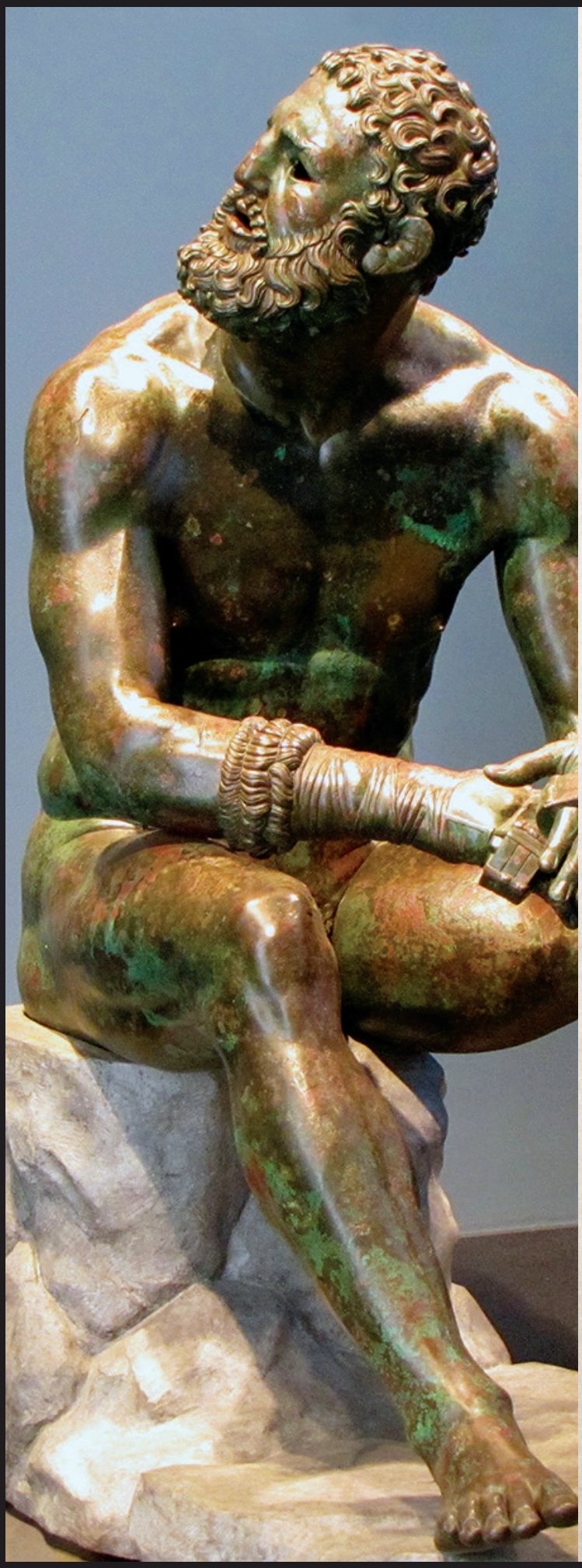


THE 250

smarthistory

GUIDE TO

THE ART OF AP® ART HISTORY

VOLUME 1 · 1-47

GLOBAL PREHISTORY

ANCIENT MEDITERRANEAN

Smarthistory guide to AP® Art History (volume one: 1-47)

Smarthistory guide to AP® Art History (volume one: 1-47)

DR. WILLIAM ALLEN, DR. JEFFREY BECKER, DR. DAVID BOFFA, THE BRITISH MUSEUM, DR. AMY CALVERT, DR. ESPERANÇA CAMARA, DR. ELIZABETH CUMMINS, FRANK DABELL, DR. KATHLEEN DOYLE, DR. LANE EAGLES, DR. ALLEN FARBER, DR. JULIA FISCHER, DR. SALLY HICKSON, DR. ELISA FOSTER, DR. SENTA GERMAN, NATHALIE HAGER, DR. BETH HARRIS, DR. JANE HORAN, DR. LAUREN KILROY-EWBANK, DR. REX KOONTZ, ABAGAIL LAPIN, MARY BETH LOONEY, DR. ELIZABETH MACAULAY-LEWIS, REBECCA MIR, DR. SHADIEH MIRMOBINY, DR. BONNIE NOBLE, DR. PAUL RANOGAJEC, RACHEL ROPEIK, DR. NANCY ROSS, DR. WENDY SCHALLER, DR. KRISTINE TANTON, DR. LAUREL TAYLOR, LOUISA WOODVILLE, CHRISTINE ZAPELLA, AND DR. STEVEN ZUCKER

Smarthistory guide to AP® Art History (volume one: 1-47) by Smarthistory is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License, except where otherwise noted.

AP® Art History is a trademark registered by the College Board, which is not affiliated with, and does not endorse, this publication.

At Smarthistory® we believe art has the power to transform lives and to build understanding across cultures. We believe that the brilliant histories of art belong to everyone, no matter their background. Smarthistory's free, award-winning digital content unlocks the expertise of hundreds of leading scholars, making the history of art accessible and engaging to more people, in more places, than any other provider.

This book is not for sale, it is distributed by Smarthistory for free.

smarthistory books
DISTRIBUTING KNOWLEDGE FOR FREE

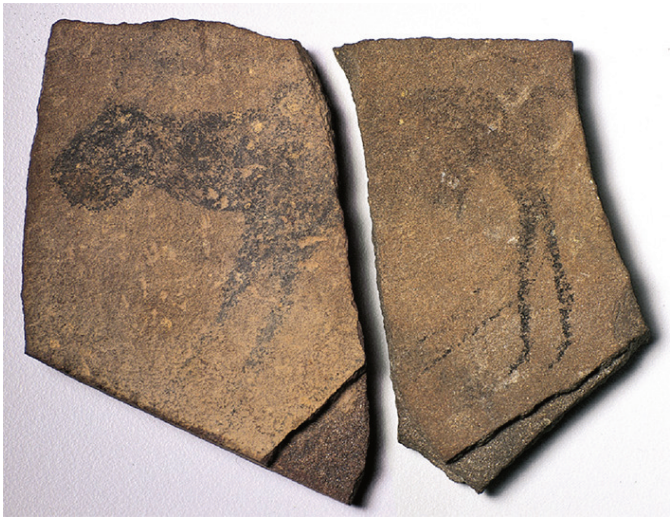
Global Prehistory

1. Apollo 11 Cave Stones

Nathalie Hager

A significant discovery

Approximately 25,000 years ago, in a rock shelter in the Huns Mountains of Namibia on the southwest coast of Africa (today part of the Ai-Ais Richtersveld Transfrontier Park), an animal was drawn in charcoal on a hand-sized slab of stone. The stone was left behind, over time becoming buried on the floor of the cave by layers of sediment and debris until 1969 when a team led by German archaeologist W.E. Wendt excavated the rock shelter and found the first fragment (below, left). Wendt named the cave "Apollo 11" upon hearing on his shortwave radio of NASA's successful space mission to the moon. It was more than three years later however, after a subsequent excavation, when Wendt discovered the matching fragment (below, right), that archaeologists and art historians began to understand the significance of the find.



Apollo 11 Cave Stones, Namibia, quartzite, c. 25,500–25,300 B.C.E. (State Museum of Namibia, Windhoek)



Location of the Huns Mountains of Namibia, ©Google

Indirect dating techniques

In total seven stone fragments of brown-grey quartzite, some of them depicting traces of animal figures drawn in charcoal, ocher, and white, were found buried in a concentrated area of the cave floor less than two meters square. While it is not possible to learn the actual date of the fragments, it is possible to estimate when the rocks were buried by radiocarbon dating the archaeological layer in which they were found. Archaeologists estimate that the cave stones were buried between 25,500 and 25,300 years ago during the Middle Stone Age period (a period of African prehistory generally considered to have begun around 280,000 years ago and ended around 50–25,000 years ago) in southern Africa making them, at the time of their discovery, the oldest dated art known on the African continent and among the earliest evidence of human artistic expression worldwide.

While more recent discoveries of much older human artistic endeavors have corrected our understanding (consider the 2008 discovery of a 100,000-year-old paint workshop in the Blombos Cave on the southern coast of Africa), the stones remain the oldest examples of figurative art from the African continent. Their discovery contributes to our conception of early humanity's creative attempts, before the invention of formal writing, to express their thoughts about the world around them.

The origins of art?

Genetic and fossil evidence tells us that Homo sapiens (anatomically modern humans who evolved from an earlier species of hominids) developed on the continent of Africa more than 100,000 years ago and spread throughout the world. But what we do not know—what we have only been able to assume—is that art too began in Africa. Is Africa, where humanity originated, home to the world's oldest art? If so, can we say that art began in Africa?



View across Fish River Canyon toward the Huns Mountains, /Ai-/Ais – Richtersveld Transfrontier Park, southern Namibia (photo: Thomas Schooch, CC-BY-SA-3.0) <https://commons. wikimedia.org/wiki/File:Fish_River_Canyon_Namibia.jpg>

The Apollo 11 rock shelter overlooks a dry gorge, sitting twenty meters above what was once a river that ran along the valley floor. The cave entrance is wide, about twenty-eight meters across, and the cave itself is deep: eleven meters from front to back. While today a person can stand upright only in the front section of the cave, during the Middle Stone Age, as well as in the periods before and after, the rock shelter was an active site of ongoing human settlement.

Inside the cave, above and below the layer where the Apollo 11 cave stones were found, archaeologists unearthed a sequence of cultural layers representing over 100,000 years of human occupation. In these layers stone artifacts, typical of the Middle Stone Age period—such as blades, pointed flakes, and scraper—were found in raw materials not native to the region, signaling stone tool technology transported over long distances. Among the remnants of hearths, ostrich eggshell fragments bearing traces of red color were also found—either remnants of ornamental painting or evidence that the eggshells were used as containers for pigment.

On the cave walls, belonging to the Later Stone Age period, rock paintings were discovered depicting white and red zigzags, two handprints, three geometric images, and traces of color. And on the banks of the riverbed just upstream from the cave, engravings of a variety of animals, some with zigzag lines leading upwards, were found and dated to less than 2000 years ago.

But the most well-known of the rock shelter's finds, and the most enigmatic, remain the Apollo 11 cave stones (image above). On the cleavage face of what was once a complete slab, an unidentified animal form was drawn resembling a feline in appearance but with human hind legs that were probably added later. Barely visible on the head of the animal are two slightly-curved horns likely belonging to an Oryx, a large grazing antelope; on the animal's underbelly, possibly the sexual organ of a bovid (the Bovidae are the biological family of mammals that includes bison, African buffalo, water buffalo, antelopes, gazelles, sheep, goats, muskoxen, and domestic cattle).

Perhaps we have some kind of supernatural creature—a therianthrope, part human and part animal? If so, this may suggest a complex system of shamanistic belief. Taken together with the later rock paintings and the engravings, Apollo 11 becomes more than just a cave offering shelter from the elements. It becomes a site of ritual significance used by many over thousands of years.

Global origins of art

In the Middle Stone Age period in southern Africa prehistoric man was a hunter-gatherer, moving from place to place in search of food and shelter. But this modern human also drew an animal form with charcoal—a form as much imagined as it was observed. This is what makes the Apollo 11 cave stones find so interesting: the stones offer evidence that Homo sapiens in the Middle Stone Age—us, some 25,000 years ago—were not only anatomically modern, but behaviorally modern as well. That is to say, these early humans possessed the new and unique capacity for modern symbolic thought, "the human capacity," long before what was previously understood.

The cave stones are what archaeologists term *art mobilier* —small-scale prehistoric art that is moveable. But mobile art, and rock art generally, is not unique to Africa. Rock art is a global phenomenon that can be found across the World—in Europe, Asia, Australia, and North and South America. While we cannot know for certain what these early humans intended by the things that they made, by focusing on art as the product of humanity's creativity and imagination we can begin to explore where, and hypothesize why, art began.

2. Hall of Bulls, Lascaux

Mary Beth Looney

We are as likely to communicate using easily interpretable pictures as we are text. Portable handheld devices enable us to tell others via social media what we are doing and thinking. Approximately 15,000 years ago, we also communicated in pictures—but with no written language.



Map showing select prehistoric sites

The cave of Lascaux, France is one of almost 350 similar sites that are known to exist—most are isolated to a region of southern France and northern Spain. Both Neanderthals (named after the site in which their bones were first discovered—the Neander Valley in Germany) and Modern Humans (early Homo Sapiens Sapiens) coexisted in this region 30,000 years ago. Life was short and very difficult; resources were scarce and the climate was very cold.

Location, location, location!

Approximately 15,000 years later in the valley of Vèzére, in southwestern France, modern humans lived and witnessed the migratory patterns of a vast range of wildlife. They discovered a cave in a tall hill overlooking the valley. Inside, an unknown number of these people drew and painted images that, once discovered in 1940, have excited the imaginations of both researchers and the general public.

After struggling through small openings and narrow passages to access the larger rooms beyond, prehistoric people discovered that the cave wall surfaces functioned as the perfect, blank "canvas" upon which to draw and paint. White calcite, roofed by nonporous rock, provides a uniquely dry place to feature art. To paint, these early artists used charcoal and ochre (a kind of pigmented, earthen material, that is soft and can be mixed with liquids, and comes in a range of colors like brown, red, yellow, and white). We find images of horses, deer, bison, elk, a few lions, a rhinoceros, and a bear—almost as an encyclopedia of the area's large prehistoric wildlife. Among these images are abstract marks—dots and lines in a variety of configurations. In one image, a humanoid figure plays a mysterious role.

How did they do it?

The animals are rendered in what has come to be called "twisted perspective," in which their bodies are depicted in profile while we see the horns from a more frontal viewpoint. The images are sometimes entirely linear—line drawn to define the animal's contour. In many other cases, the animals are described in solid and blended colors blown by mouth onto the wall. In other portions of the Lascaux cave, artists carved lines into the soft calcite surface. Some of these are infilled with color—others are not.

The cave spaces range widely in size and ease of access. The famous Hall of Bulls (below) is large enough to hold some fifty people. Other "rooms" and "halls" are extraordinarily narrow and tall.

Archaeologists have found hundreds of stone tools. They have also identified holes in some walls that may have supported tree-limb scaffolding that would have elevated an artist high enough to reach the upper surfaces. Fossilized pollen has been found; these grains were inadvertently brought into the cave by early visitors and are helping scientists understand the world outside.



Left wall of the Hall of Bulls, Lascaux II (replica of the original cave), original cave: c. 16,000-14,000 B.C.E., 11 feet 6 inches long (photo: Adibu456, <https://www.flickr.com/photos/50193753@N02/5961891157> CC BY-NC 2.0)

Hall of Bulls

Given the large scale of many of the animal images, we can presume that the artists worked deliberately—carefully plotting out a particular form before completing outlines and adding color. Some researchers believe that "master" artists enlisted the help of assistants who mixed pigments and held animal fat lamps to illuminate the space. Alternatively, in the case of the "rooms" containing mostly engraved and overlapping forms, it seems that the pure process of drawing and repetitive re-drawing held serious (perhaps ritual) significance for the makers.

Why did they do it?

Many scholars have speculated about why prehistoric people painted and engraved the walls at Lascaux and other caves like it. Perhaps the most famous theory was put forth by a priest named Henri Breuil. Breuil spent considerable time in many of the caves, meticulously recording the images in drawings when the paintings were too challenging to photograph. Relying primarily on a field of study known as ethnography, Breuil believed that the images played a role in "hunting magic." The theory suggests that the prehistoric people who used the cave may have believed that a way to overpower their prey involved creating images of it during rituals designed to ensure a successful hunt. This seems plausible when we remember that survival was entirely dependent on successful foraging and hunting, though it is also important to remember how little we actually know about these people.

Another theory suggests that the images communicate narratives (stories). While a number of the depictions can be seen to do this, one particular image in Lascaux more directly supports this theory. A bison, drawn in strong, black lines, bristles with energy, as the fur on the back of its neck stands up and the head is radically turned to face us (below).

A form drawn under the bison's abdomen is interpreted as internal organs, spilling out from a wound. A more crudely drawn form positioned below and to the left of the bison may represent a humanoid figure with the head of a bird. Nearby, a thin line is topped with another bird and there is also an arrow with barbs. Further below and to the far left the partial outline of a rhinoceros can be identified.



Disemboweled bison and bird-headed human figure? Cave at Lascaux, c. 16,000-14,000 B.C.E. (photo: Peter80 <https://commons.wikimedia.org/wiki/File:Lascaux_01.jpg>, CC BY-SA 3.0)

Interpreters of this image tend to agree that some sort of interaction has taken place among these animals and the bird-headed human figure—in which the bison has sustained injury either from a weapon or from the horn of the rhinoceros. Why the person in the image has the rudimentary head of a bird, and why a bird form sits atop a stick very close to him is a mystery. Some suggest that the person is a shaman—a kind of priest or healer with powers involving the ability to communicate with spirits of other worlds. Regardless, this riveting image appears to depict action and reaction, although many aspects of it are difficult to piece together.

The Caves of Lascaux are the most famous of all of the known caves in the region. In fact, their popularity has permanently endangered them. From 1940 to 1963, the numbers of visitors and their impact on the delicately balanced environment of the cave—which supported the preservation of the cave images for so long—necessitated the cave's closure to the public. A replica called Lascaux II was created about 200 yards away from the site. The original Lascaux cave is now a designated UNESCO World Heritage Site. Lascaux will require constant vigilance and upkeep to preserve it for future generations.

Many mysteries continue to surround Lascaux, but there is one certainty. The very human need to communicate in the form of pictures—for whatever purpose—has persisted since our earliest beginnings.

3. Camelid sacrum in the shape of a canine

Dr. Beth Harris

Prehistoric art around the globe

When we think about prehistoric art (art before the invention of writing), likely the first thing that comes to mind are the beautiful cave paintings in France and Spain with their naturalistic images of bulls, bison, deer and other animals. But it's important to note that prehistoric art has been found around the globe—in North and South America, Africa, Asia, and Australia—and that new sites and objects come to light regularly, and many sites are just starting to be explored. Most prehistoric works we have discovered so far date to around 40,000 B.C.E. and after.

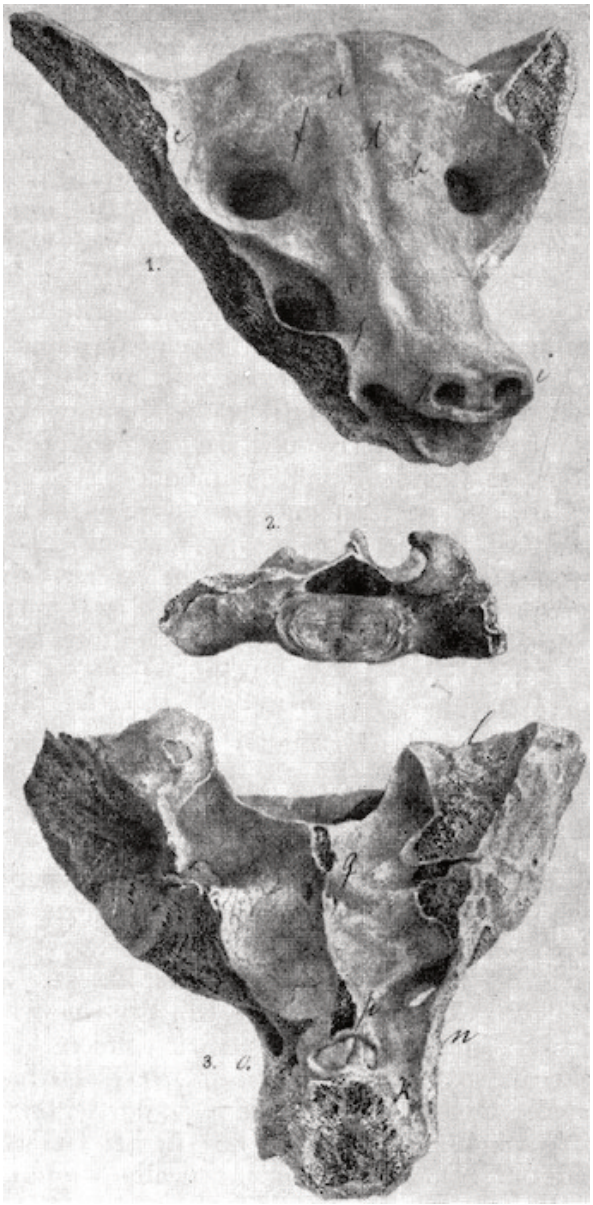
This fascinating and unique prehistoric sculpture of a dog-like animal was discovered accidentally in 1870 in Tequixquiac, Mexico—in the Valley of Mexico (where Mexico City is located). The carving likely dates to sometime between 14,000–7000 B.C.E. An engineer found it at a depth of 12 meters (about 40 feet) when he was working on a drainage project—the Valley of Mexico once held several lakes. The geography and climate of this area was considerably different in the prehistoric era than it is today.

What is a camelid? What is a sacrum?

The sculpture was made from the now fossilized remains of the sacrum of an extinct camelid. A camelid is a member of the Camelidae family—think camels, llamas, and alpacas. The sacrum is the large triangular bone at the base of the spine. Holes were cut into the end of the bone to represent nostrils, and the bone is also engraved (though this is difficult to see in photographs).

Issues

The date of the sculpture is difficult to determine because a stratigraphic analysis was not done at the find spot at the time of discovery. This would have involved a study of the different layers of soil and rock before the object was removed. Another problem is that the object was essentially lost to scholars between 1895 and 1956 (it was in private hands).



Lithograph of the sacrum as illustrated by Mariano Bárcena, published in Anales del Musei Nacional, vol. 2 (1882)

In 1882 the sculpture was in the possession of Mariano de la Bárcena, a Mexican geologist and botanist, who wrote the first scholarly article on it. He described the object in this way:

"…the fossil bone contains cuts or carvings that unquestionably were made by the hand of man…the cuts seem to have been made with a sharp instrument and some polish on the edges of the cuts may still be seen…the articular extremity of the last vertebra was utilized perfectly to represent the nose and mouth of the animal." [As quoted in Luis Aveleyra Arroyo de Anda, "The Pleistocene Carved Bone from Tequixquiac, Mexico: A Reappraisal," *American Antiquity*, vol. 30, (January 1965), p. 264.]

Bárcena was convinced of the authenticity of the object, but over the years—due to the lack of scientific evidence from the findspot—other scholars have questioned its age, and whether the object was even made by human hands. One author, in 1923, summarized the issues:

> To allow us to state that the sacrum found at Tequixquiac was a definite proof of ancient man in the area the following things must be proven: (1) That the bone was actually a fossil belonging to an extinct species. We cannot doubt this since it has been affirmed by competent geologists and paleontologists. (2) That it was found in a fossiliferous deposit and that it had never been moved since it found its place there. This has not been proved in any convincing manner. (3) That the cuttings of the bone can actually be attributed to the hand of man and that it can never have occurred without human intervention. This has not been proved either. (4) That the carving was made while the species still existed and not in later times when the bone had already become fossilized. [As quoted in Luis Aveleyra Arroyo de Anda, "The Pleistocene Carved Bone from Tequixquiac, Mexico: A Reappraisal," *American Antiquity*, vol. 30 (January 1965).]

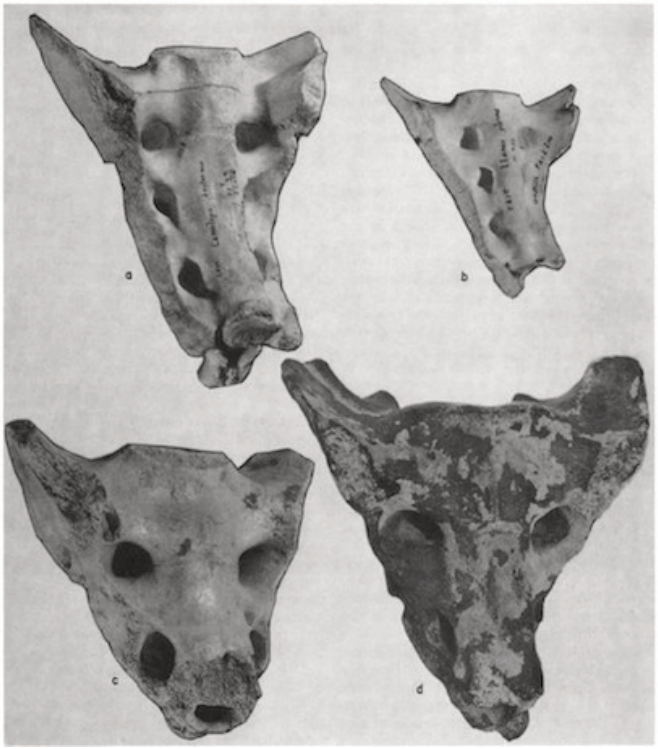
Today, scholars agree that the carving and markings were made by human hands—the two circular spaces that represent the nasal cavities were carefully carved and are perfectly symmetrical and were likely shaped by a sharp instrument. However, the lack of information from the findspot makes precise dating very difficult. It is quite common, in prehistoric art, for the shape of a natural form (like a sacrum) to suggest a subject (dog or pig head) to the carver, and so we should not be surprised that the sculpture still strongly resembles a sacrum.

Interpretation

Because the carving was made in a period before writing had developed, it is likely impossible to know what the sculpture meant to the carver and to his/her culture. One possible way to interpret the object is to look at it through the lens of later Mesoamerican cultures. One anthropologist has pointed out that in Mesoamerica, the sacrum is seen as sacred and that some Mesoamerican Indian languages named this bone with words referring to sacredness and the divine. In English, "sacrum" is derived from Latin: os sacrum, meaning "sacred bone." The sacrum is also—perhaps significantly for its meaning—located near the reproductive organs.

"Language and iconographic evidence strongly suggest that the sacrum bone was an important bone indeed in Mesoamerica, relating to sacredness, to resurrection, and to fire. The importance attached to this bone and its immediate neighbors is not limited to Mesoamerica. From ancient Egypt to ancient India and elsewhere, there is abundant evidence that the bones at the base of the spine, including especially the sacrum, were seen as sacred." [footnote]Brian Stross, "The Mesoamerican Sacrum Bone: Doorway to the otherworld," FAMSI Journal of the Ancient Americas (2007) pp. 1-54.

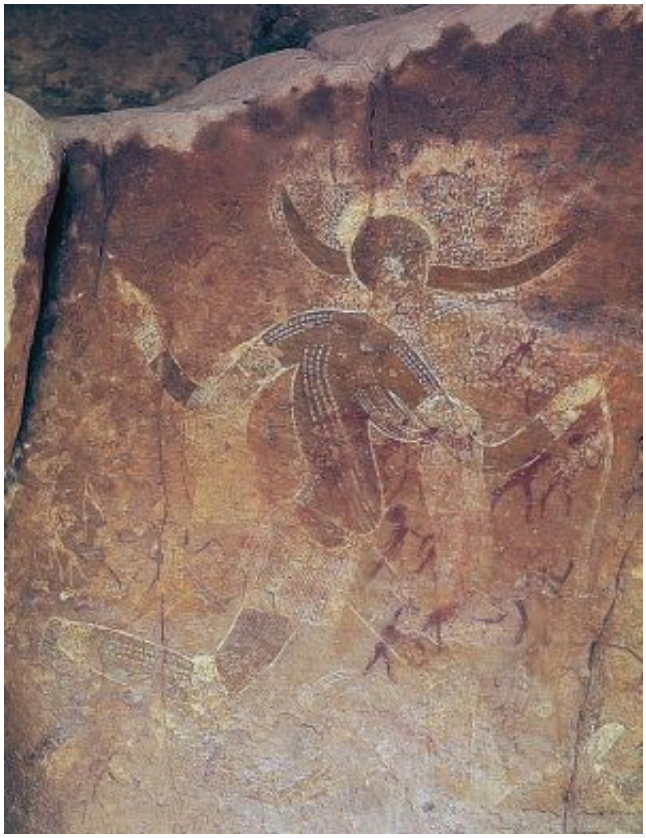
As appealing as this interpretation is (and the argument the author makes is quite convincing), it is wise to be wary of connecting cultures across such vast geographic distances (though of course there are some aspects of our shared humanity that may be common across cultures). At this point in time, we have no direct evidence to support this interpretation, and so we can not be certain of this object's original meaning for either the artist, or the people that produced it.



Sacra from various forms of camel, illustration from: Luis Aveleyra Arroyo de Anda, "The Pleistocene Carved Bone from Tequixquiac, Mexico: A Reappraisal," American Antiquity, vol. 30, (January 1965), p. 269.

4. Running Horned Woman (Tassili n'Ajjer, Algeria)

Nathalie Hager



Running Horned Woman, 6,000-4,000 B.C.E., pigment on rock (Tassili n'Ajjer, Algeria)

"Discovery"

Between 1933 and 1940, camel corps officer Lieutenant Brenans of the French Foreign Legion completed a series of small sketches and hand written notes detailing his discovery of dozens of rock art sites deep within the canyons of the Tassili n'Ajjer. Tassili n'Ajjer is difficult to access plateau in the Algerian section of the Sahara Desert near the borders of Libya and Niger in northern Africa (see map below). Brenans donated hundreds of his sketches to the Bardo Museum in Algiers, alerting the scientific community to one of the richest rock art concentrations on Earth and prompting site visits that included fellow Frenchman and archaeologist Henri Lhote.

Lhote recognized the importance of the region and returned again and again, most notably in 1956 with a team of copyists for a 16--month expedition to map and study the rock art of the Tassili. Two years later Lhote published *A la découverte des fresques du Tassili*. The book became an instant best-seller, and today is one of the most popular texts on archaeological discovery.



Sand and rocks (Tassili n'Ajjer, Algeria) (photo: Akli Salah, CC BY-SA 4.0) <https://commons.wikimedia.org/wiki/File:Tadrert_,_tassili_n%27ajjer_,_alg%C3%A9rie.jpg>

Lhote made African rock art famous by bringing some of the estimated 15,000 human figure and animal paintings and engravings found on the rock walls of the Tassili's many gorges and shelters to the wider public. Yet contrary to the impression left by the title of his book, neither Lhote nor his team could lay claim to having discovered Central Saharan rock art: long before Lhote, and even before Brenans, in the late nineteenth century a number of travelers from Germany, Switzerland, and France had noted the existence of "strange" and "important" rock sculptures in Ghat, Tadrart Acacus, and Upper Tassili. But it was the Tuareg—the indigenous peoples of the region, many of whom served as guides to these early European explorers—who long knew of the paintings and engravings covering the rock faces of the Tassili.



Tassili n'Ajjer is a Tamahaq name meaning "plateau" of the Ajjer people (the Kel Ajjer is group of tribes whose traditional territory was here). Much of the 1,500-2,100 meter high plateau is protected by an 80,000 square kilometer National Park, map © Google

The "Horned Goddess"

Lhote published not only reproductions of the paintings and engravings he found on the rock walls of the Tassili, but also his observations. In one excerpt he reported that with a can of water and a sponge in hand he set out to investigate a "curious figure" spotted by a member of his team in an isolated rock shelter located within a compact group of mountains known as the Aouanrhet massif, the highest of all the "rock cities" on the Tassili. Lhote swabbed the wall with water to reveal a figure he called the "Horned Goddess":

> On the damp rock surface stood out the gracious silhouette of a woman running. One of her legs, slightly flexed, just touched the ground, while the other was raised in the air as high as it would normally go. From the knees, the belt and the widely outstretched arms fell fine fringes. From either side of the head and above two horns that spread out horizontally was an extensive dotted area resembling a cloud of grain falling from a wheat field. Although the whole assemblage was skillfully and carefully composed there was something free and easy about it…

The Running Horned Woman, the title by which the painting is commonly known today, was found in a massif so secluded and so difficult to access that Lhote's team concluded that the collection of shelters was likely a sanctuary and the female figure—"the most beautiful, the most finished and the most original"—a goddess:

Perhaps we have here the figure of a priestess of some agricultural religion or the picture of a goddess of such a cult who foreshadow—or is derived from—the goddess Isis, to whom, in Egypt, was attributed the discovery of agriculture.

Lhote's suggestion that the painting's source was Egyptian was influenced by a recently published hypothesis by his mentor, the French anthropologist Henri Breuil, the then undisputed authority on prehistoric rock art who was renowned for his work on Paleolithic cave art in Europe. In an essay titled, "The White Lady of Brandberg, South-West Africa, Her Companions and Her Guards," Breuil famously claimed that a painting discovered in a small rock shelter in Namibia showed influences of Classical antiquity and was not African in origin, but possibly the work of Phoenician travellers from the Mediterranean. Lhote, equally convinced of outside influence, linked the Tassili painting's provenance with Breuil's ideas and revised the title to the 'White Lady' of Aouanrhet:

In other paintings found a few days later in the same massif we were able to discern, from some characteristic features, an indication of Egyptian influence. Some features are, no doubt, not very marked in our 'White Lady'; still, all the same, some details as the curve of the breasts, led us to think that the picture may have been executed at a time when Egyptian traditions were beginning to be felt in the Tassili.

Foreign influence?

Time and scholarship would reveal that the assignment of Egyptian influence on the *Running Horned Woman* was erroneous, and Lhote the victim of a hoax: French members of his team made "copies" of Egyptionized figures, passing them off as faithful reproductions of authentic Tassili rock wall paintings. These fakes were accepted by Lhote (if indeed he knew nothing of the forgeries), and falsely sustained his belief in the possibility of foreign influence on Central Saharan rock art. Breuil's theories were likewise discredited: the myth of the "White Lady" was rejected by every archaeologist of repute, and his promotion of foreign influence viewed as racist.

Yet Breuil and Lhote were not alone in finding it hard to believe that ancient Africans discovered how to make art on their own, or to have developed artistic sensibilities. Until quite recently many Europeans maintained that art "spread" or was "taken" into Africa, and, aiming to prove this thesis, anointed many works with Classical sounding names and sought out similarities with early rock art in Europe. Although such vestiges of colonial thinking are today facing a reckoning, cases such as the "White Lady" (both of Namibia and of Tassili) remind us of the perils of imposing cultural values from the outside.



Tassili National Park (photo: magharebia, CC BY 2.0) <https://commons.wikimedia.org/wiki/File:Tassili_Desert_Algeria.jpg>

Chronology

While we have yet to learn how, and in what places, the practice of rock art began, no firm evidence has been found to show that African rock art—some ten million images across the continent—was anything other than a spontaneous initiative by early Africans. Scholars have estimated the earliest art to date to 12,000 or more years ago, yet despite the use of both direct and indirect dating techniques very few firm dates exist ("direct dating" uses measurable physical and chemical analysis, such as radiocarbon dating, while "indirect dating" primarily uses associations from the archaeological context). In the north, where rock art tends to be quite diverse, research has focused on providing detailed descriptions of the art and placing works in chronological sequence based on style and content. This ordering approach results in useful classification and dating systems, dividing the Tassili paintings and engravings into periods of concurrent and overlapping traditions (the *Running Horned Woman* is estimated to date to approximately 6,000 to 4,000 B.C.E.—placing it within the "Round Head Period"), but offers little in the way of interpretation of the painting itself.

Advancing an interpretation of the *Running Horned Woman*

Who was the *Running Horned Woman*? Was she indeed a goddess, and her rock shelter some sort of sanctuary? What does the image mean? And why did the artist make it? For so long the search for meaning in rock art was considered inappropriate and unachievable—only recently have scholars endeavored to move beyond the mere description of images and styles, and, using a variety of interdisciplinary methods, make serious attempts to interpret the rock art of the Central Sahara.

Lhote recounted that the *Running Horned Woman* was found on an isolated rock whose base was hollowed out into a number of small shelters that could not have been used as dwellings. This remote location, coupled with an image of marked pictorial quality—depicting a female with two horns on her head, dots on her body probably representing scarification, and wearing such attributes of the dance as armlets and garters—suggested to him that the site, and the subject of the painting, fell outside of the everyday. More recent scholarship has supported Lhote's belief in the painting's symbolic, rather than literal, representation. As Jitka Soukopova has noted, "Hunter-gatherers were unlikely to wear horns (or other accessories on the head) and to make paintings on their whole bodies in their ordinary life." [Jitka Soukopova, "The Earliest Rock Paintings of the Central Sahara: Approaching Interpretation," Time and Mind: The Journal of Archaeology, Consciousness and Culture 4, no. 2 (2011), p. 199.] Rather, this female horned figure, her body adorned and decorated, found in one of the highest massifs in the Tassili—a region is believed to hold special status due to its elevation and unique topology—suggests ritual, rite, or ceremony. Rather, this female horned figure, her body adorned and decorated, found in one of the highest massifs in the Tassili—a region is believed to hold special status due to its elevation and unique topology—suggests ritual, rite, or ceremony.



Running Horned Woman (detail) (photo: FJ Expeditions, CC BY 2.0) <http://www.fjexpeditions.com/expeditions/past/ tassili11/P4700.jpg>)

But there is further work to be done to advance an interpretation of the *Running Horned Woman*. Increasingly scholars have studied rock shelter sites as a whole, rather than isolating individual depictions, and the shelter's location relative to the overall landscape and nearby water courses, in order to learn the significance of various "rock cities" in both image making and image viewing.

Archaeological data from decorated pottery, which is a dated artistic tradition, is key in suggesting that the concept of art was firmly established in the Central Sahara at the time of Tassili rock art production. Comparative studies with other rock art complexes, specifically the search for similarities in fundamental concepts in African religious beliefs, might yield the most fruitful approaches to interpretation. In other words, just as southern African rock studies have benefitted from tracing the beliefs and practices of the San people, so too may a study of Tuareg ethnography shed light on the ancient rock art sites of the Tassili.

Afterword: the threatened rock art of the Central Sahara

Tassili's rock walls were commonly sponged with water in order to enhance the reproduction of its images, either in trace, sketch, or photograph. This washing of the rock face has had a devastating effect on the art, upsetting the physical, chemical, and biological balance of the images and their rock supports. Many of the region's subsequent visitors—tourists, collectors, photographers, and the next generation of researchers—all captivated by Lhote's "discovery"—have continued the practice of moistening the paintings in order to reveal them. Today scholars report paintings that are severely faded while some have simply disappeared. In addition, others have suffered from irreversible damage caused by outright vandalism: art looted or stolen as souvenirs. In order to protect this valuable center of African rock art heritage, Tassili N'Ajjer was declared a National Park in 1972. It was classified as a World Heritage Site by UNESCO in 1982 and a Biosphere Reserve in 1986.

5. Bushel with ibex motifs

A CONVERSATION

Dr. Beth Harris and Dr. Steven Zucker

This is the transcript of a conversation conducted in the Musée du Louvre, Paris.



Bushel with ibex motifs, together with other Vessels, 4200-3500 B.C.E., Susa I period, necropolis, acropolis mound, Susa, Iran, painted terra-cotta, 28.90 x 16.40 cm, excavations led by Jacques de Morgan, 1906-08 (Musée du Louvre) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/kEsCZ3>

Steven: We're in the Louvre in Paris, which holds one of the most important collections of clay vessels from Ancient Susa.

Beth: Ancient Susa is in modern-day Iran, going back about 6,000 years to 4000 B.C.E., and we're looking at a beautiful beaker decorated with animal forms and geometric patterns.

Steven: So, 6,000 years ago, this is right at the cusp of the Neolithic and the Historical Era, just before the great cities of Mesopotamia rise.

Beth: In fact, this area at certain moments in history becomes politically part of southern Mesopotamia, the cities of Uruk and Ur, but at this point, 4000 B.C.E, this is still Prehistoric. We are looking at people who lived in a very fertile river valley, who painted beautiful vessels and buried them in their cemeteries.

Steven: At about 4000 B.C.E., we believe that they built a raised mound and had a temple on top, and the whole area was continuously occupied for about 5,000 years, so we have this extraordinary accumulation, but when we dig all the way down, we get to this pot and pots like it.

Beth: And because this is Prehistoric—this is before writing—we have no records of why they bury their dead with the pots, what they believe, what their religion was, the gods or goddesses they were worshiping on that temple mount, but we do have extraordinarily beautiful pots.

Steven: It's handmade, it's clay, and it's painted. It's quite thin and it doesn't have the perfection you get from something that's made on a wheel, though some archaeologists have conjectured it was perhaps made on a slow wheel, although others think it was completely handmade. In any case, it was clearly hand-painted.

Beth: The circular forms, balanced by forms that are linear, balanced by geometric, hard-edged forms, like rectangles…



Bushel with ibex motifs, detail with Ibex, 4200–3500 B.C.E., Susa I period, necropolis, acropolis mound, Susa, Iran, painted terra-cotta, 28.90 x 16.40 cm, excavations led by Jacques de Morgan, 1906-08 (Musée du Louvre) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/kEqVWH>

Steven: And you mentioned animals: the most obvious is the mountain goat. The mountain goat occupies the large rectangle, and the body is actually made out of two arcs, to create this very geometric form.

Beth: But it's mostly his horns that take up the space—so this is not a naturalistic image of a mountain goat. His body is reduced to triangles. So, very stylized images of these natural forms.

Steven: Nevertheless, there is real detail here. We can make out the goat's beard, his ears. We can make out his nose, where his eyes would be. We can see the bush of his tail, and we see that kind of detail in the other animals that are represented here. Just above the rectangle that holds the goat, we see a band that wraps around the vessel, that has a kind of dog that's rather like a greyhound.



Bushel with ibex motifs, detail with dogs and birds, 4200–3500 B.C.E., Susa I period, necropolis, acropolis mound, Susa, Iran, painted terra-cotta, 28.90 x 16.40 cm, excavations led by Jacques de Morgan, 1906-08 (Musée du Louvre) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/kEsxaC>

Beth: Very thin and elongated, perhaps it's reclining, perhaps it's running, and then above that, we see wading birds with elongated necks.

Steven: The necks speak to the verticality of the vessel, and the roundness of the horns speak to the cylindrical shape of the vessel. It's wonderful the way these geometric elements reflect the shape of the object itself. There's this beautiful integration between the pictorial and the actual body of the pot.

Beth: Look at how the tails of the dogs spin back in the opposite direction of the horns of the mountain goat, of the ibex. But then we have these things we can't identify, this criss-cross pattern with these angular forms in the center almost looks like stitching on a baseball. We see that shape repeated on other vessels, so perhaps it has meaning…in fact, perhaps the animals themselves had meaning and were associated with different ideas, perhaps fertility, or water, because we know that those associations were made later on in ancient Mesopotamia.



Bushel with ibex motifs, behind two bowls, 4200–3500 B.C.E., Susa I period, necropolis, acropolis mound, Susa, Iran, painted terra-cotta, 28.90 x 16.40 cm, excavations led by Jacques de Morgan, 1906-08 (Musée du Louvre) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/kEqskH>

Steven: Right, but we don't know if those meanings are in play here in Susa.

Beth: The name "Susa" may be familiar, because later on it figures in the Prophecy of Daniel, and it also figures in the Book of Esther, sometimes called Shushan.

Steven: And in fact, the reason that these pots were found is because an archaeologist was looking for the tomb of Daniel and came upon this extraordinary cemetery.

Watch the video. <https://www.youtube.com/watch?v=eeNfDr4ojZg>

6. Anthropomorphic stele

Nathalie Hager



Anthropomorphic stele, El-Maakir-Qaryat al-kaafa near Ha'il, Saudi Arabia, 4th millennium B.C.E. (4000-3000 B.C.E.), sandstone, 92 x 21 cm (National Museum, Riyadh) (photo: Explicit, CC BY-SA 4.0) <https://commons.wikimedia.org/wiki/File:Anthropomorphic_stele_at_National_Museum_of_Korea_02.jpg>

An anthropomorphic stele from Ha'il

This stele is tall, measuring approximately three feet high. But it is not just vertical height that makes this free-standing stone sculpture appear human, or anthropomorphic.

While both sides are sculpted, emphasis is on the front, particularly the face, chest, and waist: a trapezoidal head rests directly on squared shoulders with the outline of a face framing two closely-spaced eyes and a flattened nose; on the robed figure's torso a necklace hangs with two cords diagonally crossing the body with an awl (a small pointed tool) attached; and at the waist, a double-bladed dagger hangs from a wide belt that continues around to the back. The sculpture is simple, even abstract, but clearly represents a human figure. [simple_tooltip content='A stele is a vertical stone monument or marker often inscribed with text or relief carving.']What is a stele?[/simple_tooltip]

Found in a small village near Ha'il in northwest Saudi Arabia, this anthropomorphic (human-like) stele was one of three discovered in the region. The trio join a corpus of more than sixty low-relief sculptures in human form dating to the fourth millennium B.C.E. and discovered across the Arabian Peninsula in the last four decades. Despite the vast territory in which they were found (some 2,300 kilometers, stretching from Jordan in the north to Yemen in the south) these stelae (the plural of stele or in Latin, stela) share certain features and characteristics. How can this be?

Arabia's prehistory

While today Saudi Arabia is known for its desert sands and oil reserves, in prehistoric times the environment and landscape were dramatically different—more fertile and lush, and readily accessible to humans: early stone petroglyphs (rock engravings in which an image has been cut into the rock) —depict people hunting ostriches, a flightless bird that hasn't been able to survive in the region for thousands of years.

It was during the Neolithic period, from the sixth to the fourth millennium B.C.E. when the Arabian Peninsula was more like a savannah than a desert, that small groups of hunter-gatherers gradually shifted their economy from predation to production by domesticating such herd animals as sheep, goats, and cattle, and settling in oases and mountainous regions linked to one another by caravan trails. Due to changing climactic conditions these settlement sites were often only temporary—occupied seasonally but repeatedly,

and probably for centuries—yet it was this constant need for movement that stimulated communication between regions and interaction among its societies. But more than just people moved along Arabia's caravan trails: ideas and objects travelled too.



Map of the Arabian Peninsula (https://commons.wikimedia.org/wiki/File:Saudi_Arabia_map.png)

Figural representation in pre-Islamic Arabia

On a rock wall at Tabuk, close to the Jordan-Saudi Arabia border, two human silhouettes dating to the late Neolithic period show the same cord, awl, and double-bladed dagger as the Ha'il stele. In Riqseh, in southern Jordan, a broken stele has been found with a similar awl and dagger. While in Southern Arabia stelae are considerably smaller than in the north (some reach only 40 centimeters high), examples from Rawk in Yemen display the same characteristic lack of detail as the Ha'il stele. This evidence of stylistic influence, coupled with the presence of exogenous materials (materials that originated elsewhere), confirm that during the Neolithic period objects were circulated and exchanged across wide swathes of territory.

What is just as interesting as this common visual repertoire is the shared anthropomorphism: each stele represents an upright male figure carved in stone—remarkable, for it is figural representation in a land thought for so long to have none. Indeed, for many, the history of the Arabian Peninsula began with the rise of Islam in the seventh century C.E. when artistic expression was focused on the written word and human form was largely absent. But what the Ha'il stele reveals—what the full corpus of anthropomorphic stelae show us—is the existence of a pre-Islamic Arabia in which the human figure dominates.

Arabia: an open peninsula at the crossroads of trade

Archaeology is a relatively new field of study on the Arabian Peninsula: surprisingly, it is only within the last forty years or so that scientists have been able to shed light on Saudi Arabia's early material culture to recognize a historical and cultural past largely ignored and previously believed to hold no importance at all.

Before Arabia traded in incense, before Islam (when Muslims traveled in pilgrimage to Mecca), during the Neolithic period early caravan trails expanded into an intra-regional network that eventually spread externally into contact between Eastern Arabia and Mesopotamia. It was this early contact that positioned the Peninsula, in the Bronze Age and through Antiquity, as the center of an active and interconnected Ancient World—a commercial and cultural crossroads bridging East and West—linking trade and pilgrimage routes that reached from India and China, to the Mediterranean and Egypt, Yemen and East Africa to Syria, Iran and Mesopotamia.

Interpreting the Ha'il stele

Despite apparent visual similarities it would be a serious error to assume that the meanings and symbols of each stele were everywhere the same—each region, village, and tribe is believed to differ in custom and to have developed strong local traditions. To avoid the risk of assigning generalized meanings to distinct anthropomorphic stelae excavated across the Arabian Peninsula, scholars have increasingly focused on local culture in their analysis of material history. In other words, they have looked beyond what appears to be a common style to conduct a fine-grained analysis of each stone's unique context of local social and ritual practices. With this in mind, how are we to interpret the Ha'il stele, one of the Arabian Peninsula's earliest known artifacts?

Archaeologists believe that the Ha'il stele was probably associated with religious or burial practices, and was likely used as a grave marker in an open-air sanctuary. While we do not know who produced the stele (just imagine a specialist stone carver working among mobile pastoral herders), we continue to be intrigued by the quality of the carving and its minimalist, yet expressive, representation of the human figure.

Postscript: the global phenomenon of the stele

While carved or inscribed stone stelae were used primarily as grave markers, they were also used for dedication, commemoration, and demarcation. Stele is the term used most often in the Mediterranean World, yet similar objects called by other names and dating to most periods have been found throughout the world including the Ancient Near East, Ancient Egypt, Greece and Rome, China, Islamic lands, and Pre-Columbian Mesoamerica and South America.

7. Jade Cong, Liangzhu culture

A CONVERSATION

Dr. Steven Zucker and Dr. Beth Harris

This is the transcript of a conversation conducted at the British Museum.



Jade Cong, c. 3300-2200 B.C.E., Liangzhu culture, Neolithic period, China (British Museum) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/fATZoS>

Steven: Where does history begin?

Beth: Well, history begins with writing. That's how we use the term "Prehistoric," before writing.

Steven: But of course we're not satisfied with only knowing literate cultures. We want to push back further and understand the cultures that are preliterate. But in order to invent writing, you have to have a society, you have to have some stability. We find that at the end of the Neolithic period.

Beth: The Neolithic period begins around 10,000 B.C.E., when we have human beings who can settle down because they've figured out how to domesticate animals, they figured out how to farm, how to raise crops—and that brings some stability. They don't have to live a hunter-gatherer existence anymore.

Steven: This is known as the Neolithic Revolution.

Beth: And it really was a revolution. It completely changed human beings' way of relating to nature. We could, for the first time, control nature to some degree.

Steven: This takes place after the end of the last ice age and it may have to do with the environment becoming more hospitable. We see this Neolithic Revolution in areas all over the world that were disassociated from each other.

Beth: Sometime around the year 3000 B.C.E., many of those cultures also developed writing.

Steven: Writing is seen as one of the hallmarks of civilization, and we see the development of what we recognize as civilization—that is, early cities, farming techniques, writing—developing in the great river valleys around the world. Most famously, in Egypt (Nile), in Mesopotamia (Tigris and Euphrates), in the Indus Valley, and in China (Huang He and Yangzi).

Beth: There are several areas in China that had sophisticated Neolithic culture. One in particular is called Liangzhu. This culture developed around what is today Shanghai and Yangzi River.

Steven: Right at the delta of the Yangzi River.

Beth: Just like Egypt developed right around the delta of the Nile, and ancient Mesopotamia developed between the Tigris and Euphrates River. It made sense: these were places where you could irrigate crops.



China Galleries, with Jade Cong, c. 2500 B.C.E., Liangzhu culture, Neolithic period, China (British Museum) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/fAU3pQ>

Steven: In fact, the Liangzhu people seem to have become expert rice growers, and were able to create a surplus, which allowed them not to worry about eating, not to worry about feeding themselves. It allowed at least certain elements of society to begin to develop in more sophisticated ways.

Beth: Liangzhu culture was especially known for producing beautiful jade objects, specifically something that we call cong: square, hollow tubes that are decorated with lines and sometimes with circles that represent faces. Some of them are short and some of them seem to be stacks that are quite tall. We're looking, actually, at several examples here at the British Museum.



Jade Bi, c. 2500 B.C.E., Liangzhu culture, Neolithic period, China (British Museum) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/fAU3Sq>

Steven: These were found in graves. Sometimes there were many cong in graves. There were also objects called bi. These are round disks, also with holes in the center. We have no idea what any of this means. This is a culture where we have found no traces of writing. It's possible that they were preliterate or it's possible that they wrote on a material that didn't survive, but the result is, all of the ideas that surround these objects are theories.

Beth: Because they clearly represent faces—whether they're monster faces or animal faces or human faces—these clearly meant something.

Steven: And there's a great degree of regularity and specificity. Now this jade is true jade, or nephrite, and it is extremely hard. This culture did not have tools that were harder than this nephrite. That is, they couldn't carve it.

Beth: You can't incise into it. You can't take a knife and cut into it. It's just too hard.

Steven: You can't even really scratch it. So when you look at these objects that are so precise, it's almost impossible to imagine that they were produced by rubbing sand.

Beth: Some of the lines are very, very fine and run parallel to each other. It's important to think about the care with which these objects are made.

Steven: They are clearly symbols. There's a uniformity, there's an intentionality, there's a clarity, and there is tremendous effort. Though we don't speak this language, we recognize it as the product of a human mind.

Beth: A human mind that was trying to say something about power, perhaps; about our relationship to nature; about the spiritual world; about what happens after death…the kinds of questions that human beings ask all the time still. Their verticality, the repetition of these parallel lines—it's hard not to think about these in relationship to issues of power.

Steven: Some scholars have suggested that the rectilinear quality of the cong is a symbol for Earth. That the round interior is a symbol of the heavens, of the sky, of the sun. These are symbols that develop later in China, and it's very seductive to link this Neolithic culture with later Bronze Age cultures.

Beth: To read that definition back into time is definitely tempting.

Steven: It is possible that this is the origin of those symbols, but we can't really know.

Watch the video <https://www.youtube.com/watch?time_continue=302&v=ld8kHvz1yN4>.

8. Stonehenge, Salisbury Plain, England

Dr. Senta German



Stonehenge, Salisbury Plain, Wiltshire, England, c. 2550-1600 B.C.E., circle 97 feet in diameter, trilithons: 24 feet high (photo: Noah Zucker, CC BY-NC-SA 2.0)

Stonehenge, on Salisbury plain in England, is one of the most recognizable monuments of the Neolithic world and one of the most popular, with over one million visitors a year. People come to see Stonehenge because it is so impossibly big and so impossibly old; some are searching for a connection with a prehistoric past; some come to witness the workings of a massive astrological observatory. The people living in the fourth millennium B.C.E. who began work on Stonehenge were contemporary with the first dynasties of Ancient Egypt, and their efforts predate the building of the Pyramids. What they created has endured millennia and still intrigues us today.

Phase one

In fact, what we see today is the result of at least three phases of construction, although there is still a lot of controversy among archaeologists about exactly how and when these phases occurred. It is generally agreed that the first phase of construction at Stonehenge occurred around 3100 B.C.E., when a great circular ditch about six feet deep was dug with a bank of dirt within it about 360 feet in diameter, with a large entrance to the northeast and a smaller one to the south. This circular ditch and bank together is called a henge. Within the henge were dug 56 pits, each slightly more than three feet in diameter, called Aubrey holes, after John Aubrey, the seventeenth-century English archaeologist who first found them. These holes, it is thought, were either originally filled with upright bluestones or upright wooden beams. If it was bluestones which filled the Aubrey holes, it involved quite a bit of effort as each weighed between 2 and 4 tons and were mined from the Preseli Hills, about 250 miles away in Wales.



Aerial view, 2014, Stonehenge, Salisbury Plain, Wiltshire, England, c. 2550-1600 B.C.E., circle 97 feet in diameter, trilithons: 24 feet high (photo: timeyres <https://www.flickr.com/photos/timeyres/14425050602>, CC BY-SA 2.0)

Phase two

The second phase of work at Stonehenge occurred approximately 100-200 years later and involved the setting up of upright wooden posts (possibly of a roofed structure) in the center of the henge, as well as more upright posts near the northeast and southern entrances. Surprisingly, it is also during this second phase at Stonehenge that it was used for burial. At least 25 of the Aubrey holes were emptied and reused to hold cremation burials and another 30 cremation burial pits were dug into the ditch of the henge and in the eastern portion within the henge enclosure.

Phase three

The third phase of construction at Stonehenge happened approximately 400-500 years later and likely lasted a long time. In

this phase the remaining blue stones or wooden beams which had been placed in the Aubrey holes were pulled and a circle 108 feet in diameter of 30 huge and very hard sarsen stones were erected within the henge; these were quarried from nearby Marlborough Downs. These upright sarsen stones were capped with 30 lintel stones.



Interior of the sarsen circle and bluestones in the foreground, Stonehenge, Salisbury Plain, Wiltshire, England, c. 2550-1600 B.C.E., circle 97 feet in diameter, trilithons 24 feet high (photo: Stonehenge Stone Circle, CC BY 2.0) <https://flic.kr/p/e9osu3>

Each standing stone was around 13 feet high, almost seven feet wide and weighed around 25 tons. This ring of stones enclosed five sarsen trilithons (a trilithon is a pair of upright stones with a lintel stone spanning their tops) set up in a horseshoe shape 45 feet across. These huge stones, ten uprights and five lintels, weigh up to 50 tons each.

Bluestones, either reinstalled or freshly quarried, were erected in a circle, half in the outer sarsen circle and half within the sarsen horseshoe. At the end of the phase there is some rearrangement of the bluestones as well as the construction of a long processional avenue, consisting of parallel banks with exterior ditches approximately 34 meters across, leading from the northeast entrance to Stonehenge, dipping to the south and eventually to the banks of the Avon river.

Questions

All three phases of the construction of Stonehenge pose fascinating questions. The first phase of work required precise planning and a massive amount of labor. Who planned the henge and who organized whom to work together in its construction? Unfortunately, remains of Neolithic villages, which would provide information about who built Stonehenge, are few, possibly because so many lie underneath later Bronze Age, Roman, Medieval and modern cities. The few villages that have been explored show simple farming hamlets with very little evidence of widely differing social status. If there were leaders or a social class who convinced or forced people to work together to build the first phase of Stonehenge, we haven't found them. It also probably means the first phase of Stonehenge's construction was an egalitarian endeavor, highly unusual for the ancient world.

Who were the people buried at Stonehenge during its second phase? Recent analysis of these bones has revealed that nearly all the burials were of adult males, aged 25-40 years, in good health and with little sign of hard labor or disease. No doubt, to be interred at Stonehenge was a mark of elite status and these remains may well be those of some of the first political leaders of Great Britain, an island with a ruling tradition extending all the way to the House of Windsor. They also show us that in this era, some means of social distinction must have been desirable.

Conclusions

The work achieved in the long third phase of Stonehenge's construction, however, is the one which is most remarkable and enduring. Like the first phase of Stonehenge, except on a much larger scale, the third phase involved tremendous planning and organization of labor. But, it also entailed an entirely new level of technical sophistication, specifically in the working of very hard stone. For instance, the horizontal lintel stones which topped the exterior ring of sarsen stones were fitted to them using a tongue and groove joint and then fitted to each other using a mortise and tenon joint, methods used in modern woodworking.

Each of the upright sarsens were dressed differently on each side, with the inward facing side more smoothly finished than the outer. Moreover, the stones of the outer ring of sarsens were subtly modified to accommodate the way the human eye observes the massive stones against the bright shades of the Salisbury plain: upright stones were gently widened toward the top which makes their mass constant when viewed from the ground.

The lintel stones also curve slightly to echo the circular outer henge. The stones in the horseshoe of trilithons are arranged by size; the smallest pair of trilithons are around 20 feet tall, the next pair a little higher and the largest, single trilithon in the south west corner would have been 24 feet tall. This effect creates a kind of pull inward to the monument, and dramatizes the outward Northeast facing of the horseshoe. Although there are many theories, it is still not known how or why these subtle refinements were made to Stonehenge, but their existence is sure proof of a sophisticated society with organized leadership and a lot of free time.

A solar and lunar calendar?

Of course the most famous aspect of Stonehenge is its relationship with the solar and lunar calendar. This idea was first proposed by scholars in the eighteenth century, who noted that the sunrise of the midsummer solstice is exactly framed by the end of the horseshoe of trilithons at the interior of the monument, and exactly opposite that point, at the center of the bend of the horseshoe, at the midwinter sunset, the sun is also aligned. These dates, the longest and shortest days of the year, are the turning point of the two great seasonal episodes of the annual calendar. Since this discovery, several other theories about astrological observation have been offered but few stand up to scrutiny together with the physical details of the monument.



Stonehenge, Salisbury Plain, Wiltshire, England, c. 2550-1600 B.C.E., circle 97 feet in diameter, trilithons: 24 feet high (photo: Stonehenge Stone Circle, CC BY-SA 2.0) <https://flic.kr/p/e9okjh>

9. Ambum Stone, Papua New Guinea

Dr. Jane Horan



Ambum Stone, c. 1500 B.C.E., greywacke, 20 x 7.5 x 14 cm, Ambum Valley, Enga Province, Papua New Guinea (Australia National Gallery, Canberra)

The *Ambum Stone* is a masterfully crafted stone carving, created around 3,500 years ago in the highlands of the island we now know as New Guinea. Who actually carved it and for what original purpose is not known. Nevertheless, the *Ambum Stone* had a life as a religious object for a group of people in Papua New Guinea before becoming an aesthetically beautiful and intriguing artifact of exotica in a Western gallery. More recently it suffered a mishap that left it broken, and the publicity around this thrust the *Ambum Stone* into ongoing political debates about who owns historical artifacts. Every chapter of this carving's history has been entangled with personal and political intrigue, and chronicles a bigger story about colonization and shifting and evolving structures of power.



Map, © Google

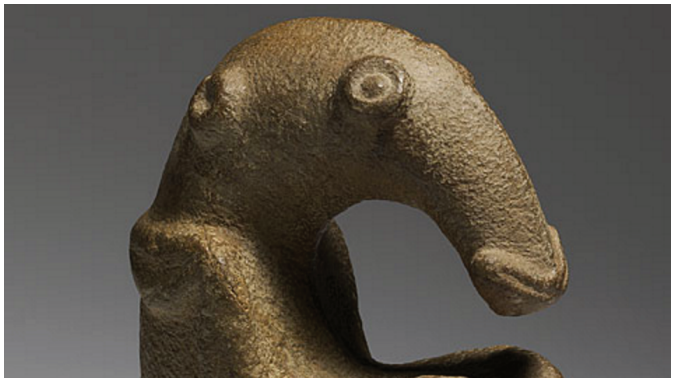
An ancient pestle

There are 12 recorded artifacts like the *Ambum Stone*: ancient stone mortar and pestles (a mortar is a bowl and a pestle is an object used to grind against the sides of the mortar; mortars and pestles are commonly made of hard material such as stone and are often used to prepare food) excavated from New Guinea, usually from the mountains of its interior. The smoothly curved neck and head of the *Ambum Stone* suggest its possible utility as a pestle when we consider its size—at about 8 inches high, the "neck" of the creature it depicts can be held in the hand, and its fat base could have been used to pound food and other materials. The tops of other ancient pestles from New Guinea are distinguished by human or bird heads, or by fully sculpted birds, while the mortars also include geometric imagery alongside avian (bird) and anthropomorphic (human) depictions.

The *Ambum Stone* is prized above all others not only for its age—it is one of the oldest of all sculptures made in Oceania—but also for its highly detailed sculptural qualities. It has a pleasing shape and smooth surface, and the slightly shiny patina on some of its raised details suggest it has been well handled. It was made from greywacke stone, and its finished shape may suggest the original shape the stone it was carved from. Greywacke is a very hard sedimentary stone, which often has fracture lines and veins that reveal its age and formation. Much greywacke has been subjected to significant amounts of tectonic movement, pressure and heat over extended periods, and some of the greywacke in the islands of the Pacific is more than 300 million years old. Imagine carving something as

symmetrical and aesthetically pleasing as the *Ambum Stone* using only stone tools. It must have taken its maker many months to chip out the rough shape then finish it carefully, and the time and effort involved in its making suggests it was special and valued by whomever it was made for.

Carved in the form of some kind of animal, its features are rounded and include a freestanding neck, elegantly curved head and long nose, and upper limbs that hug its torso and appear to enclose a cupped space above its belly. Stylized eyes, ears and nostrils are depicted in relief, and shoulder blades and what could be an umbilicus suggest the maker's understanding of anatomy. While it is possibly a fetal-form of a spiny anteater known as an echidna, which is thought to have been valued for its fat prior to the introduction of pigs, it might also be a bird or a fruit bat, and some have speculated that it represents a now extinct mega-sized marsupial.



Ambum Stone (detail), c. 1500 B.C.E., greywacke, 20 x 7.5 x 14 cm, Ambum Valley, Enga Province, Papua New Guinea (Australia National Gallery, Canberra)

Ritual use in Papua New Guinea

When the *Ambum Stone* first became known to Westerners in the 1960s, it was being used by a group of people called the Enga who live in the western highlands of Papua New Guinea. For the Enga, the *Ambum Stone* and other objects like it are called *simting bilong tumbuna* which literally translates as the "bones of the ancestors" (Egloff 2008:1). This is the Enga term for a class of cult objects which were used as powerful ritual mechanisms where ancestors reside. While the ritual object is not actually an ancestor per se, paradoxically, such sacred objects are believed to have a life of their own, and they can even move around, mate, and reproduce. It would seem—for the *Ambum Stone* at least—they can also go on adventures and create controversy.

Enga society is based on an organizational power structure known as the "big man" system, and the negotiation of power depends on commanding natural resources like pigs and produce, as well as supernatural forces like the goodwill of the ancestors (or the Christian God). Power is vested with those "big men" who can cajole, organize, or even manipulate other people into giving them resources so these can be redistributed at big ritual events. Before the Enga decided to convert to Christianity in the wake of the arrival of missionaries and colonization in the 1930s, the *Ambum Stone* and other objects like it were imbued with supernatural powers through ritual processes. They were buried in a group's ancestral land and regular sacrifices of pigs were needed to appease the stones and the ancestors that resided in them. With the appropriate care they could ward off danger and promote the fertility and vigor of the tribe and the land.

Christianity, colonization, and commoditization

When Christian missionaries arrived in Papua New Guinea, people largely embraced the new religion, the new system of power that came with colonization, and the consequent Australian administration. The big man system was maintained but the way of managing the supernatural took on a Christian guise. Objects like the *Ambum Stone* lost some of their former potency, but under the "Whiteman's gaze" they acquired new parameters of value as "primitive art" and were therefore worth money.

The *Ambum Stone* came to distil exoticism, imbued with all the romance perceived by Westerners in the stark differences of Papua New Guinean ways of seeing the world, and evoking a primitivism and purity lost to the West. This exoticism was enhanced by its specific dimensions and proportions that meet a certain aesthetic ideal from a Western point of view. All of this, its "primitive" and aesthetic value drove its pathway through a murky set of transactions, culminating in its acquisition by the Australian National Gallery in 1977, where it is valued as a priceless antiquity.



Ambum Stone (detail), c. 1500 B.C.E., greywacke, 20 x 7.5 x 14 cm, Ambum Valley, Enga Province, Papua New Guinea (Australia National Gallery, Canberra)

Originally sold by two young boys (at the urging of resident missionaries) for 20 shillings to the European owner of the trade store in Wabag (Enga Province), it was then sold by an intermediary to Philip Goldman, a London art dealer. Goldman subsequently offered it to the British Museum, before selling the sculpture to the Australian National Gallery in Canberra, Australia. In his negotiations with the Museum and by way of justifying his asking price, Goldman compared the *Ambum Stone* to Jackson Pollock's *Blue Poles (1952)* which the gallery had purchased a few years earlier: basing the "primitive" *Ambum Stone*'s value on that of a work of modern art (in 1973 the Gallery is reported to have paid 1.3 million dollars for the painting *Blue Poles)*. Eventually, the Australian National Gallery agreed to pay Goldman $115,000 United States dollars for the stone.

Protecting the cultural heritage of Papua New Guinea

The Papua New Guinea Museum attempted to buy the *Ambum Stone* when it was offered to the Australian Museum, but was unsuccessful. Papua New Guinea became an independent state in 1975, and robust legislation and other legal structures have been in place since 1913 that prohibit the export of objects of antiquity and relevance to Papua New Guinea as a unique place in the world. The country has not been able to afford to make purchases on the international antiquities

market because prices are too high for a developing nation. Further, Papua New Guinea has not had the capacity to enforce its legislation internationally until recently. Whether the *Ambum Stone* was legally exported from Papua New Guinea remains a point of contention.



Australian National Gallery, Canberra (photo: Nick-D <https://commons.wiki media.org/wiki/File:National_Gallery_of_Australia_October_2012.JPG>, CC BY-SA 3.0)

Many objects of New Guinea's historical material culture were shipped to foreign museums and galleries for "safe keeping." Other desirable or even potentially valuable objects were smuggled out illegally. In 1977, the legal standing of the Papua New Guinea state to reclaim objects of national significance was bolstered by the opening of the Papua New Guinea National Museum and Art Gallery, complete with state of the art storage and exhibition facilities. It was staffed first by Europeans who in turn trained Papua New Guinea nationals in museum management who were politically and philosophically intent on having antiquities returned to Papua New Guinea. Over the years the Papua New Guinea Museum and Art Gallery has perfected its systems of export control and its capacity to enact legal proceedings against that intent on taking antiquities out of the country. They have also been able to successfully negotiate the return of objects and whole collections that were sequestered away for safe keeping elsewhere in the world. Nevertheless, there are limits to their ability to enforce the return of objects such as the *Ambum Stone*.

Damage and restoration

In 2000, while on loan to a French art museum, the *Ambum Stone* was accidentally dropped and shattered into three main pieces and various shards of stone. It was later discovered by conservators, as they pieced it back together, that what had previously been thought to be old breaks, mended while in Papua New Guinea, were actually fracture lines of the greywacke stone. Fissures and grooves containing organic material were examined and were used to suggest its date of 1500 B.C.E. The *Ambum Stone* was carefully repaired, but other damage had been done. News of the incident made it into international media, which in turn generated the discussion about what the *Ambum Stone*—a registered antiquity belonging to Papua New Guinea—was doing in the possession of an Australian gallery in the first place. Whilst the *Ambum Stone* remains in Canberra, arguably the controversy over this artifact has meant that Papua New Guinea's capacity to negotiate at the global level has been bolstered.

At the heart of the recent chapters of the story of the *Ambum Stone* is a narrative about colonialism and its legacy. The *Ambum Stone* was made and imbued with particular meanings and values by a group of what we now know as Papua New Guineans, and then relocated to a Western museum where it has been reinterpreted within a framework of aesthetics and exchange, where we continue to marvel at it—and exoticize it—because of its origins, and the mysteries we perceive in the pages of its story, remain closed to us.

10. Female figurine from Tlatilco

Dr. Rex Koontz



Double-faced female figurine, early formative period, Tlatilco, c. 1500–1200 B.C.E., ceramic with traces of pigment, 9.5 cm. high (Princeton University Art Museum)

We don't know what the people here called themselves. Tlatilco, meaning "place of hidden things," is a Nahuatl word, given to this "culture" later. Around 2000 B.C.E., maize, squash and other crops were domesticated, which allowed people to settle in villages. The settlement of Tlatilco was located close to a lake, and fishing and the hunting of birds became important food sources.

Archaeologists have found more than 340 burials at Tlatilco, with many more destroyed in the first half of the twentieth century.

Intimate and lively

Tlatilco figurines are wonderful small ceramic figures, often of women, found in Central Mexico. This is the region of the later and much better-known Aztec empire, but the people of Tlatilco flourished 2,000-3,000 years before the Aztec came to power in this Valley. Although Tlatilco was already settled by the Early Preclassic period (c. 1800-1200 B.C.E.), most scholars believe that the many figurines date from the Middle Preclassic period, or about 1200-400 B.C.E. Their intimate, lively poses and elaborate hairstyles are indicative of the already sophisticated artistic tradition. This is remarkable given the early dates. Ceramic figures of any sort were widespread for only a few centuries before the appearance of Tlatilco figurines.

Appearance

The Tlatilco figurine at the Princeton University Art Museum has several traits that directly relate to many other Tlatilco female figures: the emphasis on the wide hips, the spherical upper thighs, and the pinched waist. Many Tlatilco figurines also show no interest in the hands or feet, as we see here. Artists treated hairstyles with great care and detail, however, suggesting that it was hair and its styling was important for the people of Tlatilco, as it was for many peoples of this region. This figurine not only shows an elaborate hairstyle, but shows it for two connected heads (on the single body). We have other two-headed female figures from Tlatilco, but they are rare when compared with the figures that show a single head. It is very difficult to know exactly why the artist depicted a bicephalic (two-headed) figure (as opposed to the normal single head), as we have no documents or other aids that would help us define the meaning. It may be that the people of Tlatilco were interested in expressing an idea of duality, as many scholars have argued.



Double-faced female figure figurine, early formative period, Tlatilco, 1500–1200 B.C.E., ceramic with traces of pigment, 9.5 cm. high (Princeton University Art Museum)

The makers of Tlatilco figurines lived in a large farming villages near the great inland lake in the center of the basin of Mexico. Modern Mexico City sits on top of the remains of the village, making archaeological work difficult. We don't know what the village would have looked beyond the basic shape of the common house—a mud and reed hut that was the favored house design of many early peoples of Mexico. We do know that most of the inhabitants made their living by growing maize (corn) and taking advantage of the rich lake resources nearby. Some of the motifs found on other Tlatilco ceramics, such as ducks and fish, would have come directly from their lakeside surroundings.



Reconstruction of a house, c. 1200 B.C.E., central Mexico



Shaman, Middle Preclassic (1200-600 B.C.E.), Tlatilco, 9.5 cm high (National Museum of Anthropology <http://www.mna.inah.gob.mx/coleccion/pieza-72/ficha-basica.html>, Mexico City)

Male figures are rare

Tlatilco artists rarely depicted males, but when they did the males were often wearing costumes and even masks. Masks were very rare on female figures; most female figures stress hairstyle and/or body paint. Thus the male figures seem to be valued more for their ritual roles as priests or other religious specialists, while the religious role of the females is less clear but was very likely present.

How they were found

In the first half of the twentieth century, a great number of graves were found by brick-makers mining clay in the area. These brick-makers would often sell the objects—many of them figurines—that came out of these graves to interested collectors. Later archaeologists were able to dig a number of complete burials, and they too found a wealth of objects buried with the dead. The objects that were found in largest quantities—and that enchanted many collectors and scholars of ancient Mexico—were the ceramic figurines.



Tlatilco figurine of a woman with a dog, Tlatilco, c. 1200–600 B.C.E., ceramic (National Museum of Anthropology, Mexico City) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://www.flickr.com/photos/profzucker/16628577908/in/photostream/>

Craftsmanship

Unlike some later Mexican figurines, those of Tlatilco were made exclusively by hand, without relying on molds. It is important to think, then, about the consistent mastery shown by the artists of many of these figurines. The main forms were created through pinching the clay and then shaping it by hand, while some of the details were created by a sharp instrument cutting linear motifs onto the wet clay. The forms of the body were depicted in a specific proportion that, while non-naturalistic, was striking and effective. The artist was given a very small space (most figures are less than 15 cm high) in which to create elaborate hairstyles.

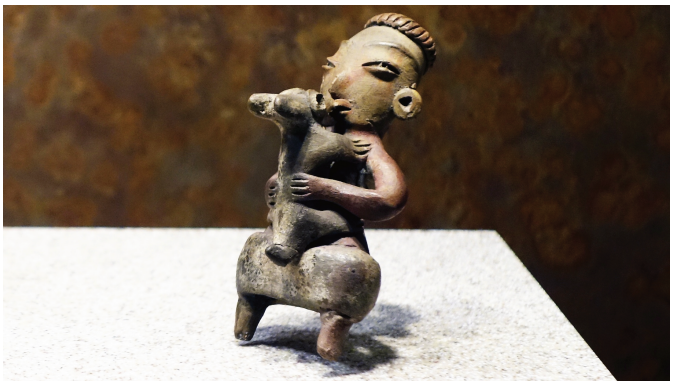
Even for today's viewer, the details in this area are endlessly fascinating. The pieces have a nice finish, and the paint that must indicate body decoration was firmly applied (when it is preserved, as in the two-headed figure above). Many scholars doubt that there were already full-time artists in such farming villages, but it is certain that the skills necessary to function as an artist in the tradition were passed down and mastered over generations.

10 a. Tlatilco Figurines — an extraordinary variety

A CONVERSATION

Dr. Steven Zucker and Dr. Lauren Kilroy-Ewbank

This is the transcript of a conversation conducted in the National Museum of Anthropology, Mexico City.



Tlatilco figure kissing dog, c.1200-900 B.C.E., ceramic with traces of pigment, Tlatilco, Mesoamerica (present-day Mexico) (National Museum of Anthropology, Mexico City) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/rkqJqE>

Steven: We're in the National Museum of Anthropology in Mexico City, and we're looking at some of the most extraordinary little clay figurines that were from a village in this area in the Valley of Mexico, about 3,000 years ago.

Lauren: The name of the town was Tlatilco, and it had hundreds of burials where you find these amazing figurines. (Tlatilco is a Nahuatl word, which means "place of hidden things." It was given to the "culture" later; we don't know what the people here called themselves.)

Steven: The figurines have extraordinary variety, but they give us an insight into what was important to people 3,000 years ago—that they made and then had themselves buried with.

Lauren: What we're seeing at Tlatilco is one of the earliest developments of a wide array of objects that display this very advanced visual expression. And so right now we're standing in front of a series of figurines of individuals with two faces or two heads.

Steven: The double-headed figures come in a whole variety. There's one at Princeton University that I'm particularly in love with because it has a bifurcated face with two noses, two mouths, but only three eyes.



Double-faced female figurine, early formative period, Tlatilco, c. 1200–900 B.C.E., ceramic with traces of pigment, 9.5 cm. high (Princeton University Art Museum)

Lauren: And it's a very representative type of Tlatilco female figurine, where you have the narrow waist, the broad hips, traces of paint on the face, on the incised hair.

Steven: Now this is clay, and it would have been incised with a sharp instrument to create, for instance, the lines of the hair, and pinched to created forms like the nose.



Double-faced female figure figurine, early formative period, Tlatilco, 1200–900 B.C.E., ceramic with traces of pigment, 9.5 cm. high (Princeton University Art Museum)

Lauren: You typically see red, yellow or black pigment, and then decorations where you had roller stamps, where you could roll designs over the various surfaces.

Steven: Some of the figures that we're seeing here don't actually have a combined double face, but have two heads.



Tlatilco two-headed figurine, c.1200-900 B.C.E., ceramic with traces of pigment, Tlatilco, Mesoamerica (present-day Mexico) (National Museum of Anthropology, Mexico City) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/rBZ3zk>

Lauren: One of the figurines that we're looking at right now you have a single body, so only two legs, two arms, two breasts, but then two individual heads. And we see a variety of these here, that are relating to this idea of duality.

Steven: We really don't know what this means, because we don't have a written record to go with this. We've got the objects themselves.

Lauren: And this is a great example of where the visual archaeological record is one of the main ways in which we're able to know about this culture.

Steven: I'm really taken by this small, clay object that is a single, mask-like form, but is bifurcated, that is, divided right down the middle.



Mask of duality, c.1200-600 B.C.E., ceramic, 8.7 cm high, Tlatilco, Mesoamerica, present-day Mexico (National Museum of Anthropology, Mexico) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/qEZmQY>

Lauren: On the left, you see the face alive, and on the right side, a skeletonized face—so basically, the de-fleshed, dead face.

Steven: So "duality" can have lots of different meanings. I think in the twenty-first century, when we use that term, we're often thinking about a kind of east Asian notion of duality, of the yin and the yang. But here in Mexico, what do we know about duality in later cultures, where we do have a better record?

Lauren: Well, if we're kind of making broad generalizations around this idea of duality. The idea of life and death paired together might relate to the cycle of life. It's through death that life is able to continue.

Steven: So we usually think about life and then death. And you're saying that people in Mesoamerica thought also about death and then life?

Lauren: Exactly, there is this concept that you see consistently about the cycle of life, and this idea of regeneration and rebirth.



Mask of duality (side view), c.1200-600 B.C.E., ceramic, 8.7 cm high, Tlatilco, Mesoamerica, present-day Mexico (National Museum of Anthropology, Mexico) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/qFcNSc>

Steven: As I look at this mask—and it's too small to be worn, it would actually fit comfortably in the palm of my hand— the right side is terrifying. It is this skull with that wide open eye, and it's almost as if we see the grinning of the teeth. But on the left side, it's also unnerving because it is almost a kind of animal-like face. And the tongue is sticking out below the teeth.

Lauren: The lip has been pulled open as if it is this grimace, which to us reads as threatening or a little terrifying.



Mask of duality (left side), c.1200-600 B.C.E., ceramic, 8.7 cm high, Tlatilco, Mesoamerica, present-day Mexico (National Museum of Anthropology, Mexico) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/rkpPfE>

Steven: And it's important to remember that this was found in a burial. We don't know if it was originally intended for a burial, but that's where it ended up.

Lauren: What we find in most in most of these Tlatilco figurines are scenes of daily life and very humorous or charming figurines.

Steven: There is that small infant in what looks to be a crib, a woman who seems to be kissing a small dog, and another that cradles the dog.



Child in Crib, c.1200-600 B.C.E., ceramic, 8.7 cm high, Tlatilco, Mesoamerica, present-day Mexico (National Museum of Anthropology, Mexico) (photo: Steven Zucker, CC BY-NC-SA 2.0) <https://flic.kr/p/rBTtyg>

Lauren: These are some of my favorites. Here we see not only people in daily life but people engaged in types of activities that are truly more intimate, that you don't see as frequently throughout Mesoamerican art.

Steven: It's interesting, what you're saying, because there's so much that carries from the early cultures to the later cultures, but that's not true here.

Lauren: We know that in some ways Tlatilco is contemporary with Olmec civilization (c. 2500-200 C.E.), which is considered the mother culture of Mesoamerica. Tlatilco is not necessarily influencing—at least as far as we know right now—later cultures (such as the in the same way that, say, the Olmec are.

Steven: And then there are those amazing animal vessels. They're so plump and playful.



Animal vessel, c.1200-600 B.C.E., ceramic, Tlatilco, present-day Mexico (National Museum of Anthropology, Mexico) (photo: Gary Todd, by permission) <https://flic.kr/p/fU27Kx>

Lauren: So some of my favorite include the head of a fish, or a duck….

Steven: These were settled people.

Lauren: I mean at this point, they're living more sedentary lives here, say in the village of Tlatilco, and so they're able to create ceramics. What we are seeing here are animals and plants that people are using for food, as much as they are creating them to replicate, in ceramics, this amazing variety of the natural environment that they see before them.

Watch the video. <https://youtu.be/Q3DpCMAyWyw>



Animal vessel, c.1200-600 B.C.E., ceramic, Tlatilco, present-day Mexico (National Museum of Anthropology, Mexico) (photo: Gary Todd, by permission) <https://flic.kr/p/fU2aw4>

11. Terracotta fragments, Lapita people

Dr. Jane Horan

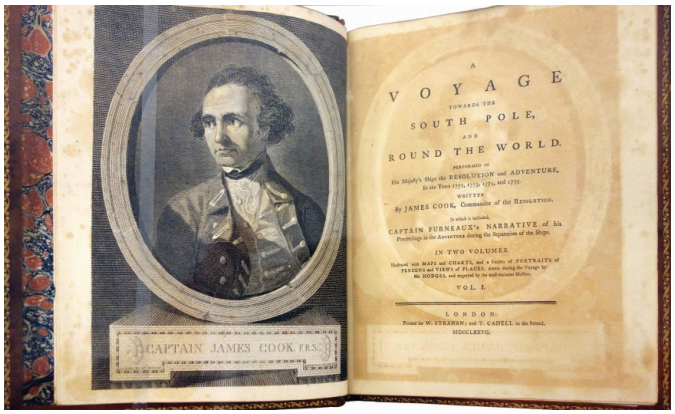


Terracotta fragments, Lapita people, c. 1000 B.C.E., red-slip earthenware, Santa Cruz Islands, south-east of Solomon Islands (Department of Anthropology, University of Auckland, CC BY-NC-ND 3.0)

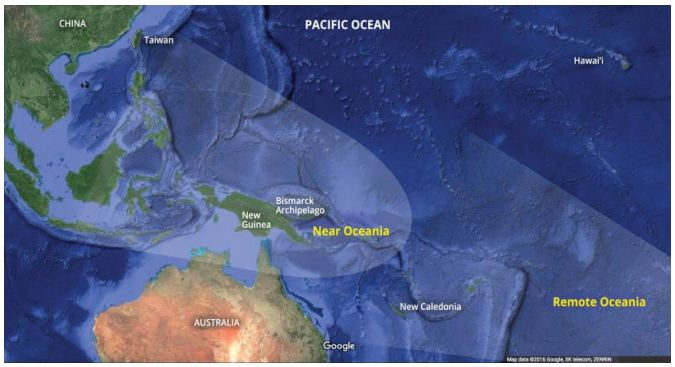
Archaeologists get very excited when they find pieces of Lapita pottery. Why? Because the sequential depositing of potsherds (fragments of pottery) in an easterly direction across the island groups of the Pacific has become the pivotal evidence that tells the extraordinary story of the peopling of the vast Pacific Ocean. Pieces of the distinctive red-slipped (slip is made up of tiny particles of clay suspended in water and can be colored with iron oxide or other minerals to decorate the surface of a pot) pottery of the Lapita people have been recovered from sites spanning thousands of miles across the Pacific from the outer reaches of Southeast Asia, through the island groups often referred to as Micronesia (the region of the western Pacific, which includes the Federated States of Micronesia, Guam, Kiribati, Mariana Islands, the Marshall Islands, Nauru, Palau, and Wake Island) and Melanesia (a region of the western Pacific that includes the islands and island groups of Fiji, New Guinea, the Solomon Islands, and Vanuatu), and into the central Pacific and Polynesia.

An archaeological puzzle

Though Pacific Islanders have their own richly detailed historical accounts of the exploration of their "sea of islands," European speculation about how and when the Pacific was populated began with James Cook and other European voyagers of the Enlightenment era (1700s).[1] Theories based on thin historical conjecture proliferated in the late eighteenth and nineteenth centuries, often at odds with Islanders' own knowledge systems. At first it was thought that the inhabitants of what is now known as Near Oceania colonized the islands southeast of the Solomon group, now referred to as Remote Oceania (see map below). It was not until archaeologists began to undertake stratigraphic archaeology in the Pacific from the 1950s onwards that this idea was debunked—mostly due to evidence provided by the multiple archaeological sites where Lapita pottery has been found (stratigraphic archaeology is the study of stratification, layers deposited one atop another over time).



Captain James Cook, A voyage towards the South Pole, and round the World. Performed in His Majesty's ships the Resolution and Adventure, in the years 1772, 1773, 1774, and 1775 (London: Printed for W. Strahan; and T. Cadell in the Strand. 1777) (photo: Daderot, CC0 1.0) <https://tinyurl.com/y5pggt55>



Map © Google

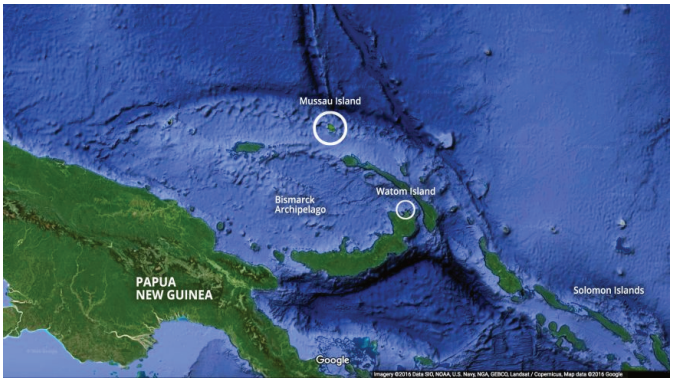
Archaeologists now believe that, somewhere between 4,000 and 3,500 years ago, a group of people who had sailed from the area around Taiwan in Southeast Asia arrived by canoe to the beaches of the Bismarck Archipelago. The new arrivals, who we now know as the Lapita people (named for the beach on the island of New Caledonia where a large number of pottery sherds were found), spoke a different language than the people they would have encountered there. These local people had been living on the large island now known as New Guinea and the surrounding islands for between 60,000 and 40,000 years.[2] Aside from their language and different genetic stock, the Lapita were different to those they encountered because they had sophisticated seafaring and navigation capability—and they manufactured and decorated ceramics in very particular ways. We can only theorize about the political and environmental pressures that drove these people to set out to sea in search of new places to live. Nevertheless, the pieces of broken but stylistically related potsherds distributed across thousands of miles of islands, laid down in datable stratigraphic layers, have revealed important information about the ancestors of the contemporary peoples of the central Pacific.



Terracotta fragments, Lapita people, red-slip earthenware, Watom Island, Bismarck Archipelago (photo: Merryjack, CC BY-NC-SA 2.0) <https://flic.kr/p/dwqGZq>

Travel and trade

Lapita pottery was shaped by hand, and perhaps using a paddle-and-anvil technique to thin the walls, but without the aid of a potter's wheel. It is low-fire earthenware (no evidence of Lapita kilns have been found). This means that the dry clay pots would likely have been placed in open fires to harden—the descendants of the Lapita people in Fiji and other areas still make pottery in this way. There is some geographical variation in the shapes and sizes of the pottery but most were simple bowls, some had pedestal feet, and others were flat-bottomed vessels. We know that the pottery was generally not used for cooking because carbon residues are not normally found on the potsherds. Rather, the evidence suggests that much of the pottery was used for serving food, while larger vessels were likely used for storage.



Map, © Google

The makers of the Lapita pottery blended clay with a particular type of sand. The sand was needed as a temper (temper, often sand, or other added materials, reduces the elasticity of the clay—how much it shrinks—and helps to avoid cracking during the firing process) to make the vessels more durable during firing. Both the clay and sand are only found in certain areas of the Pacific. The islands in Remote Oceania are far less diverse in terms of geology than those in Near Oceania, and only a limited number of island locations had deposits of the clay used to make the pottery.

Analysis of the composition of the sherds has revealed valuable information about where the raw materials came from. The archaeologist Terry Hunt has analyzed a large number of potsherds found by the archaeologist Patrick Kirch at Talepakemalai and other Mussau Lapita sites (see map above). The Mussau islands, which are mostly limestone, are one of the island groups with very little clay. Hunt showed that a large number of the potsherds found there had been made from materials brought from other places, indicating that either the raw materials or perhaps the pots themselves had been imported. This reveals that the Lapita people had the means and the need to travel and trade across significant ocean stretches—their "sea of islands." Perhaps, the most remarkable thing about the Lapita pottery sherds is that despite the remaining sherds being found thousands of miles apart, they share a formal and discernible design grammar that archaeologists can analyze. In fact, it is the decoration of Lapita pottery that holds the greatest amount of information for archaeologists.

A design grammar

The decoration of the pottery consists of stamped and incised motifs that adhere to a very regular, structured, and repeated set of specific patterns. The motifs were applied to the surface of the vessel with a small dentate (tooth-like) stamp and/or drawn free-hand with a sharp edge of some sort. The pattern stamps used included both linear and curved shapes of various lengths, as well as round forms. Once a pot was decorated, a paste of white coral lime was applied to the pattern which had the effect of making the delicate patterning stand out against the reddish-brown clay. Types of patterns range from simple to complex geometric forms, and include anthropomorphic face designs (image, top of page) found on Talepakemalai in the Mussau island group (see map above). The anthropomorphic (human form) pattern was a characteristic of early Lapita pottery, and is not present on pottery found in the upper (and therefore newer) archaeological layers of sites further east in Polynesia.



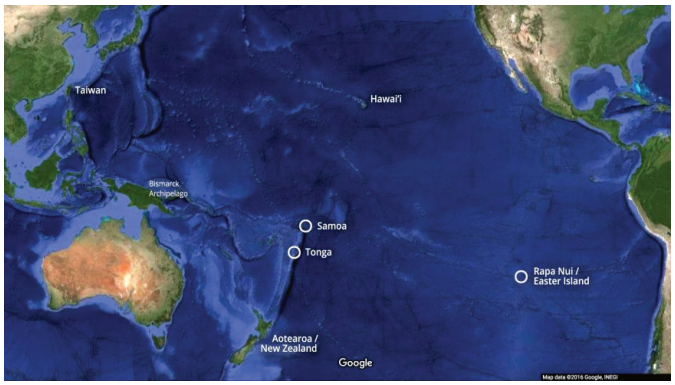
Terracotta fragments, n.d., Lapita people, red-slip earthenware (Department of Anthropology, University of Auckland, CC BY-NC-ND 3.0)

Archaeologists contend that those responsible for decorating the pots used a very restricted range of motifs and combined these in specific ways on particular areas of the pots. In other words, the ancient people who decorated the pots followed the rules of a defined design system. As Kirch notes "although we may never know what was in the minds of those potters and design-makers, we can understand in a more formal or structural sense their system of art and design, and use this as a tool for tracing the history of Lapita pottery in time and space."[3]



Painted Barkcloth (Masi kesa), late 19th–early 20th century, Lau Islands, Fiji, 85.1 x 419.1 cm (Metropolitan Museum of Art) "The repeating geometric motifs of many tapa cloths at times resemble those seen on pottery produced by the Lapita peoples, who were the ancestors of present-day Polynesians." <http://www.metmuseum.org/art/collection/search/310412>

A major breakthrough in the analysis of the Lapita design system came in the 1970s when Māori archaeologist Sydney Moko Mead developed a coherent formal system to categorize the design elements and motifs found on Lapita pottery. Mead's system drew inspiration from linguistic analysis and has a set of components that form the building blocks of the "grammar" of the Lapita design system. These include: design elements, motifs, zone markers, and design fields. Even though the design system changed incrementally through time and within specific geographical areas as people moved across the Pacific, the underlying structural patterns and rules of the system remained the same. From an analytical point of view, the systemized grammar of design has meant that potsherds found in one site can be categorized and compared with others found in multiple other sites to provide evidence of the movement of the Lapita people in particular timeframes. What's more, vestiges of the design motifs and the grammar of the system are apparent in contemporary tattooing, barkcloth decoration and other art forms throughout contemporary Remote Oceania (image, below left).



Map, © Google

An extraordinary story

As the Lapita people moved east past the Bismarck archipelago they likely reached the Samoan and Tongan Island groups around 800 B.C.E. They then paused for 1200 years when another phase of colonization began, and people headed toward the most distant reaches of the Polynesian triangle (this stretches from Hawaii in the north to Aotearoa (New Zealand) in the south, and Rapa Nui (Easter Island) in the east). People arrived in Hawai'i by c. 1000 C.E., and Rapa Nui/Easter Island and Aotearoa/New Zealand by about 1200 C.E. For the most part, the further east the Lapita people headed, the simpler their patterns became. The most recent potsherds, found in the most easterly and south westerly locales, are minimally decorated. It seems that within a couple of hundred years of arriving in what are now Samoa and Tonga (see map above), Lapita pottery and its distinctive design decoration had all but disappeared. When Europeans arrived in the Pacific in the 1700s and 1800s, the ocean going long-distance seafaring canoes were gone, but the knowledge of distant islands and oral histories of voyaging remained. Archaeologists are still actively working to untangle the history of this early pottery, and with each successive discovery, to add to the extraordinary story of the Lapita people.

[1] In his seminal essay "Our Sea of Islands" <https://scholarspace.manoa.hawaii.edu/bitstream/10125/12960/1/v6n1-148-161-dialogue.pdf>, Tongan scholar Epeli Hau'ofa asserted, "There is a gulf of difference between viewing the Pacific Islands as 'islands in a far sea" (as has been historically constructed by Europeans) to "a sea of islands." Whereas the former emphasizes remoteness, the latter reinstates the ocean as a connector between all the people and islands of the Pacific; an oceanic highway in a region rich in resources. Epeli Hau'ofa, "Our Sea of Islands," *A New Oceania: Rediscovering Our Sea of Islands* (Suva, Fiji: The University of the South Pacific, 1993), pp, 2-16.

[2] Kirch 2010.

[3] Kirch 1997, p. 126.