

# Evolution of Human Consciousness - I

## Role of Symbols

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*The eye sees only what the mind is prepared to comprehend.*

- Henri Bergson

### **Abstract**

*In the interior of their ancient cave dwellings found all over the world, prehistoric hunter-gatherers had recorded the realities of their world as perceived by them in beautiful images that survive to this day. Whether used as part of shamanistic rituals or for their hunting, in these images, for the first time, ancient men and women had used symbols to represent their thoughts about the world inhabited by them. Symbols played a definite role in shaping man's cognitive abilities and were integral to the evolution of human consciousness. Art, which is based on the use of symbols, along with language gave our ancestors a distinctive identity that was recognizably human.*

*Man's psyche has been shaped by millions of years of experiences through evolution. Human mind retains the memory of its evolution through time and its contents are not limited only by the knowledge and experience gained through life. A large part of the mind lies within the unconscious self that speaks through symbols often generated and expressed through our dreams. Use of symbols is therefore universal, as also the convergence in interpreting their meanings across cultures and religious boundaries.*

*Mind is the most important element in our attempt to understand nature. History of scientific developments indicate that the more we explore into the depths of our mind, the more we grasp of our external world, as if by looking deeper into our own minds, we are able to understand the underlying nature of our external reality. Symbols, being spontaneous and natural, can be used to express that reality much more potently than words.*

**Keywords: consciousness, role of symbols**

(I)

At the heart of the north Indian peninsular shield lying at the southern end of the mighty Himalayas and extending over a thousand kilometres across the central Indian state of Madhya Pradesh, the Vindhya mountain range spreads in an array of broken hills and wide valleys forming the southern ridge of the central highland of India. Formed in ancient geological times from sandstone, the flat-topped and plateau-like mountains rise to elevations ranging from 450 metres to 1100 metres. Together with the Satpura range of mountains which runs almost parallel to it, the Vindhya range forms a watershed, separating the northern peninsular India from the Deccan plateau of the south.

Vindhya, or Vindhya, is closely intertwined with the history, geography, mythology and folklore of India. It finds mention in the treatise 'Geography' written by the famous second century Greek astronomer Claudius Ptolemy. The Vindhya shelters a number of tribes, largely Gonds, who with their unique ethnic and cultural diversities constitute a living museum of anthropology. It also sheltered the

primitive people – *adimanavs* – before the dawn of civilisation- during the Palaeolithic, Mesolithic and Neolithic times, what is collectively known as the Stone Age because of the use of stone and flake tools by pre-agricultural societies of hunter-gatherers. There is no evidence, however, that the *adivasis* or tribes of today who inhabit the region had descended from those pre-historic epochs.<sup>1</sup>

The northern periphery of the Vindhya lies about forty five kilometres northeast of Bhopal, the busy capital of Madhya Pradesh. Here, hidden among the imposing mammoth-sized craggy rocks and surrounded by about 880 square kilometres of the Ratapani Wildlife Sanctuary that is home to a wide range of wild animals, lies a series of over 700 ancient caves at a place called Bhimbetka. Bhimbetka literally means the ‘sitting place of Bhima’, the second Pandava of the epic Mahabharata. Legend has it that the five Pandavas with their common wife Draupadi, after having lost their kingdom and being exiled, had arrived here and stayed in these caves. This is also a place where legend and history diffuse into each other. Bhimbetka lies in the proximity of an ancient village called Bhiyanpura, believed to be a derivative of Bhimapura. Another nearby village is Pandapur, believed to have been named after the Pandavas.

The walls of these caves, now a UNESCO World Heritage site, bear testimony to the working of the minds of their ancient dwellers in the form a series of spectacular paintings which have survived the ravages of time.<sup>2</sup> Inside these caves time has stood still for centuries. Silence of the caves eloquently tell their own tales, taking us back by millennia to the times when our ancestors were hunter gatherers. Frozen in time, these extraordinary pictures drawn by them on the cave walls depicting their ways of life during the unrecorded prehistoric epochs cast a magic spell on today’s visitors and inspire awe and admiration in our minds. The ancient treasure is guarded by lofty rocks, craggy cliffs and dense forests on a plateau that gently slopes and merges into the fertile alluvial plains forming the basins of Betwa river in the north and Narmada in the south. Here the prehistoric men and women had marked their footsteps on the sands of time and reproduced in brilliant hues the panoramic details of their lives along with their struggles for survival against the hostile elements of nature and wild animals. The cave dwellers had painted these details on the walls and at daunting heights of the ceilings of their cave shelters, where they lived and died, honing their skills at tool making, improving their flint and flake tools, improvising their clubs and maces, and sharpening their spears and stone axes with which they hunted the boar and the bison, the gaur and the antelope, the antlers and the spotted deer, the buffalo and the oxen, the rhinos and the goats, and also killed the lions, the tigers, the leopards and the snakes. Later they would learn to domesticate the horses and the elephants and use them for their hunting. In these caves lying in the womb of the Mother Earth, where they lived their lives for centuries, our prehistoric ancestors had wondered about the meaning of life and death, the mystery of origin and nature of an uncertain world they inhabited and left their vivid impressions in bright red and white, yellow and green, for future men and women to ponder over the priceless heritage left by them.<sup>3</sup>

The magnificent paintings can be seen in layers belonging to different epochs, ranging from the Upper Paleolithic, Mesolithic to the proto-historic, early historic and medieval periods, the most ancient of them belonging to about 15000-10000 years ago.<sup>4</sup> They include game and hunting scenes, their ways of life and its concerns, battle scenes, scenes of dancing and music playing drums and other humdrum scenes of their insecure daily lives. They describe the importance animals played in their lives, and how their survival crucially depended on them, both for food and for assisting them in securing it. In short, they give a

glimpse into human life in that misty dawn before civilization began. Archaeological evidence from the tools gathered in these caves suggests that they had settled in these caves over 100000 years ago during the Palaeolithic. Palaeolithic marked the beginning of the Pleistocene epoch in the Geological Time Scale of the Earth, when Earth's climate had cooled and glaciers had spread across the higher latitudes bringing in the Ice Ages, and forcing the early *Homo sapiens* wander southwards to warmer latitudes. It was then that the early humans had arrived and settled at the Bhimbetka caves. With the end of Pleistocene, Ice Ages ended and Holocene or the present epoch in Earth's history had begun at about 10000 years ago.<sup>5</sup> By then they were well settled in kinship based life in these caves and began to capture in paint the exquisite impressions of their world and of their lives within it. Domestication of animals began at the same time. Invention and use of written scripts would come later, at around 5000-4000 BC.

Bhimbetka is not the only place where such paintings have been found, though it is one of the largest of many similar sites discovered in places across the world closely resembling each other in style and content— at Altamira and El Castillo in Spain, at Lascaux, Chauvet, Lussac-les-Châteaux and Dordogne Valley in France, at Khoit Tsenkher in Mongolia, at Pedra Furada in Brazil, at Tassili n'Ajjer in Algeria, in Sulawesi and Borneo islands in Indonesia, in Thailand, Malaysia, Egypt, Libya and at many other places all over the globe.<sup>6</sup> Why did ancient men and women devote so much of their effort, time and energy in painting these pictures? Picture is nothing but the use of symbols that they invented to represent the realities of their world. What deep emotions welled up in their minds and stirred them to capture in the walls and ceilings of their shelters these perceived realities, the frontiers of their mental world? It was certainly not from the urge for survival or necessity. Their hunting-gathering ways of living would not have required them to be engaged in abstract thoughts; even if they were capable of such thoughts, too much of preoccupation with these would rather work to their disadvantage in the harsh competition for survival. Given the way these pictures had been painted inside in cave chambers deep in the hills or stacked up one on top of another on the walls, mere visual pleasure does not seem to be the reason either.

Could prehistoric men form a mental imagery of their world, placed it in the context of their lives, and invented symbols to transform these abstractions into colourful images? Or were these part of the shamanistic rituals practiced by ancient men and women? Did they receive visions of 'spirituality' from a mysterious 'supernatural' world? Did they pray beforehand to their prospective preys? Did they try to recreate the hunting scenes when light from their torches flickered on the animal figures on the cave walls, transforming the lifeless figures etched in bright colours into moving, living forms? Did they attempt to weave a magic spell around the images of their prey animals, seeking the power to strike them down while hunting? It will be difficult to tell – the secrets will remain hidden forever inside the thick mist of our unremembered beginning. But one thing was certain – they were using symbols to represent their thoughts, like rituals, religion or language.

Did symbols and patterns play a formative role in the evolution of human behaviour and awareness? As Lawrence Barham, Professor of Archaeology at the University of Liverpool, says, the answer is a resounding 'Yes'.<sup>7</sup> Art has indeed been integral to the evolution of human consciousness. Cave art is as old as nearly 36000 years<sup>8</sup> – it evolved during the Palaeolithic times, when men had first learnt to use sophisticated stone tools with which they not only hunted but also started to paint. Art, like language, is

based on a set of agreed symbols and these two together played a pivotal role in the development and evolution of human consciousness. Like language, art also held together social groups by imparting an identity to the group and forming and perpetuating bonds of kinship so essential for human evolution. As Barham says, "Image making, it seems, was part of the coevolution of the behaviour and biology of our immediate ancestors and of our own species." Unlike his modern counterpart, ancient men did not use art to express individual ecstasy or angst seeking recognition or identity, but used it to express collective thoughts, shared values and beliefs. As Chinua Achebe said, "Art is man's constant effort to create for himself a different order of reality from that which is given to him." That reality form him was constituted by the need to strengthen the sense of belongingness and to hold the disparate elements in the group together by forging a unique bond through symbols that transported themselves into his as yet undefined consciousness, influenced his behaviour and shaped his cognitive abilities while at the same time increasing group cohesion. Art helped him develop a sense of self within his group and being a medium for communication through symbols, distinguished him from all other species. Art and language together helped him to carve out an identity that was recognizably human.

Both language and art are based on extensive use of symbols and patterns and their juxtaposition to derive new patterns and new symbols. This has direct correlation to the way our brain functions. Group living and cooperative behaviour among early hominids had emerged about half a million years ago and evidence of the use of symbols had been found in East and Central Africa from about 200000 years later. Human and animal figurines have been discovered in Israel dating back to 265000 years ago, pigments using ochre has been evidenced in Southern Africa dating back to 100000 years, ornaments with patterns using shells have been discovered in many places dating back to 75000 years. As Barham observed, "A threshold in human cognitive evolution was crossed with the emergence of a symbol-using species, one which also made new kinds of tools and settled previously uninhabited environments and continents."<sup>9</sup> With the increase in population, the need for transmission of trans-generational information increased, inducing increasing use of symbols. Eventually, art integrated with rituals which again was based on symbols, and further contributed to group cohesion and collective behaviour, leading to isolated human settlements across continents based on shared values and beliefs which ultimately found expression in the beautiful cave arts all over the world.

Survival of humanity in a hostile world dominated by powerful predators engendered cooperative behaviour which demanded discipline, and discipline could be enforced only through common law. Taboos served the purpose of this law, as Alvin Toffler had pointed out, and hence were the beginnings of a legal code aimed at the survival of the species. Taboos originated in fear which was the original impulse behind the invention of religion, to hold the isolated human groups together in a cold, intimidating and unfriendly world. Awed by the uncontrollable forces of Nature, man 'turned to gods made in his own image, or in the image of the natural powers that seemed to control his life', seeking comfort and commiseration. In religions and taboos also, symbols played a vital part. From his nomadic prehistoric days, as he moved to a crude social life in cave settlements and honed his skills for improvising increasingly efficient tools, finally settling to a relatively placid and secure life in early agricultural societies, the images created by him also underwent a gradual change in style, graduating from merely

linear representation to a highly evolved and complex depiction of his world as understood by him. In all this journey, symbols seemed to be the only common, unifying element.

Symbols gave shape to what cultural historian Jean Gebser called the “structures of consciousness” in human evolution, each structure constituting a major breakthrough over the previous one in understanding the world, each representing a new way of seeing and experiencing reality as ancient man journeyed through prehistory. The most ancient of these was the ‘archaic structure’ of consciousness, perhaps 200,000 years into our past, just after man’s transition from the animal form, and about which very little can be known. This was followed by the ‘magical structure’ associated with the first completely human form of experience beginning 50,000 to 100,000 years ago. It was characterized by an almost ‘complete sense of space and time as present in each moment’, and a group identity as a tribe with some shared values and belief. The earliest human art seems to date from this period. Evolution of the sense of self as unique to every individual, something that is a defining characteristic of consciousness, would not appear until much later in history.<sup>10</sup>

The onset of the agricultural revolution around 10,000 years ago marked the next structure Gebser called the ‘mythic consciousness’ where man had started to seriously explore the meaning of life and death, the origin and destiny of the world, and his place in it, seeking answers to these questions from mythology, which according to him, had been the root of all religious experience. Modern rational consciousness would evolve in due course following this progression. However, evolution of human consciousness was likely to have been a continuum of gradual development and progression of awareness, cognition and sentience rather than occurring at definitive intervals of time, and Gebser’s views have to be examined in that light.

### **Bhimbetka Paintings : Upper Paleolithic, Mesolithic and Early Historic Periods<sup>1</sup>**



IIIC-19: Mythical Boar, Mesolithic

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<sup>1</sup> All photographs are by the author.



IIIF-23: Elephants, Mesolithic



IIIC-50: Animals, Mesolithic



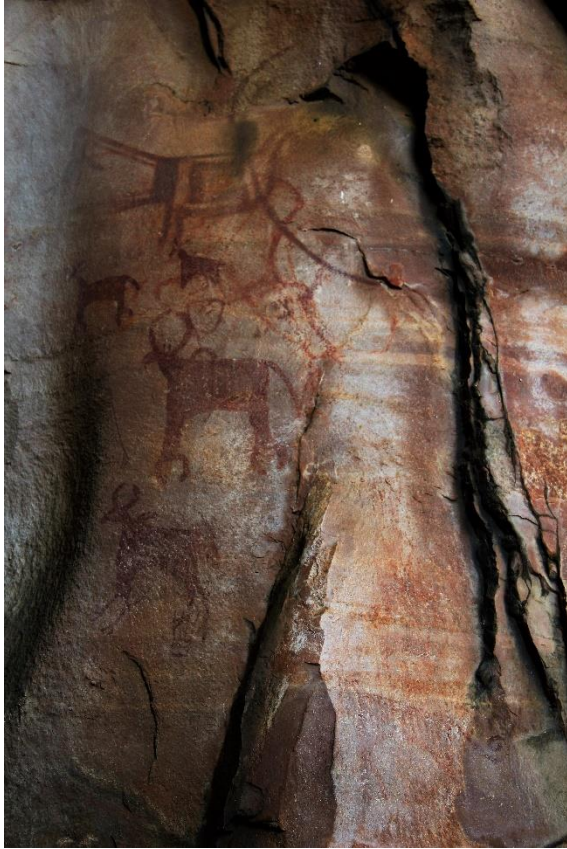
IIIC-30: Horse, Elephant and Floral Design, Mesolithic



IIIC-48: Dancers, Drummers and Horse Rider



IIIC-43: Cavaliers and Foot Soldiers, Historic Period

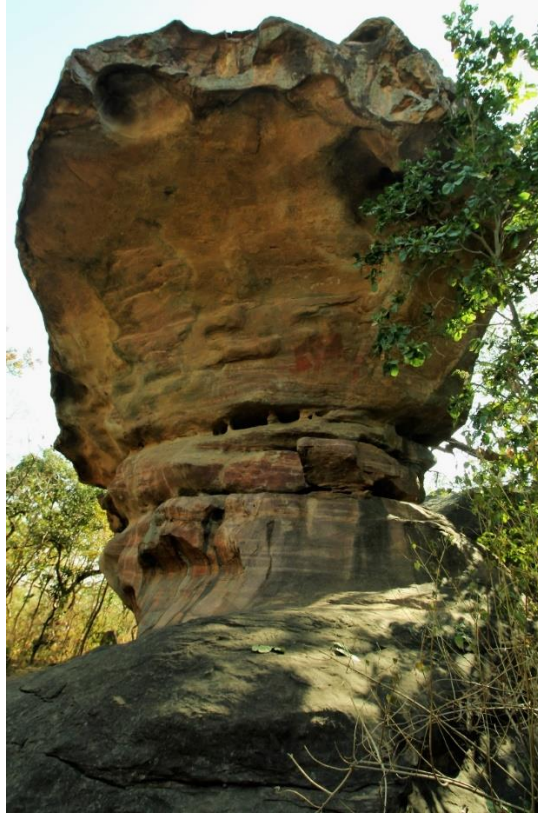


IIIF-24: Human and Animal figures, Paleolithic    IIIF-24: Hand Print, Mesolithic



Rock Shelters III F-23 and III F-24



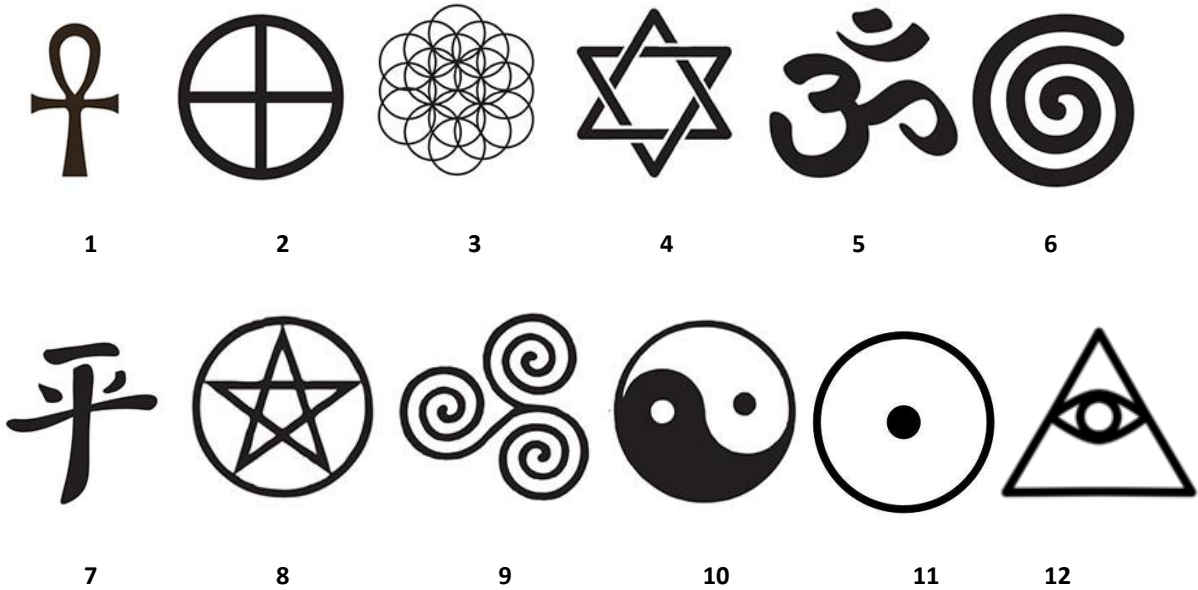


IIIC-19: Mushroom shaped giant rock with the Mythical Boar<sup>11</sup>

(II)

Throughout the course of history, symbols and geometrical configurations have played an indispensable role in shaping human consciousness. In that distant and dim past when man was just emerging out of his forest-dwelling animal existence, shedding the baggage of his past, and when his cognitive abilities were as yet far too underdeveloped to make a meaning of the world around him, symbols helped to merge his tangible and intangible worlds into a comprehensible unity, giving him a sense of purpose and existence in relation to the reality of the world he inhabited. Symbols shaped his consciousness and influenced his behavior to enhance the chances of his survival against the odds. Through general consensus about their meaning and appreciation of their significance, symbols effected an essential unity among the groups of humans in that early dawn of pre-history and reinforced group cohesiveness. Symbols, like language, are integral to the evolution of human society and formed the first essential step in the evolving matrix of consciousness.

**Some Ancient Symbols Universally Used (Illustrative)**



**Meaning of Ancient Symbols<sup>12</sup>:**

1. Ankh, an ancient Egyptian symbol, represents eternal life and provides magical protection, also represents the regeneration of life through water
2. Earth Medicine Wheel is a Native American symbol that represents the harmony and peaceful interaction between all beings and the four elements of the earth.
3. Flower of Life represents patterns of creation as they emerge from the great void. As expansive creation continues, so do the interlocking rings.
4. Hexagram or Star of David symbolizes the connection between God and Man. The Centre represents the heart of power.
5. Om is the primordial sound by which the Universe came into being. The past, present and future are all blended in this single all-inclusive sound.
6. Spiral is the oldest symbol used in spiritual practices. It reflects the universal pattern of growth and evolution and represents the goddess, the womb, fertility and life force energy.
7. Peace is an ancient Chinese symbol representing the balance between opposing forces that creates peace and beauty.
8. Pentagram, a star encased in a circle, has five points, of which the upward point represents the spirit. The other four points represent the four elements: earth, air, fire, and water. All five contribute to life and are integral parts of every life.
9. Triskele Design, Triade, or Triple Spiral, is an ancient Celtic symbol related to earthly life, the afterlife, and reincarnation, drawn in one continuous line suggesting the fluidity of time. They also evoke the domains of material existence- earth, water, and sky; body, mind and spirit; and the eternally-spiralling cycles of time.
10. Yin Yang: Taoist symbol of the interplay of opposing forces in the Universe. The symbol represents the unity and balance between opposites – the masculine and the feminine, the darkness and light. Yin and Yang symbolize the primal cosmic forces.
11. Circled dot or Circumpunct is an ancient solar symbol that means different things in different cultures. It is the astronomical and astrological symbol for the Sun, and the ancient Egyptian sign for "Sun" or "Ra" in the hieroglyphic writing system. Some interpret this symbolizing consciousness with the dot at Centre representing the self and the circle the expansion of the self through life's experiences.
12. The Eye of the Providence or the All Seeing Eye, represents the eye of God watching over mankind.

Archetypes are visual symbols which can often convey messages that are not expressible in words. They symbolize the language of the mind and 'innate prototypes of ideas'. Archetypes are found everywhere- they are connected to each other by what Swiss psychoanalysts Carl Jung called the collective unconsciousness of a group.<sup>13</sup> They can be individual or universal, and serve as a metaphor of reality. According to Jung, the collective thought patterns are innate and inherited, much like instincts.

The word psyche has its origin in Greek *psukhē* meaning 'breath, life, soul or the animating spirit that directs the physical body'. Jung held that man does not come into the world with an empty psyche, and human mind is not entirely constituted only by his lifetime's experiences, a view that agrees with modern psychiatry. Sigmund Freud first brought in the concept of the unconscious part of our mind. He was the pioneer in exploring the unconsciousness background of our consciousness, and the concept of an unconscious self cannot be discarded today except with the abandonment of reason. Symbols often express ideas that have not yet reached the threshold of our consciousness, they originate in the dark abyss of our unconscious self, and are often expressed through our dreams. Dreams in fact, provide the most accessible materials for investigation into the unconscious.

Dreams are nature's mechanism for decluttering the mind of the all the unnecessary images and words it gathers in its daily journey through life and form an important part of 'our subliminal psyche'. They also bring up new ideas from the subliminal to the conscious mind, and help resolve many of the problems the conscious mind is unable to find an answer to, following the vertical logic we are so accustomed to apply to resolve every problem. Discovery of the nature of light by Einstein or the structure of the Benzene ring by Kekulé, which originated from their dreams are examples of this process from Science, and the revelation of the plot of Dr. Jekyll and Mr. Hyde to Robert Louis Stevenson is an example of the same process in literature which only illustrate the point that dreams cannot be explained simply in terms of our living memories of experiences. They also retain the memory of our past evolution and of our ancient struggles for survival against mighty competitors, our most basic fears and prejudices. Common motifs of dreams like falling, fleeing, being persecuted by dangerous animals, fighting against well-armed enemies while being defenceless, etc. again can be related to our evolutionary days of hard struggle. Thus the fear of falling, a common theme of dreams of people across the world may refer to the arboreal existence of our ancestors, and fear of reptiles, perhaps the closest competitors to mammals, may explain our fear of the snake, another common theme of dreams.<sup>14</sup>

Dreams generate symbols, the meaning of which is not always apparent to our conscious mind, and while striving for their meaning, our ancient ancestors often conjured up the images of gods or spirits. Dreams of modern men and women often summon images that are analogous to ancient myths or rituals, which Freud had called the 'archaic remnants' – they are innate and inherited from our past. These again originated from his instincts which played a much more pervasive and enduring role for them than their modern descendants who have learnt to control them somewhat during what Jung calls the "civilizing process", but nevertheless, these instincts are not entirely forgotten; they lie buried deep in his psyche but can come up to the surface in a dream. If our physical body could still retain the signatures of our evolution in the form of remnants of various obsolete organs, like the *appendix* or the *os coccyx*, there is no reason why the mind cannot retain the memory of its biological, prehistoric and unconscious development when the primitive mind was not much different from that of an animal, and why the

collective psyche cannot spawn the memory of such development in the form of symbols and dreams, collective images and mythological motifs, the primordial symbolic images or 'archetypes' of Jung. Their origin is untraceable, but they occur everywhere in the world.



*The megalithic Celtic tomb of Newgrange in Ireland was built around 3200 BC, much before the Great Pyramid of Giza in Egypt, It predates the Mycenaean culture of ancient Greece. On the Winter Solstice, when the first rays of the rising Sun illuminates the triple spiral carved into one of its smaller chambers, which is illuminated only on the Winter Solstice, indicating to the ancient people that the sun was returning with the promise of renewing the desolate landscape of winter by the luxuriant greenery of spring. Similar monuments using the sunlight are found in many other places, including at the Inca monument of Macchu Pichu in Peru. The triple spiral appears in various forms in pre-Christian Celtic art and also later.*

*The triple spiral was possibly the precursor to the later triskele design (shown earlier at serial number 9 in the list of ancient symbols depicted earlier) found in ancient manuscripts and many other intertwined spirals. Many explanations have been proffered which are not necessarily what the ancient men had in mind while designing the symbol. Many ancient symbols are still in vogue in the rituals of societies living on the outskirts of civilization even in our world.*

Unlike a sign, symbols are natural and spontaneous that connect human beings in a group or society, and thereby serves its evolutionary purpose. A symbol represents collective thoughts. Religious symbols, for example, are collective in their nature and origin. As Jung says, they emanate from 'primeval dreams and creative fantasies', and in being so, are involuntary, spontaneous manifestations, to understand which our past is as important as our present.

Dreams often dig into the storehouse of buried memories inherited from our ancestral past, skipping images which are important to our conscious mind, like the 'faint gleam of stars during a total eclipse of the Sun'. As Jung says, 'As a plant produces its flower, so the psyche creates its symbols'. Every dream evidences this process. That is why they exhibit so much similarity in theme, content, images and their recurrence, cutting across cultures and religions. While rational analysis remains the prerogative of the conscious mind, the unconscious is guided by the archetypes. Ancient men did not reflect upon their meaning, but lived them, and were guided and animated by them.<sup>15</sup> They feared their spirits, gods and demons, prayed to powers that were seemingly beyond their control, and derived solace from collective beliefs inscribed as images in the walls of caves they inhabited. These images imparted a meaning unto their lives, an 'unconscious identity' with natural phenomena, and the ancient men were moved by the stirrings of their collective appeal. These symbols were natural, they engendered in the unconscious content of their psyche, as distinct from cultural symbols which are products of culture and represent the truths and beliefs held sacrosanct by different cultures. These came much later. The unconscious has been a part of the 'original mind' that has preserved its original characteristics - man's basic instincts, his fundamental illusions and primitive fears as his consciousness evolved while he gradually learnt to free the mind from these primeval instincts and fears. But somehow, the unconscious has retained the ability

of recollection of his infantile mental world made of a complex web of inexorable opposites, day and night, light and dark, good and evil, happiness and misery.

(III)

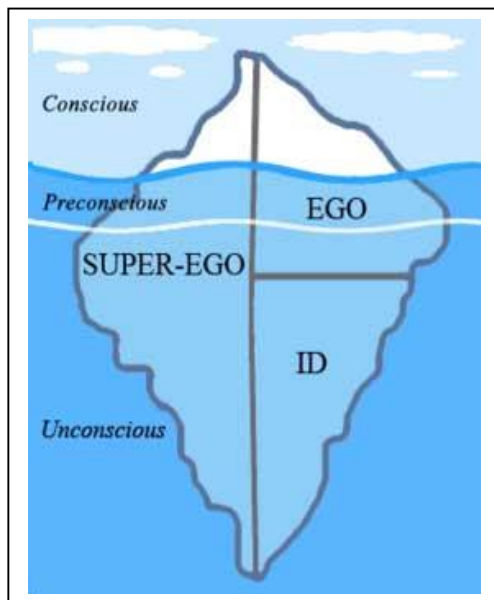
The use of symbols, as already observed, is ingrained in the customs and rituals of tribal societies even in today's world, in what Henderson called the "Archetype of initiation", "In tribal societies, it is the initiation rite.....The ritual takes the novice back to the deepest level of original mother-child identity or ego-self identity, thus forcing him to experience a symbolic death. In other words, his identity is temporarily dismembered or dissolved in the collective unconscious. From this state he is then ceremonially rescued by the rite of new birth. This is the first act of true consolidation of the ego with the larger group, expressed as totem, clan or tribe, or all three combined." The rite of death and rebirth provides the "rite of passage" from one stage of life unto the next, like from childhood to adolescence, or from adolescence to maturity. These archetypal patterns of initiation are woven into the fabric of ecclesiastical rituals of ancient societies.<sup>16</sup>

Shamans and birds are two recurrent motifs in the ancient cave paintings. According to Henderson, both are symbols of transcendence, 'the means by which the contents of the unconscious can enter the conscious mind' in a trancelike state.<sup>17</sup> He quotes the American scholar Joseph Campbell who has commented on the ancient Palaeolithic cave paintings of Lascaux, ".....there is a shaman depicted, lying in trance, wearing a bird mask, with a figure of a bird perched on a staff beside him. The shamans of Siberia wear such bird costumes to this day." This again proves the universality of symbols and their meanings, which transcend time, space and cultural boundaries. Other animals, especially coiled snakes have also repeatedly been used as symbols of transcendence in different cultures since ancient times, and motifs like lonely journey, rites of initiation, or death or birth have been found to be shared in the paintings and arts of most ancient cultures.

A common object used by all ancient societies was the stone – even now we pick up a stone of unusual shape or colour and preserve them as something priceless. Men have collected stones since times immemorial, attributing various meanings unto it, from the spirit of the dead to the mystery of life force. Stone is a symbol of something eternal and permanent, something that time cannot destroy. Erection of stone monuments evidenced in almost all ancient civilizations probably stems from this symbolic meaning of the stone.<sup>18</sup> *Mandala*, a circle that appears in diversified forms, is another recurrent symbol used all over the world in religion, meditation, architecture and sculpture. A circle symbolizes perfection, enlightenment, wholeness and order, and *mandala* is used to indicate unity, harmony, balance, inner peace, completeness of the self and consciousness.

Animal pictures were another common motif that has been symbolized and used extensively in the cave paintings. These go back to the Ice Age as we have seen, but even today, 'a strange magic seems to haunt the caves that contain the rock engravings and paintings'. People living in areas where these cave paintings have been found in Africa and Europe are prevented by some kind of religious awe or fear of spirits not to go near these caves. Pictures of animals keenly observed and rendered with great artistic

skill on the walls of the caves seem to recreate a hunting-magic – in the belief that what happens to the picture happens to the original animal. The animal is identified with its image, which is then attributed the soul of the animal.<sup>19</sup>



When people started living in groups from the necessity of cooperative behavior for survival, symbols like these had guided and modified his behavior leading to the development of a collective consciousness, what Freud called the Super-ego. Super-ego influences the other aspects of our personality, what Freud called *Id* and Ego. The *Id* is unconscious part of our psyche - the primitive and instinctive component of our personality comprising the inherited or biological components of personality preset at birth, including the sex instinct or *Eros*, and the aggressive instinct or *Thanatos*. *Id* responds directly to the instincts. The personality of the newborn child is all *id* - it develops an ego and super-ego only later. *Id* is infantile and detached from the external world, it does not change with time or experience or reality, as it operates within the unconscious part of the mind. *Id* is primitive, illogical, irrational, and selfish

- it demands immediate satisfaction and when that happens we experience pleasure; on denial of satisfaction, we experience tension.<sup>20</sup>

The Ego is “that part of the *Id* which has been modified by the direct influence of the external world.” Ego mediates between *Id* and the external real world. It is the decision making component of personality that works by reason, unlike the *Id*. Ego considers social realities and norms, etiquette and rules in deciding how to behave in society. Like the *Id*, it seeks pleasure but through a realistic strategy; it postpones satisfaction to avoid negative consequences in society. Freud made the analogy of the *id* being a horse and the ego being the rider. The ego is “like a man on horseback, who has to hold in check the superior strength of the horse.” The Ego has no concept of right or wrong, but is guided by the principle of satisfaction without causing harm to itself or to the *Id*. It is rational, realistic, and orientated towards problem solving. It can formulate alternative solutions to a problem, and can control one’s impulses.<sup>21</sup> *Id*, Ego and Super-Ego are the three parts to our psyche, with the help of which we can grasp reality. Freud had divided the mind into the three elements of conscious, unconscious and preconscious which is the no-man’s land between the first two.<sup>22</sup> While *Id* lies wholly within the unconscious, the conscious is accessible to the Ego and Super-ego.

The animal motif used in the cave paintings that we have seen earlier is symbolic of man’s primitive and instinctual nature, and corresponds to the *Id*. An animal is neither good nor evil, it only obeys its instincts.<sup>23</sup> Instinct is also the foundation of human nature – but man is the only creature who can control its instinct through Ego and integrate it in his life to bring balance and harmony. As Jaffle says, “Primitive man must tame the animal in himself and make it his helpful companion; civilized man must heal the animal in himself and make it his friend.”<sup>24</sup>

(IV)

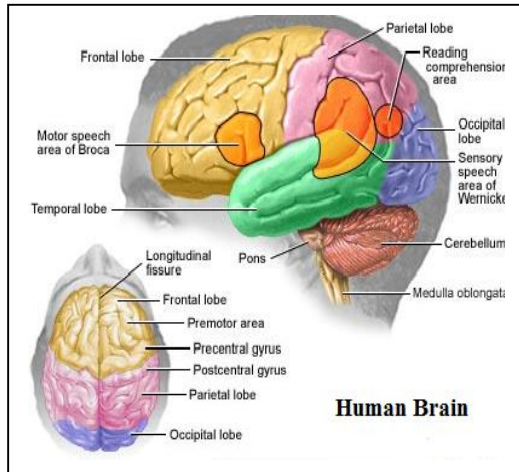
Unconscious is the primal womb of creation; it is here that the images, dreams, ideas, intuitions are generated which then enter our consciousness in tangible form. The origin of such contents lies on the frontier of the unknown, and possibly unknowable, mystery of the unconscious.<sup>25</sup> Our conscious representations are sometimes ordered even before we become conscious of them; what appears as 'rational' explanation of something to our conscious mind is probably because this explanation conforms to the 'preconscious constellation of contents in our unconscious'.<sup>26</sup> Scientists, creative writers and even ordinary people trying to solve a problem often face an Eureka-moment, when the solution suddenly presents itself out of nowhere, solving 'itself as lightning strikes', as the famous mathematician Karl Friedrich Gauss had once described the experience while dealing with the theory of numbers. Every enlargement of an observer's consciousness by gaining an insight into the working of the mind also leads to corresponding new insights into the way nature works. Somehow mind and nature seem to be acting in close liaison with each other. Even hard-core scientists have been fascinated by such relationship; physicist Wolfgang Pauli wanted a 'psychological investigation of the inner origin of our scientific concepts' side by side the investigation of the outer world. Physical and psychological characteristics may be linked to the qualitative and quantitative aspects of the same reality.<sup>27</sup>

Eastern sages believed that all knowledge resides in our mind, we only have to dis-cover it. History provides ample evidence that every time we have delved deeper into the working of our minds and untangled one bit of the mysterious way the mind worked, it has been followed immediately by a profusion of discoveries in the realms of physics, chemistry, mathematics and biology – as if a greater understanding of the working of our mind has expanded our vision into the physical way nature worked. There are in fact too many instances of such correspondence to dismiss this hypothesis as a mere coincidence or oversimplification, notwithstanding the fact that scientific discoveries in any realm do take place in an autonomous way, independent of discoveries in other branches of science. Let us try to correlate a few discoveries in the two realms.

In 1672, Thomas Willis published the anatomical treatise '*De Anima Brutorum*', interpreting psychology in terms of brain function. About the same time, Baruch Spinoza showed that moral concepts such as good and evil, virtue, and perfection have a basis in human psychology. These were important milestones in the development of psychological thoughts and gave man an insight, hitherto unknown, into the working of the mind. In 1672, Newton discovered that white light is a spectrum of a mixture of distinctly coloured rays. In 1675, Leibniz and Newton invented calculus to deal with infinitesimal quantities. In 1687 Newton discovered his three laws of motion and the law of gravitation, laying the foundation for Classical Mechanics that will rule over the scientific landscape for the next two centuries.

Modern neuroscience was born in 1848, when an accidental blast of dynamite propelled a three-foot seven-inch iron spike through the front brain and jaw of a Vermont railroad foreman by the name of Phineas Gage. Though an unfortunate event for Mr Gage who survived the accident and recovered almost fully from it, it opened the brain to serious scientific measurement and investigation for the first time. His coworkers noticed a sharp change in his personality after the accident, turning an otherwise decent and helpful man into a capricious, selfish, abusive and hostile misanthrope. The iron rod had caused large scale destruction of the area of the brain behind the forehead called the frontal lobe. Over the years, as it

became increasingly clear that the abrupt change in his behaviour was due to the massive damage caused in the frontal lobe of his brain, it led to a paradigm shift in the scientific thinking of the day that perhaps areas of the brain could be mapped to certain specific behaviours. It was a revolutionary idea in psychology at that time. A similar revolutionary idea had rocked the world of science to its very foundation in 1859, when Charles Darwin and Alfred Wallace suggested the man had evolved from lower forms of life, by propagating their theory of evolution through natural selection.



In 1861, Pierre Paul Broca, a physician in Paris, identified an area in the left cerebral hemisphere, in the left temporal lobe, an area of the brain near the left ear that is important for speech production, now called the Broca's area.<sup>28</sup> In 1864, the Scottish physicist James Clerk Maxwell formulated the famous Maxwell Equations combining the forces of electricity and magnetism in a unified framework, bring together the ideas of Gauss, Faraday and André-Marie Ampère. The very next year, Johann Gregor Mendel discovered the laws of heredity, laying the foundation of the science of genetics. In the same year, Rudolf Clausius also defined Entropy, and along with it the first and second laws of thermodynamics, laws that have stood rock-solid

against the tides of time ever since. Four years hence, Dmitri Mendeleev would design his Periodic Table of Elements.

In 1874, German physician Carl Wernicke showed that damage to a slightly different area in the left temporal lobe caused the problem of understanding of written or spoken speech, even though a person could articulate clearly. In the same year, Wilhelm Wundt (1832-1920) published "*Grundzüge der Physiologischen Psychologie*" (Principles of Physiological Psychology), the first textbook of experimental psychology. Described as the 'Father of Experimental Psychology' as well as the 'Founder of Modern Psychology', Wundt ushered in the idea of 'structuralism' in psychology, breaking consciousness into the elemental structures of sensations and feelings to be analysed through the process of 'introspection'. In 1879, Wundt established the first psychological laboratory at the University of Leipzig in Germany, a very significant development in psychology to study mental experience by analysing the elements that constitute the experience. In the other realm of physical sciences, between 1875 and 1878, Josiah Willard Gibbs published his monumental work on chemical thermodynamics, "On the Equilibrium of Heterogeneous Substances" by applying thermodynamic techniques to the interpretation of physico-chemical phenomena, a work that has been recognized as one of most important in the history of chemistry. In 1877, Ludwig Boltzmann discovered Statistical Mechanics.

In 1885, just a year before Sigmund Freud (1856-1939) started practicing in Vienna, Hermann Ebbinghaus published "*Über das Gedächtnis*" (On Memory), a path-breaking work on memory based on self-experiments, describing the learning curve, forgetting curve, and spacing effect. Two years later, Albert Michelson and Edward Morley would conduct their famous 'failed' experiment for detection of aether that ultimately led to the discovery of the Special Theory of Relativity in 1905. In 1899, Freud published



his “*Die Traumdeutung*” or “Interpretation of Dreams”, marking the beginning of psycho-analysis and thereby opening a new window to the human mind, to be followed later by his “Lectures on Psycho-Analysis”. The very next year, Max Planck discovered the Law of Black Body Radiation, laying the basis for Quantum Theory, an equally powerful intellectual achievement like the Theory of Relativity. In 1901, Freud published “The Psychopathology of Everyday Life”. In 1905, Albert Einstein would propose his Theory of Special Relativity, which took physics to an altogether higher plane in a giant leap for scientific knowledge.

In 1910, Freud published his first series of lectures on Introduction to Psychoanalysis. Three years later, Carl Jung developed his own theories of Analytical Psychology. In 1921, Freud published “Group Psychology and the Analysis of the Ego”, followed by “The Ego and the *Id*”. In 1927, the Russian psychologist Ivan Pavlov published “Conditioned Reflexes” containing his theory of classical conditioning. During this period, Alfred Wegener discovered the Theory of Continental Drift in 1912, Albert Einstein developed the Theory of General Relativity in 1915, Wolfgang Pauli discovered the Exclusion Principle in 1924, and Erwin Schrödinger developed the Schrödinger Equation of Quantum Mechanics in 1925. In the same year, Werner Heisenberg discovered his celebrated Uncertainty Principle and Georges Lemaître developed the theory of the Big Bang to explain the origin of the Universe. In the next year, Paul Dirac formulated the Dirac Equation of Quantum Mechanics and Alexander Fleming discovered Penicillin, the first antibiotic. In 1929, Edwin Hubble discovered and formulated the law of expansion of the Universe. In 1953, Nathaniel Kleitman of the University of Chicago discovered Rapid Eye Movement Sleep (REM), an important step to understand dreams. In the same year, Francis Crick and James Watson cracked the helical structure of DNA, laying the basis for molecular biology.

Dreams and DNA obviously have nothing in common and may not be connected in any way, but it can be imagined that by opening an eye into the mind, another eye is automatically opened into the nature when mysteries disappear and things that were hitherto unseen and unexplained suddenly come into the light of consciousness, and reality shines in the bright daylight of objective knowledge. Reality is multi-dimensional, multi-layered; in it are embedded experience, imagery, hope, faith and belief, as also fear, confusion, anxiety, insecurity and doubt that often turn our lives into wastelands. To express reality accurately in all its dimensions has always been, whether now or in the ancient times, the ultimate aim of artists, poets, philosophers, thinkers and scientists. Symbols without words but arising from our unconscious perhaps provide a better medium for expressing reality.

(To be continued)

## References

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<sup>1</sup> Palaeolithic age in Indian subcontinent is defined between 100000 to 10000 years ago and is divided into the Lower Palaeolithic (100000-40000 years ago), the Middle Palaeolithic (40000 to 20000 years ago) and the Upper Palaeolithic (20000-10000 years ago). Mesolithic age is defined between 10000 years ago and 2500 BC while Neolithic age is defined between 2500 BC and 1500 BC. These are characterised by the nature of the stone tools used by primitive humans. Agriculture and settled life had begun during the Neolithic period, when civilisations started springing up in different parts of the world. Characteristic tools of the three ages were flake tools like hand axes, microliths or small chips or flint tools, and polished tools like stone axes or grinding tools respectively.

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<sup>2</sup> Rock paintings in over 400 caves spread over 5 hills (Bineka, Bhimbetka, Bhonrawali, Lakha Juar (east) and Lakha Juar (west)) are preserved by the Archaeological Survey of India. Only 39 caves spread over a length of 8 kilometres are open to tourists today.

<sup>3</sup> For details of these paintings, please refer to Ota, S B, *World Heritage Series: Bhimbetka*, Archaeological Survey of India, 2008.

<sup>4</sup> In one of the rock shelters known as the Auditorium Rock Shelter, the earliest engravings of small cup like depressions dates to nearly 100000 years. (Source: [http://asi.nic.in/asi\\_monu\\_whs\\_rockart\\_bhimbetka.asp](http://asi.nic.in/asi_monu_whs_rockart_bhimbetka.asp), accessed 20/03/2016).

<sup>5</sup> The complete story of the evolution of *Homo sapiens* has been told in details in the author's book "Story of Evolution".

<sup>6</sup> Walter, Chip and Stephen Alvarez, "The First Artists", *National Geographic*, January 2015.

<sup>7</sup> Barham, Lawrence S , "Art in Human Evolution" in Berghaus, Gunter, *New Perspectives on Prehistoric Art*, Greenwood Publishing Group, Westport, USA, 2004, 105-127.

<sup>8</sup> Use of pigments for body decoration or 'body art' is much older. Some evidence suggests its use some 300000 years ago in Africa, in the Congo basin. It may be mentioned that Africa was the cradle for human evolution.

<sup>9</sup> *Ibid*, 126.

<sup>10</sup> Combs, Allan, "Art and the Evolution of Consciousness", *Eros & Kosmos*, <http://eroskosmos.org/english/art-and-evolution-of-consciousness/> , accessed Mar 30 2016.

<sup>11</sup> The numbering of the rock shelters has been done according to the area of the shelter (I to VII), cluster of shelters within the area (A to F) and specific shelter within the cluster. Area III is the only one accessible to the public.

<sup>12</sup> <http://thespiritofwater.com/pages/sacred-symbol-uses>, <https://en.wikipedia.org/wiki/> accessed 20/04/2016.

<sup>13</sup> Jung, Carl G, "The Importance of Dreams", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 3-94.

<sup>14</sup> Sagan, Carl, *The Dragons of Eden*, Ballantine, New York, 1977, 151-160, 177-180.

<sup>15</sup> Jung, Carl G, "The Importance of Dreams", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 69.

<sup>16</sup> Henderson, Joseph L, "Ancient Myths and Modern Man", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 123.

<sup>17</sup> *Ibid*, 147.

<sup>18</sup> Franz, M L von, "The Process of Individuation", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 221-224.

<sup>19</sup> Jaffe, Aniela, "Symbolism in the Visual Arts", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 260-261.

<sup>20</sup> McLeod, S A (2016), "Id, Ego and Superego", [www.simplypsychology.org/psyche.html](http://www.simplypsychology.org/psyche.html), accessed 06/05/2016.

<sup>21</sup> *Ibid*.

<sup>22</sup> Preconscious are the thoughts which are unconscious at the particular moment in question, but which are not repressed and are therefore available for recall and easily 'capable of becoming conscious'.

<sup>23</sup> Jaffe, Aniela, "Symbolism in the Visual Arts", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 265.

<sup>24</sup> *Ibid*, 266.

<sup>25</sup> Relationship between the conscious and the unconscious finds expression in the surreal paintings of modern times. As one of the founders of surrealism, the French poet Andre Breton, who as a student of medicine was introduced to Freud's ideas, wrote, "the apparent antagonism between dream and reality will be resolved in a kind of absolute reality – in surreality." Surrealists sought a reconciliation between the conscious and the unconscious. But it is the conscious that plays the decisive part, and can interpret the images and dreams generated by the unconscious. Once unconscious self is allowed control, as happens under the influence of drugs like LSD, the paintings acquire an abstract quality. Unconscious is like pure nature, it throws gifts as 'spirit of nature' as well as horrors as 'spirit of evil' without discrimination. (*Ibid*, 295)

<sup>26</sup> Franz, M L von, "Science and the Unconscious", in *Man and His Symbols*, Ed. Jung, Carl G, Dell, 1968, 383.

<sup>27</sup> *Ibid*, 381.

<sup>28</sup> Can be seen in the adjoining picture, adapted from <http://www.mybraintest.org/2014/08/on-using-only-10-percent-of-our-brains-the-enduring-myth-from-lucy-the-movie/> accessed 20/05/2016.