or etching into the rock surface. Prehistoric art, like all other artworks, reflects mental imagery – which only a small portion of is projected onto the outside world. As such, prehistoric parietal art projected in such a long-lasting stable way as depicted on a rock surface, could be easily replicated and communicated. Such ideas could then become part of the cultural lexicon of the prehistoric people and survive within that population.

Contextual

According to Rose (2012), the context of an artwork consists of all factors that might have influenced its creation and/or the artist but are not actually part of the artwork itself. The historical context during which the artwork was created, as well as the factors that influenced the artist (including their culture, anthropological information, the artist's geographical information and their personal worldview) all fall under this category as well. While artwork can be appreciated on a surface level without these types of information, the addition of context can enhance our understanding of artwork.

As an example of the usefulness of contextual information we turn to Sundstrom's (1989) analysis of rock art from the Southern Black Hills of South Dakota and Wyoming. Considering the chronological, geographic, and symbolic contexts of each artwork, she noted six distinct styles – all related to functions including preparing youth for adulthood, shamanism, concern with acquiring subsistence resources and female reproductive

capabilities. The collective evidence suggests that a long period of cultural stability was followed by upheaval, culminating in rapid culture change during and immediately preceding contact with the first European colonists, which had an undoubtedly calamitous impact on such Native American populations. Without this historical context, it would be difficult to properly contextualize the progression in Native American rock art styles in this case.

Phenomenological

While certainly related to the contextual approach, I have chosen to highlight the viewing context separately as related to phenomenological experience. According to Linde (2017), a broad description of phenomenology refers to the essence of “something” expressed in a different form. According to Throop et al. (2021), phenomenology is a philosophical tradition which focuses specifically on subjective experience, in other terms, on one’s “world.” Consciousness, the self, perception and memory all play a key role in understanding phenomenology (Linde 2017).

According to Throop et al. (2021), anthropologists using this approach conceptualize how human relationships are intertwined with each other and with the various experiences that create one’s inner and outer worlds. Phenomenology also focuses on the conditions of experience, the set of causal and contributing circumstances which led to an experience in the first place. The skill and craftsmanship of an artwork are absorbed through the senses, which is then interpreted through a pre-existing cognitive network already imbedded in the perceiving individual, therefore generating a genuine and unique experience per person (Holl et al. 1994).

Heritage management

When specifically relating to art, the manner in which the artwork is presented to the viewer can have an impact on the phenomenological experience. These modes of presentation are directly related to the practice of heritage management, conservation and development of cultural resources with the aim that such heritage provides long-term benefit for the general public (Ngulube 2018). The practice of heritage management also includes determining what has cultural significance and as part of conservation, inherent protection of such people, artifacts and locations.

However, it would be a bold claim to conclude that heritage management is a homogenous practice. Rather, the spectrum of how artifacts, specifically parietal rock art, is preserved encompasses a wide spectrum. Parietal rock art is a unique type of art form as it is mostly found in the open and not in an internally-confined environment like a museum – however, there are significant differences in location, funding and resources – all of these factors can influence how such artifacts are perceived by both the outside observer and to the people who may draw a direct cultural connection to the artwork.

Examples of Two Previous Studies of Prehistoric Parietal Art

Previous studies looking at two globally separate Neolithic art sites: Bangudae in South Korea and the Elk/Whale of Hammer IX and the Vingen art site in Norway highlight two differing approaches, descriptive/contextual and semiotic/phenomenological, in studying prehistoric parietal art. The Bangudae petroglyphs of Ulsan, South Korea, are a series of engravings etched into vertical cliff surfaces next to a stream, which is a branch of the Taehwa River (see Fig 1.10a-b). They

date from 6,000 to 1,000 BCE and are organized largely into categories of sea animals, land animals, humans and tools. According to Bale, Jeon, Solomon, Bahn et al. (2015), this site is particularly unique due to its depiction of multiple cetaceans, mostly whales, which are an uncommon theme in the total corpus of global rock art. Another unique aspect of the petroglyphs is their isolation – they are one of the only parietal rock art sites on the Korean peninsula and their motifs do not share much in common with other prehistoric art sites located in nearby locations, including China and Japan, which to date, have few prehistoric depictions of whales (Clottes and Smith 2019). Yet another unique feature of the petroglyphs is that the flooding of the adjacent stream eight months of the year significantly limits traditional archaeological research techniques and poses concerns for the survival of the motifs.



Fig 1.10a A panel showing Bangudae petroglyphs

Located next to Daegokcheon stream, the petroglyphs have been carved into a surface above the water (Ulsan Petroglyph Museum)

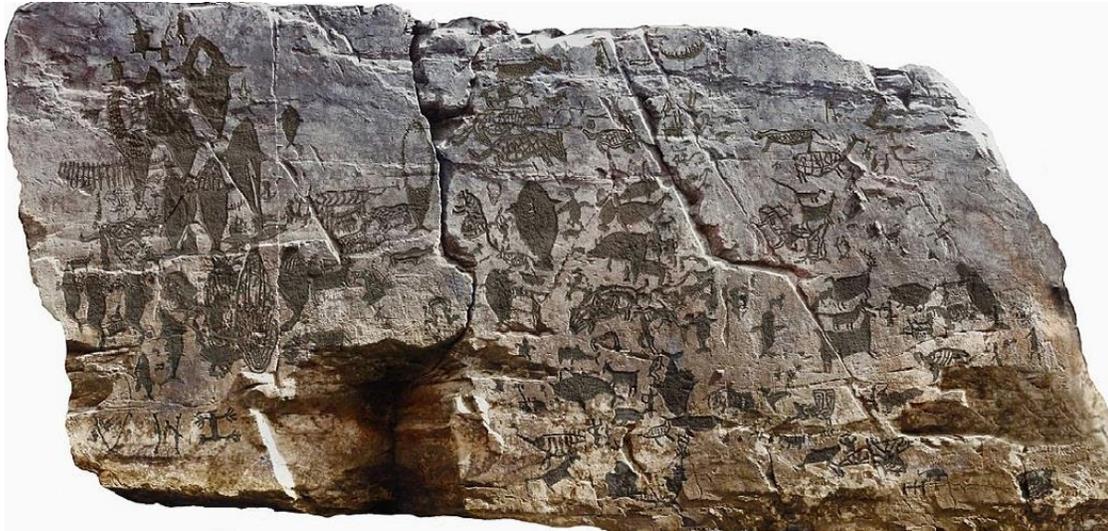


Fig 1.10b An enhanced view of Bangudae petroglyphs

The panel shows both sea and land animals; the petroglyphs have been enhanced for easier viewing (Ulsan Petroglyph Museum)

Previous researchers have focused on these unique features of Bangudae as validation for several assertions: 1) Searches for meaning of prehistoric art, which others have attempted to glean from patterns in the archaeological record and patterns of association are impossible in such unique, isolated sites, and therefore, should not be the main focus of study, 2) visibility is under-studied in rock art research, with identifying subject matter often being confused for meaning itself, 3) more attention needs to be paid to aesthetic choices favored by prehistoric image makers – their decisions were likely not random or haphazard (Solomon 2015).

As described by Lee and Robineau (2004), with attention paid specifically to descriptions of the visibility and aestheticism of the images, these researchers interpreted the visual characteristics of the sea animal imagery in relation to the environment and

seasonal behavior of the creatures depicted. This attention to iconicity of the subject matter might also be characterized as semiotic, but their interpretation focuses on description of these images and connection to the geographical context, rather than a discussion of iconic meaning. Their observations of the different styles and superimposition of layers of the petroglyphs led them to suggest that successive styles were either the work of subsequent generations of the same community or the diffusion and sharing of cultural motifs among different groups. His work also suggested that the frequency and ratios of the animal motifs depicted reflect changing sociocultural values through time. This study highlighted the wealth of knowledge that could be offered by focusing on the visual description of these images, without resorting to searching for meaning in its subject matter.

In a somewhat different approach, Rédei et al. (2020) focused their studies on Bronze Age Scandinavian rock art – proposing that a large portion of art from this time period was meant not only to be seen but felt. Using both semiotic and phenomenological approaches, they noted that Scandinavian prehistoric rock art, found largely outdoors, could be conceptualized as consisting of both visual and tactile elements. These different sensory elements could also be grouped and defined relationally – with the passage of time changing how these different elements were experienced. For example, they describe that in their studies of various rock art sites, they found evidence that while some petroglyphs may have originally been carved and then painted in to increase visibility, these pigments would inevitably fade with time. Compounding the issue is that the rock itself (usually gneiss or granite) would darken

with age, decreasing visibility – the team found that several of the petroglyphs had been re-chiseled over time to deepen the engravings.

Rédei et al. (2020) also described how the petroglyphs were found on horizontal surfaces, and in moderate sizes – they surmised that the relatively modest size of the images meant that they were not meant to be viewed from a distance, but rather from an intimate distance and from standing or kneeling height. They proposed that this type of physical proximity facilitated a tactile approach for the perceiver navigating the rock art with their hands – this would also be necessary in the case of an image that was no longer painted and thus, not easily seen with the naked eye.

They noted that in their study of several rock art sites, the engraved images had features that further supported the idea that they were explored by hand, including directionality. Firstly, the engraved images provided distinct edges for the perceiver – while some images were superimposed upon another (especially as sites were used and reused by subsequent generations), in most cases, the edges are distinct. In addition to noting iconic aspects of the rock art such as the depictions of boats, wheeled vehicles, and people, they also note that images of people were sometimes drawn with exaggerated calves (Fig 1.12), which would have provided an indexical marker of what direction the person was facing. In addition, phalluses were drawn as pointing upwards and swords were drawn as sheathed and pointing downwards – which would make sense when depicting male figures and speak to semiotic meanings of the images in relation to gender and violence.



Fig 1.11 Scandinavian petroglyphs

Depicting a ship and two axes above, note the horizontal-laying nature of the rock, directionality of the axes pointing upward, and the deeply engraved ends of the ship (Rédei et al. 2020)



Fig 1.12 Scandinavian petroglyphs of human figures and a chariot

(left) Two human figures drawn with exaggerated calves, suggesting possible tactile edges for the viewer (right) A wagon or chariot engraved in an orthographic perspective – the paint has been applied recently to increase visibility (Rédei et al. 2020)

Lastly, Rédei et al. (2020) described images that were drawn in an orthographic perspective: this describes an image that is drawn from several right-angle positions (Figure 1.12). This perspective is often used to communicate images for the blind, as while not structurally accurate, it maximizes the amount of relayed information. This further points to rock art being meant to be experienced in both a visual and tactile context. Importantly, the authors note that our modern-day focus on the visual aspects of prehistoric rock art may testify to our current sociocultural context of semiotics – that is, we often think of art as strictly something meant to be viewed, and not touched.

Moving Forward

As evidenced by the discussion of previous studies, there is no “one size fits all” approach to studying prehistoric parietal art – while there may be underlying commonalities in many examples, the artworks spread across time and across the globe are simply too vast and heterogeneous for a single approach to interpretation. However, an intersectional framework that explores the overlap of the aforementioned approaches benefits from the advantages that a combination of these approaches may provide complementary understandings of various aspects of the artwork – perhaps even providing a means for reinterpreting what has already been surmised about a particular work of parietal rock art.

In the remainder of this thesis, I will briefly explore each facet of this framework to two sites I personally visited: the petroglyphs and pictographs of Columbia Hills State Park in Washington state and Cueva de las Manos in Santa Cruz, Argentina. Using this framework, I will attempt to answer these questions for each site.

Approach	Question(s) to be answered
Descriptive	What are the limits and borders of the composition? Are they clearly delineated? What are the basic elements of the composition? What, if any, are the relationships between the elements? How was the composition created?
Semiotic	What pigments, locations, and light projection details may have symbolic meaning? What is the function/value of the elements of the image – are they icons, symbols or indices? Can the relationships be qualified: are they direct, opposite, reciprocal or analogous?

Contextual	Are there social, historical, environmental, or mythical backgrounds of the surrounding environment that have influenced what is depicted?
Phenomenological	What are the subjective thoughts and feelings of the viewer perceiving the artwork? What are the conditions of experience leading to these perceptions?
Heritage Management	What is the mode of presentation used to display these artworks? What determines which mode of presentation is used? What are the resources which determine such different modalities?

As interest and research into the field of prehistoric rock art progresses, I believe this framework can provide a viable systemic approach for interpreting all works of parietal rock art – both old and newly-discovered. It is simultaneously visual, relational, applicable for nearly all locations and can be applied both prospectively and retrospectively. As such, I am excited to see what future directions lie for myself and other prehistoric rock art enthusiasts.

Chapter 2:

The Columbia Hills State Park Petroglyphs and Pictographs

In western Washington state, prehistoric occupations have been found dating back to approximately 3,500 years. These occupations have been discovered along the Deschutes, Columbia and Yakima rivers (see Figure 2.1) (Keyser 1992; Oregon Archaeological Society 2008). Both petroglyphs and pictographs attributed to such prehistoric people have been uncovered along the Columbia River at Horsethief Butte, which is located within Columbia Hills State Park. While Lewis and Clark did not make note of these artworks while documenting their journeys in the early 1800s, other early explorers like the Wilkes expedition of 1841, did describe encountering them (Keyser 1992). Prior to the creation of several dams between 1955-1968 (see Figure 2.2) which dramatically altered the flow of the river and the migration of salmon and other fish, numerous petroglyphs lined the adjacent basalt cliffs. Unfortunately, due to the dams, nearly half are now submerged under water (Keyser 1992). The petroglyphs that were able to be salvaged in the 2000s are now located within Columbia Hills State Park, far from the water's edge (personal communication with Columbia Hills State Park ranger, 7/29/23).



Figure 2.1 A map of the Columbia Basin

The map shows the Columbia and Snake Rivers in Washington and Oregon, as well as depictions of fish species prevalent within them (Portland District, U.S. Army Corps of Engineers 2023)



Figure 2.2 Dams on the Columbia and Snake Rivers

A map depicting the large number of dams on the rivers traversing between Washington state and Oregon (Johnson et al. 2009)

According to Keyser (1992), a resurgence of interest in the 1970s propelled both professional and avocational researchers to document the artworks through photographs, drawings and extensive cataloguing (McClure 1987, Loring and Loring 1982). Despite the painstaking effort put into preserving these works on paper, there is a notable dearth of information regarding exactly when they were created – see Figure 2.3. According to the Oregon Archaeological Society (2008), methods to indirectly ascertain the age of rock art include associating the art with dated archaeological/geological events that have already been conclusively dated, association with dated portable art and inferences from subject matter (i.e., bows and arrows began to be used in the North Americas approximately 2000 years ago, so a depiction of a figure with such weapons would mean

that they were created within the last 2000 years). The Columbia Hills State Park official tour of the petroglyphs and pictographs note that they are at least 400 years old, based on the age of lichens growing over and around them. However, research regarding some of the specific art styles (like the “pit and groove”) found primarily along the lower Columbia and Snake rivers suggest that this style (if not the actual work itself) can be up to 3,000 years old (Oregon Archaeological Society 2008). Currently, the Columbia Hills State Park sites are protected and designated as sacred to the surrounding tribes (see below for more information); therefore, further archaeological sampling is not allowed.

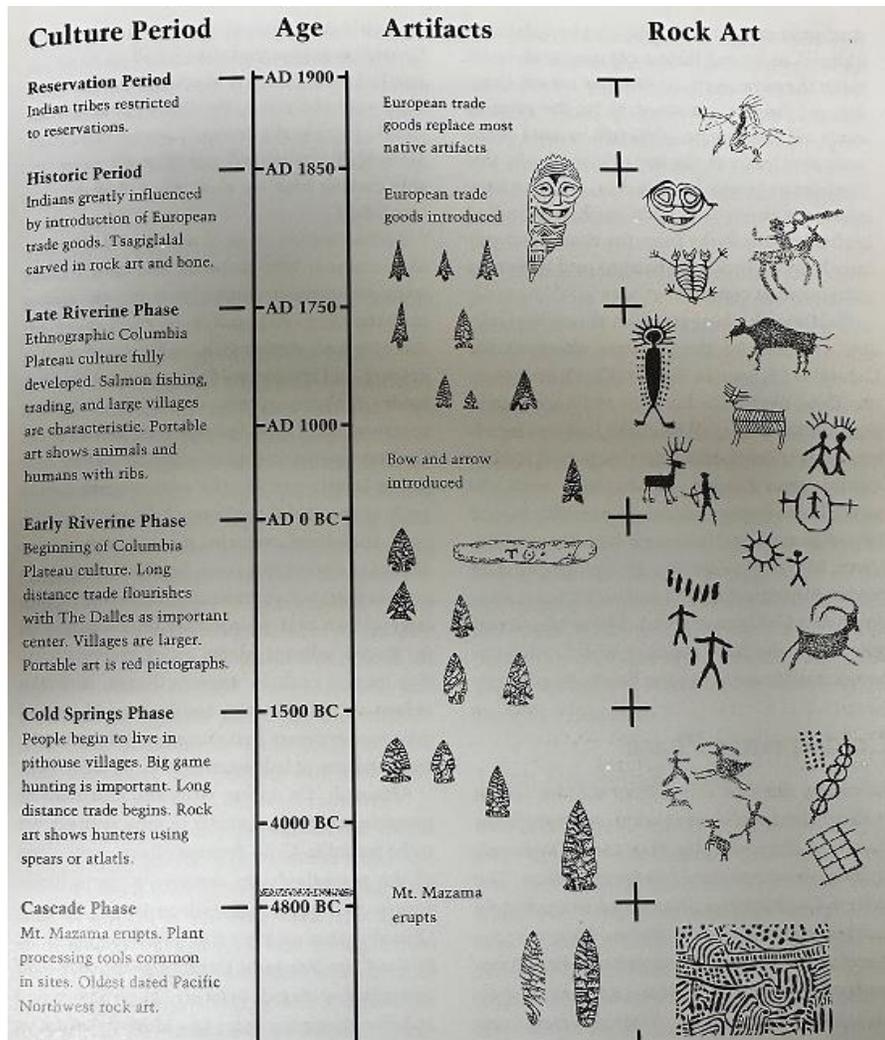


Figure 2.3 A timeline approximating the ages of Columbia River rock art

This figure details several phases throughout the development of Columbia River rock art and the corresponding artifacts and styles (Keyser 1992)

Descriptions of the Petroglyphs and Pictographs of Columbia Hills State Park

According to Keyser (1992), overall motifs of both the petroglyphs and pictographs of Columbia River can be placed into ten descriptive categories: humans, faces, mythological beings, animals, bear tracks, rayed arcs/circles, multicolor rayed

figures, linear geometrics and tally marks. According to the Oregon Archaeological Society, there was also a distinct difference between private and public art, with images intended to be viewed privately located in protected settings and often smaller than public images. Of 3575 lower Columbia River rock artworks, over 25% were found to consist of rayed arc figures, with approximately 23% consisting of human figures.

The artworks can further be differentiated stylistically (see Figure 2.4) into the Long Narrows Style (thought to be the most recent, dating from the last 200 to 1,000 years and unique to the lower Columbia River, consisting of stylized anthropomorphic and zoomorphic figures, mask-like faces and animals with eyes ribs and internal organs, carrying certain similarities to the indigenous art of the Northwest Coast), Yakima Polychrome Style (largely abstract red and white pictographs of faces with rayed arcs and circles, along with some petroglyphs, dating from 250 to 1,250 years ago), Central Columbia Plateau Style (simplistic stick figure humans, animals, lizards, tally marks and other abstract themes, mostly in the form of red pictographs, dating approximately 2,000 years before present), North Oregon Rectilinear Style (dating from the last 100 to 3,000 years ago) and the Pit and Groove Style (see Figure 2.5) (found commonly along the Columbia and Snake Rivers, thought to be around 3,000 years old). Motifs of two or three different styles have been found to exist concurrently within the same site.

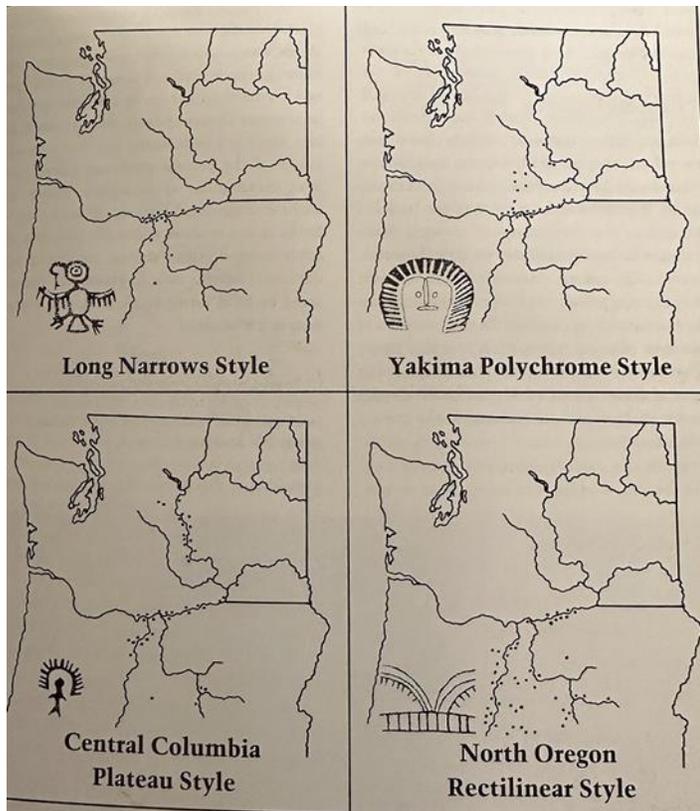


Figure 2.4 Parietal rock art along the Columbia River

This figure details the four different styles of parietal art found along the Columbia River, including Long Narrows Style, Yakima Polychrome Style, Central Columbia Plateau Style and North Oregon Rectilinear Style (Keyser 1992)



Figure 2.5 Pit and groove petroglyphs (Oregon)

I was unable to find examples from Washington state, however, boulders with this type of design have been documented as being found along the Columbia River (Scenic Oregon 2023)

The landscape where the petroglyphs and pictographs are located at Columbia Hills State Park is significantly arid and lined with basalt formations and cliffs (see Figure 2.6). Basalt is a fine-grained volcanic rock; its relatively low silica and high iron/magnesium content gives it a dark color (Geology Science 2023). The Columbia River Plateau is thought to have been caused by lava flows, which created large basaltic plateaus (Geology Science 2023). Basalt, when weathered, is a dark reddish-brown to black in hue (Keyser 1992). This “crust” or patina covers inner layers of the stone that range from yellow/brown to dark grey; prehistoric artists engraved deeply enough for these lighter colors to be sharply visible against the outer, darker crust (Keyser 1992).



Figure 2.6 Landscape of Columbia Hills State Park

Note the dry vegetation and basalt cliffs (personal photograph, Columbia Hills State Park 2023)

Petroglyphs

Located directly next to the gate leading to the main tour, there are several salvaged petroglyphs on a collection of approximately 40 large rocks, displayed behind a length of fence measuring approximately 20 to 30 feet. They have been displayed as closely as to their original layout as possible (personal communication with Columbia Hills State Park ranger, 7/29/23) and show evidence of various styles (see Fig 2.7), including the North Oregon Rectilinear Style, Long Narrows Style, and Yakima Polychrome Style.

The rocks were laying out in the sun and exposed to the weather. Due to the sunny weather and the fence, it was difficult to clearly visualize the features of the rocks. While all of the petroglyphs appeared deeply grooved, and some were easily visible due to the presence of remaining pigment, some were difficult to make out without effort.



Fig 2.7a Columbia Hills State Park petroglyphs

A fence and placard describing some of the petroglyphs at Columbia Hills State Park (retrieved from http://columbiariverimages.com/Regions/Places/horsethief_butte_petroglyphs.html on 1/29/24).

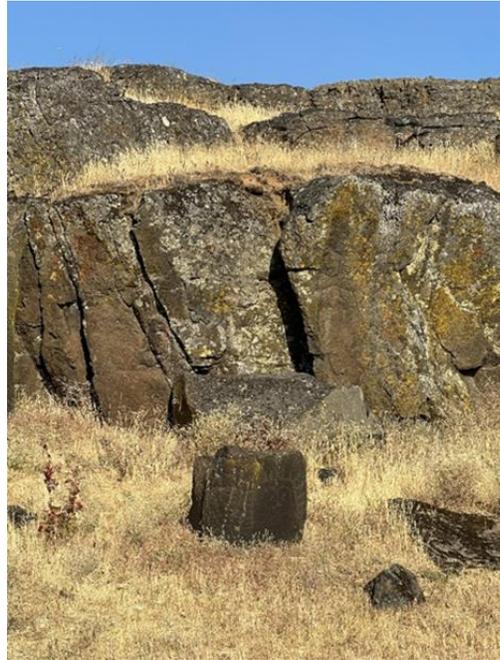
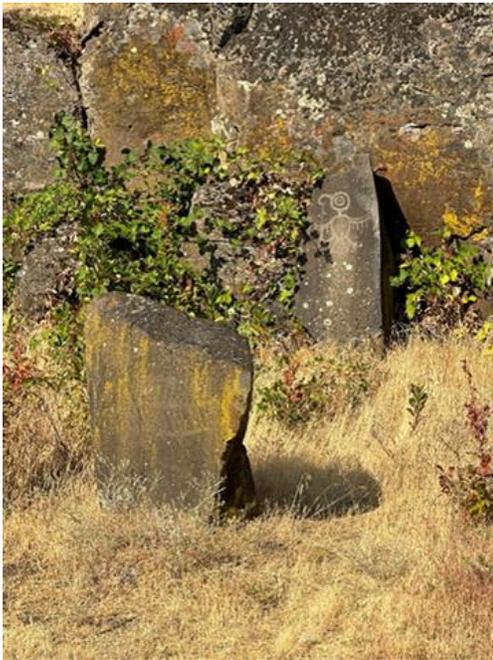
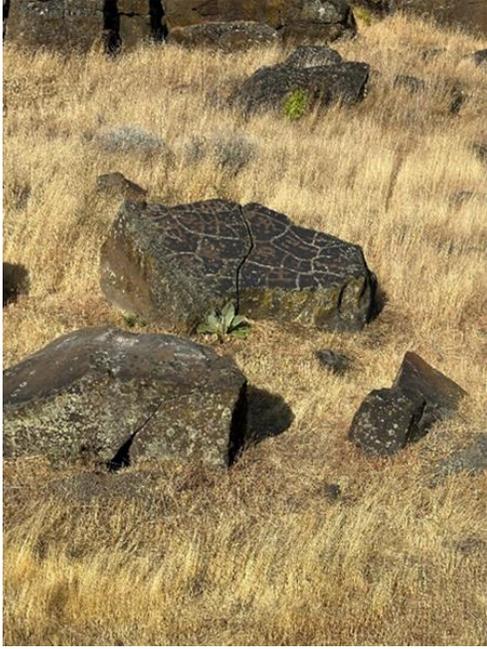


Figure 2.7b Petroglyphs at Columbia Hills State Park (details)

From left to right, top to bottom: An example of North Oregon Rectilinear Style, two examples of Long Narrows Style, and an example of the Yakima Polychrome Style in the forefront (personal photograph, Columbia Hills State Park 2023)

Pictographs

Along the way to the main attraction of the tour, Tsagaglalal, we were shown several different pictographs (see Fig 2.8a-c). Unlike the petroglyphs, the pictographs have been left in their original positions. Some were readily accessible, most were not – located several feet above the ground, making it clear that significant effort must have been involved in their creation. They were drawn mostly in red and white hues. The largest pictograph we were shown spanned approximately 1-2 feet, others were much smaller.

As with the petroglyphs, the pictographs had also been exposed to the elements and were at times, difficult to visualize. The pictographs depicted human figures with rays or arcs drawn over their heads, animals like owls and fish, and natural features like the sun.



Figure 2.8a Columbia Hills State Park pictographs

(Left) Red pictographs lining the cliffs. (Right) note the two figures (directly in the center of the photograph, and on the angled rock face), one with an arc over its head. Twin motifs are also important in lower Columbia River rock art, with some believing that twin births were influenced by shamans, and therefore, that the twins were destined to become shamans themselves (personal photographs and communication with Columbia Hills State Park ranger, 7/29/23).



Figure 2.8b Pictographs in red and white

Note the close-up of the “sun rays” on the right (personal photograph, Columbia Hills State Park 2023).



Figure 2.8c White pictographs of Columbia Hills State Park

(Left): A white pictograph of what is either thought to be a depiction of a water spirit, or a map depicting the confluence of several waters, (Right): A depiction of an owl (personal photograph, Columbia Hills State Park 2023)

Tsagaglatal "She Who Watches"

Of the lower Columbia River prehistoric artwork, the best known is Tsagaglatal (alternatively spelled Tsagiglatal) or "She Who Watches," as named by the Wishram people (see Figures 11-13) and located in present-day Columbia State Hills Park. While similar motifs have been discovered at three other sites along the Columbia River, "She Who Watches" is the largest, (Keyser 1992) measuring three and a half by three feet (Parrish 2014). Simultaneously a pictograph, petroglyph (some of the concentric rings around her eyes have been carved into the rock) and a polychrome (painted in shades of

red, white and black), Tsagaglallal is a prime example of the Long Narrows style (Keyser 1992).

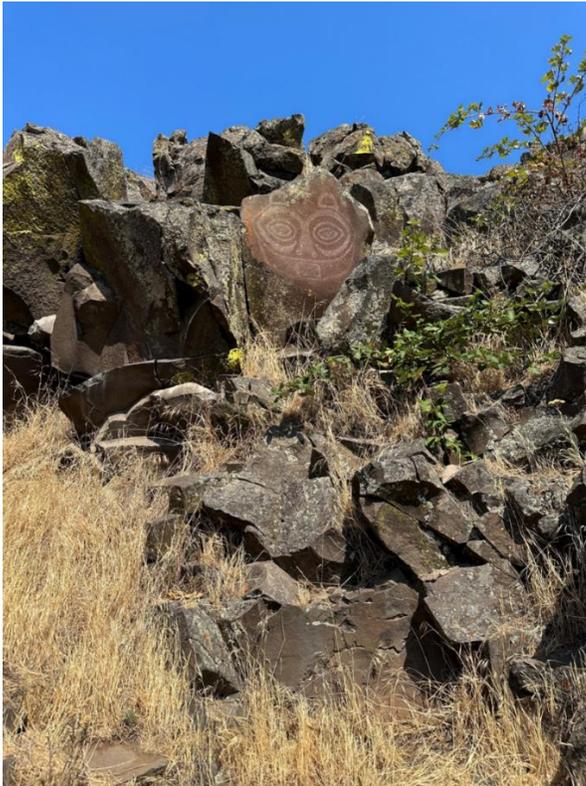


Figure 2.11 Tsagaglallal

Note the bright yellow and red lichens surrounding and on the artwork. While difficult to be seen, there are ceremonial offerings (like tobacco) placed in front of Tsagaglallal, denoting that this is still very much a sacred place to local Native American peoples (personal photograph, Columbia Hills State Park 2023)



Figure 2.12 Tsagaglalal (close-up)

Note the bullet marks on her right orbit, as she was used for bullet practice by early colonists (personal communication with Columbia Hills State Park ranger, 7/29/23, personal photograph, Columbia Hills State Park 2023)



Figure 2.13 Tsagaglalal's view and accompanying pictographs

(Left) Tsagaglalal's view of the Columbia River, (Right) Pictographs visible to the right of Tsagaglalal (personal photograph, Columbia Hills State Park 2023)

Semiotic Aspects of Columbia Hills State Park Petroglyphs and Pictographs

Pigments and Techniques

According to Keyser (1992), a variety of pigments and resulting colors were used by prehistoric Native American artists to create such pictographs, and these color choices may have had particular symbolic significance. The most commonly found colors are red and white, but white, black, yellow and sometimes even blue-green pigments were utilized. Red pigment is thought to represent blood, and therefore, life, whereas white is associated with the whiteness of bare bones, and therefore symbolizes death (Oregon

Archaeology Society 2008). While polychromes (describing a work of art painted in different colors) are relatively rare, when they do occur (as in the case of Tsagaglallal, described below), they were usually in a combination of red and white hues. Crushing iron oxides (including hematite and limonite) created shades ranging from bright red to yellow, and these ores were sometimes baked in a fire, presumably to intensify their hues. Other substrates created white hues (clays), blue/green (copper) and black colors (charcoal and manganese oxide). These bases were then mixed with a binding agent like water, blood, eggs, fat, urine or even plant juice and a pigment was created. The paint was then applied to the rock surface, often using fingers as paintbrushes. This technique explains the finger-width lines of the majority of pictographs found in this area. Alternatively, the artists used smaller bristled brushes made out of animal hair, feather, or even frayed twigs.

Such paints and techniques have withstood the test of time – in contrast to earlier scholars who believed that such pictographs would fade rapidly and believed their age to younger than two hundred years old, researchers in the 1970s discovered that such pigments actually stain the rock surface through capillary action (Keyser 1992). While the paint stains the rock, warm weather evaporates the binder with which the pigment was mixed – in essence, creating a weatherproof pictograph that is now part of the rock itself. In addition, naturally-occurring mineral deposits like calcium carbonates, aluminum silicates or other water-soluble minerals found within cliff surfaces act as a fixing agent for the pigments – rainwater draws these minerals out of the rock, and as the water evaporates on the rock surface, it leaves behind a layer of transparent mineral deposits which protected the pictographs underneath.

According to Keyser (1992), the petroglyphs of the Columbia River are thought to have been created by using a hard stone to strike a softer rock surface, creating an initial indentation, which was then widened to create a design. In contrast, other petroglyphs were rubbed or abraded with a hard stone, creating an artificial smooth surface to contrast the surrounding rock.

Icons, Indices or Symbols?

The Columbia River petroglyphs contain both icons (e.g., the animal-like figures depicted in the Long Narrows Style) and signs we would interpret as symbols (e.g., the North Oregon Rectilinear style), since their meaning is not evidently indexical. The pictographic images, in contrast, include icons (e.g., the human figures) and signs that may be indices (e.g., the sun rays and arcs above figures), referencing some meanings for which these natural features may point. Tsagaglallal, in particular, is an icon resembling a death mask pertinent to the epidemics of disease that swept Native American populations at the time (described further in the next section), and accordingly the meaning of this sign likely relates to the social and cultural significance of that object that it depicts.

Labor

While some of the pictographs appeared painted simplistically and in one hue, Tsagaglallal appeared nearly perfectly symmetrical – not an easy feat to begin with, but even more impressive considering how high off the ground she is. In addition, as the park ranger explained, Tsagaglallal is painted in three different hues and is both a pictograph and a petroglyph. The location, selection of pigments and differences in detail between the

pictographs and Tsagaglalal suggest that Tsagaglalal's creation was much more labor and time intensive.

Contextual Understandings of the Columbia Hills State Park Petroglyphs and Pictographs

Archaeologists agree that while Native Americans have lived in the Pacific Northwest for at least 12,000 years, they began to create permanent settlements along the Columbia River 3,500 years ago (Oregon Archaeological Society 2008), and the artists of the petroglyphs and pictographs were members of these communities. The tribes of the plateau lived in autonomous villages, led by male chiefs (Keyser 1992), and the Wishram people's village, Nix lui dix, or "The Trading Place" was located directly on the bank of the Columbia River at what is now Columbia Hills State Park. Trade was an essential part of social interactions between different tribes, and The Dalles at the east end of the Columbia Gorge attracted Native Americans as far away as from Alaska and North Dakota (Keyser 1992; Oregon Archaeological Society 2008). In addition to trade, all Columbia Plateau tribes engaged in salmon fishing, gathering wild roots, nuts and berries, as well as hunting small and large game animals (Keyser 1992).

According to the Oregon Archaeological Society (2008), due to the large numbers of Native Americans who traded within and visited the area, it is reasonable to assume that the images depict a confluence of their cultural and spiritual beliefs. While some rock art can be linked to certain tribes using ethnological approaches and stylistic data, most Native American rock art in the Pacific Northwest cannot be conclusively connected to any specific tribe. Currently, four main tribes -- the Confederated Tribes of the Warm Springs (including the Wasco and Wishram tribes), Confederated Tribes and Bands of the Yakama Nation, Nez Perce Tribe and the Confederated Tribes of Umatilla

Indian Reservation – hold strong cultural ties to the Columbia River and surrounding areas (Columbia River Gorge National Scenic Area Office 2023).

While conclusive interpretations are not possible due to the passage of time and cultural heterogeneity, Keyser (1992) notes that most lower Columbia rock art was deeply associated with shamanistic practices. Shamanism is a religious phenomenon that is differentiated from more complex religions by the belief of spirits in both animate and inanimate objects, and the necessity of a shaman negotiating a good relationship with these spirits for the maintenance of the well-being of an individual or the community (Pierce 2001). While present worldwide, it cannot be categorized as a homogenous set of practices but rather, should be thought of as a heterogenous set of practices with some common underlying commonalities, Pierce (2001) also refers to shamanism as both a psychological and psychiatric phenomenon; VanPool (2008) expands on this concept, noting that shamanistic iconography consists of entopics (i.e. grids, nets, dots, spirals, lines), anthropomorphic figures and liminal creatures. Vanpool (2008) adds that shamanic practices also include the presence of ritual and liminal spaces – both with some type of controlled access.

Referring specifically to the shamanistic iconography of Columbia Hill State Park pictographs, one of the most common motifs of rock art in this region, the rayed arcs, are thought to symbolize an aspect of supernatural power, akin to an aura enshrouding the human or object. This depiction serves to document or advertise the possession of this power acquired through vision quests, described as a process of fasting and praying in remote locations, which would allow an individual to contact the spirit world and receive visions in the forms of animals, plants, birds, reptiles or even celestial objects (Oregon

Archaeological Society 2008)– as seen in Figure 2.8a (right), one of the figures has an arc over its head; the other does not.

According to Keyser (1992), another prominent theme of these artworks is that of mythical beings, with Tsagaglalal as a prime example. The religious beliefs of the people living along the Columbia River at this time also emphasized the existence (and importance of) a personal guardian spirit (Oregon Archaeological Society 2008). Native American folklore is rife with mythological beings that could either harm or help humans – including child-stealing cannibal ogresses, a land monster who lived in caves and ate those who ventured too close, and water spirits that would protect people from drowning. Artworks of such mythical beings were often used in ceremonies and other religious rituals.

There are a number of differing beliefs regarding who the Tsagaglalal figure is and what the artwork is depicting. According to Keyser (1992), in addition to Tsagaglalal, other figures with similar large eyes and wide-grinning mouths have been discovered carved along the lower Columbia River. He notes that at least some of these faces overlook cemeteries of early historic Native American villages, and that similar images carved in portable objects like bone, stone, and antlers have been recovered from cremation sites near The Dalles and in other surrounding areas – he points to these similarities as evidence that Tsagaglalal may have been associated with death. Since she is estimated to be approximately 300 years old, this would coincide with European diseases like measles, whooping cough, smallpox and tuberculosis sweeping across the area. According to Keyser (1992), the Wishram tribe were known to have suffered two major smallpox epidemics – leading to a 90% decimation of the Native American

population along the Columbia River by 1840. He surmises that in the presence of overwhelming fatalities, guardian spirits with the ability to protect against death may have been carved into the rock as a means of protection.

However, not all agree with Keyser's theories. According to Parrish (2014), local Wishram legend notes that Tsagaglalal was once a woman chief. When Coyote, a notable figure in many Native American beliefs, informed her that change was afoot and that women would no longer be allowed as chief, Tsagaglalal either requested to or was tricked into being transformed into a rock. She now permanently watches over the Columbia River, guarding her people (personal communication with Columbia Hills State Park ranger, 7/29/23).

Given what we know about Tsagaglalal, the other pictographs and the pictographs, I do not believe that they were produced simply for aesthetic purposes (or "art for art's sake"). The evidence suggests that the images were sacred and may have played a role in sympathetic magic – in particular, as explained by the Columbia Hills State Park ranger, with the exception of the image in Fig 2.10 (left) (which may have also served as a map), the pictographs were involved in vision quests and served a sacred purpose. While perspectives on Tsagaglalal and her exact purpose remain more unclear, the evidence suggests that she played an important role in the mythology at the time – either as a woman chief of old, or as a part of a death cult testifying to the hundreds that died as a result of colonization. What is clear is that her meaning to her people has changed over time with evolving sociocultural context.

Phenomenological Experience of the Site

I visited Columbia Hills State Park on a guided tour in July 2023. Open to the public six months of the year from April to October only, the guided tour was educational and illuminating. It began near the parking lot where the various petroglyphs were displayed – as they had been salvaged prior to the creation of the Dalles dam, while it appeared they were displayed largely in the arrangement they had previously been in, it was evident that they had been moved from their previous surroundings. Perhaps it was only because I knew they were not originally from that setting, but the rocks seemed somewhat out of place.

The nineteen individuals who embarked on the tour showed a healthy level of enthusiasm and respect for learning. Most were adults; only one was a child. In turn, the park ranger was eager to teach the group, while making sure to instill a respect for the Native American people who considered the artwork sacred. It was a hot day (but not intolerably so), and the entire tour took approximately two hours – an hour to Tsagalalal, and an hour back. We were shown various petroglyphs and given potential explanations describing their meanings, with the park ranger sometimes handing out laminated visual aides (usually in the form of book pages with illustrations). Some of the pictographs were notably faded with age and also difficult to see given the intensity of the sunlight. The park ranger also pointed out the numerous brightly-colored lichens that covered the rocks – to an untrained eye, they could easily appear to be intentional placements of synthetic pigments or even the results of vandalism. There were also no attempts at restoration; the park ranger explained that to the Native American perception of the site, they saw the natural erosion and damage as meant to be.

When I approached Tsagaglalal, I was not sure what to expect. I also did not expect her to be quite so high up off the ground, so by the time I was making sure of my footing (the rocks underground were not the most stable) and managed to look up, I was struck by her presence. She seemed foreboding, haunting and elegant all at once. I was also struck by the fact that Tsagaglalal, far from being simply a relic from the past, was very relevant to contemporary Native Americans, as evidenced by recent votive offerings on the ground. While there were one or two pictographs located behind Tsagaglalal, it was clear that she was meant to be the primary feature of her location with no other distracting features. The colors of her pigment, which are not quite as dark as some photographs, were still vivid, as was the damage caused by bullet holes. Being in her presence made me ponder her origins. I wondered about what societal changes were reflected in the Wishram legend about Coyote and why at that point in time, women were no longer allowed to be in positions of power. Tsagaglalal's story reflects that of so many influential women of history – stripped of power and condemned or confined.

I felt further saddened and outraged that in addition to the injustice of the bullet holes, Tsagaglalal and the other pictographs had been subject to vandalism in the past – therefore, necessitating limiting their access to the general public. I wondered what sparked the desire to deface artwork, which is seen frequently worldwide. While I understood that part of the damage had been due to well-meaning but ill-advised attempts to rub or copy some of the petroglyphs and pictographs under paper, others were blatant attempts at graffiti. I felt perplexed at the human need to put one's mark on something, even at the expense of ruining a precious and meaningful work of art. It seemed that they were inspired in a misguided way from earlier people who had also left their marks.

Heritage Management: To Whom Does it Belong?

During the tour, the park ranger stopped at several points and educated the group about various aspects of Native American mythology, purported meanings of the paintings and painted a vivid picture of life for prehistoric Native Americans. She made a point to pass out relevant, laminated materials (see Fig 2.14 below) from books written specifically about the Columbia Hills State Park petroglyphs. For example, she passed out pages from Loring and Loring (1982), showing the pictures that the two researchers had created of the drawings we stood in front of, and were unable to appreciate all of the features of due to weathering and the intense sunlight.

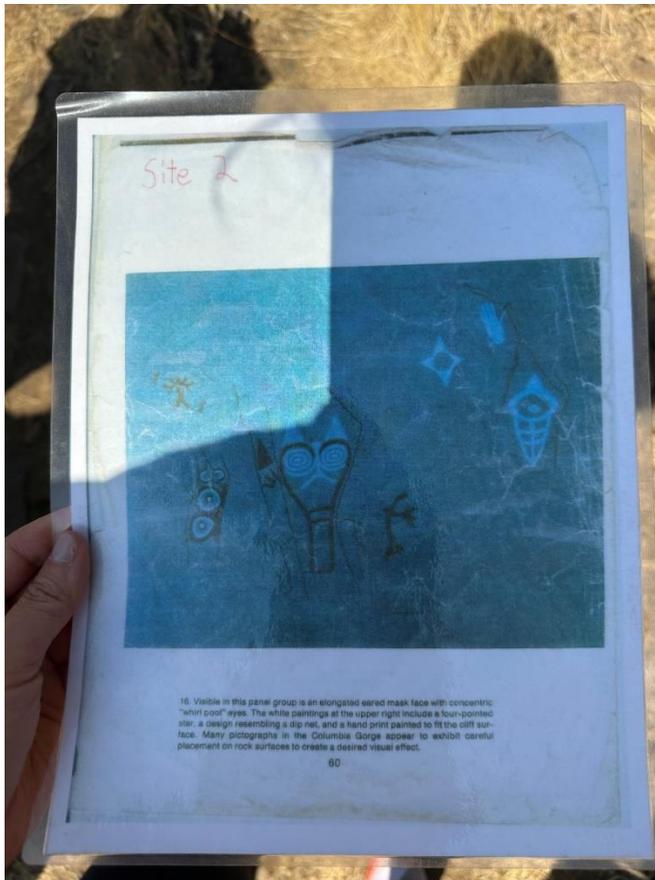


Fig 2.14 Education provided on the tour

An example of one of the laminated book pages passed out by the park ranger during the tour (personal photograph, Columbia Hills State Park 2023)

During the tour, the park ranger informed us that we were allowed to take photographs and use them for personal means. After I returned home, I wanted to make absolutely sure that I would be able to use my personal photographs of the site in this thesis. Given that we had been told about how sacred Tsagaglalal, the other pictographs and the petroglyphs were, I wanted to confirm this and reached out to the Washington State Parks Department. I was first informed that I would need to apply for an education permit, which the application fee alone was approximately \$100. I was also informed

that as part of the application, I would need to provide proof of an insurance binder. Several long and confusing weeks later, I was ultimately given confirmation in writing by the Washington State Parks Department that since I was not publishing this thesis for a profit, and that the visit had already occurred, I would be exempt from requiring a permit and would be allowed to use my personal photographs without issue.

This raised pertinent questions regarding the ownership of these and other culturally meaningful sites with parietal art. While I did not interact directly with tribal members with cultural connections to the artwork, I was under the assumption that the Washington State Parks Department had consulted with, and therefore, spoke on their behalf. I wondered how that relationship between the two parties had been formed but was not able to find much information about this topic.

Concluding Remarks for Columbia Hills State Park

In this chapter, I have attempted to apply the five complementary approaches as previously described in Chapter 1: descriptive, semiotic, contextual, phenomenological and heritage management related. I discuss the visual parameters of various artworks in the park, as well as possible semiotic meanings as filtered through a contextual lens. I have also described my own subjective experiences observing the artworks as a relatively uninformed observer and discussed my own experiences exploring the heritage management of Columbia Hills State Park. Based on my own experiences gathering and organizing this information using this framework, I believe this could be a useful standardized approach on how to approach all works of parietal rock art around the globe.

Although I have appreciated parietal art in books and other media over the past several years, the petroglyphs, pictographs and Tsagaglalal were my first experience

seeing any in person. In the next chapter, I will be discussing another series of parietal artwork that I had the privilege of visiting –this time, on another continent, in Santa Cruz, Argentina. By comparing these two examples we see the variability in these five approaches when applied to different examples of parietal art.

Chapter 3:

Cueva de las Manos

Cueva de las Manos (translated to “The Cave of Hands”) is located in the province of Santa Cruz, Patagonia, Argentina (see Fig 3.1 and Onetto and Podesta 2011). Patagonia is a territory consisting of more than 900,000 square kilometers of Andes mountains and low plains. Cueva de las Manos is one of several rock art sites present in the area including the Cerro Casa de Piedra sites 5-7 and Cerro Bayo sites 1-3; these prehistoric artworks are primarily in rock shelters at the foot of cliffs.

As elaborated by Aschero and Schneier (2022), the Rio Pinturas Canyon is one of several examples of prehistoric Argentinian art sites. These sites are located on both sides of the Pinturas river, with the Central High Plateau of Santa Cruz Province located to the west. The Pinturas runs north to south, with the riverbed being bordered by ignimbrite cliffs (a type of volcanic rock) over 200 meters (656 feet) high.



Fig 3.1 Santa Cruz Province

A map of the Santa Cruz province, showing the location Cueva de las Manos and its relation to the Rio Pinturas (Geuna and Escosteguy 2008)



Fig 3.2 Rio Pinturas Canyon

Note the canyon with the river winding through it (Onetto and Podesta 2011)

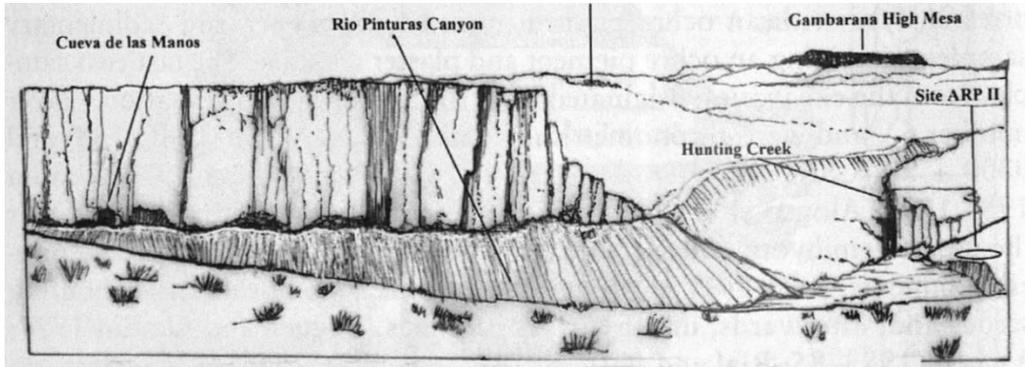


Fig 3.3 Cueva de las Manos and other associated landmarks

A representation of the Cueva de las Manos site in relation to other landmarks in the area (Aschero 2018)



Fig 3.4 Rio Pinturas Canyon

A current view of the canyon seen in person by the author (personal photograph taken by the author on November 19, 2023)

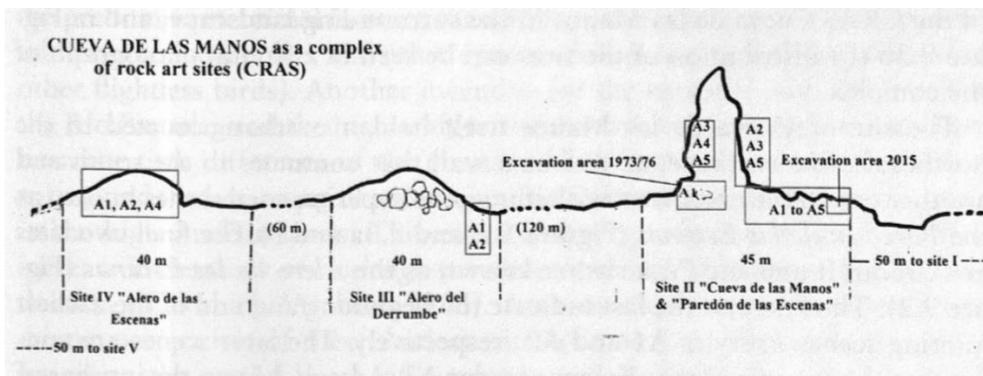


Fig 3.5 Layout of Cueva de las Manos

A figure showing the various locations of panels and corresponding styles of art in Cueva de las Manos (Aschero 2018)

Descriptions of the Petroglyphs and Pictographs of Cueva de las Manos

Located overlooking the Rio Pinturas Canyon and placed approximately 90 meters above the river (see Fig 3.2), Cueva de las Manos consists of panels totaling 600 meters long (see Fig 3.3, 3.4 and 3.5) and covered with paintings of humans, animals and abstract symbols. The images are located both internally and externally within the cave system, meaning that some of the petroglyphs and pictographs are exposed to the elements while others are protected within cave walls (Acheró 2018).

Styles of Cueva de las Manos Art

According to Onetto and Podesta (2011), the Cueva de las Manos are distinguished by three broad groups of stylistic characteristics in chronological order. Firstly, Stylistic Group A (see Fig 3.6) (also known as Rio Pinturas I, and further subdivided into A1-A5³²; Styles A1 and A2 are unique to Cueva de las Manos) – associated with long distance hunters using stone technology, consisting of largely dynamic guanaco hunting scenes displaying different techniques: surrounding or trapping guanacos in an ambush, or chasing them with throwing weapons and bolas. Human figures are always depicted as larger than the guanacos, suggesting a hierarchical perspective (Aschero 2018). Like other examples of prehistoric rock art previously

³² According to Aschero and Schneier (2021) and Aschero (2018), styles A1 through A5 are characterized by the following:

- a) Style A1 and A2 (c. 9,400 – 8,800 years before present): consisting of images in ochre and black; only found in Cueva de las Manos
- b) Style A3 and A4 (c. 8,800 – 7,700 years before present): consisting of images in red and purple; found in Cueva de las Manos and other sites. A4 is notable for its miniaturization of frames and figures.
- c) Style A5 (c. after 7,700 years before present until the eruption of the Hudson volcano): images in white; found in Cueva de las Manos and other sites.

mentioned, beginning with the A2 style, the artists of Cueva de las Manos utilized naturally occurring features of the rock (crevices, fissures and protrusions) as part of the art and to establish the “end” of a scene.



Fig 3.6 Stylistic Group A

A depiction of a guanaco hunting scene in the style of Group A (Aschero 2018)

Following Stylistic Group A, Stylistic Group B and B1 (see Fig 3.7a-b, 3.8) (also known as Rio Pinturas II and Rio Pinturas III, respectively) came on the scene around 7,000 years – 3,300 years before present, and include handprint stencils (Figure 3.7) and hunting scenes of large groups of guanacos replaced by single guanaco figures (Figure 3.8). They are depicted are static with protruding bellies; human figures are not prominent in this stylistic period. Instead, we find over 2,000 hand stencils – mostly left hands belonging to both male and female children and adults, sometimes even including

the forearm. These handprints, painted in an array of colors (including red, purple, orange, yellow, white, black, and even green) are often superimposed. The same technique used to apply the handprints has also been used to the foot of an indigenous flightless bird called the choique or nandu (*Rhea americana*), and these footprints occur concurrently with handprints.



Fig 3.7a Stylistic Group B

A rock panel with multiple handprints in different hues (personal photograph taken by the author on November 19, 2023)

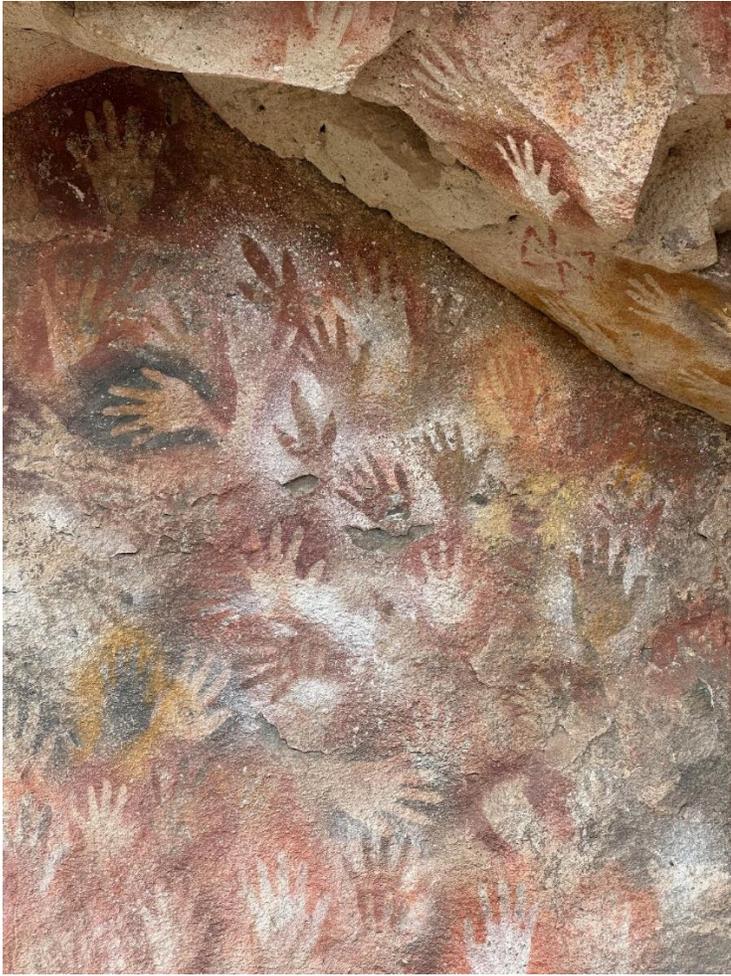


Fig 3.7b Handprints and choique footprints

Note the choique footprints toward the top of the image (personal photograph taken by the author on November 19, 2023)



Fig 3.8 Depictions of pregnant guanaco females

The artists of Cueva de las Manos believed chulengos (or newborn guanacos) were born during the full moon, thought to be depicted by the circles (personal communication with Cuevas de las Manos tour guide and personal photograph taken by the author on November 19, 2023)

Following Group B, during Stylistic Group B1, the artwork becomes more schematic and stylized, with animal and human figures, hand stencils, dotted lines and red circular dots on the high ceilings of several shelters –the marks on the ceiling were thought to have been created by throwing paint-soaked rocks (see Fig 3.9).



Fig 3.9 Circular spots on the ceiling of the rocks

These spots were located on a substantially high “ceiling” of parts of the caves that jutted outward (personal photograph taken by the author on November 19, 2023)

Stylistic Group C (see Fig 3.10) (also known as Rio Pinturas IV), is attributed to the most recent time period of Cueva de las Manos art, beginning 1,300 years before

present. This style is characterized by more abstract and monochrome designs, with very bright red pigment used to paint zigzags, angular shapes, dots and circles.



Fig 3.10 Stylistic Group C

Zigzag lines and concentric circles among handprints and stick figures (personal photograph, taken November 19, 2023)

Aschero and Schneier (2021), who focused their research on Style Group A and its subdivisions, in their detailed discussion of motifs in the Cueva de los Manos rock art (see Figure 3.11) argue that the prehistoric artists utilized different colors to distinguish scenes from each other: for example, the preceding ochre images did not appear connected to the superimposed black images, creating distinct monochromatic narratives.

These monochromatic associations are referred to either as “tonal” or “chromatic” groups. They note that in contrast to each scene being a discrete entity as in other parts of Cueva de las Manos, several of the scenes in this series appear related. Partial scenes appear to depict hunting-related actions, with the total hunt being portrayed by the additive effects of other partial scenes. The total, final hunt scene can only be seen by the observer moving through the partial scenes in a stepwise fashion.

Aschero and Schneier (2021) also note that the guanacos depicted in this group (Style A1 and A2) appear different – this may be because they were drawn in an entirely different sequence from other styles. For example, in the “black series” of Style Group A2, the body was drawn as an oval, after which the neck, head, leg and tail were added in that order – we know that this was the sequence because of presence of “preforms,” or incomplete guanaco drawings left on various parts of Cueva de las Manos. Pregnant guanacos on the other hand, were drawn using a different sequence to depict a different pose: their bodies were drawn as almonds, and then after adding a line for their necks, both front and back legs were drawn as tubular pairs.

Further according to Aschero and Schneier (2021), various weapons are also depicted in the “black series” hunting scenes including dart-throwers, spears, a “bola perdida” translated as “lost ball” (a heavy stone tied to a long leather rope about 1 to 1.5 meters long, ending with a handle), and the lazo-bola (a light stone tied to a longer rope about 5-6.5 meters long and flung at an animal’s legs). Human figures depicted at Cuevas de las Manos have been described as carrying “cephalic garments” which are similar to those used by the Chinchorro people of Chile – the purpose of these garments was to hold the ends of the spear shafts in place and attached to the owner’s head

Semiotic Approach to Cueva de las Manos

Meanings of Pigments and Techniques

Like nearly all pigments, the pigments used by the prehistoric artists of Cueva de las Manos were created by grinding up mineral pigments and mixing it with some sort of dissolvent, possibly water or grease (Onetto and Podesta 2011). These binder agents worked to enhance the adhesive properties of the pigment and also facilitated its application (Vasquez et al. 2008). A 2015 excavation of Cueva de las Manos found that in three fire pits, large amounts of ochre and small amounts of bone fragments and stone debris were found; this suggested that the primary function of these fire pits was to thermally convert the ochre into red pigments (Aschero and Schneier 2021). Such fire pits provided the basis of dating the images of Cueva de las Manos. For example, in one such firepit, a lithic artifact stained with goethite ochre and gypsum hemihydrate, a mixture used to paint the Style Group A1 series; this mixture was dated to approximately 9,300 years before present³³. In addition, iron oxide produced red pigment, hematite and maghemite produced purple pigment, kaolin produced white pigment, natrojarosite created yellow shades, terra verde created green hues and manganese oxide produced black pigment.

While not specific to Cuevas de las Manos or Argentinian prehistoric art, according to Domingo and Chieli (2021), recent research indicates that in contrast to what was previously thought about red pigment in Paleolithic art. It was not merely a byproduct of heating processes. Samples taken from cave deposits in Lascaux, France,

³³ Excavation on the upper layers pertaining to Style A1 have been dated to 9320 ± 90 BP and 9300 ± 90 BP, suggesting that that the series could have been created around 9400 BP (Aschero 2018).

showed the presence of four different types of hematite which were not treated by heat, indicating that the prehistoric artists knew where to find this mineral in its natural environment. Specific to Argentina, in addition to kaolin, calcined bones were also used to create white pigment.

While I was unable to find in-depth information regarding how these prehistoric artists may have applied pigment to the walls of Cueva de las Manos to create images, there is evidence that some of the abstract dots found on the cave ceilings are thought to have been formed by throwing stone spheres wrapped in leather and soaked in paint (Aschero and Schneier 2021). In addition, hand stencils (which are found in prehistoric artwork worldwide) were formed by placing the hand on or close to the rock surface and using either a brush or mouths filled with pigment to splatter paint around the hands, so that the hand provided a “negative space” (Onetto and Podesta 2011).

Icons, Indices or Symbols?

The guanacos of Cueva de las Manos are icons that realistically depict animals that existed and still exist in the surrounding landscape. Other invaluable information provided by the tour guide included interpretations of paintings involving pregnant guanacos and what appeared to be circles – he described these as full moons, espousing the prehistoric peoples’ beliefs that valuable chulengos would be born at these times.

The handprints are also icons, as the hand is an easily identifiable part of human anatomy, although they may also be indices of other aspects of personhood in this context. He also pointed out two examples of unique-looking hands; one was smaller, almost appearing clenched, which he explained might have been this way due to arthritis (alternatively, the result of several amputations for an unspecified reason). Another hand

had six fingers – our tour guide explained that as such prehistoric groups were often small in size; these and other genetic abnormalities might have occurred as a result of inbreeding. Circles around one or two hands were thought to have delineated chiefdom or leadership.

The abstract art of Cueva de las Manos including the lines and circles can be categorized as symbols, however the cultural convention of how they relate to the referred object can only be speculated at this time. According to the tour guide, the zigzag lines symbolize mountains, and the circles symbolize the sun (personal communication with the Cuevas de las Manos tour guide on 11/19/23).

Contextual Approach to Understanding Cueva de las Manos

The Americas, and South America in particular, was the last land mass (excepting Antarctica) to be occupied by human beings, beginning around 11,000 to 10,000 years before present. The prehistoric people who lived in the area were hunter-gatherers and early inhabitants found shelter and sustenance in the Rio Pinturas Canyon, located between 500 to 700 meters above sea level (Onetto and Podesta 2011).

According to Aschero and Schneier (2021), for the people who sheltered in the canyon, its cliffs would have provided protection from wind and rain. In addition, due to the favorable climate, beginning in the Holocene era, plants (including the “molle” or *Schinus molle*) began to proliferate in this area, providing a steady source of firewood, shelter and resins to make glue with (Aschero and Schneier 2021). The environment also provided abundant sources of sustenance, including the calafate (*Berberis sp.*), still used in local Patagonian cuisine. Other vegetation was used both for consumption and medicinal practices. Unlike some modern-day environments surrounding prehistoric

artwork sites (including the dramatically transformed landscape around the Columbia Hills State Park), the environment Cueva de Las Manos remains largely unchanged, containing much of the same fauna and flora as depicted on its walls by prehistoric artists (Onetto and Podesta 2011).

According to Onetto and Podesta (2011), while the grassland, hills and gorges surrounding the Rio Pinturas Canyon may have appeared habitable to prehistoric Patagonians, they did not spend all seasons there. Instead, beginning around 9,500 years before present, they began to rotate locations on a seasonal basis between the canyon, the forests and steppes of the Andes (located 800 to 900 meters above sea level), and west of the Central High Plateau (also at 800 to 900 meters above sea level). The reason for their nomadic migrations is thought to have stemmed from following hordes of guanacos (see Fig 3.13) (*Lama glama guanicoe*).

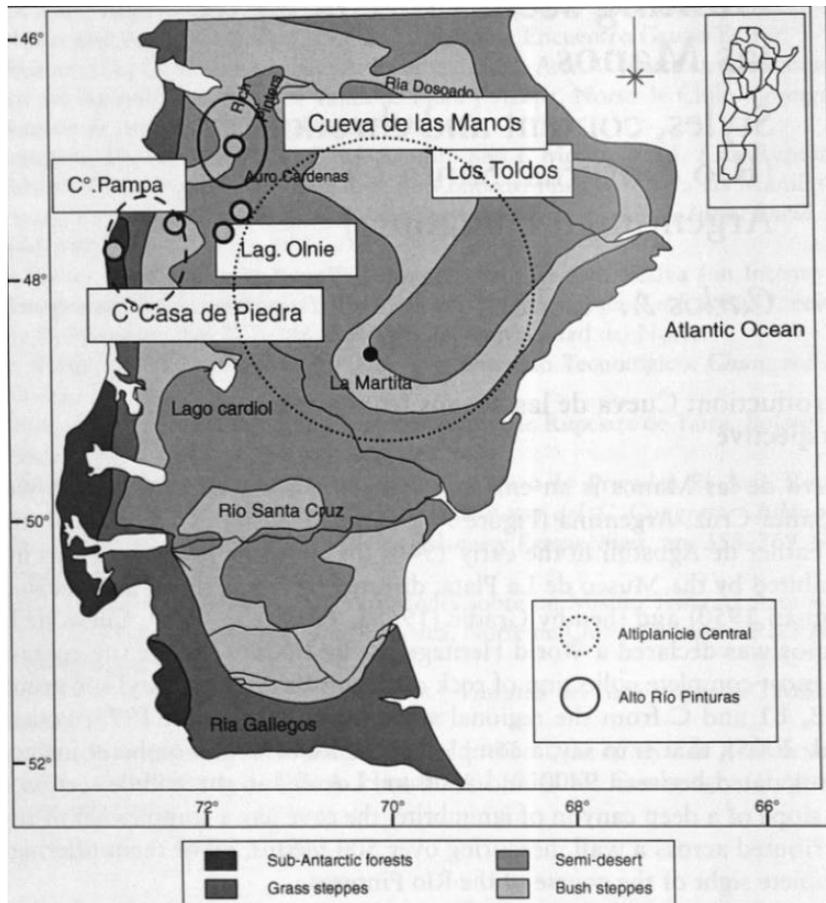


Fig 3.12 Varieties of Patagonian vegetation

Note the different landscape including forest, desert and steppes (Aschero 2018)

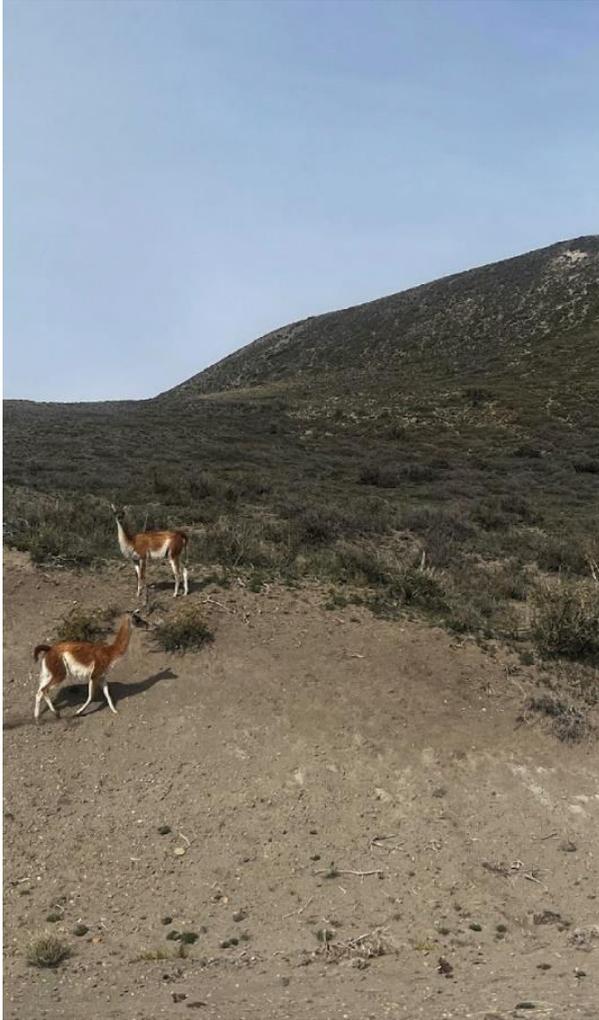


Fig 3.13 Guanaco photographed on the way to Cueva de las Manos

There were numerous herds spotted to and from the site (personal photograph taken on November 19, 2023).

According to Onetto and Podesta (2011), the fall and winter months saw the Rio Pinturas Canyon and its immediate periphery hosting large concentrations of guanaco herds seeking shelter. Prehistoric Patagonians hunted in groups and utilized gorges and ravines from higher elevations (600 to 700 meters above sea level) to “trap” the guanaco on the open steppes by driving them into coastal areas limited by abrupt slopes,

encircling them and using bolas, a type of throwing weapon with weights on the ends of cords (Aschero and Schneier 2021). They utilized all parts of the guanaco: its flesh³⁴, fur, wool, bones and tendons. The guanaco bones were used to create weapons (personal communication with Cueva de las Manos tour guide on 11/19/23). In particular, “chulengos” (or newborn guanacos) were hunted for their fur, which was a highly valued commodity used by the southern Tehuelche people (Aonikenk), an indigenous people of eastern Patagonia (Aschero and Schneier 2021).

According to Aschero and Schneier (2021), beginning with the development of these nomadic circuit routes following the guanaco, the Cueva de las Manos images were the only prehistoric rock art in this landscape. It was only after 8,800 years before present that these early hunting scenes were also painted in other sites. They suggest this indicates that the artists of Cueva de Las Manos created a central hub and inspiration for future generations of prehistoric Patagonian artists. Additional evidence for this is suggested by the presence of Cerro Pampa as a source of obsidian for various prehistoric communities; Aschero (2018) suggests -that the route between Cerro Pampa and Cueva de las Manos and Cerro Casa de Piedra may have been a way to exchange art forms.

Aschero and Schneier (2021) have proposed an interpretation for the Stylistic Group A2, or the black series. They point to the inclusion of huemul (South Andean deer, or *Hippocamelus bisulcus*) figures along with those of the guanaco in several scenes, suggesting that this is not indicative of an actual historic event but perhaps a mythical one, as these species of animals do not normally co-exist. In addition, while the huemul were abundant in the area, no remains of the deer have ever been found in any

³⁴ The guanaco are still eaten today and can be found on many menus catering to tourists and local Argentinians alike.

excavation of Cueva de las Manos, supporting the idea that their depictions in hunts were not reality-based (Aschero 2018).

Aschero and Schneier (2021) also point out that the entire ecosystem and lifestyle of the prehistoric Patagonians was dependent on the guanaco, and as such, the fertility of female guanacos was imperative for their survival. In fact, guanacos are the most predominant animal depicted, making up nearly 90% of animal images in hunting scenes and the majority of the overall total images (See Fig 3.11) (Aschero 2018). In particular, Aschero and Schneier (2021) focus on the presence of pregnant guanaco depictions in the cave interior as being closely linked to an Aonikenk myth that the benevolent spirit Seecho created guanacos inside a cave, and that all animals and people also originated from a mythical cave. In addition, the superimposition of the ochre (A1) and black images may not have only been for re-using the space, but as a means of revitalizing the pre-existing artwork by exercising the collective memory of the prehistoric Patagonians by providing a type of visual testimony. They also note that the “impact marks” on parts of the ceiling may have been intended as an attempt to “nullify” or “undo” negative effects of a particular scene.

As meaningful as these images may have been to prehistoric Patagonian people, Aschero (2018) points out that they were not necessarily reserved for the selected few. Since the images were on display in these spaces, they must have played a part in daily living for these people. This is supported by the numerous amounts of children’s handprints, suggesting that the children actively participated in the creation of art, and in the presence of children-sized sandals (“tamangos”) found in excavations.

Phenomenological Observations of the Sites

One of the most striking features about the tour was how close we were to the artworks; while there were fences and railings separating us from the rocks, at various portions, we were close enough to reach out and touch the rocks (we were cautioned not to by the tour guide). It also struck me that photographs I had previously seen (and included in this paper) could not do the site justice – the vivacity of the colors (especially that of the paintings that had been sheltered from the weather by overhanging boulders), the sheer number of handprints, the immense height of the circular paint splotches on the “ceiling” of the basin, as well as copious amounts of graffiti unfortunately effacing some of them – these could not be adequately portrayed through photographs and descriptions alone.



Fig 3.14 Tour views of Cueva de las Manos

(Left): The tour entrance, (Right) Walking to the first panel of art (personal photographs by author taken November 19, 2023)

Despite having access to resources about Cueva de las Manos, there were invariably things that I could not have learned without physically traveling there. For example, the plentiful numbers of guanaco that covered the landscape near and around the caves brought to mind how plentiful they must have also been during prehistoric times. The enormity of the basin and surrounding cliffs could also not be adequately described in words – it was such that the white helmets we were given seemed futile in the case of an actual rockfall or avalanche. I was also unaware that there was also a green pigment that the prehistoric artists used – while it is the “youngest” color used at the site, that style still dates back to 2,500 years ago.

Observing the hands, I could not help but be awestruck – this was an extremely remote location and required vast amounts of efforts and shuttling resources to create these paintings – whatever must have inspired these prehistoric artists to create these artworks must have been profoundly significant to them. The sheer number of hands alone also attested to the vast numbers of people who must have made this journey, presuming of course, that each handprint belonged to one person alone. While this is no doubt, part of my contemporary extrapolation, I felt a sense of longing emanating from the handprints – what did these prehistoric people hope to achieve by leaving them? Was each handprint simply a message to future generations that “I was here?” as some previous theorists surmise? Could they have guessed that their handprints may have been the only thing left in this world to prove they had, at one time, existed? While this explanation has some merit, the sheer number, beauty and artistic layout of the hands suggest this reasoning may be too simplistic.

Viewing the artwork, I could not help but reflect on the tremendous privilege I had to visit this site in a remote part of South America. It saddened me to think that this experience may not be possible for others either due to time, financial or other constraints.

Heritage Management

I traveled to Cueva de las Manos with three other friends as part of an international vacation touring Argentina and parts of Chile. After starting the trip in Argentina, we took a short jaunt to Chile and headed back to Argentina on a ferry, which was decorated on the inside with pictures reminiscent of Cuevas de las Manos (see Fig

3.15). As Cueva de las Manos is quite remote, we stayed in Los Antiguos, a town which is a two-to-three-hour drive from the site.

Despite the openness and friendliness of the Argentinian people throughout the country, there was significant difficulty and confusion receiving clear information about the hours of the site. For example, our itinerary had us traveling to the site on November 19, 2023. The website for Cueva de las Manos states that they are open most days of the year except holidays. While November 20th is an Argentinian holiday (National Sovereignty Day, commemorating the Battle of Vuelta de Obligado in 1845), it only dawned on us the day before that November 19th might also be a holiday as it was the national election. I emailed three separate sources (including the email contact listed on the Cueva de las Manos site and the Direccion de Turismo (National Tourism Directorate) of Perito Moreno requesting clarification; I did not receive any replies. It was only after our generous hostel host, Mario, contacted someone he knew who worked at the site, that we received word that they would indeed be open on November 19th, but with modified hours (he was further instrumental in our subsequent travels by providing a gasoline can – while there are gasoline stations in Argentina, the more remote regions tend to run out gasoline on a frequent basis, which would have left us stranded with no phone reception – he was truly a lifesaver).



Fig 3.15 Local depictions of Cueva de las Manos

(Left) Decorations on the ferry from Chile to Argentina, (Right) Our hostel host, Mario, showing us one of his rooms that he and his wife had painted with pictures similar to Cueva de las Manos (personal photographs taken by the author in November 2023)

In addition to the difficulty acquiring information about opening hours, there were also technical difficulties in physically reaching the site. We had rented a fairly sturdy sports utility vehicle, but the roads leading to the site were unpaved and surprisingly steep. During one particular hill, the car stalled, with us three passengers needing to exit the car and walk that portion instead, leaving the driver and our luggage to drive on less encumbered.

Upon arrival, we were greeted in a cabin lodging-like structure, which housed a waiting area with two long tables and an adjacent small museum dedicated to the caves. Arranged in a square, each wall was dedicated to exhibits describing the flora and fauna

of the canyon, the different types of pigments used in the paintings and the prehistoric artists who created the artworks. We made two friends in the lobby of this cabin, a young Swiss couple, who were traveling South America by van.

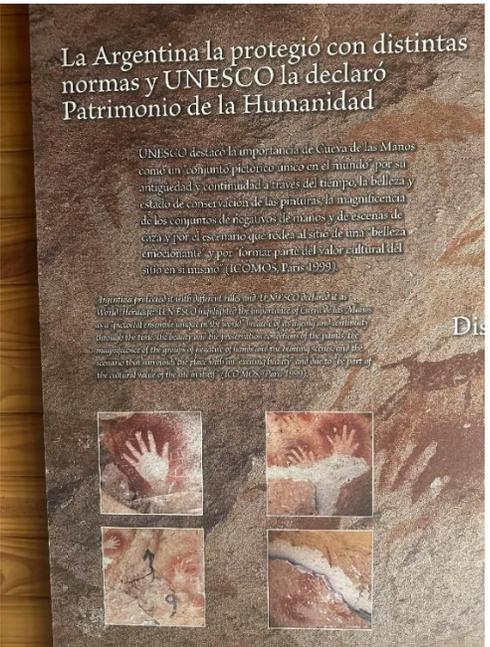


Fig 3.16 Guest cabin and museum of Cuevas de las Manos

Top (left) A view of the guest cabin upon entering, Top (right): Two views of the square-shaped museum directly next to the benches, Bottom (left and right): Additional view of

one of the museum panels and a close-up (personal photographs taken by author on November 19, 2023)

After waiting an hour for the noon tour (the tours begin on the hour), a group of twenty or so individuals were instructed to put on white helmets and follow the tour guide. The tour was conducted in both English and Spanish, and the tour group was a mixture of local Argentinians (Mario had accurately predicted this – recommending that we catch an early tour as he thought election day would gather large groups of people) and tourists like us.

In addition to local visitors making use of a holiday to regularly visit the site, Cuevas de las Manos remains a culturally significant site for the local Argentinian people. In one of the nearest villages to the site, Perito Moreno, a Cueva de las Manos festival is held every summer. In addition, the citizens of the town celebrate a local holiday known as “Provincial Day of Rock Art,” to honor Cueva de las Manos and other Argentinian prehistoric rock art sites.

Cueva de las Manos is a UNESCO heritage site and is very well-maintained. In the buildings leading up to the tour and the tour itself, there were no noticeable signs of damage or disrepair (see Fig 3.17). During the one-and-a-half-hour tour, we were led along large and well-constructed walkways connected by stairs (see Fig 3.18). In addition to UNESCO resources, it became evident that local researchers, including the La Asociacion Identidad Pro Museo Regional Cueva de las Manos (Identity Association Pro Regional Museum Painted Hands Caves) and the Instituto Nacional de Antropologia y Pensamiento Latinoamericano (The National Institute of Anthropology and Latin

American Thought, INAPL) were actively involved in educating and preserving the site (see Fig 3.19).



Fig 3.17 Buildings of Cuevas de las Manos site

While we were not allowed into these particular buildings, they appeared very well-maintained (personal photograph taken by author on November 19, 2023)



Fig 3.18 Cueva de las Manos walkway

Each panel was linked together with a series of walkways with clearly delineated stairs and well-maintained railings (Personal photograph taken by author on November 19, 2023).



Fig 3.19 Local research organizations

Posters of local archaeological organizations dedicated to researching the site (Personal photograph taken by author on November 19, 2023)

As I had learned my lesson at Columbia Hills State Park about requesting permission to use personal photographs in my thesis, I posed the same question to our tour guide, who indicated that there was no problem. After reaching out to the Direccion de Turismo (National Tourism Directorate) of Perito Moreno, they directed me to the Cueva de las Manos site director. I reached out to this individual through Whatsapp, who verbally assured me that it was fine for me to use my personal photographs as part of this thesis.

Concluding Remarks

In this chapter, I have again applied five intersectional approaches to understanding parietal art: descriptive, semiotic, contextual, phenomenological and heritage management related. In comparison with the first site at Columbia Hills State Park, research about Cueva de los Manos has much more published literature available, making it easier to gather information pertinent to several of these approaches.

Cueva de las Manos was my second experience seeing parietal artwork in person. I was struck by several key differences and similarities between Columbia Hills State Park and this site, which I will be exploring in the next chapter.

Chapter 4:

Conclusion

In this thesis I employ five very different, but important lenses for understanding prehistoric parietal art. By considering them simultaneously, I present a framework that can be readily applied prospectively to recently discovered works of prehistoric rock or cave art, or alternatively, can be applied retrospectively to previously known sites. The framework is meant to capture, in a snapshot, several different yet intertwined ways we think about prehistoric art and art in general.

Comparing and Contrasting Columbia Hills State Park and Cueva de las Manos

Descriptive

There were notable differences and similarities between the two sites I visited. From a descriptive point of view, while both the artwork of Columbia Hills State Park and Cueva de las Manos contained pictographs, Columbia Hill State Park also displayed petroglyphs. The artwork of Columbia Hills State Park appeared to be largely contained in a well-circumscribed manner on only particular rocks cloistered in certain areas; the artwork of Cueva de las Manos was spread out over 600 meters (approximately 200 feet), with various non-painted (or unpaintable) gaps in between.

Semiotic

Considering a semiotic approach, it became evident that the pictographs of Columbia Hill State Park contained icons and symbols that reflect both ritual and natural phenomena. Tsagaglatal, in particular, is an icon resembling a death mask pertinent to the epidemics of disease that swept Native American populations at the time.

The guanacos and hands of Cueva de las Manos are also icons, but differently from Columbia Hill State Park, here the emphasis is on depictions of animals and aspects of personhood that reflect a concern for the living environment. Additionally, abstract art at Cueva de las Manos can be categorized as symbols, including zig-zag lines, and dots, and the cultural conventions of how they may have related to certain meanings can only be speculated upon.

Contextual

The most notable difference in the contexts that gave rise to both artwork sites are location and time. While both situated in the Americas, Columbia Hills State Park is located in Northern America and Cueva de las Manos is in South America. In addition, Columbia Hills State Park is a much newer site than Cueva de las Manos, with some estimating that the latter is as old as 10,000 years before present.

What was particularly striking was the location and intended purpose of both sites – while the artwork of Columbia Hills State Park was meant for sacred purposes and for a designated few (including those on a vision quest), in contrast, the artwork at Cueva de las Manos appears to have been more tied to the daily lives of residents. This is evidenced by the layers of hands (including those alleged to have disabilities) and the continuous use of the site over many generations.

Phenomenological

In addition to the differences in contexts, the phenomenological experience that both sites brought out in me were markedly different. The petroglyphs and pictographs of Columbia Hills State Park made me filled with a certain sense of sadness, partially because of the state of decay, and partially because they were created with such care by people who lived centuries ago and whose meaning we may never fully understand. In particular regard to Tsagaglallal, I wondered about the societal forces that found it acceptable to entomb a mythical female being into rock, perhaps to silence her – as a woman who is currently functioning in a leadership role in my own job, I felt a sense of warning and foreboding for women who dared to stand in power.

In contrast, at Cuevas de los Manos, I felt a sense of curiosity and wonder partially because we were allowed so close to the pictures. The art was so clearly preserved and protected (unlike Columbia Hills State Park) that often no explanation was necessary. The tour guides were local Argentinians and displayed an obvious amount of pride – I wondered why some of these same emotions were not embodied to the same extent by the people who claim cultural heritage to Columbia Hills State Park. Due to the surrounding basin and enormity of the landscape, I was struck by the thought that humanity was simultaneously insignificant and yet resourceful enough to survive (and thrive) in such an environment.

Heritage Management

There were significant similarities and differences between how both sites were presented to the public. While only accessible to non-Native Americans through a guided tour, the petroglyphs and pictographs of Columbia Hills State Park did not show

any other evidence of ongoing research or conservation. As these sites are sacred to Native American beliefs, the idea that erosion will change the rocks through natural processes may be one reason why conservation is not a priority. Some descendant communities believe that the rocks should not be disturbed, regardless of what damage may occur through the ravages of time. As such, several of the rocks with pictographs were heavily damaged, chipping off and cracked in several places. While protected by the Washington State Department of Parks, Columbia Hills River Park does not appear to be funded by any other sources. The guided tour for the pictographs and Tsagaglalal is only open to the public six months of the year (from April to October only).

In contrast, Cueva de las Manos is a UNESCO site. As previously described, it is open most days of the year. The resources available were readily visible in the well-maintained layout of the site, with a museum within the visitor building, and on the actual tour fences, stairs and protective equipment given to the visitors (hard hats, to protect in the case of a sudden rock fall). We were even given an unofficial passport stamp to commemorate our visit to a UNESCO site (Fig 4.1). While the number of visitors per tour were the same for each site (approximately around 20), Cueva de las Manos apparently drew a multitude of international visitors whereas Columbia Hills State Park largely drew only people who were already residing in Washington state.



Fig 4.1 Cueva de las Manos passport stamp

Our group received this passport stamp at Cueva de las Manos (personal photograph taken by author on November 19, 2023)

In addition, there was evidence of ongoing archaeological research at Cueva de las Manos. The visitor cabin displayed posters of local archaeological groups devoted to the site and their recent discoveries. The tour guide took pains to point out a particular rock shelter next to a large slab painted with guanacos, explaining that a large amount of bone shards had been discovered by one of the groups in that location, and that they were undergoing scientific analysis. In contrast, the Columbia Hills River Park ranger explained that archaeological sampling of any of the petroglyphs or pictographs had been strictly forbidden by the affiliated Native American tribes.

Final Concluding Remarks

During the course of this thesis, the findings of previous prehistoric parietal rock art researchers became increasingly evident to me: that with the nearly infinite reaches of space, time and culture, it is impossible to find one general, global explanation of why this type of art exists. While theories similar to universal emotion may be of benefit to prehistoric rock art research in the future, it is not necessarily applicable to the current breadth of evidence for prehistoric rock art.

Similarly, in the course of my own research, the question had gradually changed from “What is the emotion that the prehistoric artists meant to convey?” to “What is the emotion being perceived by the observer?” In this case, we cannot align with prehistoric observers, but instead, we have ample opportunity to connect with the phenomenological experiences of current day observers. While these observations are inevitably a heterogeneous collection of thoughts due to the extensive spectrum of internal subjective experience, I believe there are still valuable insights to be gained from this data.

There are two spheres of emotional expression that would benefit from further research: further investigation into what, if any, evidence remains for the emotional underpinnings of prehistoric artists and, perhaps more accessibly, the subjective emotional experience of current day viewers. This is particularly meaningful because various prehistoric rock art sites around the world (like the art in Scandinavia) increasingly show evidence that the art was interactive, and not merely displayed – therefore, necessitating some sort of physical and emotional experience. While the respective fields of Anthropology and Archaeology have progressed rapidly, I believe

there is yet more to be discovered, especially when it comes to the intangible aspects of human experience.

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