

A PALAEOOLITHIC SHAMANISTIC COSMOGRAPHY: HOW TO DECODE THE FAMOUS ROCK PICTURE IN THE SHAFT OF THE LASCAUX GROTTA

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An important expression of a Palaeolithic shamanistic cosmovision is to be found in the cave of Lascaux (France). There, in the so-called »shaft», a panel of rock pictures reveals a cosmography, 16,500 years old, as dated by archaeological and astronomical methods.

It's a map of the cosmos, which contains elements of shamanistic (and totemistic) cosmology and cosmogony, comparable to the drawings on the later shamanistic drums.

To «read» such a panel of rock pictures, one needs a special kind of new methodology – the so-called «integral methodology». Previously presented interpretations, like a hunting scene, a funeral monument, a cult of the dead, hallucinations, a magic scene, a sexual topic, a divination, a sacrificing rite, a shamanistic-totemistic scene or a picture of the sky are not wrong, but must be combined together in a consistent view. This methodology is necessary because of the complexity of earliest cultures. The «integral methodology» uses phenomenology, single detailed views, relations between different perspectives, synopsis (with respect to superposition, complementarity, paradoxicality). The research work takes results and methods from many disciplines, including astronomy, archaeology, cartography, ethnology, mathematics, mythology, scientific study of religions, semiotics.

The study is based on a phenomenology of all known rock-pictures in the "shaft" (*ill. 1, 2, 3*). Moreover they are analysed by means of scientific and technological methodology, in particular photogrammetry and image processing of the images. With the help of a monocomparator, co-ordinates of about 90 points in the figures of the panel were determined. These examination allowed to reconstruct the «geometry» of the scene with a CAD-software, showing clearly straight lines, angles and circles in the panel of rock pictures. The resulting angles were equivalent to some special astronomical values for place and epoch of Lascaux (*ill. 10*). Thorough astronomical computations include the obliquity of the ecliptic, the precession of the equinox, the proper motions of the stars, the horizontal parallax of the moon, the disc radiuses of sun and moon, the refraction, the extinction, the visual horizon and finally the star phases. The computations are based on the age of the rock pictures, according to stylistic, stratigraphic, pollen analytic and radiocarbon dating.

This abstract system of astronomical elements is connected with biological, symbolical and mythical aspects of the pictures, leading to an archaic cosmology and cosmogony of the Lascaux epoch. A lot of shamanistic and totemistic elements could be found in the Lascaux rock pictures. The figures represented are star-creatures (constellations, Milky Way, sun, moon) and also power-beings.

Studies had pointed out, that shamans were not only spiritual healers, but experts for cosmography. They looked at the sky and studied the celestial figures and proceedings very carefully. Shamans believed, that all phenomena between heaven and earth are interacting with one another. Every action stood under astral influence. It was important to know the right time for telling myths, carrying out rites and ceremonies. So it was necessary for them to find out vigorous and weak places and times in the cosmos. Therefore they built observatories, which were connected with some form of rock art, within or outside caves. Shamans used maps to show important and holy points or regions in the heaven and on earth. With the help of calendar-sticks they kept the time.

Shamans and chiefs organised their societies with reference to definite phenomena of the sky. The clan divisions and totems followed complex class systems, which were structured

dyadic and diametric and connected with cosmic events, proceedings and structures. Shamans recognised their "relatives at the sky" in the celestial creatures, who are the divine lords of the beings, their ancestors. From them shamans hoped to get help to survive in difficult situations and to heal. So shamans were able to arrange the communication between the heavenly and the earthly nature and established the cosmic harmony, where it seemed disturbed. They safeguarded the relations in the cosmos by travelling through the different regions and getting in contact with the archetypal life-figures.

Since the Palaeolithic shamans entered the caves to travel to the spheres of the space-time and to learn something about it. Phenomena and proceedings, which they experienced there, were shown as a shamanistic-totemistic cosmography in rock-pictures. In the subterranean sanctuaries shamans thought to get spirit helpers figured as animals, which helped them to master their journey through the worlds.

Already since the epochs of the earliest cultures caves were considered world-wide as particular places in space and time, shrines and places of cult and curing. Later in time artificial crypts, then, above the ground, hallow tents, huts, houses, temples, churches or the domes of stalactites of the mosques replaced the caves.

The cave was the place, where space and time were generated. Rock pictures showed the creatures of this world-cave. The arch of the subterranean rock ceiling, particularly in the natural domes of the caves, represents the rounding of the sky, the floor of the cave the earth. The heavenly figures are recorded on the ceilings, the earthly on the ground. The shape of the underground spaces copies the structures of the cosmos, particularly the apertures, passages, chambers, dripstones and watercourses in the cave. The rock figures and rock pictures of objects, plants, animals, and sometimes human beings frequently refer to astronomical elements, which show places and motions into space and time. These are for example the directions, the plumbing rule, the centre, the cosmic axis, the places of the solstices and equinoxes, the course of moon and sun, the stars and constellations, the Milky Way and occasionally also other phenomena as eclipses, meteor showers or comets. Caves permitted the entrance into the alternate worlds and worked as a kind of doors. The inner forces of nature were to be found there. The creatures of the different levels of the cosmos assembled in such power-caves. Shamans visited caves to learn more about the powers and structures of nature and to get the strength from the ancestral heavenly spirits. Therefore they drew the phenomena and proceedings of the cosmos, an archaic cosmography onto the rocks. The cave reflected all spatiotemporal attributes of the universe. The navel of the world was situated there, often symbolised by a stalagmite-stalactite-pillar. The topography of the subterranean rooms showed the important points, directions, lines, circles and dates of the cosmic structure.

The cave was at the same time a locality of birth, death and rebirth, the uterus of the cosmos, the things and creatures in it. It was the place of cosmogony, particularly of the genesis of living beings. The grotto contained in its depths the creative inner forces of nature, of the elements earth, water, air, fire. The cave resembled the female sexual organs, the uterus primarily. The living beings, plants, preferentially animals and people, but also crystals and metals, was given continuous birth out of an embryonic archetypal state in the dark womb of the cosmic mother earth. After her death or destruction they were put back into the cave or mother earth for a new transformation. The caves therefore were not only places of generation and birth but moreover of dying and death, of renewal and rebirth, of heavenly and earthly nature in the course of the year. The first celestial bodies, objects, plants, animals and people were created in the darkness of the "birth caves". These archetypes (totems) came out of the rocks of the subterranean spaces. According to old opinions, such powerful creatures made even the rock art by penetrating the rocks, leaving her lasting "impression" - the rock pictures on the walls as symbols of their powers. Finally they came from the darkness of the grottoes to light on the surface of the earth through an opening in the rocks and made the creatures,

whose prototypes they were. Often shamans acted as an obstetrician for them.

According to old opinions caves opened paths to other realities of the cosmos. Different spaces and times were connected in a multidimensional construct at her place. The centre of the world, the entrances, passages and outlets in the lower, middle and upper worlds could be found in the grottoes. There succeeded the difficult and dangerous passages between the different spatiotemporal worlds.

Therefore shamans entered the caves to travel to the different spheres of the space and to learn something about it. The journey led the shaman to all directions of the cosmos. Phenomena and proceedings, which they experienced and recognised there, were shown as shamanistic and totemistic cosmography in rock-pictures within and outside the caves. In the grottoes shamans thought to get spirit helpers figured as animals, which helped them to master safely their journey through the cosmic spaces and times.

Caves were so in a similar manner places of psychosomatic curing and cosmic theory (reminding the original meaning of the Greek word »theoria" as »vision"). They were locations of inner and outer experience.

That's why therefore the Lascaux scene may be a Palaeolithic shamanistic cosmography. This now has to be proofed. In my original study – a doctoral thesis – more than 2,500 notes substantiate the statement. The examples are symbols, myths and rites from cultures all over the world. Because of the short time available it is impossible to tell any myth in detail. In this extreme shortened paper only some results can be presented. Please have a look on the doctoral thesis to follow up the argumentation down to the smallest detail.

The keys to decode the rock panel are the bird-stick and the bird-man (*ill. 10*). Both figures show similarities and differences. To »read" the pictures, it is necessary to split the images into their elements, in one case the bird and the stick, in the other case the bird and the human body. Myths and symbols of the people all over the world, particular shamanistic ones, help to find out the meaning of the figures, showing, that they represent ideograms. Ascending and flying Birds symbolise the wide areas of the air and the sky and also the celestial bodies – the sun, the moon, the stars and constellations moving in these upper spaces. They have the power to reach the highest points in the sky, the zenith and the pole, hovering there. Therefore they are the animal lords of these heavenly places and regions.

Two focuses have to be considered: A standpoint from the bottom of the shaft and another from its top, immediately near the way down. First the scene is seen from the floor (*ill. 8*).

The stick punctures the ground like a prick and marks a selected place on earth: the centre of an area, the middle of the world. Seen from the bottom of the shaft of the grotto it really raises up vertically. A fact, which can be verified by plumbing. The bird-man then appears to be inclined. The bird-stick shows the topographical centre, the direction to the zenith and the vertical line. World-wide shamans set up figure-posts, crowned by animals, frequently by birds, at particular localities, mostly the centre of an important area or of the whole cosmos. The birds may be an eagle, a raven, a cock, a cuckoo, a crane, a quetzal or others. These sticks and rods, posts and pillars, crosses or sceptres, crowned by a bird, express the divine power of the place, the cosmic axis extending from the centre to the highest point in the heaven. The stick may be replaced by a column, a cross, a mountain, a nail, a phallus, a pillar, a pole, a plug, a sceptre, a temple, a tree, a vertebral column, always crowned by a bird, which all support the sky, holding the cosmos together. In particular the bird-sceptre is a handy bird-tree. It represents the creative cosmic energy, which is especially active at the time of the changing seasons. According to some myths the souls of the shamans, shaped as birds with human heads or humans with bird heads, are sitting on the branches of the world-tree. They often are also compared with stars sparkling in the boughs. The bird-stick as a handy bird- and world-tree connects the three (or sometimes more) worlds of the shamanistic worldview - the

lower, the middle and the upper world. These bird- or world-tree permits the shamans and sovereigns to get in contact with the powers, spirits or gods of the sky. They serve as spirit-helpers for the flight of the shaman into the different regions of the cosmos.

Now the view has to be changed (*ill. 9*). From the top of the shaft in the grotto the bird-stick seems to be inclined and the bird-man stands upright. Both, the bird-stick with its tip and the bird-man with his flat feet stand on an invisible baseline. With the help of a CAD-program it is possible to compute the angle between the vertical line, represented by the bird-stick and this kind of ground (*ill. 10*). The resulting angle measures 45.3° . This value is remarkable, because the Lascaux grotto is situated at a latitude of 45.01° . When the bird-man stands upright, then the bird-stick points to the northern pole of the sky above the horizon. Rites and myths from the people all over the world show, that the whole bird-stick and in particular the bird refer to the circumpolar constellations and the point of the sky pole or the northern star of the epoch. Therefore, the sign of the «bird» symbolises the rotating sphere of the heavens and expresses the cosmic power. Shamans in Asia and America erect such bird-sticks or sticks crowned by tuft of feathers replacing the bird and align them or at least the figure of the animals on the top along the cardinal directions, in particular the meridian line. Often they incline the post and get its top in a straight line to the point of the northern sky pole.

The «bird-stick» is comparable to the so-called «one-legged polar beings», peculiar hybrid figures, known from several symbols, myths, fairy-tales world-wide. It could be seen as a bird with only one oversized leg. This abstract picture is understandable because of its astronomical meaning. It symbolises the pole star or constellation near by – represented by an animal, here the bird or sometimes by a god, and the polar axis – the stick, around which the sky rotates. The one leg, the pivot leg, is an excellent picture for the possibility to turn around. It seems as if the polar axis impaled the animal of the pole star or the polar constellation. During the epochs the constellations at the northern (and southern) sky pole change, because of the slowly shifting axis of the earth. And so different celestial animals succeeded one another above the apparently immovable polar axis. One of these creatures is a bird, often a chicken. Others are a turtle, a stag, an elk, a bear, a snake, a horse for example. The impaled animals of shamanistic rites, the hobbyhorses and later the weather-cocks on top of the churches belong to that type of one-legged polar beings.

Some people know the ancient practice to shoot at the solar bird, perched on a rod. This tradition took place at the day of the solstice in summer. Mostly the bird was a chicken. It symbolises the sun, that after the solstice descends on the ecliptic and the declining daylight in the second half of the year. The sun nests at the top of the rod like a bird at a tree-top. Another version of this solar-bird-stick is the solar-ring or ring of time, which is also the object of a shooting practise. In this view the bird-stick is a gnomon and serves as a sundial. It's important to understand that there is a special form of such a sun clock, which is aligned to the pole of the sky. Shamans use this gnomon to fix the course of the seasons, the dates of the equinoxes and solstices, the meridian line, the circling of the stars and the Milky Way around the pole and even the obliquity of the ecliptic. It is very interesting that the loosed arrow in the scene and the stick, on which the bird is sitting are at an angle of 68.6° . This fits very well the altitude of the sun above the horizon at the place of the Lascaux grotto, at the date of summer-solstice, about 16,500 years ago (the computed value is 69.3°). And the arrow sometimes belongs to the shamans equipment too. The flying arrow, replacing a bird, points in the direction, where the ecstatic human being must ascend to the sky.

So the «bird-stick» is a symbol for the structure of the cosmos and the dynamic forces, which hold the universe rotating. It serves as a measure of the spatiotemporal structure of the cosmos. It fixes the origin of a reference system of all phenomena in the universe. Therefore in many old cultures, the bird-sceptre served as a sign of political and spiritual power. Since some thousand years, the shamans used bird-sticks to show their strength and as a spirit

helper, to master their journey to the other worlds and in particular to the sky pole, the centre of the cosmic forces. There, they believed, near the middle of the heavens, existed the cosmic totem animals, the lords and prototypes of the creatures on earth, personified in the constellations.

It's time to look back to the bird-man. According to traditions of the people bird-men carry the vault of the heaven. They stand with both feet on the ground and reach with their vortex the sky in the highest point above, the zenith. On their heads they wear a crown of feathers or a single feather, because they enter the regions, where only birds can stay. These bird-men turn the stars around. The living being, which should support the world, must be in rigor mortis. It serves like a backbone of the universe. Its vertebral column with the ribs stretches the circles of the heavens and really looks like a cosmic skeleton. Often these carriers are shown as ithyphallic mummies. Primeval rulers and shamans, mostly seen as giants, spread their extremities to create and conserve the cosmos. In old traditions the primeval shaman incorporates the cosmic axis, supporting the levels of the universe.

Selected mammals and birds accompany or lead even the souls of the shamans on her way. Mostly these helping and protecting spirits are represented with the shaman. They are at the same time totem figures and constellations. Such spirit helpers can be found in the rock pictures in the «shaft»: the bison, the woolly rhinoceros, the wild horse in opposite of them, and also the bird stick. The detailed analysis of these images substantiates this idea. It refers to an extensive study of symbols, myths and fairy-tales all over the world and the CAD-proofed geometry of the scene (*ill. 4, 5, 6, 7*). The key to the star-beings are the eyes of the birdman, the bird-on-top-of-the-stick and the bison. They form a triangle, which could be verified as our today «summer-triangle», composed of parts of the today constellations Swan, Lyre, Dolphin, Eagle (*ill. 5*). At the epoch of Lascaux all these constellations had been circumpolar: They circulated around the northern star of that time, the star $18 \cdot \delta$ Cyg (*ill. 4, 7*). This view of the northern sky could be computed to a time 16,500 ago, corresponding with the radiocarbon dating. The rock picture of the wild horse, face to face with the other images, is in particularly interesting: It could represent the today constellation Lion and completes the skyline of the Lascaux epoch. According to ancient shamanistic traditions constellations near the Milky Way serve as spirit helpers. It's an idea, that then the shaman himself is represented by a constellation in this gleaming ribbon.

The astronomical examination proofs, that the bird-man is a big constellation, which is really situated in the midst of the Milky Way. The upper part of the mixed creature is composed of stars of the today constellation Swan and Fox, the lower part is shaped by stars of the Eagle, Serpent Bearer, Hercules and Arrow. Today a star-bird is still flying along the Milky Way: the Swan. All over the world shamans move along this heavenly path to the points of the northern (and southern) sky poles or to the spots of the equinoxes or solstices in the ecliptic, when they are situated in the Milky Way during the course of the epochs. They travel to the origin of the creation, which is to be found in the Milky Way, in particular, if the northern sky pole comes to be situated in the shimmering band. This isn't the fact today, but it was so in the Magdalenian period (*ill. 7*). Like the constellation Swan, the shaman is flying along the Milky Way to the northern pole star, which at the epoch of Lascaux was also a star in the galactic ribbon ($18 \cdot \delta$ Cyg). 16,500 years ago, the Milky Way rotated around the northern pole star, like a bow of fire, drilled by the cosmic axis, which in the rock panel is represented by the «bird-stick». To that centre of power the way of the bird-man or shaman lead through the regions of the cosmos. That is why both bird-shaped figures are similar. The Milky Way is the shamans trajectory in the stratified cosmos to alternate worlds. It helps him to measure space and time, indicating important points and directions, where and when to go. According to ancient traditions the Milky Way is divine sperm, urine, light or milk, dropping

down from heaven to earth. The shamans flying in the Milky Way ejaculate these fertilising streams. This is why the bird-man in the scene shows an erect phallus. According several myths the cosmic ejaculation happens in the centre of the world-cave. Not only the Milky Way, but the zodiac too is generated.

In a shamanistic worldview the Milky Way is very important. It's the way of the birds, in particular migratory birds, the way of a human being, heavenly hunter, the way of the souls, spirits and shamans, a spermatic river or the backbone of the sky.

The souls travel on the Milky Way between the cardinal points from the realm of the living beings to the domain of the dead. There are special places to ascend and to descend, of disembodiment and of embodiment, pictured as gaps, holes, canals, gorges, doors. They appear as points of intersection of ecliptic and Milky Way, the horizon and sometimes the celestial equator too. Only at the date of the equinoxes or solstices the journey can be successful.

While being in ecstasy the shaman is able to travel through the connected levels of the cosmos. His soul raises up to the highest regions of the sky. There he passes the lightning, the thunder, the rainbow and other phenomena, crosses the courses of the sun, moon and the wandering stars and reaches the pole star or the Milky Way. The shamans journey goes to the lords of the animals, who are primeval celestial beings and are regarded as archetypes of all earthly living beings (*ill. 17*). They ask these cosmic totem animal them for advice.

Single stars, the constellations, the Milky Way, the sun, the moon or the wandering stars, but also other celestial phenomena, like the rainbow for example, frequently get connected to the power animals and totems of a clan and to class systems. The Pole Star, himself appeared as a mighty lord of the animals, a supreme divinity. The cosmic totem animals represent the celestial prototypes of all living beings or objects on earth. Once, certain animals of primeval times remained in the sky and became single fixed and wandering stars or constellations. They influenced all their earthly equivalents and are responsible for generating and increasing them. The brooding and throw places of the animals, the seed beds of the plants, the places of birth of the people and the origin place of the objects on the earth are named after the stars, in which the astral protection spirits are domiciled. The celestial lord of the animals passes into the earthly living being and animates it with its vitality. So it's clear, why animals and celestial beings interact.

These cosmic totem and power animals are situated in the Milky Way, at and near the sky pole and in the zodiac. This fact is important for the interpretation of the scene in the shaft. The animals, the bison, the woolly rhinoceros and the horse, situated near the bird-stick and bird-man can be such totem beings and perhaps constellations. The detailed study shows that about 16,500 years ago the celestial hemisphere really corresponded with the topographic distribution of the rock pictures in the shaft (*ill. 4, 6, 8*). The animals incorporate large constellations, each covering a quarter of the sky. The bison reaches from north to east. He indicates springtime and summer. The woolly rhinoceros occupies the heaven between north and west. It signifies autumn and winter. The wild horse represents the southern area, between east and west. It shows the summer. The bird-stick and the bird-man represent the northern area, indicating the winter.

The Beaver, North American Natives, tell a myth about the ecstatic journey of a primeval shaman through space and time. He transforms himself into a migratory bird, a swan, because this is the only animal, which can reach the supreme area in the sky. The shaman, a young boy, spread out his arms like wings and stretches his body, assuming the form of a cross and flies up. He finds the path to the inner centre of the heavens, the Milky Way and the polar axis.

The attributes of shamanistic costumes, well-known from a lot of research studies, help to comprehend the bird-mans behaviour. The bird-man could be understood as a shaman, flying

up to the circumpolar stars and travelling between the worlds along the Milky Way, which is conceived as a path of the birds, spirits and heavenly hunters up to the Pole Star. From top to toe the bird-man's figure personifies several attributes of a shaman in ecstasy, changing himself into a bird. Some people in Asia, America and Europe compare the shamans with migratory birds, because they recognise both as vigorous, responsible, sensible and guiding clan-leaders. They help the tribe to find its way in space and time. The powers of mind lend wings to the shamans. Therefore they can turn into mixed creatures, which fly in the sky as a bird and walk about on ground as a human being (*ill. 13*). Often these chimeras look like a heron, crane or stork. Like the stars around the pole star, human beings rotate around the centre of creative energy, represented by a shaman or chief. Therefore the pole star and the area nearby the polar point of the sky were very important and revered. A symbol of this cosmic power on earth is the bird-sceptre of the shaman and later of the ruler.

The shaman's path goes through several (often three) apertures in the cosmic levels, along the polar axis, standing in the middle of the world. Often only birds can peck the openings. Therefore they really can reach all regions in the cosmos. They fly, walk and dive. If a shaman wants to reach the regions too, he has to transform himself in a bird, fly along the polar axis through the apertures. The highest gaps to slip through, were the point of the zenith and the northern (or southern) celestial pole. The look to the pole star and the circumpolar constellations showing the rotating sphere of heavens help the shaman to meditate on the changing cosmos and thus to concentrate his powers. The communication between the worlds goes well, when the shaman is standing in the centre of the cosmos, near the polar axis. With the help of bird spirits and turning himself in a bird, the shaman moves between the different areas in the cosmos, which are filled with the primordial elements of water, earth, air and fire. In particular he transforms himself in a bird, sometimes a migratory bird. He stretches his arms like a flying bird's wings. He receives feathers on the head and a beak, a plumage and claws. This is why the bird-man in the scene has attributes of a human and a bird. In particular the four fingers on each of his hand represent the claws of a bird. Why is the bird-man so raw-boned? According to shamanistic opinions the skeleton of a bird, often pictured on the costume, symbolises the flight to the heavens and the dismemberment of the psychosomatic body in death and ecstasy (*ill. 14*). The transmutation happens in the centre of the rotating cosmos, where all energy is concentrated and streams from there all over the entire world. That's why the bird-man stands directly near the bird-stick, which represent the polar axis.

Hunter-gatherer recognise the Milky Way as a path of the lord of the animals. They tell from a sometimes primeval celestial hunting. A human hunter, represented in different constellations traces star animals on a gleaming hunting-ground, the Milky Way. Often the astral hunting is connected with the pole star and circumpolar constellations too. Therefore high in the sky a lot of dead beasts and some humans are floating in rigor mortis. That's another argument why the rock pictures in the shaft, in particular the bird-man appear so rigid.

The scene in the »shaft» includes an astral »hunting scene» at the sky pole and the shot on the sun-bird, expressing the primeval sacrifice, creation and recreation in the cosmic cave. Very similar scenes could be found in other old cultures, in particular for example the Egyptian (*ill. 16*) or Iranian. Often the pole star or the pole constellation is the hunter and at the same time a shaman, that chases a big celestial animal, an elk, a stag, a reindeer, a bear, a bovine, that is a constellation, which is circumpolar at a given epoch. He follows a particularly trail to get his quarry. This path is the Milky Way, sometimes connected with the zodiac. The scene shows all elements of such a celestial hunting: the bird-man is the hunter, the bison and perhaps the woolly rhinoceros are the quarry and bag. Ancient Egyptian representations (*ill. 16*) show astral combats, which remind strongly of the Lascaux scene. There Dewen-anwi, a god with the head of a falcon, tries to kill mesketiu, a bovine or a part of it, an ox-leg. These figures could be identified. Dewen-anwi and meskhetiu are the today

three-dimensional sky planetarium, putting all points of views together. It may be applied to a shamans initiation, very similar to the usage of the drums or comparable magic and mantic objects.

So, the shamanistic cosmography of the »shaft» in the Lascaux grotto includes an archaic cosmogony, showing the totem and at the same time stellar creatures of the primeval times. These beings, lords of the universe, appear in the rocks of a cave and produce all phenomena in the world, leaving their images on the walls. There, in the cave, at the centre of the cosmos, shamans could be inaugurated in secret knowledge, which helps them to understand the processes in the world and to heal the suffering beings. The cosmographical map in the «shaft» of the Lascaux grotto reveals the shaman ways of passage between the different levels of reality in the universe.

It seems that ideas of an archaic cosmology, cosmogony, biology, psychology and religion are combined together in this old worldview of Lascaux man and verify the high ideological integration force of early cultures.

Bibliography:

All quotations could be found in my doctoral thesis:

A Celestial Map from the Ice Age? A Contribution to the Earliest History of Astronomy and to Palaeoastronomic Methodology, Shown by the Scene in Le Puits, Grotte de Lascaux», Ludwig-Maximilians-University, Munich, Germany / Faculty of Mathematics and Information Sciences, Department History of Natural Sciences, March 1998 (in German), 610 pages, 290 illustrations, 13 tables 24 charts, about 2,500 quotations, 78 pages bibliography, glossary. In print.

constellations Swan and Great Bear. Often the bovine is bound to a post. That is the polar axis. After the death of the Pharaoh his soul turned into the constellation Dewen-anwi.

In the world-cave the cosmic and celestial primeval animal, often a bovine, but also a bear, horse, bird or sometimes a primeval human being is killed and dismembered. If the perpetrator is known, than it's mostly a primeval human being, frequently shown with an erect phallus. The genital symbolises the power of fertilising the universe. The weapon, for example a club, a spear, a bow and arrow or a dagger, used to kill the beast, is presented in the scene. Often not only the animal, but also the killer dies. With this first sacrifice, happening at the equinoxes or solstices, begins the creation of the world and of human culture. All things are growing from the parts of the animals or mans body. Occasionally the generating energies are shown by the sun coming out of the killed animals belly or womb (*ill. 15*). Myths from the old Iran, from the Oglala-Sioux and the traditions of the Mithraic mysteries throw light upon this ancient cosmogony and help to clear up the scene of the Lascaux grotto.

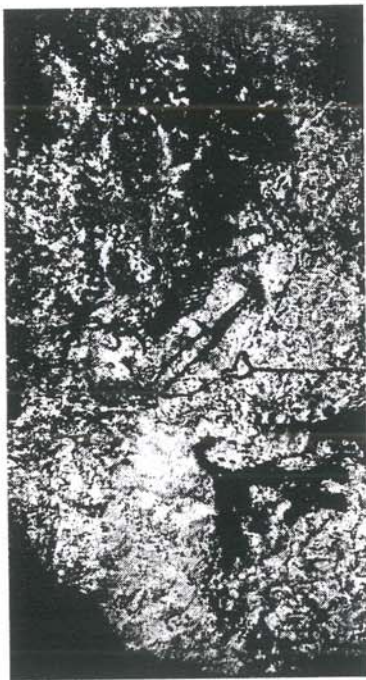
The primeval shaman is also the primeval, divine bird-human of creation. He is a guard at the place of the world axis, represented by the bird-stick, and protects the spring of the cosmic fertilising powers.

So the rock pictures in the shaft show a plain and spatial copy of the cosmos, with the ancestral and archetypal star beings and spirit helpers. They represent a kind of shamanistic sky chart, comparable to the sketch maps on shamanistic drums or other objects. Recent research work all over the world proofs, that these drawings are multidimensional cognitive maps for travelling to other worlds on earth (geographical maps), in the heavens (astronomical maps) and in the inner space-time of the animated cosmos (spiritual maps).

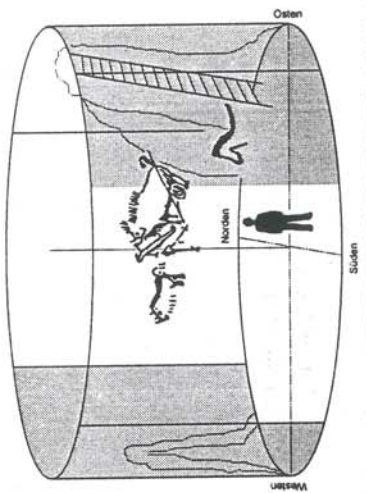
The shaman has to know, how to reach the selected localities in the cosmos. Therefore he needs a drivers log, a kind of map, which shows all important regions and places of the universe and the paths to go there. Shamans all over the world made cosmographic charts, on which earthly and heavenly things were registered: mountains, living beings, constellations and wandering stars, the pole star, the Milky Way, sometimes shooting stars and comets, the rainbow, the cardinal points and cardinal directions, the horizon and meridian, the ecliptic, some kind of zodiac and also calendar events. These maps mostly are drawn on drum-skins, but also on rocks and wooden artefacts (*ill. 11, 12*). Sometimes they are very elaborated and complex. Some of them show a model of the cosmos, a net of concentric circles and radial lines, reminding of a modern chart equipped with a grid (*ill. 12*). They are used for the purposes of magic, mantic and orientation.

The drum with the chart on the skin was aligned to the north. Holes drilled in the drum and arranged in shapes of circumpolar constellations permit to adjust the map to the northern sky pole. The horizon, the meridian, the axis to the pole and to the zenith, the Milky Way and the constellations guide the shaman on his flight. Often such maps show a dyadic division. The cold and warm, dark and light seasons of the year, the left and right side of the cosmos, the moon and the sun. Different animals represent these dyadic areas and the powers radiating from them. Cross bars indicate the levels of the cosmos, mostly three, the horizon, the zodiac, the Milky Way and sometimes the rainbow. Often shamans use two drums to reproduce both hemispheres of the sky. Recent studies proofed the astronomical function of the drums.

The rock pictures in the «shaft» of the Lascaux grotto form such a multidimensional, cosmographical map. In the Lascaux scene as in the known shamanistic sketch maps, the orientation of the sky chart to the north, the horizon, the meridian, the left and the right side of the sky, the three levels of the vertical and the four quarters, the three worlds - the "upper", the "lower", the "middle", the four directions of the horizontal level, the sun (the horse) and the moon (the bison, the woolly rhino), the stars and constellations (the bird-stick, bird-man) are noted. It's as well a manifold two-dimensional sky map showing the view of the northern, eastern and western heavenly regions in one panel and the southern area in another like a



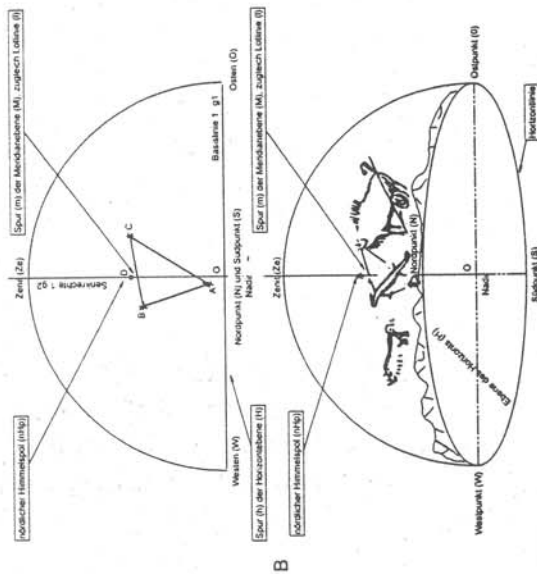
ill. 1 The scene in the shaft of the Lascaux cave, 16,500 years old. The bird-stick, the bird-man, the arrow, the bison and the woolly rhinoceros with six spots under its tail



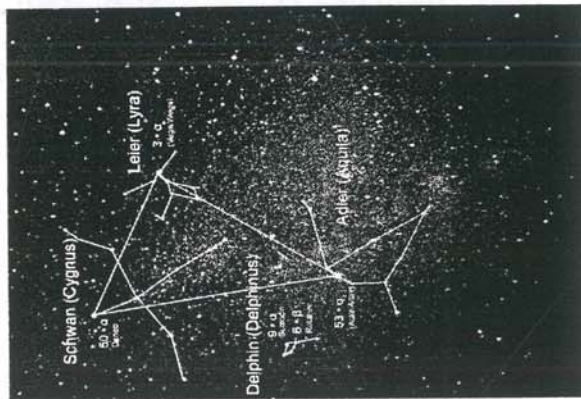
ill. 2 A three-dimensional view of the scene



ill. 3 The wild horse on the southern wall



ill. 4 The view to the northern sky above the horizon of the Lascaux grotto, midnight at summer-solstice, 16,500 ago. The triangle of the stars Vega, Altair and Deneb – the eyes of the bison, perched bird and bird-man



ill. 5 The bird-man in the Milky Way. The head of the bison and the perched bird near the gleaming ribbon.

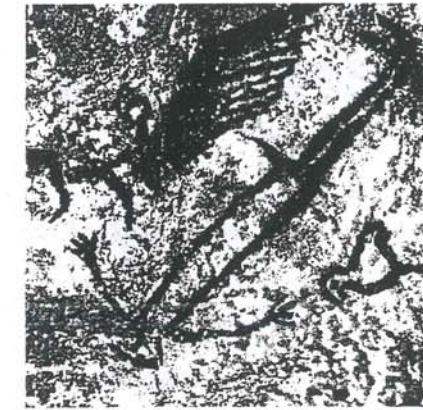
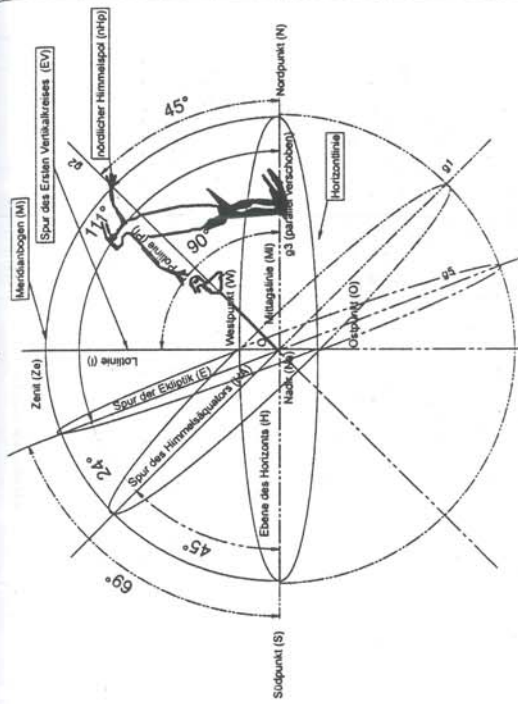


ill. 6 A view about 180° to the northern sky at the Lascaux epoch, 16,500 years ago. The constellation „bison“ covers the right quarter, the constellation woolly rhinoceros the left. In the middle stand the bird-man and the bird-(topped on the stick). The pole star, 18 delta Cyg is symbolised by the right hand of the bird-man.



ill. 7 The constellation of the Lascaxux scene

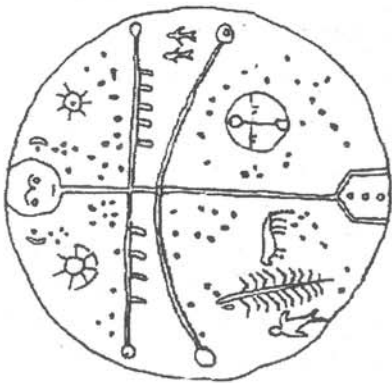
ill. 10 The bird-man and the bird-stick include an angle of 45.03° , equal to the latitude of the Lascaux grotto. The bird-stick points to the northern sky pole, the bird-man's head touches the zenith. The feet of the bird-man and the tip of the bird-stick stand on the ground. The right hand of the bird-man is placed at the northern sky pole (pole star of the Lascaxux period 18 delta Cyg)



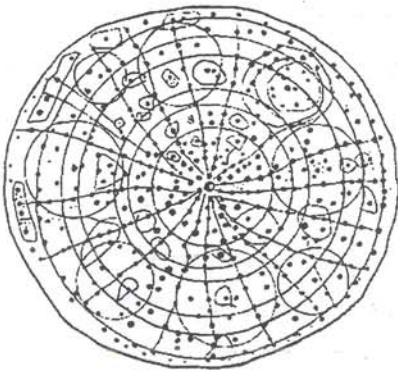
ill. 8 The bird-stick stands upright and the bird-man is inclined



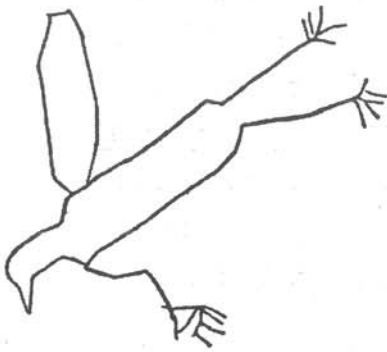
ill. 9 The bird-man stand upright and the bird-stick is inclined. The angle between both is 45.3° and equal to the latitude of the Lascaux grotto (45.01°)



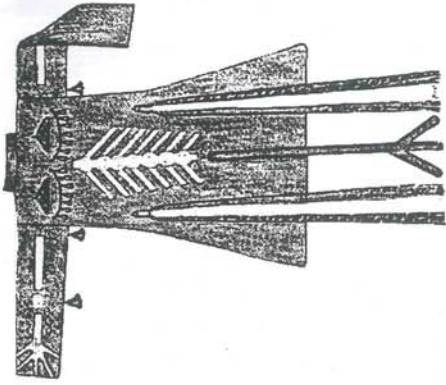
ill. 11 A celestial map on a shamans drum-skin: constellations important astronomical points and lines, the world giant, the world tree and power animals are represented



ill. 12 A Kogi shamans celestial and earthly map with an elaborated grid



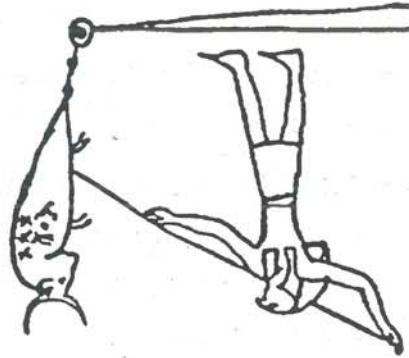
ill. 13 The assistant of the spirit of the zenith, partly a human, partly a bird; a picture from the Chuckchee tribe



ill. 14 The shaman is disembodied. This fact is shown by a skeleton drawn on the costume



ill. 15 The cosmic animal is killed and generates the creative forces of the world



ill. 16 The falcon-headed god Dewen-anwi (the constellation Swan) kills the primeval bovine meskhetiu (the constellation Great Bear). Meskhetiu is bound to the polar axis.



ill. 17 A painting on a tipi of the Oglala-Sioux shows an ithyphallic shaman wearing a feather-crown on his head and ascending to the sky. The cosmic bison (some constellations are drawn on his body) is bound to him.