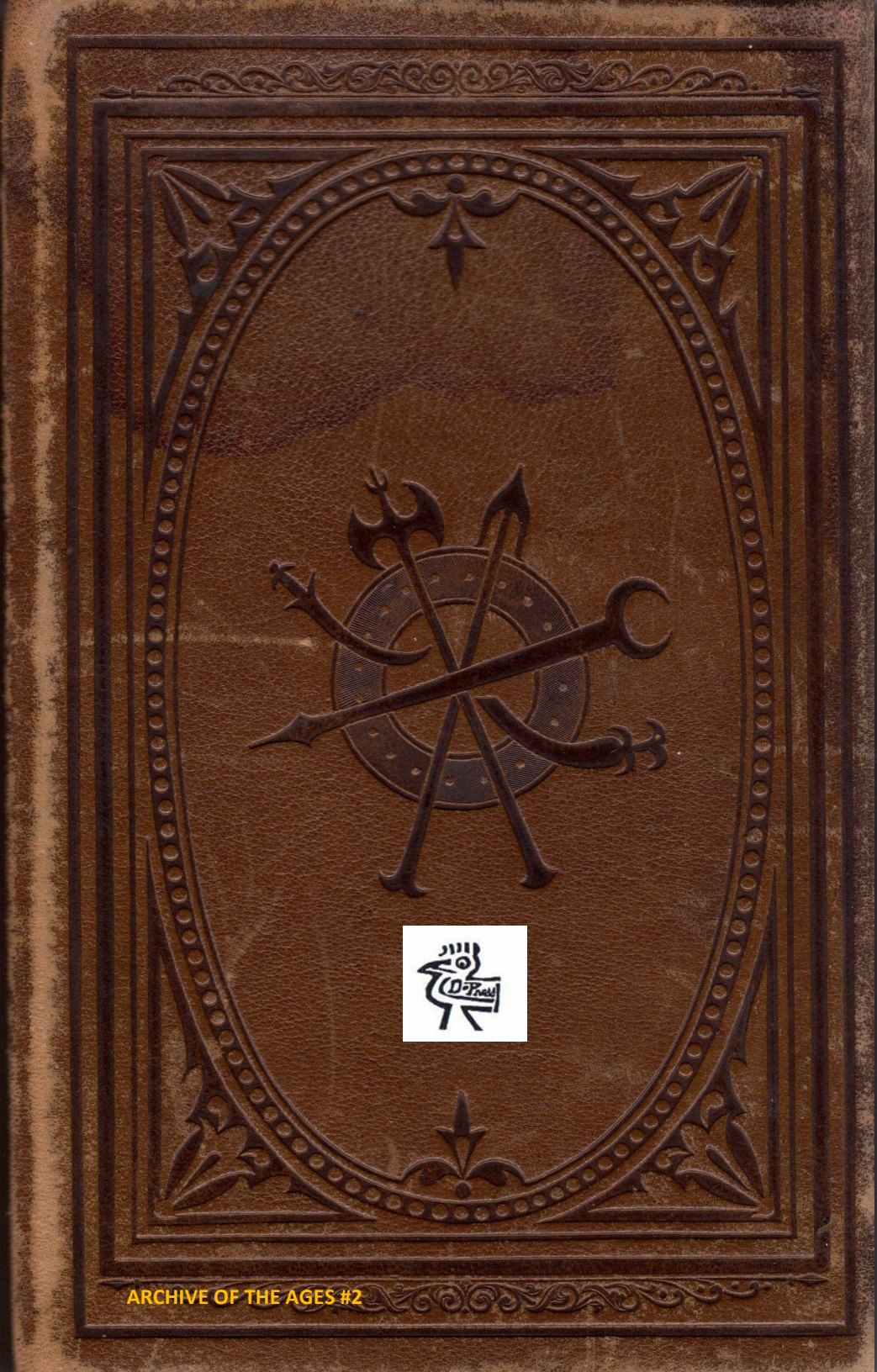
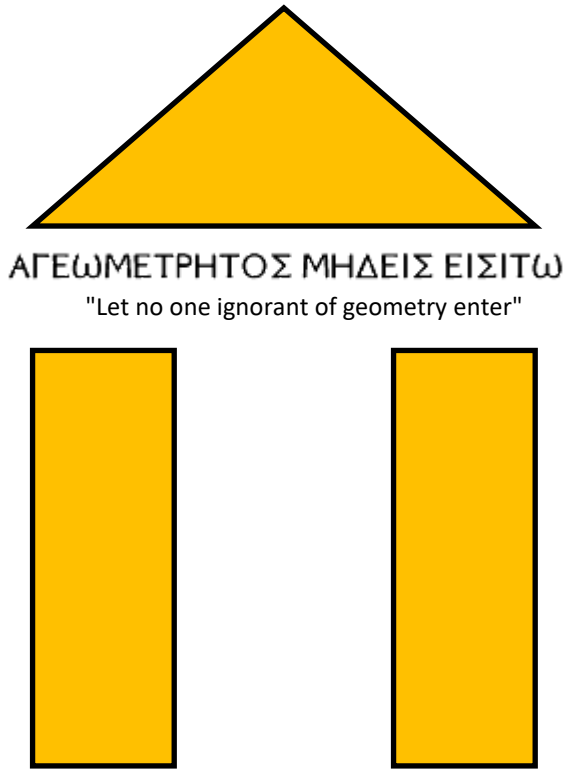


ARCHIVE OF THE AGES #2

ARCHIVE OF THE AGES SERIES

RICHARD DENNER

FROM LASCAUX TO DENDERA



FROM LASCAUX TO DENDERA

A Study in Archeoastronomy and Art

Richard Denner

D Press 2019 Ellensburg

This is a condensed version of

From Lascaux to Dendera, D Press, Sebastopol, 2001.

[23] Thompkins, *op. cit*., p. 194.

[24] Nicholas de Vore, *Encyclopedia of Astrology,* Littlefield, Adams & Co., Totowa, 1977, pp. 51-52.

[25] Joseph Campbell, *The Masks of God: Primitive Mythology,* Penguin Books, New York, 1976, Vol. I, p. 325.

[11] Abbe Henri Breuil, "The Palaeolithic Age," *Larousse Encyclopedia of Prehistoric and Ancient Art*, Prometheus Press. New York, 1962, p. 33.

[12] Andre Leroi-Gourhan, as reported by William Irwin Thompson in *The Time Falling Bodies Take to Light*, St. Martin's Press, New York, 1981, pp. 107-110.

[13] Bataille, *op. cit.,* a commentary by Abbé H. Breuil in the appendix.

[14] Ibid., an article by H. Kirchner, "Anthropos," 1952, in the appendix.

[15] Thompson, *op. cit*., pp. 111-112.

[16] The two illustrations on the left come from Carl Sagan, *Cosmos*, Random House, New York, 1980, p. 197 and the three on the right from J. Benbow Bullock, *Stars for Lincoln, Doctors & Dogs,* Gourmet Guides, San Francisco, 1981, p. 3.

[17] Donald H. Menzel, *A Field Guide to the Stars & Planets,* Houghton Mifflin Co., Boston, 1964, p. 107.

[18] J. Norman Lockyer, *The Dawn of Astronomy,* The MIT Press, Cambridge, 1964, p. 151.

[19] Ibid., Author's preface, pp. x-xiii.

[20] Peter Tompkins, *Secrets of the Great Pyramid,* Harper & Row, New York, 1971, pp. 172-173.

[21] Lockyer, *op. cit*., see star map, p. 127.

[22] The figures in the center and to the left are from Thompkins, *op. cit*, p. 174; the figures on the right are from Lockyer, *op. cit*, p. 151.

CONTENTS

NOTES

[1] John A. Eddy, "Medicine Wheels & Plains Indian Astronomy," *Astronomy of the Ancients*, Brecher & Feirtag, eds., The MIT Press, Cambridge, 1980, pp. 1-24.

[2] John C. Brandt, "Pictographs and Petroglyphs of the Southwest Indians," *Astronomy of the Ancients*, Brecher & Feirtag, eds., MIT Press. Cambridge, 1980, p. 34.

[3] Anna Sofaer, as reported by Thomas Y. Canby in "The Anasazi: Riddles in the Ruins," *National Geographic*, Vol. 162, No. 5 (November, 1982), p. 581.

[3] Anna Sofaer, as reported by Thomas Y. Canby in "The Anasazi: Riddles in the Ruins," *National Geographic*, Vol. 162, No. 5 (November, 1982), p. 581.

[4] André Leroi-Gourhan, "The Beginnings of Art," *Larousse Encyclopedia of Phrehistoric & Ancient Art,* Prometheus Press, New York, 1962*,* p. 27.

[5] Howard Eves, *An Introduction to the History of Mathematics,* Holt, Rinehart & Winston, New York, p. 175.

[6] William Irwin Thompson, *The Time Falling Bodies Take to Light*, St. Martin's Press, New York, 1981, pp. 104-105.

[7] Georges Bataille, *Lascaus, or the Birth of Art,* Skira, Switzerland, 1955, p. 141.

[8] Douglas Mazonowicz, *Voices from the Stone Age,* Thomas Crowell, New York, 1974, pp. 31-32.

[9] Pierre Grimal, *Larousse World Mythology,* London: Paul Hamlyn, 1965, p. 21.

[10] Ibid., p. 22.

Long before the settlements, before agriculture and pottery and weaving, people were hunters and gatherers, and they lived in or near caves. Some of these caves were used for ceremonial, scientific and artistic purposes. They were the churches, laboratories and museums of their society. As Joseph Campbell so poetically states, "They are the underworld itself, the realm of the herds of the underworld, from which the herds of the upperworld proceed and back to which they return. They are the realm and substance of night, the darkness, and of the night sky, their animals being comparable to the stars."[25]

Did the anonymous artists of the Franco-Cantabrian Province have the notion that time was a sacred mystery? I have explored the possibility these early people understood the operative forces of their surroundings and celebrated their knowledge with sensitivity and precision.

I will overlay sacred geometry on the figures in the Well Scene at the cave at Lescaux, France, and relate it to the celestial calendar in the Egyptian Temple at Denera. Allow me to posit some background data.

DAGGER OF LIGHT

The Neolithic Indians of the Americas built *medicine wheels* for astronomical purposes. The Bighorn medicine wheel, in Bighorn National Forest, west of Sheridan, Wyoming, made of stacked stones, is ninety feet in diameter with twenty-eight spokes radiating from the central hub, and it can be used to view solar, planetary and stellar alignments.[1]

Many pictographs and petroglyphs of southwestern Indian tribes have remarkable resemblance to celestial phenomena. A set of pictographs on a overhanging rock at Chaco Canyon, New Mexico, a hand, a crescent-shape and an asterisk-like symbol, may represent the supernova of 1054 CE.[2] In another part of the canyon, Anna Sofaer found a spiral carved on a rock face in a recess behind three stone slabs which allow a *dagger of light* to fall on the spiral in such a way as to indicate the solstices, equinoxes and the nineteen-year lunar cycle.[3]

These early North American astronomers may have been influenced by the elaborate concepts of the Mayan and Aztec civilizations, but it is also possible that this knowledge was retained from their Paleolithic past.

TIME FACTORING

We know Neanderthal mined bloodstone and put flowers in graves. The origins of esthetics are connected to found objects and to the collectors' sensitivity to texture, form and color. There are unworked stones of curious natural formation in the archeological sites which suggest animal figures. Among the flint tools, there are pieces that represent both artistic and utilitarian perfection.[4]

A rudimentary geometry is involved in the making of stone tools, both in the process of flaking the stone and in the production from patterns. With geometry we can describe the orbits of the planets and stars, and with a simple numerical system we can keep a chronology—an archive—of events.

The earliest known numeral system is the grouping technique, where a base symbol is selected, and any number is expressed by adding this symbol the required number of times. The Egyptians cut their hieroglyphs in stone in the fourth millennium BCE, but earlier examples of number groupings have been found. The Ishango bone, described by Alexander Marshak, was found on the shore of Lake Edward in Zaire (Congo) and is dated as being over 8,000 years old; it shows numbers (although this notion is disputed) preserved by notches.[5] . A bas-relief, the *Venus of Laussel,* carved c.19,000 BCE in the Dordogne, has a crescent with thirteen or fourteen markings, which could relate to the lunar calendar.[6]

The axis of the temple at Dendera is indicated by the figure of a hawk-like bird on a staff, which precedes a man with a baton and follows a cow with a star between her horns. The hawk is a symbol for both Horus and Boreas, gods who are associated with the north. In the Well Scene, one of the four-fingered hands of the birdman reaches for the staff, and one is between the horns of the bison. The cave at Lascaux has a natural bearing northward, and the drawing on the wall in the Well Scene faces east. The birdman points towards the northern constellations, which the Pythagoreans called the *two hands of Rhea.* The bison then represents the eastern horizon in one framework and the circumpolar revolution of the two Dippers in another.

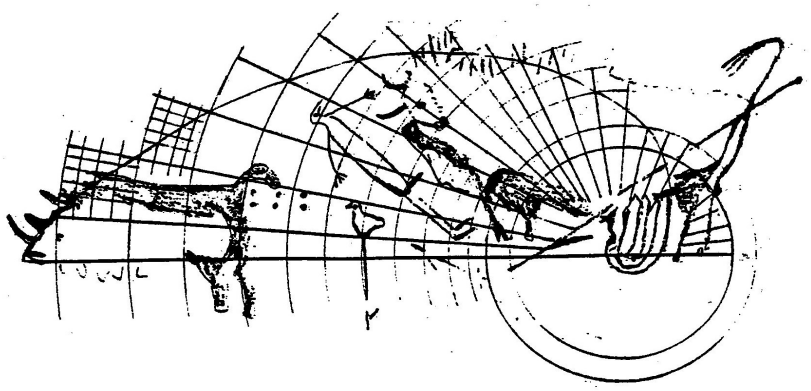
EPILOGUE

This essay began when my friend, David Pond, asked me if the Chaldeans invented astrology, and I found that the 6th century BCE Chaldean Dynasty is credited. This Babylonian dynasty lasted only a brief period, but its priests claimed their science was 473,00 years old.[24]

Sounds preposterous, I know, but the notion gave me pause to wonder how long ago it might have been that humans looked up at the heavens and wondered about their roots in the Ancient Days.

break in the dart, and touches a hoof of the bison. A line from the eye of the rhino passes on the diagonal through the six dots, touches one of the bird-man's hands, tips the penis, and passes through the point where the spear lays across the vulva of the bison.

The last diagram shows different relationships in the proportions of the composition measured along neighboring equidistant radii.



Whether it is argued the proportional harmonies revealed in the Well Scene were arrived at intuitively or intentionally, the diagrams dispel the notion of a haphazard or awkward placement of the figures in the composition.

In the Well Scene, the broken line with the figure of the bird at the top resembles a dart-thrower, a baton of command and an instrument with which to make naked-eye observations of stellar positions.

Given the thought that underlying the apparent arbitrary movements of nature, there is a pattern of order, given a tradition of accurate measurements conveyed through oral and pictogramic formula, given patience and good eyesight, with sticks and stones and a pot of paint, the artists who painted in the caves at Lascaux, France, could have portrayed the proportional limitations of the temporal process. These artists did not have our grid system, yet they discovered patterns of order in nature.

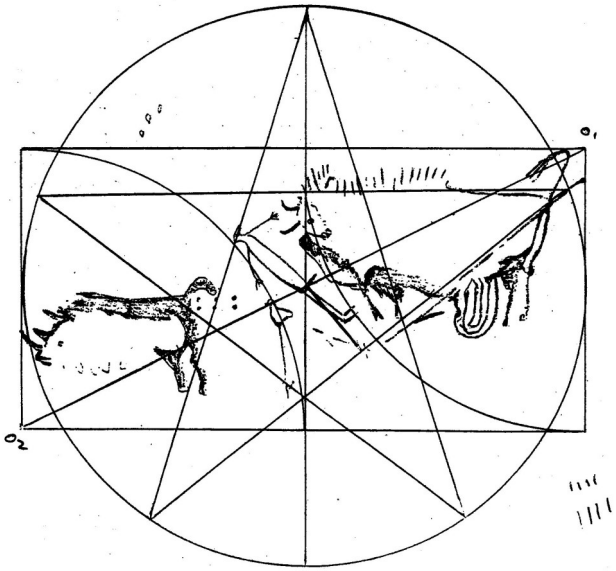
THE CAVE AT LASCAUX

Boys on a hike discovered the cave at Lascaux in Southwestern France with their dog in 1940. The principal paintings in the cave, according to Georges Bataille, date from the Middle Aurignacian, c. 20,000 BCE.[7] This date is set by a comparison of painting styles, the calcification of different rock strata, and carbon dating. The paintings are extremely well preserved due to a watertight limestone ceiling and the dormancy of the air in the chambers of the cave. However, the paint made from minerals within the cave, which was daubed with brushes and sticks or blown through bones onto the walls and ceilings, is susceptible to bacteria in human breath. The bacteria produces an algae known as *the green sickness*, which harms the paint, so there has been an official closure of the cave to the public.[8]

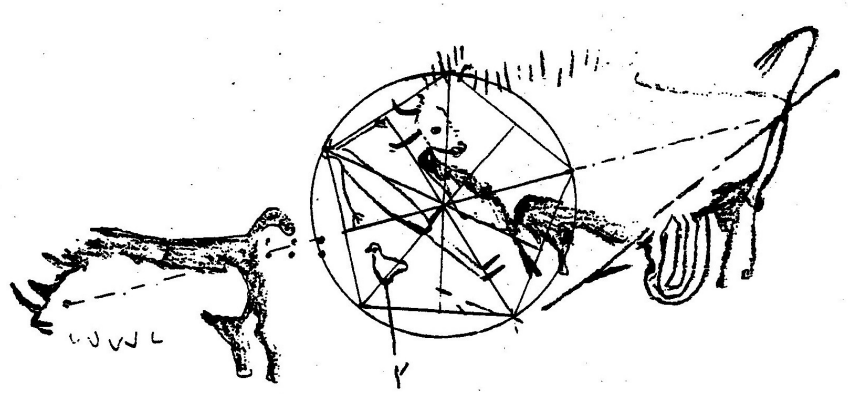
The paintings in the cave at Lascaux have been deemed a miracle, but their meaning remains an enigma. In general, art historians have concentrated on documenting the caves, taking measurements and tracings, and they have only put forth tentative hypotheses about the meanings of the paintings. There are essentially four categories of interpretation. First, *animism*, in which all things are filled with an immaterial force animating the universe.[9] The portraits are of animal spirits, the painters repainting in order to renew their power over them. This helps explain the many superimposed figures. Second, *the magic of the hunt*, in which invisible spirits must be revered and, if possible, influenced with sympathetic magic.[10] This helps explain certain obscure markings, possibly spears and arrows drawn on the figures or actual holes dug into the compositions, which indicate the animal has been killed or wounded. Third, *the cult of beauty or pure decoration*, in which the artists painted for the pleasure and fascination of representing creatures that were a part of their lives.[11] This helps explain the high degree of competency in their drawing, their understanding of animal anatomy, and their incorporation of natural accidents in the rocks as part of the paintings.

The fourth conjecture is *the language of sexuality,* in which the paintings are interpreted in the context of a fertility cult, the bison with a female valence, the horses with a male valence. The prehistorian

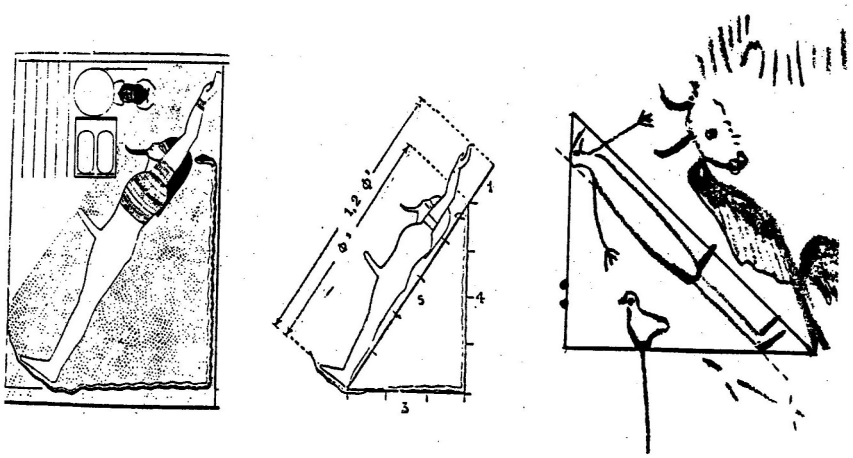
Pythagorean triangle and golden section proportions from the base of the penis to the break in the dart.



The next diagram shows a pentagon inscribed within a circle, which has a radius determined by the distance from the penis to the beak of the birdman. The pentagon's triangles approximate 3-4-5 proportions. The circumference of the circle passes through the eye of the birdman, through a pair of dots, the lower



upraised arm gives a 6/5, or 1.2 x ϕ^2 (ϕ=1.618, or π =3.1416.



I have drawn a 3-4-5 triangle on top of the birdman using the two outer dots and the back of the birdman's head as points for the side and the bottom of the bird on the staff, the heel of the birdman and the toes of the bison for the base. The distance from the right toe to the phallus would be in proportion of π to the hypotenuse.

The following diagram shows the Well Scene in a construction of two golden section proportions along a straight line O_1 to O_2, drawn through the eye of the bird and the butt of the man. An arc of a circle with O_1 or O_2 as the center and the radius being the height of the golden rectangle, drawn from the end of the spear to the horn of the rhino, establishes the birdman lying head to toe between these two golden section proportions. The base of the penis is in the middle of the pentagram, which shows the

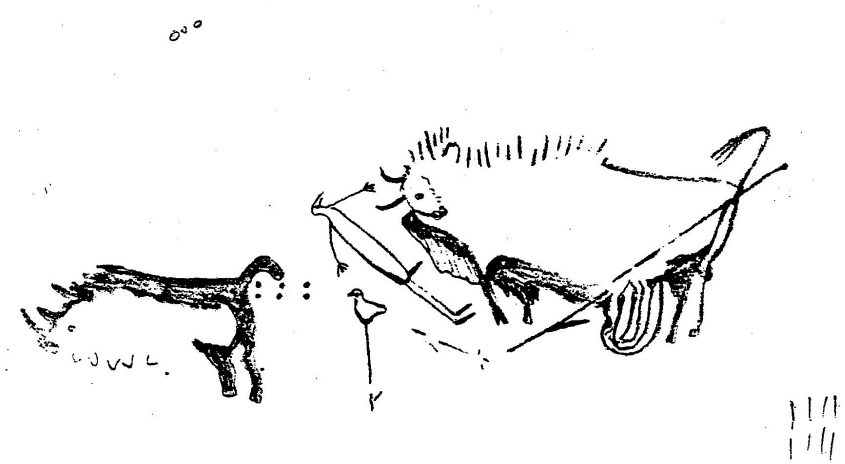
André Leroi-Gourhan hazards this idea. In *The Time Falling Bodies Take to Light*, William Irwin Thompson couples Leroi-Gourhan's idea with the idea of Alexander Marshack, that the animal figures are expressions of time-factoring patterns, to suggest the possibility of a complex cosmology in which the animals are the early forms of the zodiac.[12]

There are nearly a hundred paintings that are intact in the cave at Lascaux, and they incorporate a wide variety of styles, which were evolved over a long period of time. There are not enough paintings to depict every hunt, neither are all the walls decorated nor all the drawings finished. For the most part, the paintings are not mutilated, and the few projectile-like markings appear more like abstract signs than diagrams of the hunt. The pictures are of animals in various attitudes, not hunted, not domesticated—bulls standing, cows leaping, little horses galloping, deer swimming, deer with antlers like five-pointed stars, mountain ponies, sleek gazelles, a few fabulous beasts similar to unicorns, a few felines, one rhinoceros, and one ithphallic therianthropic being, a bird-headed man with an erect penis.

THE WELL SCENE

Of all the paintings at Lascaux there is none more curious and arresting than "The Well Scene," or as it is sometimes called, "The Shaft of the Dead Man." Many commentators have noted the twisted per-

spective and have felt there is coherency in the disorder without having found the meditated effort behind the composition.



Abbé H. Breuil, the author of *Four Hundred Centuries of Cave Art,* who first catalogued the paintings upon their discovery, sees The Well Scene as commemorating some fatal accident that occurred in the course of a hunt. The rhinoceros disemboweled the bison, and the bison killed the man. As for the pole surmounted by a bird, he is reminded of the funeral posts of the Alaskan Eskimos.[13]

H. Kirchner, in his article in *Anthropos,* believes the bird-headed man is a shaman in an ecstatic trance. He compares The Well Scene to a representation of a cow sacrifice by the Siberian Yakuts in which there are posts topped by birds similar to the ones depicted in the Lascaux scene. These auxiliary spirits help the shaman accomplish his journey while he is unconscious.[14]

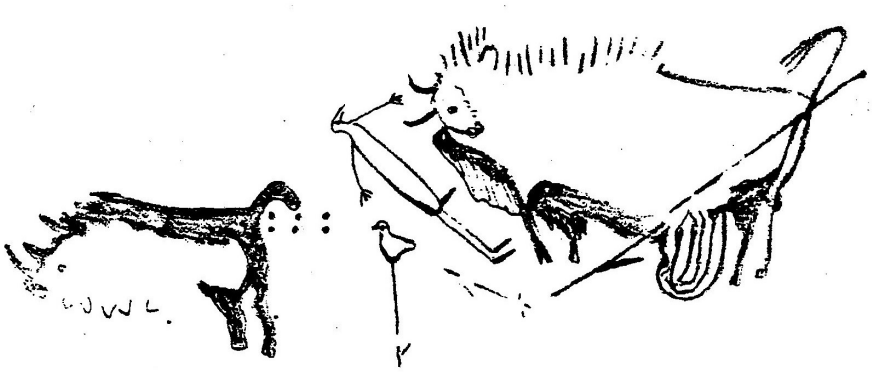
also stiff and two-dimensional, and the left front hoof is turned so the cleft is visible. The spear bisects the hind quarters of the bison, and there is a break in the shaft, as there are breaks in the dart and the staff, suggesting a coordinate system with the iconography of eyes, nose, thighs and toes all loaded with symbolic content. Every kind of perspective is utilized. Given flickering torchlight and a little psilocybe, a holographic paradigm of cosmic proportions emerges, but I'll leave off describing a Cro-Magnon ceremony.

GRAPHIC CONSIDERATIONS

The classical method of computing π is by using regular inscribed and circumscribed polygons. Aryabahata (c.530 CE) gave 62,832/20,000 = 3.1416. It is possible to arrive at this value from calculating the perimeter of a regular inscribed polygon of 384 sides. In 1967, workers at the Commissariat á l'Énergie Atomique in Paris found π to 500,000 places on a CDC 6600 computer.

Peter Tompkins, in *Secrets of the Great Pyramid,* shows Schwallers de Lubicz's graphic evidence that the Egyptians in the time of Rameses IX had worked out a direct relation between π and ϕ.[23] $\pi = \phi^2 \times 6/5$. The figure in the diagram below shows the pharaoh as the hypotenuse of a sacred 3-4-5 triangle formed in conjunction with a snake. The pharaoh as ϕ is split into a ϕ+1 proportion by his phallus. The

and the front legs are casually sketched. The man is rendered in cartoon style, and the bison, drawn in broad strokes, is a combination of both styles. Many commentators have noted this mixture of styles, and the painting has been used as an axis from which to tentatively chronicle other paintings in the cave.



The *twisted perspective* has been interpreted to mean the artists could not draw in renaissance perspective, so the head of the bison was drawn in ¾ profile to show the animal turning. This is not so much wrong as it is not taken far enough. The position of the hind legs and the shading of the rhino, even the partially rendered front legs and the position on the curvature of the wall, combine to make the figure move out of the composition. Many editors printing a reproduction of this painting crop out the rhino and the six dots entirely.

The birdman is very rigid. The front of the bison is

To these interpretations can be added Thompson's theory of the dying male god and the Paleolithic Mother Goddess, a theme, as he points out, that recurs in the myth of Isis and Osiris and is pictured in the "Pieta" of Michelangelo.[15]

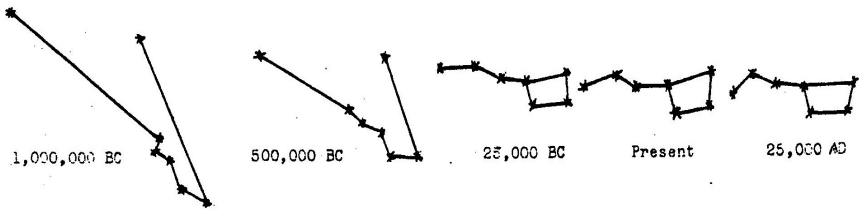
The various explanations of The Well Scene do not exclude one another, for there is symbolism in this Paleolithic painting that could be the source from which later myths and images are derived.

THE BIG DIPPER

You are familiar with the group of stars known as the Big Dipper. If you have studied astronomy, you know that its apparent change of place is due to the turning of the earth on its axis, which makes it appear that the dipper is moving. The two outer stars in the bowl of the dipper are in line with the North Star, and the handle swings in a circle. The Big Dipper is seen in different parts of the sky during each season because of the earth's rotation around the sun. Sailors and travelers watch this constellation in order to tell the hour of the night by its position.

You know the light coming from those stars moves fast. A *light year* is the distance that light travels in a year, approximately six million million miles. Since light can travel a distance equal to the circumference of the earth in 1/7 second, celestial distances are

enormous. Add to this the sources of the light, the stars, are moving. One million years ago, when Pithecanthropus first looked up, the Big Dipper was shaped more like the leg of a hoofed animal than a dipper.[16]



In France, the Big Dipper is called the Casserole; in England, the same group of stars is known as the Plough. In China, it is the Celestial Bureaucrat who, seated on a cloud, is accompanied on his rounds by his eternally hopeful petitioners. In India and Arabia, seven oxen turning a millstone represent this constellation, and the North Pole is the axle bearing in which the mill-iron turns.

Greeks, Romans, and American Indians see the Big Dipper as a Great Bear. The Sioux say it is looking for a place to lie down and hibernate.[17] In Thebes, a large group of stars, containing the Dipper, was portrayed as a procession of a bull, a horizontal man or god, Ra-Horus, and a hippopotamus with a crocodile on its back.[18]

These motifs in world mythology, with the possible exception of the Casserole, express highly developed astronomical concepts. Archaeoastronomy is the study of the position of the stars in times past.

square zodiac at Dendera. The center group are a hybrid with the Hippopotamus having donned the cloak of the Crocodile, the body of the Bull taking the shape of the Thigh, and the twisted cord attached to the Thigh becoming an isosceles triangle and ten dots. If the three stars that are in front of the Dipper (those that make up the shoulder and eye of the Great Bear) are added to the seven stars of the Dipper, the shape is similar to that held by the Hippopotamus. The Crocodile could have been an earlier figure for the same constellation, which is presently Draco, the Dragon.

Lockyer notes that our modern astronomers observe the stars at the meridian, but that the ancients considered the risings and settings as significant. In Egyptian mythology, the event of a rising star was represented as *Isis nursing Horus*, or *Isis* (the star goddess) *taking Horus* (the sun god) *from his cradle.* When there was not a rising star at dawn, a grown Horus could dispel the darkness by *slaying* the Crocodile. The symbolic notation was flexible: a god could be a star, a constellation, or a force behind the relationship of a star and a constellation.

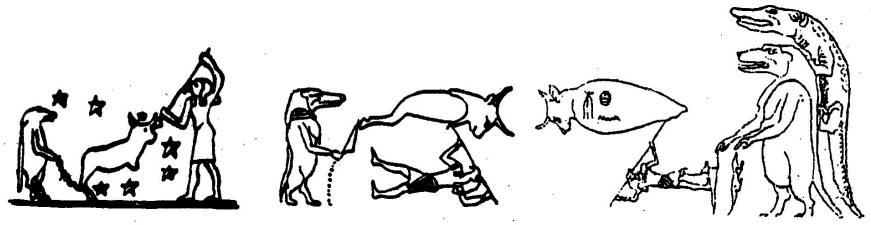
We go back now to an auspicious Magdalean Era dawn on the autumnal equinox. The wall of the Well has been prepared to receive an underpainting of ochre. The rhinoceros is painted in the superior style, although it is unfinished, so it appears to be *drowning* or disappearing over the horizon. The paint used to model the hindquarters is blown on a wet surface,

COHERENT DISORDER

To enter the Well you descend from a chamber called the Apse, so-called because it ends in a semi-dome. On the walls are paintings that have been nearly effaced by what Bataille calls “a swarming network of countless etchings.” The entire ceiling and all the walls were minutely carved with many of the figures superimposed. The vast number of engravings is in contrast to the few figures in the Well Scene, as if here an abundance of data was accumulated and computed into the equation on the wall of the Well.

The cave itself is a sacred space, and the Well is a special spot within this space. The Main Hall opens directly north, and the wall of the Well Scene, as you face it, is a few degrees south of east. The bird-headed man points to the celestial north, and the spear represents the pole of the ecliptic. I consider all the figures in the Well Scene to pertain to one composition, and that composition is analogous to Egyptian charts of the northern constellations represented by a hippopotamus, a bull, and a bird-headed man.[22]

The figures on the far right are from a Theban Tomb, and the figures on the far left are from the



These studies indicate that we have to re-evaluate the theoretical astronomy of the ancients because it has been shown that the temples and megaliths of ancient times represent the codification of a tradition of sophisticated observation that dates back to the Upper Paleolithic.

ARCHAEOASTRONOMY

The modern science of archaeoastronomy began in March, 1890, when Sir J. Norman Lockyer took a vacation from his post at the Royal Academy in London and went to the Levant. Lockyer, influenced by Professor Nissen of Germany, who had published the first papers on temple orientations, noted the many changes of direction in the foundations of the temple at Eleusis and thought that there might be possible astronomical origins in their orientations. He endeavored to ascertain whether this subject had been worked out, but he found, after consulting books and archeologists, that the idea was original.

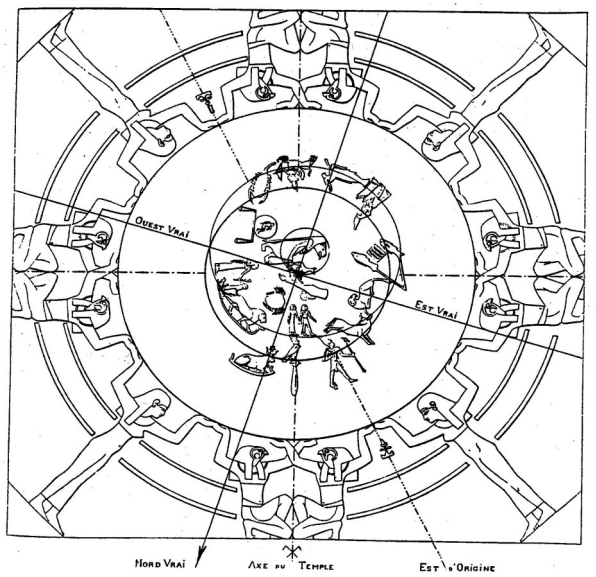
In a series of lectures, Lockyer pointed out that one would ultimately be able to arrive at dates in regard to the foundations of temples. He returned to Cairo, where his friend Brugsch Bey showed him an inscription concerning the foundation of the temple of Edfu, which indicated that his idea was possibly 6,000 years old. Further research and measurements supported his idea that the orientation of the temples had an astronomical basis. To complete the picture,

he brought together the data from old Egyptian calendars, myths, and temple orientations.

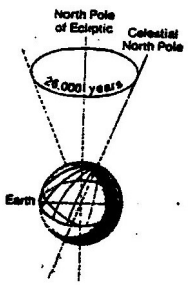
In 1894, Lockyer published *The Dawn of Astronomy.* His work demonstrated that the Egyptian iconography of animal forms represent both mythological personages and actual constellations. Using measurements from the monuments and the text from E.A. Wallis Budge's translation of *The Book of the Dead*, he investigated the astronomical basis of the Egyptian pantheon.[19]

The goddess Hathor, or Isis, personified a star, and the Temple of Hathor at Dendera, which was built on the ruins of much older temples, was used to watch this star. Lockyer described the alignment of the axis of the temple, and he noted that at widely spaced periods of time other stars had risen at nearly this same amplitude. With specially built instruments to make calculations of the position of stars in the past, Lockyer correlated his architectural measurements and the cosmological language of Egyptian myths.

The Egyptologists of Lockyer's time scoffed at his theory. Contemporary archeologists now support Lockyer's conclusions. Schwaller de Lubicz explains how the circular zodiac in the Temple of Hathor shows the ancient Egyptians understood that a new constellation comes into position behind the rising sun at the vernal equinox every 2,200 years.[20]



The precession of the equinoxes is caused by the change in the direction of the axis of the earth in space over a period of 26,000 years. At present, the pole-star is in the constellation of Ursa Minor, but in the past other stars have had this position: Draconis in the tail of Draco at 2,700 BCE, Vega in the constellation Lyra, 12,000 BCE, Deneb in Cygnus about 20,000 BCE, and Polaris again at the dawn of the last Aquarian Age.[21]



If hidden in the myths there is the awareness of the precession of the equinoxes, then it would have taken many generations (and an occasional Galileo in goatskins) to have performed the naked-eye observations required to produce the results for which the Egyptian temples would be constructed.