


These hands were painted on the wall of a cave by early humans. The hand was placed on the wall and paint sprayed around it by blowing using a pipe. Early interpretations of why the fingers are shortened involved hunting-trauma, frostbite, leprosy or self-mutilation. Most now believe that the fingers were bent to make these stencils, and that the shapes meant something. Some primitive tribes communicate during hunting, when any noise would scare off the prey, by means of such silent hand signals.

These stencils deep within a dark cave indicate that our ancestors used fire for illumination, communicated with each other using signs, and left records for others to see.

Science is the process whereby we understand how things work. With science we can control these things so as to improve our quality of life. Science requires communication. Science requires records. Religion is the process whereby we consider those things we cannot explain. Religion also requires communication and records. At the beginning of human civilization science and religion overlapped.

Fire



Fire is the rapid oxidation of material with release of heat and light. On Earth the main oxidizer is molecular oxygen (O_2) and the main materials are carbon-based compounds. As land plants evolved the amount of oxygen increased in the air and wildfires were ignited by lightning.

Ancestors of *Homo sapiens* were exposed to such fires. They learned to maintain small fires for warmth, protection and cooking. The human ability to initiate and control fire was widespread about 200,000 BP with *Homo erectus*. Recent evidence, such as hearth stones and burnt animal bones, suggests that the use of fire might have actually begun over 1,000,000 BP.

Fire was a source of energy and of wonder. Fire served as the basis for human science and human religion.

One interesting idea is that *Homo habilis* and other human ancestors such as *Australopithecus* may have changed their lifestyle and diet from their predecessors when they learned to control fire. Fire allowed them to become hunters as well as gatherers. Meat is much easier to digest when cooked.

Gowlett, J. A. J., & Wrangham, R. W. (2013) Earliest fire in Africa: towards the convergence of archaeological evidence and the cooking hypothesis, *Azania: Archaeological Research in Africa*, 48, 5-30.



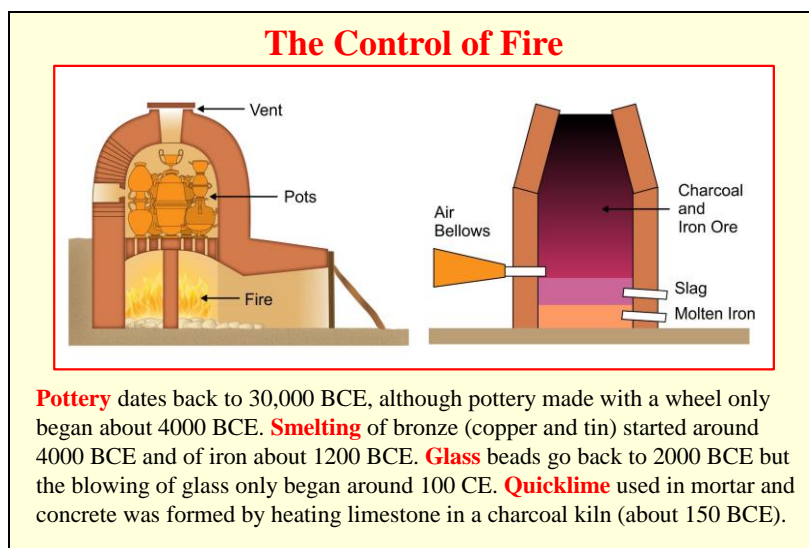
The movie is a French-Canadian production and many of the settings were filmed in Canada. This one on the Bruce Peninsula (Greig's Caves)

https://blogto.com/sports_play/2017/06/surreal-greigs-cave-system-three-hours-toronto/

In this scene at the beginning of the movie, Naoh (Everett McGill) watches as the person responsible for maintaining the tribe's source of fire watches over the flames during the night. He calls the fire *Atra*. Though all is peaceful, the tribe is soon attacked by another tribe of hominids. Noah and his colleagues are driven from their cave and seek refuge in marshy land. Their fire goes out. They are frightened, cold and hungry. Noah and two friends volunteer to go on a quest for fire.



In this scene, Naoh (Everett McGill) learns from an elder of the Ivaka tribe (with their characteristic body paint) how to make fire using a hand-drill. Later versions of this technique would use a bowed string to rotate the spindle with greater speed.



The control of fire led to many great technological achievements – pottery, metals, glass and quicklime

Agni, God of Fire

The RgVeda, the oldest scripture in the world, composed around 1500 BCE, begins and ends with hymns to Agni the God of Fire.

I adore Agni (the fire of life), which is placed inside of me and which provides me with the light (of intelligence) and the necessary fuel for my efforts (actions).
RgVeda I:1:1

10th Century CE Stone Sculpture

Note the flames around the head of the god. He carries in his left hand a pot for soma. Soma was a nectar obtained from the fire sacrifice of various plants. It is similar to the ambrosia beloved of the Greek Gods.

Temple of Vesta
Forum, Rome

Fire Temple, Baku

Many religions consider fire as sacred. It is particularly important in Hinduism and in Zoroastrianism.

The Temple of Vesta in Rome was dedicated to the Goddess of the hearth, home, and family. The vestal virgins maintained the sacred fire in the temple. It originated early in the history of Rome – perhaps around 500 BCE. It was rebuilt many times, most recently in the 20th Century.

The fire temple in Baku, Azerbaijan, was built in the 17th Century. Originally the eternal flame was fed by natural gas coming from the ground. The temple was used by Zoroastrians, Hindus and Sikhs. The natural fire went out in 1969, and the temple is now supplied by a natural gas pipeline.

Animism

“Animists are people who recognize that the world is full of persons, only some of whom are human, and that life is always lived in relationship with others.”
(Graham Harvey, 2005, 2017)

Initially used as a derogatory term to describe the foolish superstitions of primitive people, “animism” now means a way of life that respects the existence of all things.



Bush Tucker in Nyikina Country
Loonkoonan, 2006

The painting comes from an exhibition at the Kluge-Ruhe Aboriginal Art Collection at the University of Virginia:

<https://kluge-ruhe.org/wp-content/uploads/2018/04/Loonkoonan-with-essay-by-Henry-Skeritt.pdf>

Bush Tucker is food that one can get from the Australian outback if one knows where to look. Wild oranges, bush tomatoes, yams, conkerberries. See

<https://www.mbantua.com.au/bush-tucker/>

Australian aboriginal art stretches back to the time when humanity first came to Australia about 50,000 BP. A key concept in interpreting their art is the idea of “dreaming” or the “dreamtime.” This is not related to the dreams of sleep, but rather represents a mystical union with the spirits of the world, both past and present.

For more information on Australian aboriginal art see

<https://www.aboriginal-art-australia.com/aboriginal-art-library/the-story-of-aboriginal-art/>

For more information on the Dreaming

<https://theconversation.com/dreamtime-and-the-dreaming-an-introduction-20833>

From *Aboriginal Art* (2012) by Wally Caruana, p 10:

The Dreaming is a European term used by Aborigines to describe the spiritual, natural and moral order of the cosmos. It relates to the period from the genesis of the universe to a time beyond living memory. The term does not refer to the state of dreams or unreality, but rather to a state of a reality beyond the mundane. The Dreaming focuses on the activities and epic deeds of the supernatural beings and creator ancestors such as the Rainbow Serpents, the Lightning Men, the Wagilag Sisters, the Tingari and Wandjina, who, in both human and non-human form, travelled across the unshaped world, creating everything in it and laying down the laws of social and religious behaviour. The Dreaming is not, however, merely a guide for living, an agent of social control, or simply a chronicle of creation, restricted in time to a definable past. The Dreaming provides the ideological framework by which human society retains a harmonious equilibrium with the universe — a charter and mandate that has been sanctified over time.

Theory of Mind

Individuals have a “theory of mind” if they impute mental states, such as awareness or intentions, to others. The idea was initially considered when David Premack and Guy Woodrige were studying the cognitive abilities of chimpanzees (1978).

Children arrive at a theory of mind at the same time as they are developing a sense of self.

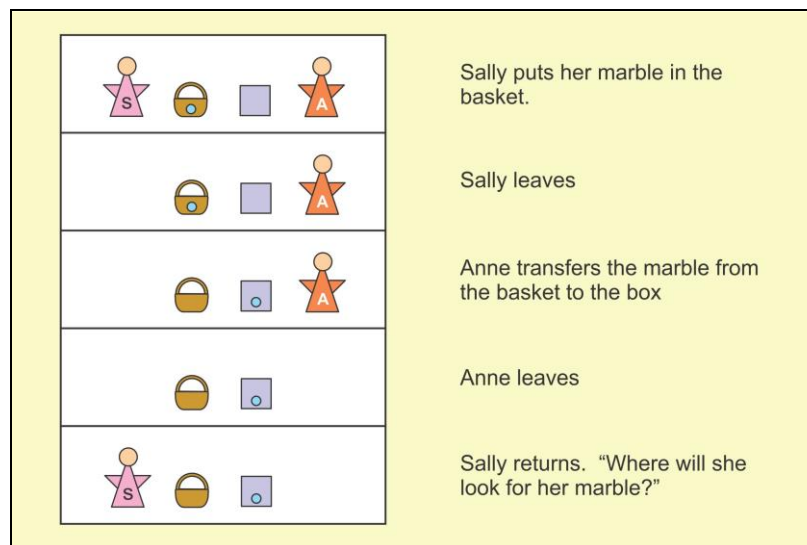
The ability to detect “agency” in others is important for survival. It warns us of predators and enemies. It also helps us to interact socially and to form communities.



David Premack (1925-2015)

Theory of mind may explain how we come to believe in gods. Perhaps the idea of god is a side effect of evolution:

Over thousands of years the human brain has evolved to be a sensitive detector of the intentions of others. This “agency detector” facilitates social interaction and preserves us from harm. If the process becomes hyper-sensitive, we posit agents that control natural events: gods of the storm and of the earthquake. Ultimately, we might propose an omnipotent God as an agent controlling the whole universe.




One way to assess this is to see whether someone understands what someone else knows and correctly identifies the “false beliefs” of others: the Sally-Anne test. Basically, the test evaluates whether someone can understand what is in the mind of another person.

Initially the test was performed with puppets. The actions are performed and then the person watching is asked where Sally would look for her marble.

Someone with a theory of mind will understand that Sally will look for her marble in the basket because she does not know that Anne has moved it to the box. Someone without a theory of mind will say that Sally will look in the box because that is where the marble is. Such a person will have no idea what is in Sally's mind.

Chimpanzees have only a rudimentary theory of mind and do not recognize Sally's false belief. Normal human children develop a theory of mind after age 3-4 years.

Autistic children have difficulty on theory-of-mind testing – they may suffer “mind-blindness”



The Evolution of God

Humankind's initial religious view was of a world full of different divine forces – polytheism. These invisible beings could be manifest in artificial objects (icons, idols, totems, fetishes, statues), which could be worshipped. One god might then be preferred over the others, e.g. Yahweh of the Israelites rather than Baal of the Canaanites (“Thou shalt have no other gods before me.” Exodus 20:3) Ultimately, people came to believe in only one true God – monotheism. All the other gods and idols were repudiated as false.

Buddha Vairocana, 2008
Lushan, Henan, China,

This slide presents the generally accepted theory of how human religions developed. *The Evolution of God* is the title of a 2009 book by Robert Wright. Similar ideas are expressed in *A History of God* (1993) by Kay Armstrong, and in *A Little History of Religion* (2016) by Richard Holloway.

Buddha Vairocana – the shining Buddha (also known as *Amida Buddha*) – is the universal Buddha from whom all other Buddhas derive. The statue (without the base) is 128 meters high. However, it is only the second tallest statue in the present world, having been surpassed by the 2018 Indian statue of Vallabhbhai Patel (one of the leaders in the Indian struggle for independence) – the *Statue of Unity*.

The mudras (hand-gestures) of the Buddha convey meaning. In this statue the right hand is in a Vitarka mudra – teaching – and the left hand is in Varada mudra – compassion.



This painting is *The Worship of the Golden Calf* (1637) by Nicolas Poussin. It depicts the story told in Exodus 32. While Moses was on Mount Sinai obtaining the Ten Commandments from Yahweh, his brother Aaron arranged for the Israelites to worship and golden calf. When Moses came down from the mountain (upper left of the painting), the celebrations were in full swing. Moses broke the tablets, talked God out of his desire for vengeance on all of the Israelites, and arranged with the sons of Levi to kill those that had worshipped the idol. Later the commandments were rewritten on another set of stones, which were stored in the Ark of the Covenant.

The commandments (Exodus 20: 1-17) are more appropriate to an urban people than to a nomadic people wandering through the wilderness: the sabbath shall be kept holy to the “stranger that is within thy *gates*” and “thou shalt not covet thy neighbour’s *house*.” They were probably first written down after the Israelites were settled in Canaan.

The Decalogue is antedated by other Laws promulgated by other civilizations in the Middle East. The code of Hammurabi comes from 1754 BCE. Some of the rules and laws in the Pentateuch are similar to those in this Babylonian code.

Although Judaism is monotheistic, some of the scriptures refer to other gods that are not just “false gods.” For example, Proverbs 20 discusses Wisdom as being created by God before He created the world:

I was set up from everlasting, from the beginning, or ever the earth was.

Now one can say this is all metaphor - that the writer is personifying an abstract quality. But then why is God not a metaphor?

This actual verse was interpreted by Christians as referring to Christ (as one part of the three-part God).



Hinduism is perhaps the most polytheistic of religions. However, in the *Upanishads*, which come after the *Vedas*, Hinduism becomes basically monotheistic. The term Upanishad means “sitting near.” It refers to the students who sit with a teacher and ask about the interpretation of the scriptures.

There is a story in the *Brhadaranyaka Upanishad* wherein a student asks the sage Yajnavalkya about the number of gods:

How many gods are there?

Three hundred and thirty-three.

Yes, but how many gods are there really?

Thirty-three.

Yes, but how many gods are there really?

Six.

Yes, but how many gods are there really?

Three.

Yes, but how many gods are there really?

Two.

Yes, but how many gods are there really?

One.

Which is that one god?

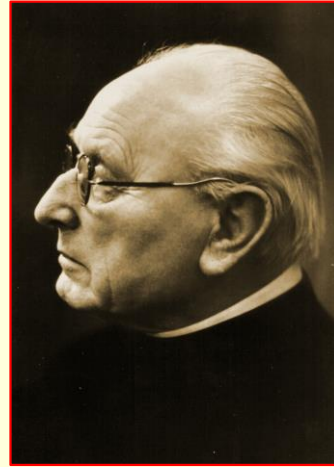
He is the breath of life. He is Brahman. He is what they call *Tat*.

Adapted from *The Artful Universe: An Introduction to the Vedic Religious Imagination* (1998) by W. K. Mahoney.

The word *Tat* means the ultimate. It is often expressed more fully as *Tat tvam asi* – that thou art. This may be analogous to the Hebrew *ehyeh asher ehyeh* – I am that I am (Exodus 3:14).

In the Beginning was the Spirit

Although the idea that monotheism derived from polytheism is generally accepted, Wilhelm Schmidt proposed that primitive tribes originally believed in a single supreme god – typically one related to the sky. Schmidt based this concept on his studies of Australian and North American aboriginals. Schmidt was a Roman Catholic priest and linguist. His ideas have been revived recently in discussions of indigenous religions.



Wilhelm Schmidt (1868-1954)

Not everyone believes that monotheism followed polytheism. Some believe that human beings were always aware of one high god or pervading spirit.

The title of the slide is also the title of a 2012 book by Diarmuid O'Murchu.

Schmidt published a 12-volume set of books in German – *The Origin of the Idea of God* (1912-1954). Some of his ideas are present in English in *The Origin and Growth of Religion* (1931) available at:

<https://archive.org/details/in.ernet.dli.2015.189007>

How does one determine the origin of religious ideas? One can evaluate religious scriptures but these only go back about 1500 BCE. We can ask present-day hunter-gatherer peoples that appear to have a similar social state to early human beings. However, we then have problems with translating abstract concepts, and with the fact that our very interaction with the people can change their worldview. We can look at the art that early peoples left behind, but we have difficulty knowing what the artists sought to portray.

The idea of monotheism arising out of polytheism fits with the Hebrew Scriptures. In the early books, Yahweh is portrayed as one of many other gods, but one who ultimately triumphed over all the others. However, the idea of a primordial monotheism as proposed by Schmidt fits with current ideas of indigenous spirituality.

Blombos Cave

Two striking pieces of art were discovered in this South African cave: a block of ochre (upper illustration) that has been incised with an abstract pattern on one side, and a rock that has been drawn on using a piece of ochre. These both date to about 70,000 BP.



Art may help us to understand the mind of early human beings. The illustrations in this slide show some early evidence of art.

Ochre is a mixture of ferric oxide and clay and sand. It varies in color from red to yellow. It was used extensively in prehistoric times to adorn the body or to paint on the walls of caves.

Fertility Figures



Woman of Willendorf
Limestone carving
30,000 BP
Krems, Austria

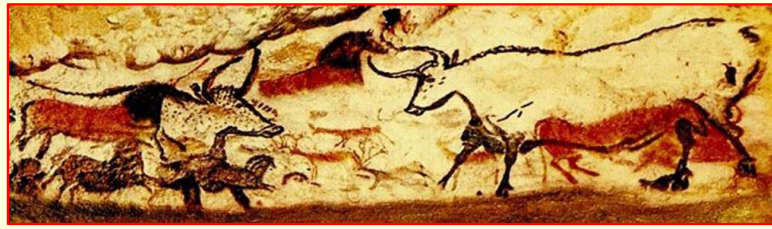


Woman of Dolní Věstonice,
Ceramic figurine
30,000 BP, Brno
Czech Republic

The term “Venus” is typically used for these figures but Venus was only recognized as a Goddess in the early Roman civilization, deriving from the Greek Goddess *Aphrodite*, who herself derives from the Phoenician *Astarte*.

Both figurines are about 4.5 inches long. The *Woman of Dolni Vestonice* is the oldest ceramic sculpture known.

The usual suggestion is that these and other similar figures represent fertility deities. However, another suggestion is that they may be self-portraits. This might explain the lack of facial features.



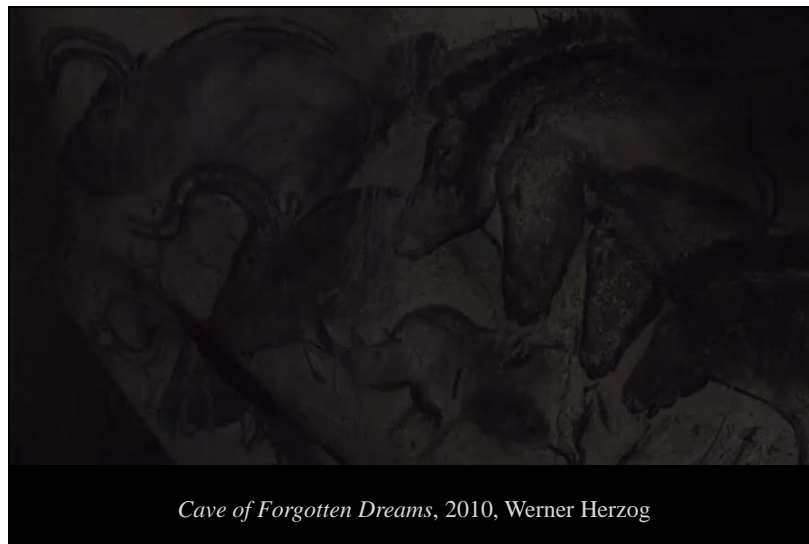
Cave Painting

Lascaux, 17,000 BP

Paintings dating back to 40,000 BP have been found on the walls of caves in many different areas of the world. Many of these are in Southern France or Northern Spain. Most of the paintings depict animals. No one is certain about the purpose of these works of art. They may have recorded hunting activities or been part of shamanistic rituals to invoke success in hunting. The expertise of the artists varies with the location, and there is no evidence that technique improved over the years, since one of the earliest sites (*Chauvet*, 30,000 BP) is one of the most impressive.

Recent evidence has shown that some non-representational Spanish cave paintings date back to over 60,000 BP, thus occurring more than 20,000 years before the arrival of *Homo sapiens*. These must therefore be attributed to *Homo neanderthalensis*.

The relationship to hunting is problematic since the people who painted the pictures did not hunt these large animals. The animal bones left in the caves come from smaller animals (deer, wild goats). This suggests that the painters depicted animals that they admired or feared. Many of the paintings also show abstract patterns, often superimposed on the animals. David Lewis-Williams has suggested that the paintings might represent visions seen by shamans in a trance state.



Cave of Forgotten Dreams, 2010, Werner Herzog

This shows some of the images from the Chauvet cave (Southern France) from 30,000 ybp. A striking characteristic of the art is the depiction of groups of animals rather than single figures – the multiple equines and the two woolly rhinoceroses butting heads.

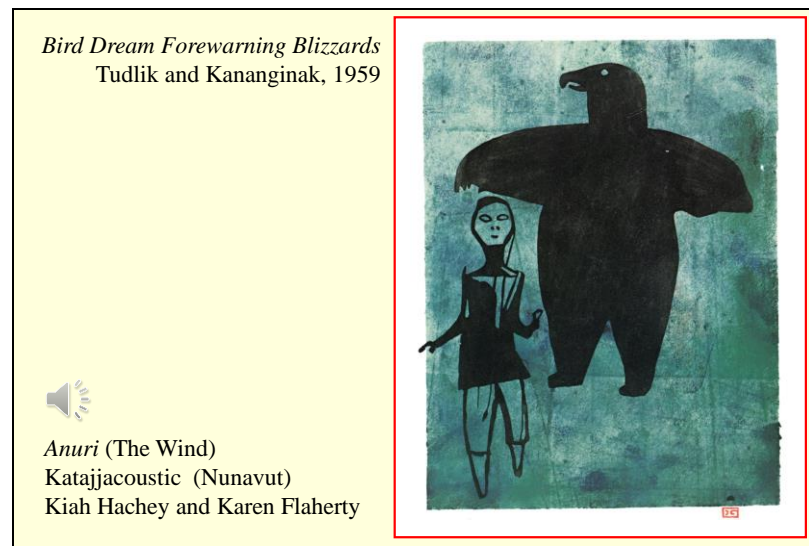


These are the lions from the Chauvet Cave.

	<p>Shamanism</p> <p><i>Löwenmensch</i> (lion-man) a 31 cm figurine carved from mammoth ivory tusk, 35,000 BP, Ulm. This likely represents a shaman under the guidance of a lion spirit.</p>	<p>In the tribes of Eastern Siberia, shamans are able to contact the spirit world usually by entering into a trance. The altered state of consciousness can be brought on by ritualistic behavior or drugs (entheogens). The shaman often takes a spirit guide (e.g lion). The goal is to heal disease (caused by malevolent spirits) or to divine the future.</p>
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The concept of “shaman” has been extended from its original usage in the context of Siberian tribes to denote similar people in various primitive tribes.

Some of the shamans’ success with diseases may have been related to what we now know as the placebo effect. If we believe that we are going to get better, we often do get better. The effect appears to work through the brain and its connections to the hormonal and immune systems. Some of what the shaman did in predicting the future may have been related to early science.

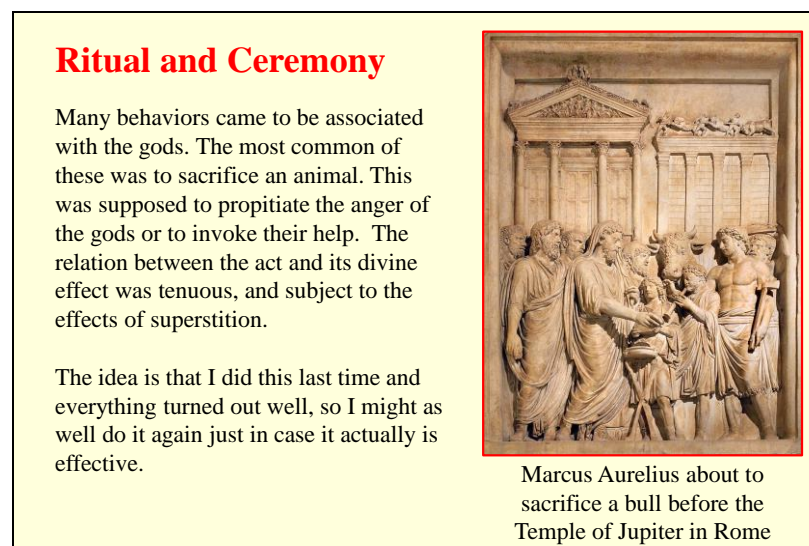


Indigenous people have an intense relationship to the natural world. This slide gives some sense of this in their visual and musical art. This is an early Inuit print from Cape Dorset. Of note is the right hand of the dreamer which reaches outside the edge of the picture to maintain some tenuous hold on the real world.

The song is a throat song about the wind. It is taken from a video

<https://www.youtube.com/watch?v=fPI2dXcn8Vw>

Inuit throat singing is traditionally performed by women. It is a duet wherein one singer provides a rhythmic pattern which the other singer adds to. The sounds can be either voiced tones or simple breathing sounds. The singing is often in the form of a contest to see which singer can outlast the other.



It is important that we determine the causes of things. If we understand the causes then we might be able to control the world. However, our cause detector is hyperactive and we often attribute causality to anything that happened just before something else.

Whether we think that our thoughts and actions are based on superstition or on justified belief depends on who is thinking or acting. Pascal Boyer presented his findings on the religious beliefs of some African people to a group of academics at Cambridge University. After his talk one of the Catholic theologians remarked, “This is what makes anthropology so fascinating and so difficult too. You have to explain how people can believe in such nonsense.” This from a person who believed in a virgin birth, the resurrection of the dead and a three-in-one god. (Pascal Boyer, *Religion Explained*, 2001, p 297)

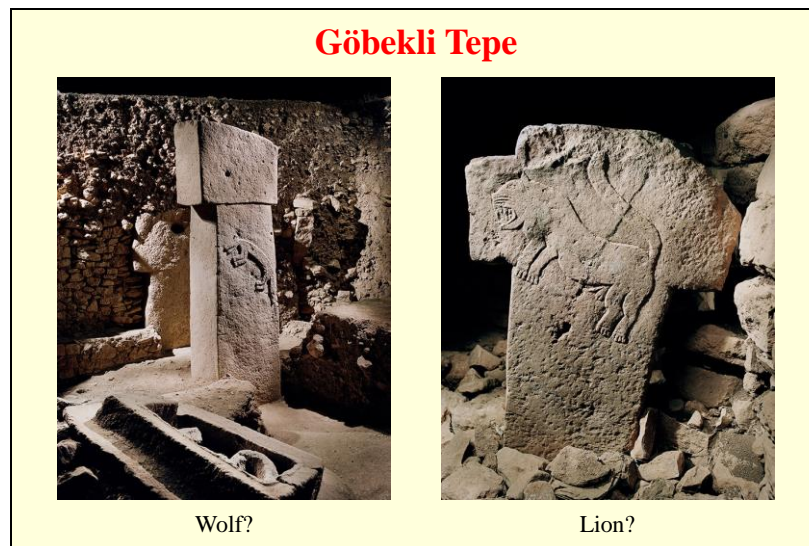
Evidence of religious ceremonies, involving shamanism and animal sacrifice go back many years to before the time when we used agriculture or lived in cities:



Göbekli Tepe (“potbelly hill”) in Turkey, first excavated by Klaus Schmidt, contains stone structures that date back to 10000 BCE. This is before the use of pottery. And before the agricultural revolution – all the evidence of food on the site was typical of hunter-gatherers. People did not live there – there are no houses, refuse-dumps, or burials. Rather they just visited, perhaps to participate in some ritual worship (the “cathedral on the hill”), or to share in some shaman’s vision.

Video is from


<https://www.youtube.com/watch?v=ZAsivJsO6pQ>



Both photographs are by Berthold Steinhilber.

<https://bertholdsteinhilber.com/gobeklitepe.html>

The carved pillars represent animals. This may be a way to bring about shamanistic trance states. The extensive accumulation of animal bones on the site suggests animal sacrifices. Some of the stones near the pillars may have served as altars for such sacrifices.



The Akedah

GOD: Abraham, my servant, Abraham,
Take Isaac, thy son by name,
That thou lovest the best of all,
And in sacrifice offer him to me
Upon that hill there besides thee.

Benjamin Britten: Cantic II, Op. 51
Abraham and Isaac (from the Chester
Mystery Play), for tenor and alto, 1952

Daniel Taylor and
Benjamin Butterfield

Abraham and Isaac
Rembrandt, 1635

Sacrifice is part of all early religions. The rituals for sacrifice are described in great detail in the Vedas. The most frightening is the idea of human sacrifice. At the heart of the three main Western religions is the story of the Abraham and Isaac,

Akedah – the binding (Aqedat Yitzhaq – the binding of Isaac)

Britten's canticle opens with the voice of God asking Abraham to sacrifice his son. The two singers (tenor and alto) sing together with an other-worldly sound.

We shall return to the Akedah in a later presentation.



And he took bread, and gave thanks, and brake it, and gave unto them, saying, This is my body which is given for you: this do in remembrance of me. Likewise also the cup after supper, saying, This cup is the new testament in my blood, which is shed for you.

(Mark 14:23-24)

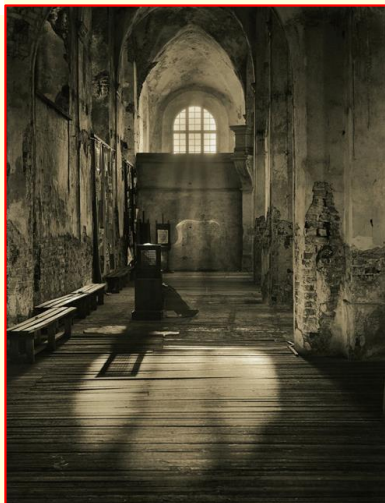
Sacrifice is the key concept behind the Christian theory of salvation. God's son was sacrificed to atone for the sins of humankind.

In remembrance of this, Christians conduct the service of the *Eucharist* (Thanksgiving), wherein the celebrant partakes of a wafer of bread and a sip of wine to acknowledge the sacrifice of the son. The bread and wine are often displayed in a monstrance before the crucifix. They are then served from a pyx (for the wafers) and a chalice (for the wine).

Roman Catholic and Protestant churches differ about what they believe happens during the service. Catholics believe that the bread and wine actually become the body and blood of Christ, whereas Protestants consider the ceremony symbolic rather than actual. Catholic beliefs are supported by Medieval philosophy, which derived from Aristotle's concepts of substance and attributes the idea that the bread and wine can miraculously change their substance to body and blood despite maintaining the attributes of bread and wine.



Religious ceremonies are similar across the different religions. All provide a way for couples to celebrate or sanctify their marriage vows. The first two photographs show a Hindu wedding (with the blessing of the fire) and a Jewish wedding (with the smashing of a glass). The next two show the blessing of a new car – by a Shinto Priest and by a Greek Orthodox priest.



Sacrament of Penance

Deus, Pater misericordiárum, qui per mortem et resurrectionem Fílii sui mundum sibi reconciliávit et Spíritum Sanctum effúdit in remissionem peccatórum, per ministérium Ecclesiæ indulgéntiam tibi tríbuat et pacem. Et ego te absolvo a peccatis tuis in nomine Patris, et Filii,+ et Spiritus Sancti.

Absolution, 2004
Roman Loranc

In English:

God, the Father of mercies, through the death and resurrection of his Son has reconciled the world to himself and sent the Holy Spirit among us for the forgiveness of sins; through the ministry of the Church may God give you pardon and peace, and I absolve you from your sins in the name of the Father, and of the Son, + and of the Holy Spirit

The sacrament is administered by a priest to those who have confessed their sins and shown contrition. The priest assigns a penance and then absolves the sinner in the name of God the Father Son and Holy Spirit. The + sign indicates where the priest makes the sign of the cross. It is one of the most powerful rituals available in religion.

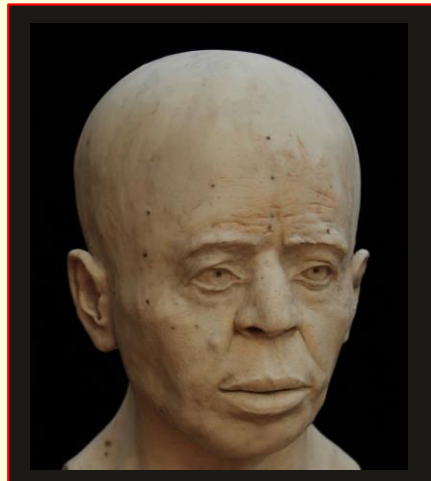
Who would not want to be absolved of all that one has done wrong?

In the photograph a ghostly confessor sits in a booth in a ruined church. The confessor is the photographer who walked into the field of view of the camera during a long exposure.

Death

Human beings have developed a special kind of memory that is centered on the individual. This “episodic” memory maintains a personal narrative, which can be consulted in “recollection” and used to imagine possible future events.

Because this sense of self is so persistent, we tend to believe that we (and those we love) shall survive death.



Because of our theory of mind, we have become aware of ourselves as agents who can act on the world, who can remember the outcomes of previous actions, who can plan for the future. Constructing a self and an autobiographical memory is of no use unless the self somehow stays the same from day to day. When we wake up after sleep, we may not be initially aware of where we are or when, but we are immediately aware of ourselves. This daily “resurrection of the person” may lead us to believe that we persist past death.

We also tend to maintain mementos of loved ones who have died and to provide for them in the afterlife. This Jericho skull dating from around 8000 BCE was plastered with clay and given seashell eyes to serve as a reminder of a dead family member.

<https://blog.britishmuseum.org/facing-the-past-the-jericho-skull/>



What we know about our forefathers largely depends upon what they left behind in their graves. Each culture had its own funereal practices and left behind its own grave goods. We have little written history of the Etruscans who existed from about 800 BCE until about 100 BCE at which time they had become assimilated with the Romans. Most of what we know about them derives from their graves. They left behind sarcophagi which portrayed the dead as still enjoying the fruits of life beyond their death.

For more information see

<http://creatureandcreator.ca/?p=1361>

Throughout the history of human thought, there have been two ways of approaching what happens at death. These may be represented by two quotes from the 17th Century, both mentioning the similarity between death and sleep:

Thomas Browne

it cannot be long before we lie down in darknesse, and have our lights in ashes. Since the brother of death daily haunts us with dying *mementos*, and time that grows old itself, bids us hope no long duration: Diuturnity is a dream and folly of expectation.

(sleep is the brother of death; diuturnity means long duration/lastingness)

From *Urn-Burial* (1658)

<http://penelope.uchicago.edu/hydrionoframes/hydrio5.xhtml>

John Donne

Thou art slave to fate, chance, kings, and desperate men,
And dost with poison, war, and sickness dwell,
And poppy or charms can make us sleep as well
And better than thy stroke; why swell'st thou then?
One short sleep past, we wake eternally
And death shall be no more; Death, thou shalt die.

From *Death be not Proud*, Holy Sonnet 10, 1633

<https://www.poetryfoundation.org/poems/44107/holy-sonnets-death-be-not-proud>



Rape of Proserpina, 1622
Gian Lorenzo Bernini

The Mysteries

For over a millennium (600 BCE to 400 CE), the Mysteries were celebrated at Eleusis, about 18 km northwest of Athens. These ceremonies were based upon the story of Persephone, the daughter of Demeter (Goddess of the Harvest) and Zeus. When Persephone was carried off by Hades to rule with him as Queen of the Underworld, Demeter was grief-stricken, and the world became barren. She wandered far and wide in search of her daughter, ultimately arriving at Eleusis. Zeus negotiated with Hades, finally arranging that Persephone could return periodically to her mother, and that the world could once again be fruitful.

What actually happened during the ceremonies at Eleusis is unknown, because everyone was sworn to secrecy. The initiates fasted and then celebrated the story of Demeter and Persephone. Part of the performance involved being in the dark and suddenly being flooded with light. Ultimately the celebrants were granted salvation from death and free passage to eternity. In a way the celebration of the Mysteries was like one of the modern Christian Revivals where one learns the gospel and is saved.

More discussion of the Eleusinian and other mysteries is at

<http://creatureandcreator.ca/?p=1538>

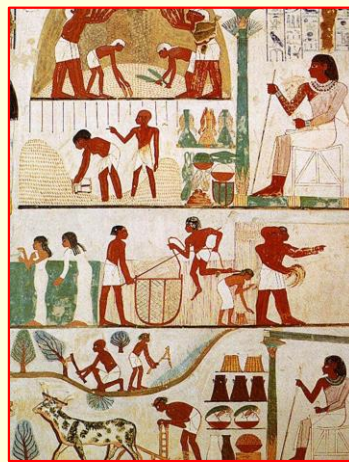
The myth of Persephone and Demeter provide us with a way to look at death and rebirth. It also highlights the annual cycle of agriculture, for ancient human beings had changed from hunter-gatherers to farmers.

Agriculture

Human beings began to eat wild grains about 15000 BP. Beginning in 10,000 BCE, we began to cultivate our own grains and to domesticate animals - changing from hunter-gatherers to farmers.

This agricultural revolution occurred in regions where there was abundant water available for irrigation: the valleys of the Tigris and Euphrates in Mesopotamia, the Nile in Egypt and the Yellow River in China.

The cultivation and storage of grain led to urbanization. This facilitated the development of learning ("culture") but also promoted disease.



Agricultural scenes from the Tomb of Nakht in Luxor, about 1350 BCE

Nakht was likely a high official in the court of the pharaoh. His tomb shows scenes of Egyptian life. This particular panel shows the threshing of wheat, storage of grain, digging, tree tapping, harvesting grain with sickles, hoeing and ploughing. More information on the tomb:

https://osirisnet.net/tombes/nobles/nakht52/e_nakht_01.htm

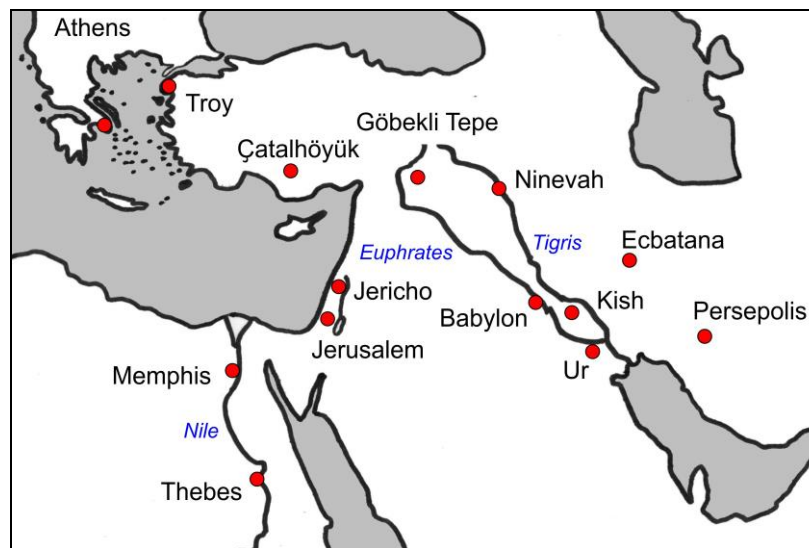
It is possible that changes in the Earth's climate facilitated the change to agriculture. The last ice age ended around 11700 BCE. The retreating glaciers would have left behind fertile land.

Urbanization led to the invention of writing, geometry and numbers to record the division of the land the storage of grain.

People became specialized in what they did – they might be farmers, scribes, overseers, and priests.

The priests promulgated rules for behavior, and provided justification for these in scripture.

In recent years there has been a tendency to consider the agricultural revolution as something that was bad for humanity. For example Yuval Harari in *Sapiens, a Brief History of Humankind* (2015) calls it “History’s Biggest Fraud.” This seems to me a strange re-thinking of human civilization. I have no desire to be a hunter-gatherer.



The Ancient Middle East – where cities were born and where monotheistic religions originated. Most sites are in the “Fertile Crescent” stretching from the Tigris and Euphrates valleys to the Eastern Mediterranean shores and then to the Nile Valley. This is also known as the “Cradle of Civilization” though this betrays a Western bias.

Göbekli Tepe is the oldest of these sites. It appears to have been used between 10000-8000 BCE. The site shows no evidence of agriculture, or of residence or of burial. It may have been a pilgrimage site.

Jericho was initially settled around 9000 BCE. It is famous for being sacked by Joshua during the Israelite invasion of Canaan though there is little evidence for this. The city was destroyed by the Egyptians around 1500 BCE

Çatalhöyük was founded near 7500 BCE and flourished for about 2000 years.

Jerusalem dates back to 7000 BCE. However the city of Solomon and David was around 1000 BCE

Nineveh was initially settled around 6000 BCE. It became the center of the Assyrian Empire from 1800 to 800 BCE

Kish was a major city in the Sumerian Empire, which dates back to 4500 BCE. Cuneiform writing began in Sumer around 3000 BCE

Ur was founded around 4000 BCE. It was located on what was then the shore of the Persian Gulf. Abraham was perhaps from the land of Ur, though others have suggested that the Biblical reference to Ur actually means Urfa in Southern Turkey.

Babylon began in about 2300 BCE, and became prominent by the time of Hammurabi around 1800 BCE. A later Babylonian Empire was under Nebuchadnezzar around 600 BCE.

The fall of Troy is dated to around 1200 BCE.

Memphis was settled before 3100 BCE (the First Dynasty). It was abandoned around 700 CE

Thebes began around 3200 BCE.

Athens became a continuously inhabited city around 5000 BCE and was a part of the Mycenaean civilization around 1400 BCE. It became powerful by 600 BCE.

Ecbatana was settled in around 1200 BCE. It became prominent in the Median Empire around 600 BCE.

Persepolis was the capital of the Persian (Achaemenid) Empire beginning around 500 BCE.

Urbanization appears to have begun in the Middle East. However by 5000 BCE other centers also flourished in the Indus valley in Pakistan and Afghanistan and in the Yellow River valley in China

Writing

Evidence for symbolic writing dates back to about 5000 BCE. **Cuneiform**, which began in Mesopotamia around 3500 BCE, is the first ancient writing system to be interpreted. This was used to represent the Sumerian, Akkadian, Hittite and other languages of the time.

Hieroglyphs were used in Egypt by 3200 BCE. The **Phoenician** alphabet (1400 BCE) based on earlier cuneiform and hieroglyphic systems led to our modern European writing systems. Other scripts were developed in the Indus Valley around 2600 BCE and in China around 1200 BCE.



Amulet (about 10 cm in diameter) showing Vinca symbols from Tărtăria, Romania, ~5000 BCE



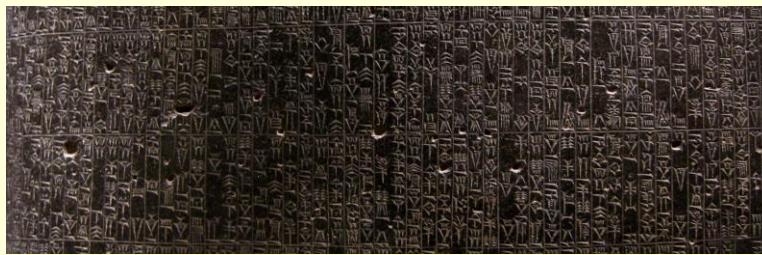
This illustrates how one can write in cuneiform. The writing is done by Irving Finkel from the British Museum.

The full video is at

<https://youtube.com/watch?v=HbZ2asfyHcA>

Code of Hammurabi (1754 BCE)

A stele containing the a set of laws from the time of Hammurabi was discovered in 1901 in what is now Iran. The upper part shows Hammurabi (left) being instructed by the God of the Sun (Shamash). The code is written in cuneiform Akkadian. The stele is now on display in the Louvre.



Among the laws in the Code of Hammurabi:

142: If a woman quarrel with her husband, and say: "You are not congenial to me," the reasons for her prejudice must be presented. If she is guiltless, and there is no fault on her part, but he leaves and neglects her, then no guilt attaches to this woman, she shall take her dowry and go back to her father's house.

196: If a man destroy the eye of another man, they shall destroy his eye. If one break a man's bone, they shall break his bone. If one destroy the eye of a freeman or break the bone of a freeman he shall pay one gold mina. If one destroy the eye of a man's slave or break a bone of a man's slave he shall pay one-half his price.

Law and judgment are recurrent themes in the history of Babylon. Nebuchadnezzar ruled over the neo-Babylonian Empire just before it fell to the Persians in 539 BCE. He had brought the Israelites in captivity to Babylon. At a banquet one of his sons, Belshazzar, had a vision of a hand writing on the wall. Daniel interpreted the writing:

And this is the writing that was written, Mene, Mene, Tekel, Upharsin.

This is the interpretation of the thing: Mene; God hath numbered thy kingdom, and finished it.

Tekel; Thou art weighed in the balances, and art found wanting.

Peres; Thy kingdom is divided, and given to the Medes and Persians.

(Daniel, 5 25-28)

Origins of Religion in the Human Brain		
Cerebral Ability	Survival Value	Religious Effect
Perception of Causality	Escape from danger	Superstition, Ritual
Detection of Agency	Predator Identification Social Interactions	Animism, Theism Ideas of Justice
Emotion	Social Grouping	Faith, Belief
Episodic Memory	Goal-directed Behavior	Souls, Afterlives
Language	Teaching, Knowledge	Scripture, Moral Law
Representational Processing	Abstract Reasoning Science and Technology	Prophecy, Mysticism

This slide speculates how certain characteristics of the human brain may have enhanced the ability of human beings to survive and to reproduce. These characteristics may have also led toward religion.



The human ability to derive meaning beyond the simple existence of things has led to our scientific understanding of the world and to our religious appreciation of what might be beyond the world. Both try to see beyond the immediate perception. Art provides another way to transcend reality

Zurbaran's painting is a marvel of both scientific accuracy and spiritual meaning

From the notes at the Norton Simon Museum website:

To devout Spanish Catholics in the 17th century, the apparently humble objects portrayed here contained significant religious meaning. The measured placement of the three motifs, for example, would have been instantly understood as an allusion to the Holy Trinity. The painting has also been interpreted as an homage to the Virgin, with the oranges, their blossoms, and the cup of water symbolizing her purity, and the thornless rose referring to her Immaculate Conception.

<https://www.nortonsimon.org/art/detail/F.1972.06.P>