



An AR Installation 'The World of Light' as a Case Study

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ABSTRACT

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Hallucinations are believed to be as old as the human's brain. Usually, modern people relate to hallucinations in drugs or mental illness. Modern man may not think how great impact hallucinations have had on arts, religions, and folklore. The purpose of this thesis was to study how hallucinations have impacted art. This study also includes an AR installation which is based on this written part of the thesis.

The data for this thesis was found from various sources such as literature, journals and researches. Art history and modern art pioneers' work such as Wassily Kandinsky, Yves Klein and Hilma Af Klint were considered. The study also deals with hallucination studies in the 50s, cave art, and religion as a part of art.

The latest research have demonstrated that hallucinations are more common than we have been suggested. Although hallucinations are still a mystery for scientists, the mechanism of hallucinations is known. Studies of hallucinations in modern art lead inevitably to artists interest in esoteric and occultism. Studies indicate that the arts role as the creator of modern spiritualism is big. Theologian Christopher Partridge has created the term "occulture" to describe this late modern era. According to Partridge, there is a process underway that traditional religions have to make room for more spiritual culture.

Nowadays artists' interest in esoteric thinking has a great impact on further, it can be found everywhere from our popular culture, and it can be seen globally. However, not all artists necessarily relate their works with esotericism, but the subconscious can also be studied from the perspective of neuroscience. Developing VR, AR, MR, and IA technology gives new tools to explore the subconscious through art.

Keywords: hallucination, fine art, subconscious, spirituality, occulture

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INTRODUCTION

The aim of this thesis was to explore the impact of hallucinations on art. The study tries to investigate what hallucinations are, consider types of hallucinations and indicates the commonness of hallucinations. This study's purpose was also to remove the stigma of people who experience hallucination, help people who are afraid of their experiences, and indicates that hallucinations can occur without the boundaries of any beliefs system. Hallucinations have inspired many artists through art history, and they have had a strong impact on artists' religious and spiritual beliefs. The study explores interesting points in a religious and spiritual point of view in art history that are influenced significantly by art movements. The thesis shows that today the subconscious is also studied in art from the perspective of neuroscience. Because the topic is wide, the thesis adduces only some of the main points. The thesis does not consider the deep thematic of religions and esoteric rather focus on the topic from the perspective of neuroscience and cultural development.

The history of hallucinations stem from the beginning of art history to the earliest cave art found in Indonesia which dates to the Paleolithic era around 40,000 years ago (Brumm, Oktaviana, & Aubert 2019). Cave paintings are founded around the world and some archaeologists and art historians point to some of them as a sign of shamanism. The paintings are interpreted as hallucinations experiences and journeys into the spirit world. (Woolfe 2013.)

The thesis explores religious and spiritual art from the golden age of Creek art and culture, through the spread of Christianity to this day. It exposes ideologies and philosophies behind artists' works.

The thesis adduces a significant turning point in art history at the beginning of the Romanticism era. At that time new ideology was born by contemporary philosophers. Science had broken down a religious worldview and humans' worldview was concentrated in rational thinking and science. Contemporary philosophers

saw the destruction in humanity and begin to seek the natural state of the human, return in the connection with nature as though primitive people were still living. It was also recognized that in the world existed attributes which were not able to explain with common sense. Through this new worldview was born a radically new idea of art. Arts purpose was to describe the world's unseen attributes which were out of the scientific researches. (Pasanen 2004, 31-32.)

The Theosophy, founded by Madame Blavatsky in the late 19th century, inspired artists. Theosophical ideologies and discusses were interested in contemporary artists, such as modern art pioneers Wassily Kandinsky, Piet Mondrian, Kasimir Malevits and Hilma Af Klint. One of the most popular and widespread ideology was that reality was four-dimensional, the fourth dimension was wider and higher reality than our three-dimensional world (Pasanen 2004, 47).

Nowadays esoteric ideologies can be found everywhere from our popular cultures such as music, literature, movies, TV-Series, and Internet. Theologian Christopher Partridge has created the term "*occulture*" to describe this era. According to Partridge, there is a process underway that traditional religions, and Christianity in particular, have to make room for more spiritual culture. (Kokkinen 2012.)

The artistic part of my thesis is based on this written study, sensory deprivation research and theosophy thinking. It is an installation that includes AR technology with a deep significance in the fine art context. I describe the working process of 'The World of Light', I am not going to analyse it rather I leave the audience to interpret the meaning from their point of view.

1 WHAT ARE HALLUCINATIONS?

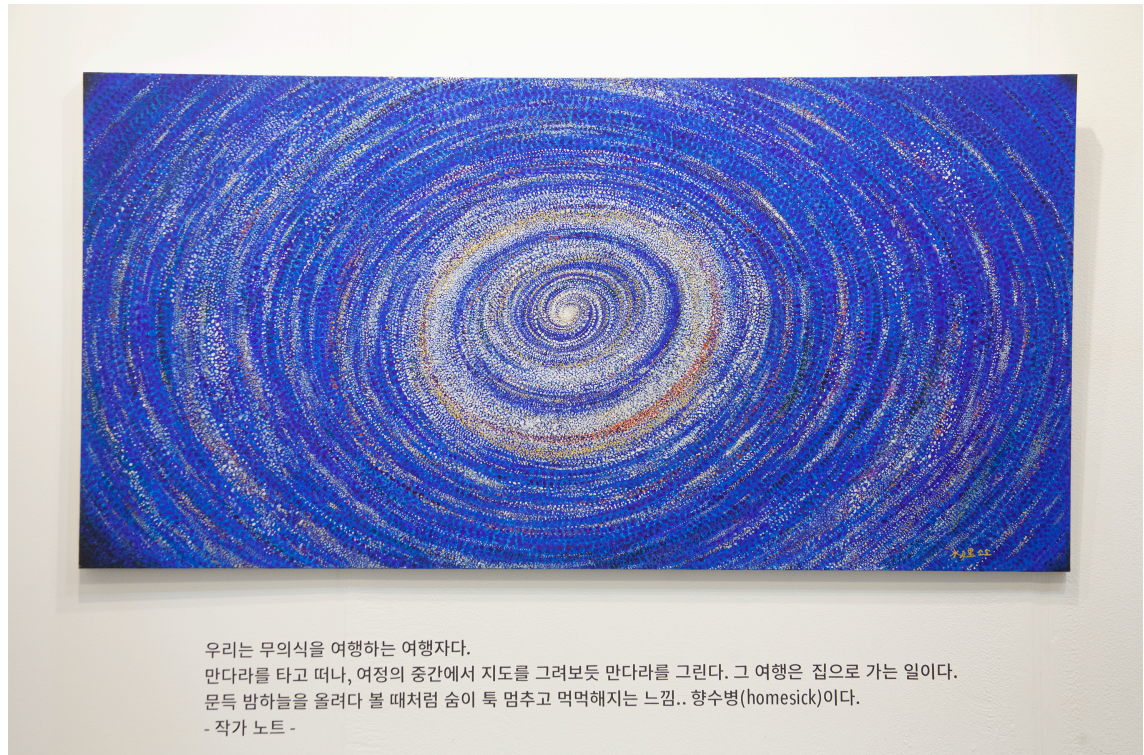
The word “*hallucination*” came in use first time in the early sixteenth century, and it denoted “*a wandering mind*”. In the 1830s Jean-Etienne Esquirol, a French psychiatrist, gave the term its present meaning. What we now call “*hallucinations*” were referred to as “*apparitions*”. Definitions of the word “*hallucination*” can still vary because it is not always easy to discern where the boundary lies between hallucination, misperception, and illusion. Generally, hallucinations percept experience in seeing things or hearing things that are not there. (Sacks 2012, ix.)

Hallucinations are probably as old as the human brain, and they have always had an important place in our mental life and our culture (Sacks 2012, xi, xii). Hallucinations have had a big role in our folklore, art, and religions. People have various beliefs about what hallucinations are. A reason for that seems to be that science and rational thinking have been in a big role in our culture. Modern people are estranged to believe in invisible and supernatural which for primitive cultures is natural.

Many cultures consider hallucinations as a special, privileged state of consciousness that can be reached through spiritual practices, meditation, drugs, or solitude. But in modern western culture hallucinations are more often considered to portend mental illness. This creates a big stigma for patients who are afraid that their friends and their doctors will think that they are losing their minds. (Sacks 2012, xiv.)

2.1 Hallucination Types

There exist various types of hallucinations, in addition to visual hallucinations, they can affect all five of your senses, such as auditory, touch, smell, and taste (Badii 2014). Visual hallucinations compartments to simple and complex hallucinations. Simple hallucinations occur as flashing lights, phosphenes and geometrical patterns such as lines, circles, nets, triangles, squares, spirals and tunnels (PICTURE 1). Complex hallucination can appear as figures, faces, people, animals, buildings, and landscapes. (Sacks 2012, 39; Häkkinen 2019, 15, 127.)



PICTURE 1. Suwoliso Lee Hyeonjoo, Homesick 2019, 7th Buddha Art Festival, Seoul Buddhism Culture Expo. Photo by Minna Annola.

Hallucinations are not necessarily a symptom of mental illness, rather they can appear for another reason (Häkkinen 2019, 13). Hallucinations may appear in the consciousness of normal people in dreams, in a hypnagogic state, hallucinations of the bereaved, under stress or sensory deprivation, or as organic symptoms of illness (Critchley 1987, 27). Hallucinations can occur in illnesses such as Alzheimer's disease, Parkinson's disease, migraine, glaucoma, epilepsy, brain damage, brain tumour, and many more (Häkkinen 2019, 13).

Hallucinations occur in many different forms. In a hypnagogic state, between awake and sleep some people are seen *hypnagogic* hallucinations. Surrealist Salvador Dali was fascinated with this hypnagogic realm and invented a tactic to enable him to access this state:

Settling for a nap, he would hold a key over a metal plate and, as soon as sleep came creeping through, the clanging of the dropped key would wake him, allowing him both the micro rest he required, and the ability to immediately record visuals experienced on the brink of the unconscious (PICTURE 2).

These pieces Dali created using this method he called “hand-painted dream photographs”. (Little 2016)



PICTURE 2. Salvador Dali, The Persistence of Memory 1931

Hallucination which appears with open eyes is called *hypnopompic* hallucination. Hypnopompic hallucinations can be for example lilliputian hallucinations which appear as little people such as, elves, leprechauns and fairies (Sacks 2012, xiii). It is interesting to think that our fairy tales might rise from Lilliputian hallucinations.

Sleep paralysis is quite a common state to experience hypnagogic and hypnopompic hallucinations. It can occur for healthy people, and as well in symptoms of narcolepsy. In sleep paralysis person have a feeling he or she is unable to move, the mind wakes but the body does not. The person can experience pressure on the chest, see a malevolent being in the room or have a sense of a threatening presence in the room. Hypnagogic experiences are visual, auditory, and sensory hallucinations. Sleep paralysis can also cause out-of-body experiences. Episodes last from a few seconds to a few minutes, and they can cause fear for the experiencer. (Davis 2017.)

The most known piece of sleep paralysis can be found in Swiss painter Henry Fuseli (1741-1825). The painting is named the Nightmare. (The National Sleep

Foundation 2017.) Interestingly, this piece was painted in 1781, a century and a half before the Surrealists began to explore the subconscious in their works. (PICTURE 3)



PICTURE 3. Henry Fuseli, *The Nightmare* 1781

Some persons suffer *Alice in Wonderland Syndrome* which was originally named by Dr John Todd in 1955. The syndrome has got the name of Lewis Carroll's novel *Alice's Adventures in Wonderland* (PICTURE 4). In this syndrome, surroundings are changing bigger (macropsia) or smaller (micropsia) than they are, a patient can experience auditory hallucinations and changes in their perception of time. It is commonly associated with migraines and brain tumours. Lewis Carroll is known to have been a Migraineur, and it is thought that he might have been inspired by his Migraine auras and distortions in perception. (On Psychology and Neuroscience 2015; O'toole & Modestino 2017.)



PICTURE 4. John Tenniel, Alice's Adventures in Wonderland 1865

The boundaries between sane and schizophrenic hallucinations may be hard to separate for ordinary people. Due to advances in neurology, "Hallucinations in the sane" have been well recognized after the nineteenth century. In England, in the 1880s, the Society for Psychical Research collected and investigated reports of hallucinations. Many notable scientists joined in the society which the subject of the investigation was clairvoyance, telepathy, and communication with the death. These researchers found that hallucinations were not uncommon among general people. (Sacks 2012, 56-57.)

According to a new study about 1 in 20 in the general population has experienced at least one hallucination in their lifetime that wasn't connected to drugs, alcohol or dreaming. More than 31 000 people in 18 countries were interviewed as a part of a mental health survey from the World Health Organization in 2015. The study excluded people who possibly had a psychotic disorder, such as schizophrenia or manic depression. Therefore, the findings show that hallucinations are not always connected to serious mental illness. (Rettner 27.5.2015.)

Larøi and van der Linden's survey indicates the same outcome (TABLE 1). 236 university students answered hallucination related question in the Launay-Slade

questionnaire. Some questions don't relate to hallucinations rather to person thinking and daydreaming. There is a background idea that persons who have vivid daydreams can experience hallucinations more.

TABLE 1. Survey (Larøi and van der Linden 2005)

Item	Yes answers %
I have been troubled by hearing voices in my head.	23
I have had the feeling of touching something or being touched and then found that nothing or no one was there.	19
Sometimes my thoughts seem as real as actual events in my life.	53
On certain occasions I have had the feeling of the presence of someone close who has deceased.	21
The sounds I hear in my daydreams are generally clear and distinct.	51
In the past, I have had the experience of hearing a person's voice and then found that no one was there.	34
Sometimes I have seen things or animals when nothing was in fact there.	25

Schizophrenia affects up to one in a hundred people (Collingwood 2018). Schizophrenic hallucinations are usually experienced as scary and agonizing. According to Swiss psychiatrist Eugen Bleuer the "voices" his patients heard, were closely associated with their mental states and delusions. The voices occurred their fears, they were surrounded by hostile powers and their entire transformed relationship to the world. Bleuer described in his 1911 monograph, *Dementia Praecox, The Group of Schizophrenias*:

The voices not only speak to the patient, but they pass electricity through the body, beat him, paralyse him, take his thoughts away. They are often hypostasized as people, or in other very bizarre ways. For example, a patient claims that a "voice" is perched above each of his ears. One voice is a little larger than the other, but both are

about the size of a walnut, and they consist of nothing but a large ugly mouth.

Bleuer had also written that almost every schizophrenic who is hospitalized hear 'voices' but hearing voices did not necessarily denote schizophrenia. (Sacks 2012, 54-56.)

Art therapy is widely used in many psychiatric hospitals (Collingwood 2018). Art therapy aims to enable a client to effect change and growth on a personal level through the use of art (Rachel & Milnes 2005.). In art therapy schizophrenia patients can make art of their hallucinations experience to cope with illness (Barnes 2017). Patients' illness can be seen in their works (PICTURE 5).



PICTURE 5. Kate Fenner 2016

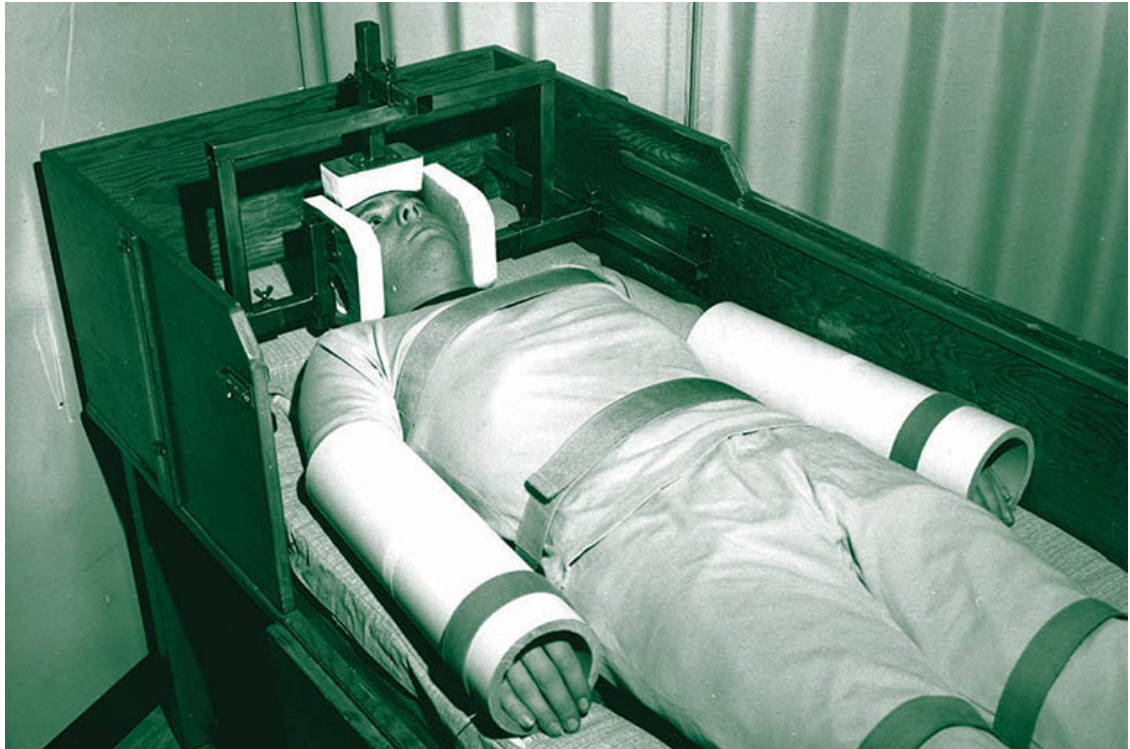
2.2 Sensory Deprivation Research by Donald Hebb

Though the mechanism of hallucinations is known, the aetiology of hallucinations is not known enough. Hallucinations arise from strengthening inner vitality and decrease of external stimulus synergy. This can be seen in illnesses that cause hallucinations such as glaucoma or deafness. (Salokangas 2004, 2085-92.) This has also been indicated in sensory deprivation researches.

The pioneer of neuropsychology, psychology Donald Olding Hebb did significant research at the Sensory Isolation Laboratory at McGill University in Canada in 1951. Hebb was a partner of the CIA and was originally making research on the torture method. Hebb had pondered communists' interrogations and was convinced that isolation was a certain key factor. Hebb had earlier researched dogs' genetics and the significance of learning where dogs were raised in isolation. Research had indicated that in isolation perception of dogs did not work normally. Hebb pondered if this method could apply as an interrogation technique. The idea in research was that if a human was kept in an isolation long enough, would they be confess easier and it would be possible to plant new thoughts in their mind. Hebb got funding from the Canadian Defense Research Board for two years. Project X-38 had one term, it was secret, and no one was not able to talk about it never in public. (Häkkinen 2019, 115-116, 123.)

Hebb constructed 2,4 meters long, 1,21 metres wide and 1,83 meters high sound-proofed room with a bed and a small table. The pillow had small speakers with a quiet humming noise. There was a dimmed light bulb in the room, and a test subject had goggles which surface was whetted so that it was impossible to see through them. In the hands, the test subject had cotton gloves and sleeves from elbow to fingertip made of cardboard. (Häkkinen 2019, 123.)

Male students were invited to the test, and they got paid each day they spent in the room. The target was one week. Because the influence of isolation was investigated in cognitive processes, the test subject had to make some anagrams, word association tests and simple sums. Test subjects' brain activity was measured with EEG. During the isolations, the test subject was also listening to a tape that was telling that the paranormal phenomenon is true, and many well-known scientists advocate that this phenomenon exists. This was the sponsor's desire. This tape purpose was to study if isolations influenced in forming of opinion. Research's outcome indicates that the isolation room deteriorated cognitive abilities and made the subject person sensitive to belief changes. Test subjects also believed more paranormal phenomenon. The surprising thing in research was that it caused hallucinations that were not expected. Because of this outcome, many other research groups began sensory deprivation studies (PICTURE 6). (Häkkinen 2019, 124-125.)



PICTURE 6. Sensory Deprivation Research by John Zubeck. University of Manitoba, Winnipeg, Canada 1959

Those who are familiar with shamanism in primitive cultures and east traditions in religions might not be surprised about Hebb's investigates outcome. Throughout the times it has been known that shamans and monks tend to meditation retreats to reach their inner self.

In the Sierra Nevada de Santa Marta mountains in Columbia are still living a primitive culture called Kogi people. Kogi shamans (Mamos) are selected for their role usually around the age of two. They are removed from the normal tribe life, and they grow up in the isolation in large, dark caves for 18 years. There they are given secret teachings by elder Mamos. (Reddy 2013 & Vogt 2015.)

2.2.1 Hallucinations during sensory deprivation researches

Most of the test subjects first reaction to the isolation was sleeping. When they waked up they tried to do something useful like think about work, but soon they found that systematic thinking was difficult in the isolation. First hours they had a pleasant feeling, but after a few hours, they began to miss stimuli. Many came restless and described their feeling unpleasant. Some test subjects had hard to

continue test after 2-3 days, but if they make it, they found that their thinking had changed, and they begin daydreaming. (Häkkinen 2019, 125-126.)

The beginning of hallucinations was varying on average from 33 to 72 hours. The typical beginning for hallucinations was a curtain that opened in front of the person and uncovered dark space. In the space was mist like difficult discernible 3dimensional structure. Some persons described it as fire or smoke. Some test subjects told that in the space was a tunnel that led through the mist. After the tunnel and the mist in the peripheral vision was to be seeing flashing lights and unclear vibration. First, clear hallucination shapes were seen in the middle of the field of view: light dots, lines, circles, trine, or nets. They complexed into rows where the field of view was filled with dots or squares in neat rows and columns. Then geometric shapes begin to get interpretations, patterns complexed and chanced identifiable objects. Test subjects begin to see visions such as yellow roses, babies lined up and millions of small umbrellas. About 10-30 hours after simple hallucinations visions get more complexed. Test subjects were seen landscapes, and in visions appeared activity. Visions were often distorted and cartoony. In addition to visual hallucination also other senses' hallucinations occurred. Hallucination came stronger the longer the isolation lasted. Eventually, test subjects began to believe in hallucinations, and they started to interact with them. Isolation also caused out-of-body experiences. (Häkkinen 2019, 126-129.)

The sensory deprivation research did not remain a secret for a long time. Test subjects had told their friends about the strange test. In 1954, the newspaper Toronto Star written about the test where students were paid that they did not do anything. Because the test has become public Hebb came up with a cover story. According to the story, the research aim was to study fatigue, and it was an extension for English psychology Norman Mackworth research. (Häkkinen 2019, 135.)

3 SHAMANISM, RELIGIONS AND SPIRITUALITY IN ART HISTORY

Investigations of art history indicate an interesting outcome of spirituality in art. The oldest art that is found is interpreted as religious art, possibly made by shamans and through whole art history a human believes in unseen forces seems to be strong. Especially, at the beginning of the Romanticism era commenced art's new era has interested contemporary art scholars.

Finnish Doctor of Philosophy Kimmo Pasanen has studied the foundations and backgrounds of modern art. In his studies, he also deals with the development of European art from a spiritual point of view. According to Pasanen religions have had a significant contribution to the development of the arts. Finnish researcher Nina Kokkinen has written a dissertation on the interest of Finnish artists in esoterics. In her research, Kokkinen analyzes the Finnish art produced by Akseli Gallen-Kallela, Pekka Halonen and Hugo Simberg for Christian environments, which is, however, art that rubs against Christianity. (Pasanen 2004; Kokkinen 2019)

Over the last decades, there has been a debate in the field of art research on the reconciliation of modern art and religion. There have been in discussion many points of views, but the emphasis has been on serious art detachment of religion, and art and religion research's unification. (Kokkinen 2012.)

According to German art historian Wilhelm Worringer (1881-1965),

Art is generated by spiritual forces, art history properly understood is the history of the human psyche and its forms of expression, the ceaseless shifting of a man's relation to the impressions crowing in on him from the surroundings world forming the starting point for all psychology on the grand scale. (Critchley 1987, 17.)

By exploring art movements from a spiritual point of view can find an idea of spiritual evolution which is in a continuous wave motion. History has seemed repetitive an event that raises people's spiritual awareness, this has often happened under the influence of one person. Since the rise, there has been a spiritual recession but with the advent of a new rise, mankind has been more aware.

For Wassily Kandinsky, some artists were prophets who could see more. He described: there is a single person at the top of the triangle. Even the closest people don't understand him. They call him: cheater or crazy. This was what Beethoven once had on top alone. Those eras, when art did not have high-class representative was spiritual life's era of an abyss. (Kandinsky 1952, 27,29.)

3.1 Shamanism and Cave Paintings

Shamanism has been called the oldest spiritual tradition in the world. Western people encountered first-time shamanism in Siberia in the 1700s (Laufer 1917; Shirokogoroff 1935; Rozwadowski; Kosko 2002; McDonald & Veth 2012, 17). The word *shaman* came in the English language from the Siperian word *ša man* that, in turn, derives from the Indo-European verb-root *ša-*, which means "to know" (Ripinsky-Naxon 1993:69; Pearson 2002:73–74; McDonald & Veth 2012, 17).

Shaman's work is based on a connection to the spirit world. Shamans use the experiences of altered consciousness. They contact spirits and supernatural entities, heal the sick, control the movements, foresee the future, control weather and harm enemies. Shamans have entered into an altered state of consciousness, they have animal-helpers and other spirits that assist them. Shamans contact the spirit realm not only through altered states but also through dreams. (McDonald & Veth 2012, 18-19.)

To understand shamanism and rock art one must know neuroscience and shamanistic practice. In discussions of shamanism and rock art there have used the three-stage model as an analytical tool which is in the same line as outcomes from the sensory deprivation researches:

- *Stage one*: In the "lightest" stage, subjects see bright, geometric, visual percepts (entoptic phenomena, phosphenes, or form constants) that include zigzags, dots, grids, nested catenary curves, crenellated lines, and meandering lines.
- *Stage two*: Moving into a "deeper" altered state, subjects try to make sense of the geometric percepts according to their emotional state and to what

their culture has led them to make of the percepts. For instance, meandering lines may be seen as snakes.

- *Stage three:* According to culturally informed expectations, subjects may ignore stages one and two, and move directly into this stage in which they experience hallucinations in all the senses and “see” culturally determined animals, people, blends of the two, and other visions that may or may not be distortions of what they see in normal vision. Geometric forms may persist peripherally. Entry into this stage is often via a vortex or tunnel; both ying and subterranean travel are widely reported. (Lewis-Williams 2002:121–135; McDonald & Veth 2012, 19-20.)

A shaman reaches these stages by ingestion of psychotropic substances or other factors, such as drumming, rhythmic movement, or meditation (Lewis-Williams 2002:111–135; Whitley 2009; McDonald & Veth 2012, 20).

A religious interpretation of Palaeolithic cave art was first suggested during the second half of the last century, but due to the developments in psychology, neuroscience, ethnology, anthropology and archaeology, the shamanistic element in cave art is more widely accepted. (Vickers 2011.) According to McDonald & Veth 2012, 17, Jakobsen (1999) believes that not all rock art should be considered shamanistic because they are not.

The earliest cave paintings are found from the island of Sulawesi, Indonesia date to at least around 44 000 years ago (PICTURE 7). These ancient paintings discovered in 2017 and they are the oldest founded art. They have the oldest pictorial narrative from our species, paintings portray a group of part-human, part-animal figures - ‘therianthropes’ - which are hunting wild pigs and small buffalo-like animals with spears or ropes. This kind of human-animal hybrids occur in the folklore of almost every modern society and are often named gods, spirits, or ancestral beings across the world. (Brumm, Oktaviana, & Aubert 2019; Devlin 2019) These paintings might be the earliest signs of hallucinations experiences which are founded.



PICTURE 7. The dwarf buffalo species is still living in the forests on the island.

Ancient rock art has been found around the world. The oldest paintings are from the Paleolithic era and have been found in addition to Indonesia, for example, from The Chauvet Cave, France (around 30 000 years old), the Lascaux Caves, France (around 17 000 years old), Kakadu National Park, Australia (20 000 years old), Laas Gaal, Somalia (11 000 years old) and The Serra da Capivara National Park, Brazil (25 000 years old). (Cox 2018.)

Shamanism is also found in the Sámi tradition in Finnish Lapland. The healer, known as a *Lapland witch or shaman*, also served as a spiritual leader, singer, artist, and ritual expert (Joy 2015). Shamanism disappeared from Finland almost completely in the 18th century when the majority population destroyed it with the legitimacy of the church as the work of the devil (Aurora 2. 2010). Nowadays shamanism is still practiced, and the number of practitioners seems to be growing both in Finland and in the world. Modern shamanism is practiced both religiously and as a psychological means. For many practitioners of shamanism, the shamanistic worldview is part of their own natural religion, but only some of them have a calling to become shamans. In modern shamanism, shamanistic techniques can only be used as methods, separate from religion. (Thuleian Tupa 2012.)

3.2 Religions as a Developer of Art

Visual arts have flourished at the birth of European cultural history in the Mediterranean area since prehistoric times. Especially Greeks have developed sculpture over hundreds of years. In the golden age of Greek art and culture, sculptors tried to find ideal shapes of the human body. Sculptures represented clear measures and logical beauty which were prevalent in the universe. Sculptors were used in religious expenditures and had a definite spiritual significance. Images of gods were worshipped, and some images were believed to have the same power as the gods themselves. Sculptors such as Pallas Athene and Artemis of Ephesus were believed to arise without human's hands. This property, *Acheiropoieta*, guaranteed that is not only the sculptor's imagination rather real image of God (PICTURE 8). For an ordinary man, it does not come to mind that he or she could try to see gods by him or herself because it would lose their mind. (Pasanen 2004, 14.)

End of the Hellenistic period sculptors spread out from the temples and rich people purchased them to decorate their homes. Greek artists were the best artists in the Mediterranean Sea area. The Romans embraced Greeks image culture and convert it better for their purposes. The images of the gods were replaced by the images of the emperors. During the reign of Emperor Caligula worship expenses related to images became mandatory. Because Emperor did not have time to be present everywhere, often the image of the emperor served as emperor. The image was a symbol and the Romans' thought that the emperor was present in the image. After Christianity had come to the official religion in the Roman empire in 313, image crowded everywhere. Christ, saints, and churchmen received a similar tribute. Image developed as a rite item clearer in paintings. The face became the most important part because through the face viewer was able to experience the holy spirit. In the middle of the image were eyes and the belief was that the spirit of the Lord was coming across through the look of the image. (Pasanen 2004, 14, 16-17.)



PICTURE 8. Christ *Acheiropoieta*, “made without human’s hands”, Novgorod 1100’s

3.3.1 The Middle Ages

In the 5th century, the focus of Western culture was in The Byzantine Empire. New Christian art as mosaics, frescoes and icons were created. Christian fine arts gradually evolved into a means of expressing sacred truths. Sacred images were painted on the ceilings of churches. The image was to use to sanctify the place. After the 3rd century, pilgrimages generalized and in places of worship were sold souvenirs of saints and Christian symbols. People believed that in these items was present the protective power of the saint. The Church did not like the use of sacred images like this and considered it popular and heretical. Two schools of thought were born: the defenders of the images, who wanted to distinguish between the image and the object of worship, and the deniers of the images, who believed that the images had wrongly formed objects of worship. There were many controversies about the holy images. Religions maintain iconoclasm. Controversies were focused on the image of Christ and behind the quarrels were deeply philosophical and theological dissonance of how spirit can be present in matter. According to people who were advocated iconoclasm, it was impossible to represent as an image of God in human’s shape. Eventually, the Church Fathers found a solution by deciding that the image can be the object of

reverent worship, while true worship can only be directed to God. It was thought that images could not be the ultimate objects of worship, as they are reflections of the original image of Christ. The Holy Spirit is embodied in Christ, albeit imperfectly. On this basis, the Holy Spirit can also be present in the image of Christ, the icon. (Pasanen 2004, 17-19.)

The holy spirit is transmitted to the icon as light, and when a viewer sees this light, a connection is established between them, and the icon achieves its meaning. The light was understood to have many symbolic meanings. Light and darkness were associated with the notion of good and evil, life and death. Light depicted holiness and dark matter. It was also thought that the knowledge of light leads to enlightenment, through which man can approach the mystery. (Pasanen 2004, 19-20.)

There were numerous image theories in the Middle Ages. They conveyed prevailing notions of the universe, the relationship between spirit and matter, the essence of nature, and the role of man in this whole. One of the most significant philosophical bases of theories was “Father” of the Western Church, Aurelius Augustinus’ (354-430) knowledge of seen. Augustinus applied Platonism and divided vision into three levels of being. The first level was sensory-based bodily vision and perception of the material world. On the second level, mental seeing based on imagination and memory. On the third level, the level of intellectual vision at which all material-related forms disappear. In the Middle Ages, all images were based on the scriptures and conveyed sacred truths in symbolic pictorial language. The original function of the images was to create a connection between the material and the invisible world. Image made invisible visible. (Pasanen 2004, 24.)

3.2.2 The Renaissance Era

In the Renaissance era, the scriptures of the Church no longer alone determined the content of the image, the bourgeoisie also had the opportunity to order the image and dictate its content. Art began to free itself from a position subjugated to religion and gave the artist the freedom to express their inner reality and

relationship to the world. The reason for this change was found in Augustinus' writings. In them, the seeker of eternal truths was urged to study his inner world instead of the outer world. In the Renaissance era, humans were also seen as part of nature, which opened up the possibility of studying anatomy. The paintings featured a landscape that was sought to be depicted naturally. It differed from medieval art, where the landscape and buildings had had only a symbolic meaning. During the Renaissance, artists also studied light and found a natural perspective. The great achievement of renaissance artists was that they found ways to create the illusion of three-dimensional objects on a two-dimensional level. The task of painting was to disappear between the viewer and the painted object. Painting followed strict rules, the form and content of which were strictly regulated by the academies. The artist as an individual also gained a new meaning, if he or she reached the level of a master, it guaranteed him or her fame and glory. Due to the achievements of the Renaissance, painting settled into its theoretical and aesthetic currents, where it remained for centuries. (Pasanen 2004, 26-30.)

3.2.3 The Romanticism Era

Romanticism Era began with philosophers new ideological current. In the late 1700s, the catholic church lost its position as an explainer of the mysteries of life. Science had broken down religious worldview after enlightenment philosophy. Humans' worldview concentrated on rational thinking and science. Great contemporary philosopher Jean-Jacques Rosseau saw that civilisation, science and culture had separated man from nature and true humanity was destroyed. Rosseau was missing the natural state of human, return in the connection with nature as though primitive people were still living. It was also recognized that in the world existed attributes which were not able to explain with common sense. Through this new worldview was born a radically new idea of art. Arts purpose was to describe the world's unseen attributes which were out of the scientific researches. According to Rousseau's philosophy, the artist had to be a kind of child of nature who had received as a gift of birth abilities that ordinary people did not have. The artist was like an instrument in the hands of nature. The mystery of life was reflected as a mirror image within man and was revealed in dreams and

dream images. An artwork was to express emotions, instead of natural truth, the work was to strive for the truth of emotion. According to the Romantics, the artist had the mental abilities to make the transition to metaphysical reality. (Pasanen 2004, 31-32, 34.)

3.3 Revolution of Modern Art

In the late 19th century, the idea of a *four-dimensional world* began to spread. The fourth dimension was thought to be a reality beyond the three-dimensional world perceptible to the senses. It was believed that the fourth dimension was possible to perceive visually. One of the biggest influencers in the background of the artists' philosophical ideas was Helena Petrovna Blavatsky (1831-1891) and her teachings. Blavatsky founded the Theosophical Society with Henry Steel Olcott and William Quan Judge in New York in 1875. According to Blavatsky, the task of the Theosophists is to form the universal core of brotherhood, regardless of race, religion, gender, etc. She taught that all people are one, man is a reborn being, hell does not exist, and an invisible world exists. She also told what happens after death, how a person moves there from one stage to another and is born into a new life. Blavatsky succeeded in combining her teachings into one entity of all major religions, religious and worldview philosophies, and Darwinism. (Pasanen 2004, 47: Teosofia.net)

Theosophy had a considerable influence on artists around Europe. The artist was a seer and a messenger of spiritual knowledge. At first, it was difficult for artists to find suitable means of expression for their Theosophical ideas. Artists began to experiment with new ways in which it would be possible to break away from the three-dimensional world tied to matter in the visual arts. Georges Braque (1882-1963) and Pablo Picasso (1881 – 1973) created cubism in which it was possible to move in a state of the painting by the power of thought. It was the first style to free the artist from the shackles of traditional fine art. Braque and Picasso broke the image space of the shield painting, which had to be broken to be able to move in it (PICTURE 9). At the same time, the object of the painting, the portrait, the still life, and the landscape also became pieces. Cubism led artists to the threshold of abstract art. (Pasanen 2004, 47, 49, 69.)



PICTURE 9. Guernica, Pablo Picasso 1937

The artists of that time were also influenced by the father of anthroposophy, Rudolf Steiner (1861-1925), who was an Austrian philosopher, social reformer, architect, and esotericist. He created *anthroposophy* based on Blavatsky's teachings. Like Blavatsky Steiner was also a seer who could gain knowledge of the invisible world through clairvoyance. Steiner created a view of the esoteric world, on which it was based biodynamic farming, anthroposophical medicine, eurythmy, that makes speech and tone visible, and Steiner pedagogy. Art also played a role in the anthroposophical idea of spiritual development. Steiner saw artistic work as part of the path of spiritual development. According to Steiner, *“human is composed of cosmic forces which the artist subconsciously expresses in his creation; art is thus a reflection of cosmic activity.”* An artist is a clairvoyant, although art and clairvoyance are different things. He also created his own style of designing architecture and designed 18 buildings. The most significant of these is the Goetheanum I and Goetheanum II built in Dornach, Switzerland (PICTURE 10). (Kokkinen 2020,15, 41, 38; Astrosophy 2021.)

Steiner pedagogy is still popular worldwide. There are currently over 1100 Steiner schools worldwide in 64 countries, and nearly 2000 Early Years settings in more than 70 countries (Steiner Waldorf Schools Fellowship 2021). There are 24 Steiner schools and 38 Steiner kindergartens in Finland (Steiner Kasvatus 2021).



PICTURE 10. Goetheanum I, Rudolf Steiner 1919

Men were long thought to be pioneers of abstract art. In the 80s, however, Swedish artist Hilma af Klint (1862-1944) was revealed to be a pioneer of abstract art. Like many of her contemporaries, af Klint was in search of spiritual insight and was also interested in anthroposophy and Blavatsky's theosophy. Af Klint was a seer who under the guidance of spirit guides, painted a collection of "Paintings for the Temple," which included 193 paintings. However, the contemporaries of af Klint could not appreciate her spiritual paintings. Not even Steiner, which she knew, was not enthusiastic about her work. She thought the world was not yet ready to see her work and, in her will, the work of her life had to be kept secret for at least 20 years after her death. Last years, af Klint's work has received tremendous interest around the world. The exhibition *Paintings for the Future* was most visited at Guggenheim Museum's history in New York in 2018-2019. (Almqvist & Belfrage 2020, 24; Guggenheim 2021; The Hilma af Klint Foundation 2020.) Swedish art curator Daniel Birnbaum believes that "the Temple" where Hilma af Klint painted her work may be the Guggenheim Rotunda (Birnbaum 2020, 13).

Interestingly, in addition to Hilma af Klint, other pioneers of abstract art such as František Kupka, Wassily Kandinsky, Piet Mondrian and Kazimir Malevich were also interested in spirituality. František Kupka (1871–1957) had become acquainted with theosophy and was probably inspired by its symbolist imagery for

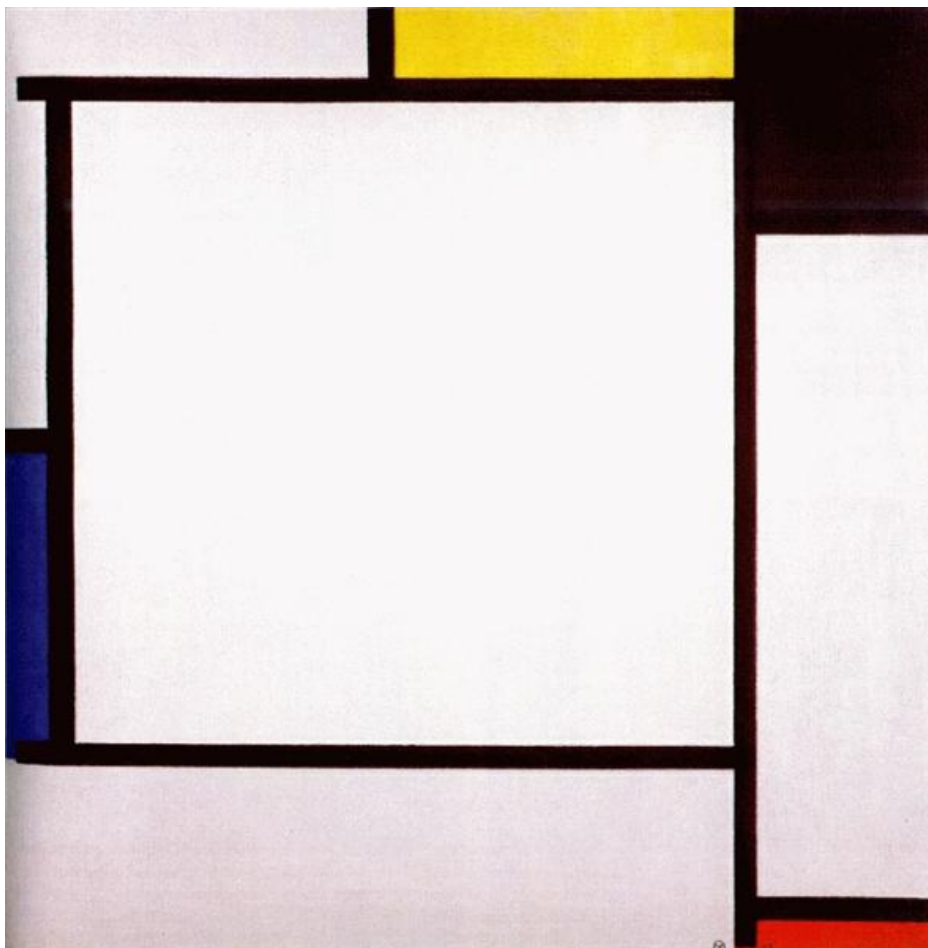
his abstract paintings. Based on Kupka's philosophical views, he published the book, *Creation in the Plastic Arts* in 1923. Kupka, like the Theosophists, believed that the essence of nature manifested itself as a rhythmic force that could be represented in geometric forms. This power could not be seen with the naked eye but required meditation and inner seeing. The mission of painting was to make visible the processes of creation, not only by imitating them but by developing plastic equivalents for them. (Pasanen 2004, 54.)

In late 19th-century Germany, artists sought a spiritual alternative to a rapidly industrialized country and materialistic worldview. Art and architecture were seen as instruments of change in society. Expressionism offered as one of the stylistic ways in which artists could influence the moral and ethical atmosphere. Art was believed to serve as a tool for social change and as a personal cleansing force for soul life. The idea of the psychological foundations of art emerged in particular from Wilhelm Worringer's dissertation *Abstraktion und Einfühlung* published in 1908. Worringer's ideas influenced the formation of Wassily Kandinsky's (1866-1944) artistic theory, among other things. According to Worringer, artistic styles arise from the psychic forces within the artist's mind, for which a similar expression could be found that would give peace to the soul. In particular, the abstract style was a means of combining art and transcendental goals. Worringer also saw that abstract style was only the prelude to a whole new kind of art. With the help of ideas adopted from symbolist art, expressionism and abstract formal language found each other. Kandinsky made a strong contribution to this development, especially in his writings. One of the most famous writings of Kandinsky is the artistic program declaration *the Über das geistige in der Kunst* (Concerning the spiritual in art), which he published in 1912. The writing has influenced generations of artists one after another. (Pasanen 2004, 55, 58, 66.)

Piet Mondrian's (1872-1944) influence on the development of abstract art has been the most extensive. The development of Mondrian's art has been seen to reflect the development of all modern art. The starting point for Mondrian's neoplastic artistic philosophy was the modern man who had developed an ability for abstract consciousness (PICTURE 11). The art of the future also represented his spirituality, awareness, and emotion that enable artistic understanding. Mondrian

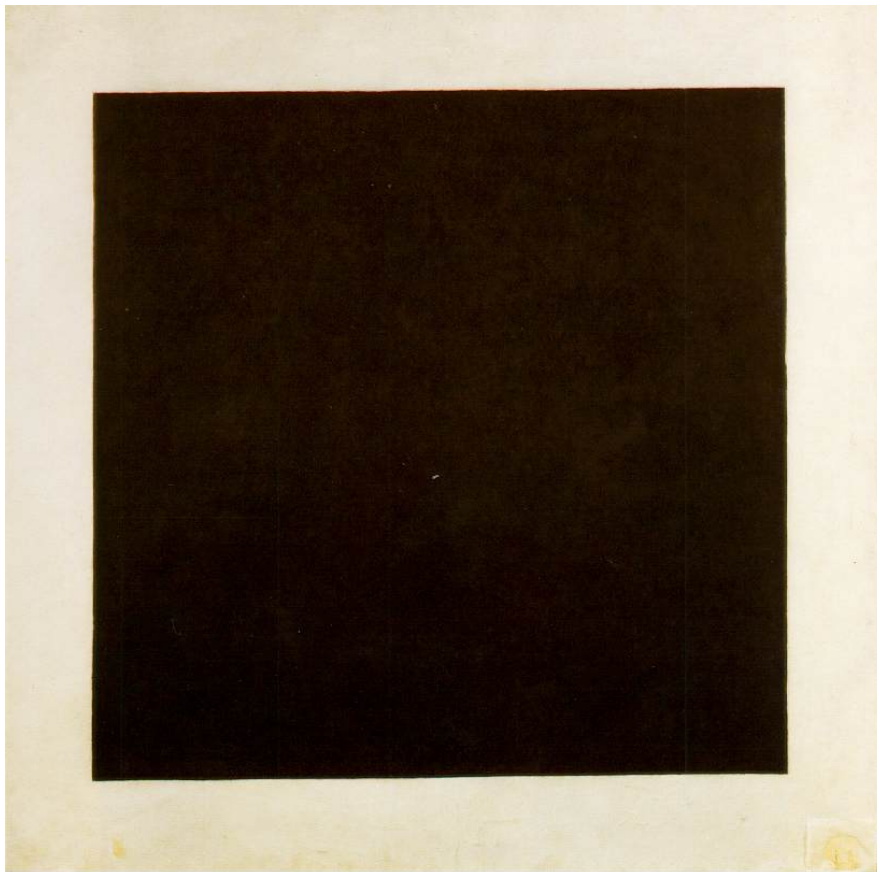
thought the painting was an intellectual endeavour for the artist, allowing the artist to strive for intuitive knowledge of spiritual reality. (Pasanen 2004, 68, 73, 74.)

Mondrian's neoplastic artistic philosophy was based on the idea adopted from theosophy that matter is condensed spirituality and that under the cover of the visible world is an unchanging and timeless reality that is precisely organized and mathematically definable. In addition to this, the world was doubly organized in pairs of opposites, the most important of which were matter-spirit, male-female, and dark-light. These pairs of opposites could be expressed visually in lines, rectangular shapes, and grounds, in addition to which came black and white. The reality obscured by the visible world was the realm of spirituality. However, the senses could not perceive pure spirituality, and thus the sensory perceptions had to be directed to the different forms of matter. The closer one gets to spirituality, the more reduced and scarcer the material forms become. In a perfect situation, the pursuit of spirituality eliminates the material. (Pasanen 2004, 71)



PICTURE 11. Composition 2 (neoplasticism), Piet Mondrian 1922

In the early 20th century, many artists were interested in the concept of *Zaum* formulated by the poet Alexei Kruchonyh. One of the artists was Kazimir Malevitš (1879-1935). *Zaum* means a higher level of perception and a level of consciousness than ordinary sensory perception, which can gain knowledge of things that rational thinking is incapable of. Malevitš developed his cubist painting style to express *zaum* visually. He also developed his philosophical-artistic theory, *suprematism*. One of his best-known suprematist works is called *Black Square* (PICTURE 12). The work was of great importance to Malevitš. It was a monument to him, marking both the end of the cubofuturist and logical phases and the beginning of the suprematist phase. The square is the foundation of suprematism, which simply reproduces the geometric shape of a square, but loaded with the artist's consciousness. It was also a profound philosophical symbol that delimits where emptiness begins and where it ends. (Pasanen 2004, 82, 86, 88.)



PICTURE 12. Black Square, Kazimir Malevitš 1915

In addition to abstract artists, the art world of the era was also represented by surrealists (PICTURE 13). They were inspired by neurologist Sigmund Freud's (1856-1939) and psychiatrist Carl G. Jung's (1875-1961) thoughts. The founder

of *Surrealism* is considered to be the poet Andre Breton (1896-1966). Breton was interested in Freud's thoughts and therefore dreams were an important part of his thoughts as well. Breton has said, *"I believe that the apparent contrast between dream and reality could be resolved in a kind of absolute reality - surrealism"*. Breton sought a connection between opposites, consciousness, and hidden consciousness. He experimented with Freud's method of free association, in which words and sentences arising from hidden consciousness are written down without conscious control. According to Carl Jung, the process meant open the way for a stream of hidden images. Awareness was important because only it was competent to define the meaning of images. (Jaffe 1964, 257.)



PICTURE 13. Golconda, Rene Magritte 1953

Freud and Jung collaborated, but Freud disagreed on Jung's theory on the collective unconscious. Jung's collective unconscious is based on a common neural structure manifested in myths, religious rites, and the arts, where the same sym-

bols are repeated through the ages. According to Jung, artists were also visionaries for whom the basis of artistic creation is an experience that is not a psychological state of mind as Freud thought. (Pasanen 2004, 118.)

According to *esotericists*, the opening of the inner pictorial world is based on the idea of a higher, encrypted knowledge that can only be initiated by following a certain path or following a pattern of action. In other words, the opening of secret information requires initiation. The initiation involves the idea of spiritual development. Different esoteric tendencies usually have well-defined rituals and exercises to achieve initiation. For example, in masons, there are well-defined rituals and symbols involved in achieving initiation that is to be kept secret so that the experience of initiation does not lose its effectiveness. The path of initiation is often understood as a kind of journey. Artists have portrayed truth-seekers as pilgrims and walkers who make the journey in the hope of high knowledge. (Kokkinen 2020, 8,13.)

The initiation concept has its roots in ancient Egypt and its mystery schools. Edvard Schuré's (1841-1929) *The Great Initiates* tells a story of a candidate who arrives in Egypt to consecrate the ancient mysteries of Hermes Trismegistus. The initiation into encrypted information culminates in a ritual. The adept is transported to the crypt surrounded by sphinxes, where he is enclosed in a sarcophagus. The initiates experience a symbolic death that they must go through to develop. A radiant apparition appears in front of an adept enclosed in a sarcophagus, which proves to be his higher side of being, the divine soul. After his vision, he rises out of his sarcophagus reborn and takes his place as one of the masters ordained to the hidden wisdom of Hermes. In the arts, for example, Akseli Gallen-Kallela's (1865-1931) work *Ad Astra* describes this same revelation (PICTURE 14). Gallen-Kallela has narrated that the work depicts his divine soul and resurrection (Kokkinen 2020, 21.)



PICTURE 14. Ad Astra, Akseli Gallen-Kallela 1907. Image: Signe and Ane Gyllenberg Foundation / Matias Uusikylä

A little later, the art world experienced a period of decline in spirituality. All art sought to move away from mysticism and suspiciously formed spirituality. However, Yves Klein (1928-1962) was an exception to his era. Yves Klein considered himself to represent realistic mysticism and defined realism in these words: *“Anyone who doesn't believe in miracles is not a realist.”* Yves Klein's influence on the formation of contemporary art is significant. Yves Klein developed his monochromatic painting style, from which the color blue became dominant. Thanks to his exceptional abilities, as an art's secret seer and a shaman, he turned ordinary everyday objects and gestures into art. Yves Klein opened a path for future art forms such as performance art, environmental art, conceptual art, installation art and so on. (Pasanen 2004, 148.)

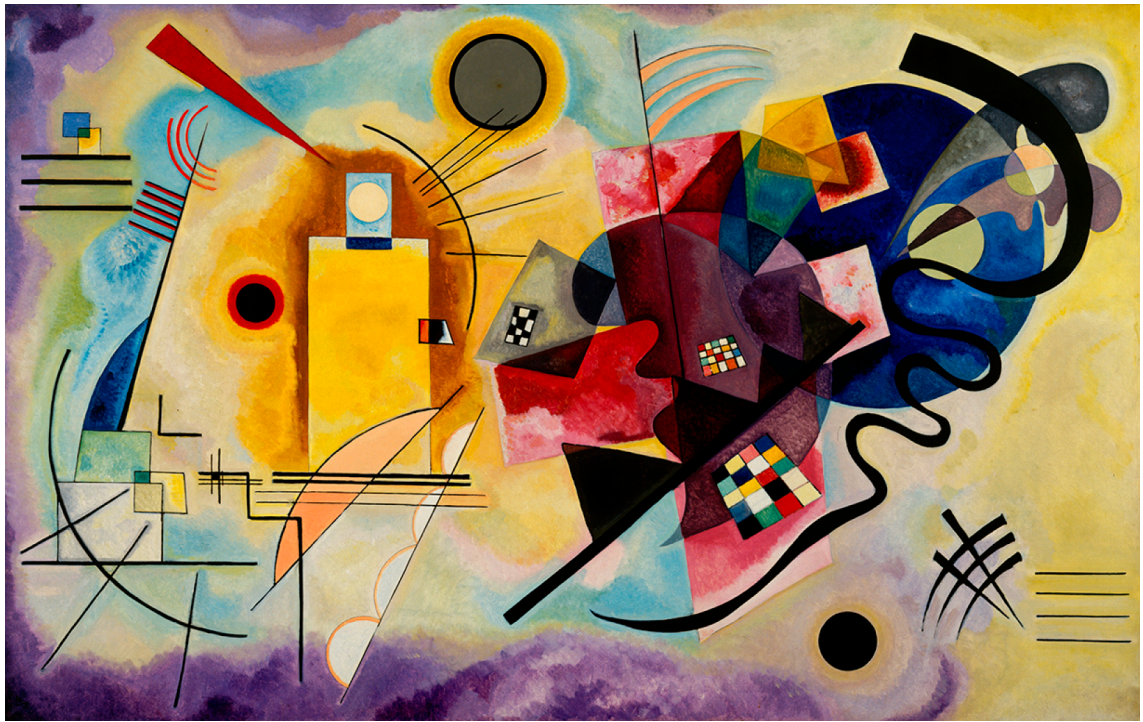
3.3.1 The pioneer of abstract art: Wassily Kandinsky

The Russian Wassily Kandinsky (1866-1944) was a painter and art theorist who has greatly influenced the painting of our time. He was an expressionist and for a long time, before af Klint became famous, he was said to have painted the first

significant abstract works of modern art. Kandinsky's philosophical view is influenced by a strong spirituality that has been seen as a direct influence on Theosophy and Anthroposophy. (iDesignWiki. 2015; Pasanen 2004, 63, 64.)

According to Kandinsky the two events had influenced him and spoke of his artistic sensitivity. The other was an Impressionist exhibition in Moscow where he was confused by Claude Monet's "Haystack". The second he experienced while visiting Wagner's opera "*Lohengrin*" in Moscow. He was overwhelmed by a set of sounds he had never heard: *"I saw all my colors in my mind, they were in front of my eyes. Wild, almost furious lines appeared in front of me."* This synesthetic experience revealed to Kandinsky that there was a secret connection between colors, chords, and painting. This experience became one of the mainstays of his artistic principles, even the prerequisites for his painting. (Heering-Labonté 1991, 10.)

According to Kandinsky, content always determines form. For him, the immutable and essential law of art was in the interdependence between content and form, which constitutes the inner necessity of a work of art. Other features of the painting, such as the correspondence of the forms to the natural forms, were irrelevant. The task of art was to give a material form to abstract, intangible content. Abstract painting lacked the outer shell of nature, but not its cosmic laws. You can get to know these laws by listening to your inner world. Through internal observation, one can get in touch with the reality hidden in the outer shell of nature. These are transmitted to a man as a vibration. For Kandinsky, emotions were the vibrations of the soul brought about by words, tones, and colors. Kandinsky has said: *"Color is the keyboard, the eye the piano hammer, the soul the multilingual piano."* According to this metaphor, the artist is *"a hand who, with the keyboard of his choice, purposefully causes the human soul to vibrate. On this basis, color harmony must be based only on the principle of purposeful touch of the human soul. This is the principle of inner necessity."* Kandinsky believed that through painting it would be possible to create a universal plastic language that spoke to people in the same way everywhere as music (PICTURE 15). (Pasanen 2004, 58, 60, 67.)



PICTURE 15. Yellow-Red-Blue, Wassily Kandinsky 1925

In the book of Kandinsky, *Concerning the spiritual in art*, he establishes that the formula for spiritual life was described by a *large acute-angled triangle* divided into different parts, the smallest section pointing upwards. There is often a single person at the top of the tip. Seeing is for him or her like inner, immeasurable grief. He or she is not even understood by the closest people. People call him or her a cheater or crazy. It will take years before the largest division of the triangle reaches the point where they were once alone. There are artists in every department of the triangle, each of whom can see upwards is a prophet in their environment and helps reluctant wheels move. But if he or she don't have that sharp eye, or if he or she misuses it, then everyone in his department will understand them. Every such compartment is hungry for the spiritual bread. This bread will be given to it by its artists and tomorrow this bread will be sought after by the next department. The times when art does not have a high level of representation are periods of decay of spiritual life. Then souls fall from the highest divisions to the lower ones and the triangle remains motionless. Seer who is left alone is then ridiculed and considered mentally abnormal. (Kandinsky 1952, 28, 29.)

According to Kandinsky, the importance of the spiritual dimension of the universe was growing, he believed that he was living in a time of great change leading to

a "great age of spirituality." Through the abstract art, it was possible to connect with spiritual depths. (Pasanen, 2004, 66.)

3.3.2 The pioneer of Contemporary Art: Yves Klein

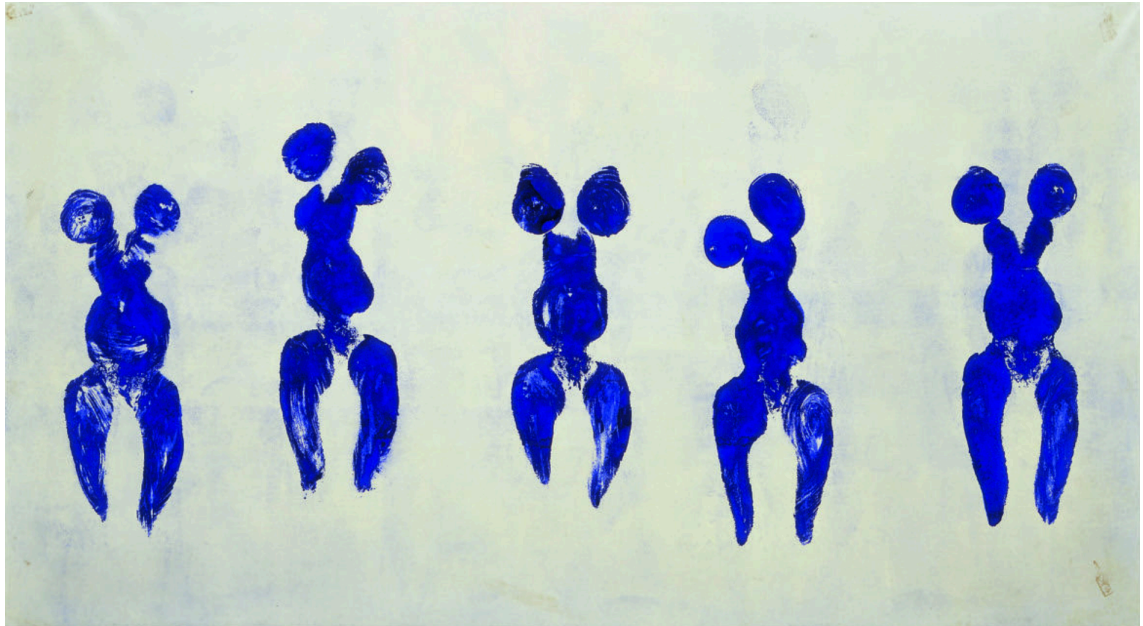
Yves Klein (1928-1962) was born in Nice, France to parents who were both painters. Klein was an artist, theorist, and provocateur who has influenced widely to our contemporary art forms. He worked in painting, photography, sculpture, performance, music, and architecture. He was a painter, but he could also have been described as a visionary, a poet, a master athlete, a composer, a ballet choreographer, and an architect. Klein was interested in the esoteric doctrine of Rosicrucianism. He had a tragically short life, he died only as 34 years old. Despite his short life, he managed to accomplish a lot during his 15-year career as an artist. He made his life a unique work of art and left behind a tremendous work of life that was flooded with visions. (Jones 2019; Vuorikoski & Hellandsjo 1997, 82,162; Walker 2021.)

Klein is known of his monochromatic works, for which he came up with the idea while working as a shop assistant in a painting material shop in his twenties in London. After 7 years, he held his first monochromatic exhibition in Paris. Klein made his monochromatic paintings over the entire spectrum of colors, but gradually the color blue began to dominate his works (PICTURE 16). Blue suited Klein, as it was often associated with symbolic and spiritual meanings. According to Klein color enabled viewers to "*bathe in a cosmic sensibility*," He has officially registered this vivid ultramarine pigment under the name International Klein Blue (IKB). (Jones 2019; Pasanen 2004, 148; Thackara, 2017.)



PICTURE 16. Relief Portrait of Arman (PR 1), Yves Klein 1962

In 1948, he began working on one of his most notable works called *Monotone-silence Symphony*. This work was performed first time in public in 1960. In front of an audience, a small orchestra and choir performed the piece. On the stage, three nude models covered their bodies with blue paint with a sponge before printing themselves on a large sheet of paper (PICTURE 17). With the portraits of nude models, he wanted to capture life after what our lives leave behind. (Jones 2019; Vuorikoski & Hellandsjo 1997, 90.)



PICTURE 17. Anthropometry of the Blue Period (ANT 82), Yves Klein 1960

For Klein, blue meant boundless space and life. In blue, he combined matter and spirit with an "ethereal glue" and gave his works eternal life (Pasanen 2004, 149). In his art, Yves highlighted the connection between material and intangible matter and explored his consciousness to find a way to reconcile the wisdom of the past with the technology of the present, so that we would not be destroyed. On that time people were living in a very material-centered time because there was a need for reconstruction after the war. Through his art, Yves wanted people to learn to understand the spiritual reality around us. He even wanted to set up a "school of sensitivity." (Vuorikoski & Hellandsjo 1997, 116, 118.) Klein's artistic ensemble is reminiscent of Malevich's production, with the same resurrection, the liberation of the soul from matter, and cosmic energy (Pasanen 2004, 154).

3.3.3. The Surprise of Art History: Hilma af Klint

Swedish Hilma af Klint (1862-1944) was the first who made abstract paintings and one of the first generation of women who admitted to a higher education at *Royal Academy of Fine Arts* in Stockholm. She made her living from landscape and portrait paintings; abstract works came later a separate part of her life. Af Klint was a seer, she could see visions and hear the spirit world. She had been

interested in spiritualism since she was a teenager and as older, she belonged to *the Theosophical Society*. In his 60s, she was also interested in Anthroposophy.

In 1896, af Klint founded a group called "*The Five*" with four other like-minded female artists. The women practiced automatic writing and mediumistic drawings. They got in touch with spirit beings whom they called "*The Higher Ones*." After 10 years of training, spirit guides commissioned her to paint temple paintings for an esoteric temple. The collection "*Paintings for the Temple*" encompasses 193 paintings. Af Klint has said that when painting the works, her hand was first moved, but then she only received instructions from the spirit guides on how to make the paintings. (The Hilma af Klint Foundation 2020; Voss 2020, 21; West-erlund 2014.)

The works include organic color fields and geometric patterns. The symbols used by Af Klint are partly familiar from Theosophy and some are af Klint's symbolic language (PICTURE 18). Af Klint has written down the meanings of her symbols, but they could also vary. Recurring topics included many dualities such as spirit and matter. Af Klint's color palette is wide, but all works include black and white (spiritual), red (secular), and blue (feminine) and yellow (masculine). (Westerlund 2014.)



PICTURE 18. Paintings for the Future, Hilma af Klint, Guggenheim, New York 2018

The last group of *Paintings for the Temple*, af Klint painted 1915. She called them *Altarpieces* (PICTURE 19). The works relate to theosophy's version of evolutionary theory, in which all the cosmos is undergoing an evolutionary process. Two triangles describe how evolution occur in two directions, reaching from the physical world to the spiritual and descending from the spiritual level to the world of matter. In the golden orb a six-pointed star, a theosophical symbol symbolizes the universe and its limitations. Four spirals give form to the energy of evolution. (Bashkoff 2020, 45, 51.)



PICTURE 19. Painting for the Temple. Group X, No. 2, Altarpiece; Group X, No. 3, Altarpiece; Group X, No. 1, Altarpiece Hilma af Klint 1915. Photo: David Heald.

4 HALLUCINATIONS IN CONTEMPORARY ART

Spirituality has been less frequently addressed in the arts for the past several decades. In the 21st century, however, spirituality has become an increasingly important concept for various cultural discourses, including works of contemporary art (Arya 2016). Massimiliano Gion's 2013 Venice Biennale, called "*The Encyclopedic Palace*," was dedicated to all sorts of spiritual cosmologies. Since then, occult-themed works have shown a return to art. (Heartney 2020.) The general public's interest in spiritual art is reflected, for example, in the popularity of Hilma af Klint's exhibition at Guggenheim in New York, which has been the most popular exhibition in the museum's history with 600 000 visitors during 2018-2019 (Guggenheim 2021). According to the theologian Christopher Partridge, there is a process going on, where traditional, institutional religions, and Christianity in particular, have to make room for a more alternative spirituality. He has created a term *occulture* to describe this era. The concept was launched to oppose the claim that religiosity is disappearing from the world (Kokkinen 2012).



PICTURE 20. The Incredible String Band: The 5000 Spirits Or The Layers Of The Onion 1967

Although works on spirituality have not been mainstream, there have been countercurrent spiritual artists for decades, and hallucinations and spirituality have also been addressed in counterculture since 1960s. After Albert Hoffman's discovery LSD, some artists inspired about hallucination experiences and a new art movement "*psychedelic art*" was found. At the same time, psychedelic rock was born, and a new kind of album cover art was created for it, which is one of the best and most important examples of psychedelic art to this day (PICTURE 20). However, psychedelic art soon became commercial as companies began to realize its commercial potential. The irony is that psychedelic art eventually became part of the rest of the world against which it originally fought. (Dačić 2015.)

The new media technology of our time gives a new dimension to making and experiencing art. Instead of staring at a painting or sculpture, a viewer can step inside the work. A work can involve interaction and it can be impossible to understand at once. Technology has been said to distance people from their bodies, but research shows that digital multimedia often heightens to a sense of phenomenology or embodiment. This makes it easier to get close to the spiritual experience with a piece of art. The interaction with the artwork also involves the potential for a transformation of our perception of reality. (Arya 2016.)

Bill Viola (1951), one of the most significant pioneers of video art, has been dealing with religions and spirituality in his works since the 70s. American Viola creates video works, such as videotapes, architectonic video installations, and flat-panel video pieces. Viola's thinking has influences from various religions, including Zen Buddhism and mysticism. Many examples of his installation art, form a holistic environment that includes interaction with what is being projected or screened. Viola's work demonstrates how technology can be used to enhance spiritual meaning. (Arya 2016.)

He weeps for you (1976) demonstrates this synchronicity of the viewer, the objects, and the spatiotemporal projection. A drop of water emerges from a small brass spigot. As the drop emerges, it is magnified by a video camera and projected onto a large screen. The close-up image reveals that the viewer and part of the room where he or she stands are visible inside each forming drop. The viewer sees each drop expand, and as it falls, it lands on an amplified drum.

A new drop immediately begins forming and the cycle continues in infinite repetition. A simple act like this generates a cycle of meaning that opens up a space of contemplation where the repetition of the action of a drop forming becomes connected with a representation of the viewer (PICTURE 21). (Arya 2016.)



PICTURE 21. *He Weeps for You*, Bill Viola 1976. Photo: Kira Perov

Emerging media technologies such as AR, VR, and MR allow us to enter the world of hallucinations and dreams and explore our consciousness through art. Virtual reality also adds new dimensions to notion what is real. We can step outside our bodies and experience a world that is different from our waking state. Virtual reality provides an opportunity to explain visions and lucid dreams to those who cannot experience them for themselves.

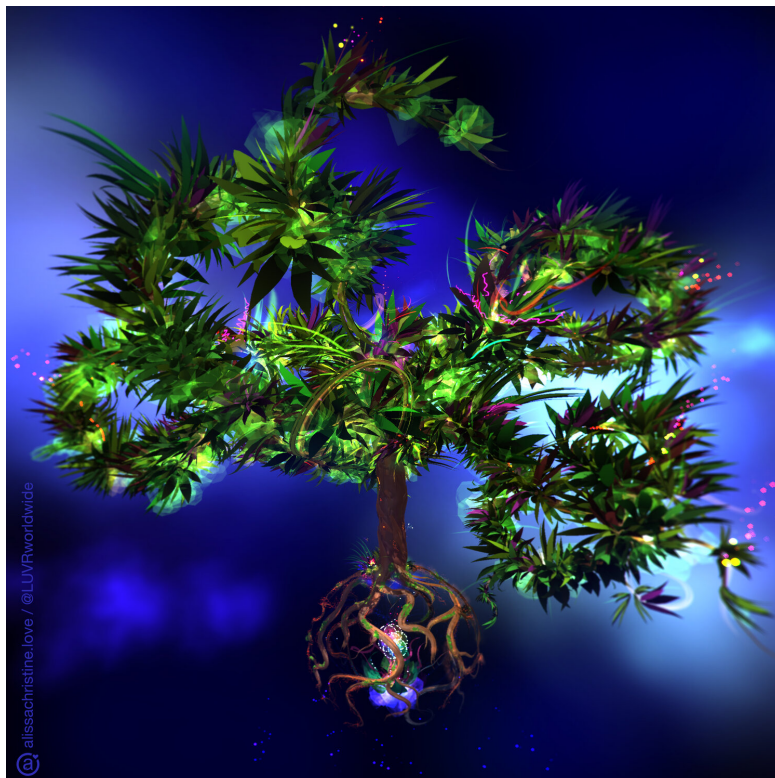
According to a psychiatrist Stanislav Grof, a pioneer in transpersonal psychology and psychedelic research, we will see soon extreme effective machines using modern technology to alter consciousness. He has also said,

The virtual reality simulating a material universe has worked out with such an acute sense for miniscule detail that the result is absolutely convincing and believable. The units of consciousness cast as the

protagonists in the countless roles of this play of plays get entangled and caught in the complex and intricate web of its illusionary magic. (Hinchliffe 2017.)

Virtual reality has also already been utilized in mental health work. Studies show that it has relieved people suffering from, social anxiety, PTSD, and phobias. Clinical psychology professor Daniel Freeman and his brother, writer Jason Freeman have said *“as in dreams, virtual reality is a “safe space” for us to engage in problem solving that we’d normally be reluctant to attempt “out there,” and that they “even foresee VR as being a diagnostic tool, cheaper and more accessible than fMRI machines and talk therapy sessions.”* (Hinchliffe 2017.)

Virtual Reality is also used for spiritual healing. A Brazilian-American artist and photographer Alissa Christine provides virtual reality meditations through her VR paintings, which are deliberately created toward states of spiritual elevation and mind expansion where the inner journey is possible to experience. Sessions are multi-sensory experiences including Reiki, aromatherapy, sound healing and culinary pleasures. She is blending art, wellness, and technology with her 3D light sculpture paintings. Her work focuses on positive change by inspiring inner growth and spirituality (PICTURES 22 & 23). (Alissa Christine 2021.)



PICTURE 22. Healing VR art. Alissa Christine 2021



PICTURE 23. Healing VR art. Alissa Christine 2021

There seem to be many contemporary artists exploring human consciousness through art, but not all contemporary artists relate spirituality in their works on the subconscious, but from the perspective of neuroscience. One of them is the Turkish-American Media Artist and Designer Refik Anadol (1985), who has produced massive multimedia works around the world. Through works, he explores whether machines and buildings can dream and hallucinate.

4.1. Refik Anadol: Machine Hallucination

Turkish-born Refik Anadol (1985) lives and works in Los Angeles, California. He is a lecturer and visiting researcher in UCLA's Department of Design Media Arts. As a Media Artists, he is a pioneer in the aesthetics of machine intelligence. He makes art in public places and his works explore the intersection of humans and machines. Anadol creates site-specific parametric data sculptures, live audio/visual performances, and immersive installations using as a basis data that flows

around us. He is fascinated by the idea of a change in contemporary culture that requires new aesthetics, technology, and dynamic space perception. He invites the viewers to visualize alternative realities. His work suggests that all spaces and facades could be utilized as the media artists' canvases. Through the works, Anadol reflects on how we experience space-changing now that smartphones and big screens are part of our daily lives. As well as how media technologies have changed our perception of space and how architecture has embraced this change. (Anadol 2021; NVIDIA 2021.)

Anadol's challenge is: "*If a machine can learn, can it dream?*" He has been focused on through his works how to tell the invisible story of data. Anadol has been working as a director with a team for over 5 years. One of their goals has been trying to create experiences using data and algorithms. Anadol believes that making the invisible visible is the most exciting experiences of humankind. He also trying to find the poetry inside those data sets to create kind of new meaning to what the data means. Anadol thinks that technology is a mirror of humankind. (Artechouse 2019.)

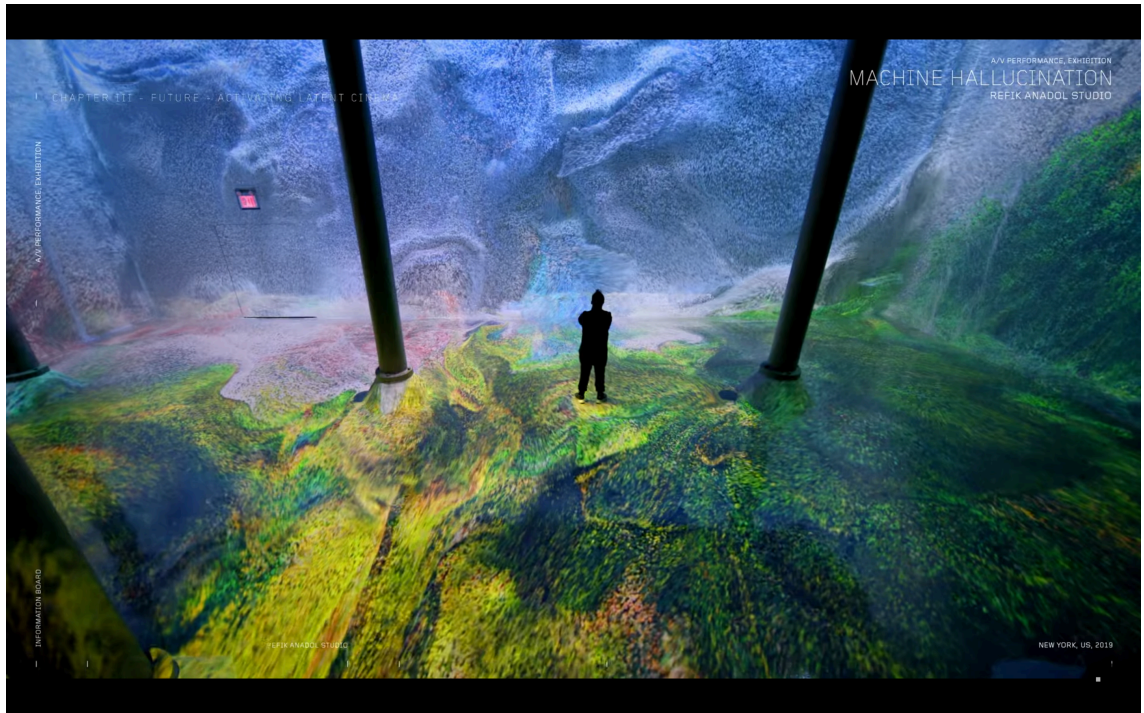
For work called *Machine Hallucinations*, his team collected the world largest datasets. It includes a hundred thirteen million images of every single photo which can be found on the Internet with search word New York. Intimate moments such as selfies are erased with AI and only the city itself used. The story is created by using 18 channel projection set-up and a 32 channel sound system. The piece explores how a machine can dream of a city (PICTURES 24-27). (Artechouse 2019.)



PICTURE 24. Machine Hallucination, Refik Anadol Studio 2019



PICTURE 25. Machine Hallucination, Refik Anadol Studio 2019



PICTURE 26. Machine Hallucination, Refik Anadol Studio 2019



PICTURE 27. Machine Hallucination, Refik Anadol Studio 2019

5 AR INSTALLATION

My artwork 'The World of Light' is an AR installation that studies the mysteries of hallucinations. Starting points for my artwork was my interest in subconscious and emerging media technologies. I got inspired by AR because I saw it is a new dimension of making art interesting. I also thought that AR is a perfect tool to describe hallucinations.

In my piece, I combine art history from cave paintings to today's media technology, and ancient shamanism encountering a human today. The narrative for the work is found as the basis of this written thesis.

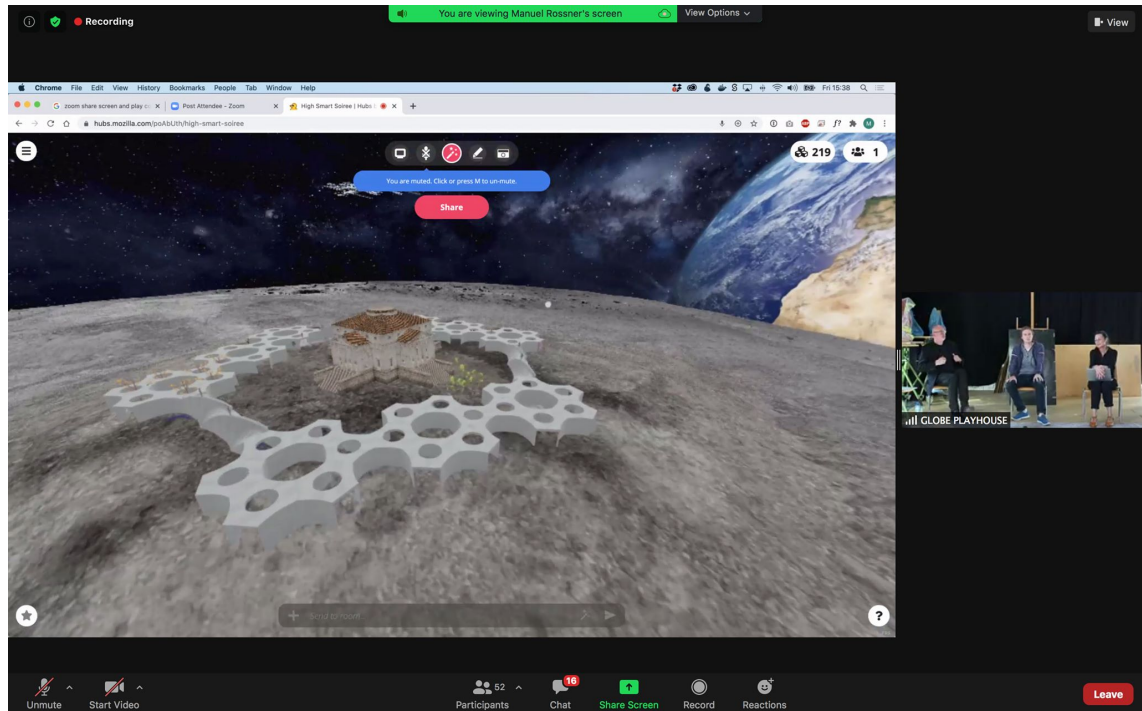
The whole installation room shines with UV lights. There is a bed and a bedside table and four paintings that work as image targets for AR content. The viewer can open the AR content by using the Arilyn application. The installation presents the world of light, which some people call the astral world or spirit world. In the augmented reality appears a blue character on the bed of the installation. What is this character? There lies the main mystery of this piece.

5.1. Workflow

I started my journey with this piece by taking part in the Masterclass Artistic Research "*Globe Playhouse - Expanded Animation Worlds*" in the fall of 2020. The Online Masterclass was organized by the Film Universities Babelsberg Konrad Wolf. 47 participants from 4 continents with 14 mentors and 6 technical artistic specialists were creating art together online on Zoom and Mozilla Hubs. During 7 days we developed with our teams' ideas for VR presentation in the virtual Villa Rotonda placed on the moon as a base for later created "Globe Playhouse Spacelab" on the web.

The best thing about the workshop was to experience working online with strangers around the world and different time zones, and see how similar ideas we have despite citizenship (PICTURE 28). The strong theme of the workshop

seemed to be for both keynote speakers and workshop participants the nature, world problems, spirituality, and mysteries of life, as well as how to take advantage of the 360° space offered by Emerging media technology in art in their context. As the best team in the workshop, we chose a group that had made amazing meditation videos.



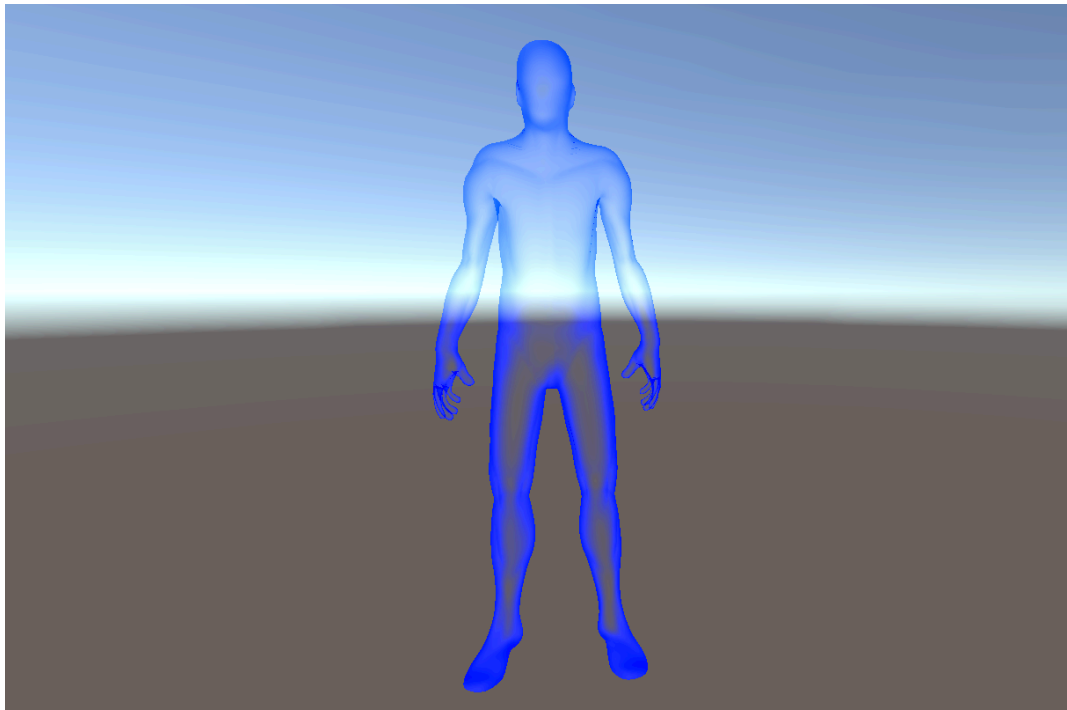
PICTURE 28. A group aMazing Stories (our team), Globe Playhouse - Expanded Animation Worlds, the Film Universities Badelsberg Konrad Wolf 2020

I first started making the piece itself by making AR content. AR content includes animated 3D characters and two video files. I used Blender for 3D modelling and animation, and for stacking animations the game engine Unity (PICTURE 29-32). I had no experience with Unity or AR software before, so I had many new things to learn. I learnt how to create AR in the AR software Vuforia and the content management system Arilyn Manager. I chose Arilyn because I found it easy to use. For 3D characters animated in Unity to work in Arilyn Manager, Unity needs to download Arilyn's Bundle Builder (PICTURE 33). I used mainly pre-made characters from websites that offer 3D characters, such as Cgtrader, Free3D and Unity Asset Store. The videos are from Pixabay. Some of the 3D characters I have customized by myself in Blender and Unity. Finding the characters turned out to be a pretty tedious project and I spent a lot of time searching for the characters. Some of the pre-made characters didn't work the way I wanted or had

bugs. I mainly did animations in Blender, but I did also some of the simple moves and effects in Unity. There was a lot to learn with the programs and especially in how they work together. There constantly seemed to be problems to be solved. I noticed many times that my plans didn't work, and I had to redesign things and do things within what was possible. I found the Arilyn Manager quite easy to use especially with video and photo, but there were occasional problems with files imported from Unity. Not all 3D characters and shaders worked in Arilyn.



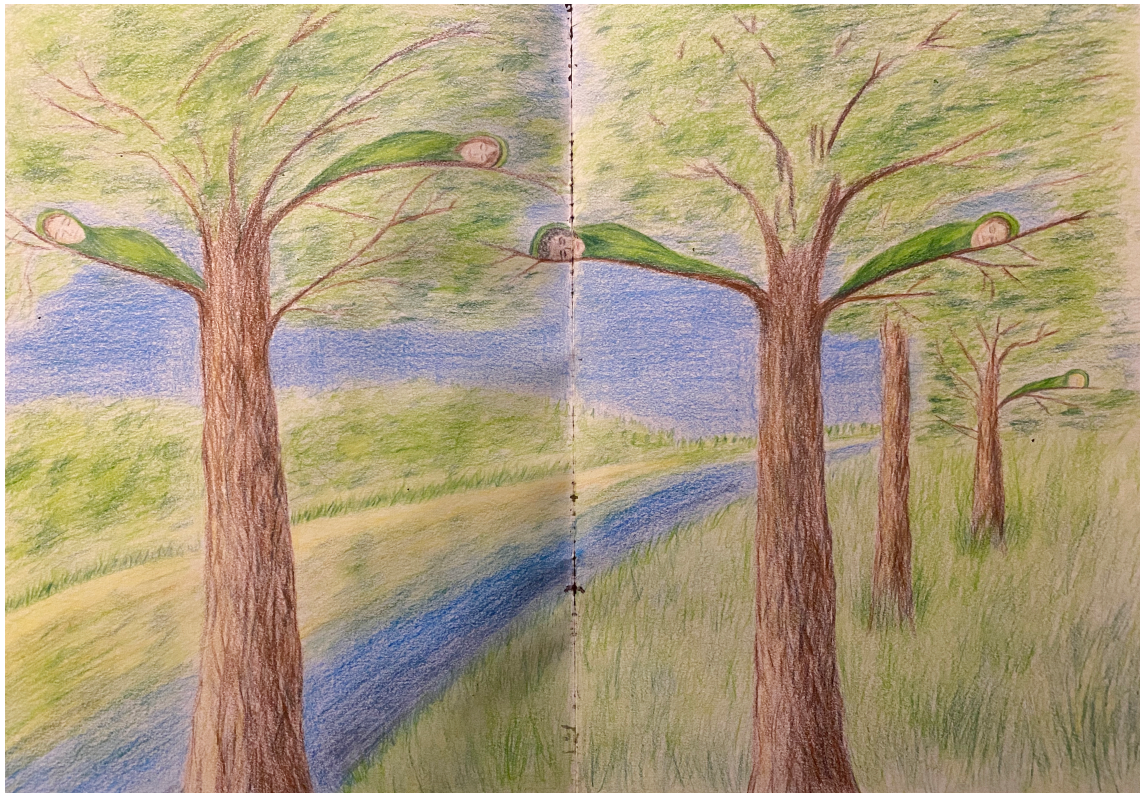
PICTURE 29. Animating the first character in Blender. Photo by Minna Annola.



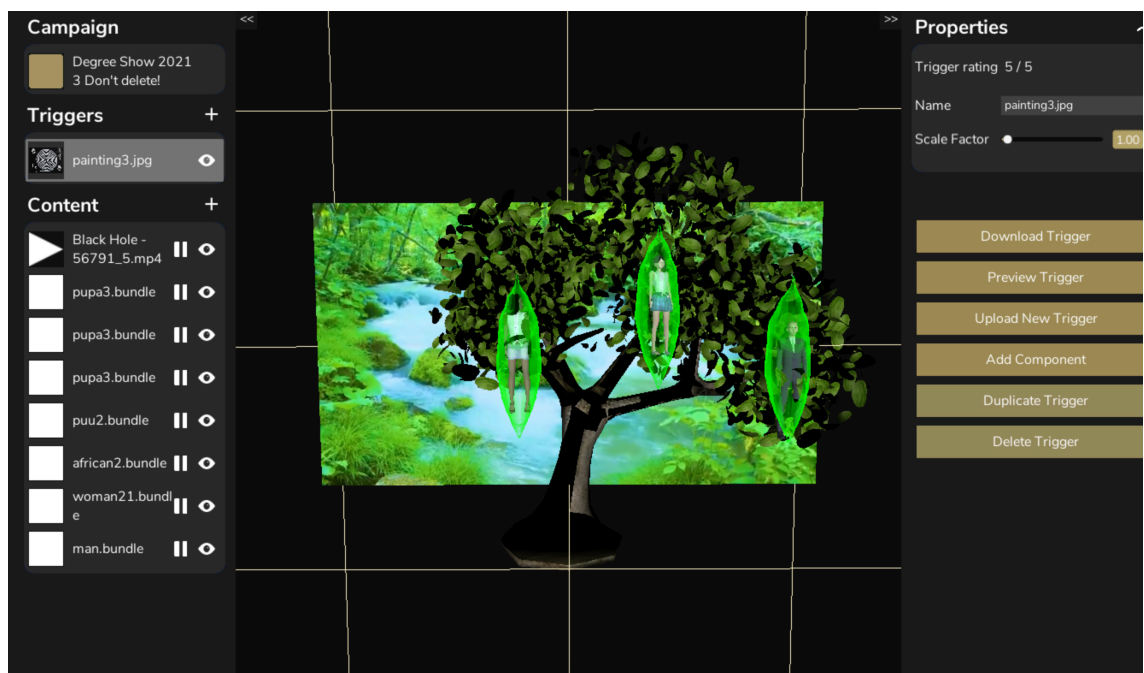
PICTURE 30. The blue character in Unity. Photo by Minna Annola.



PICTURE 31. Animating AR content in Unity. Photo by Minna Annola.



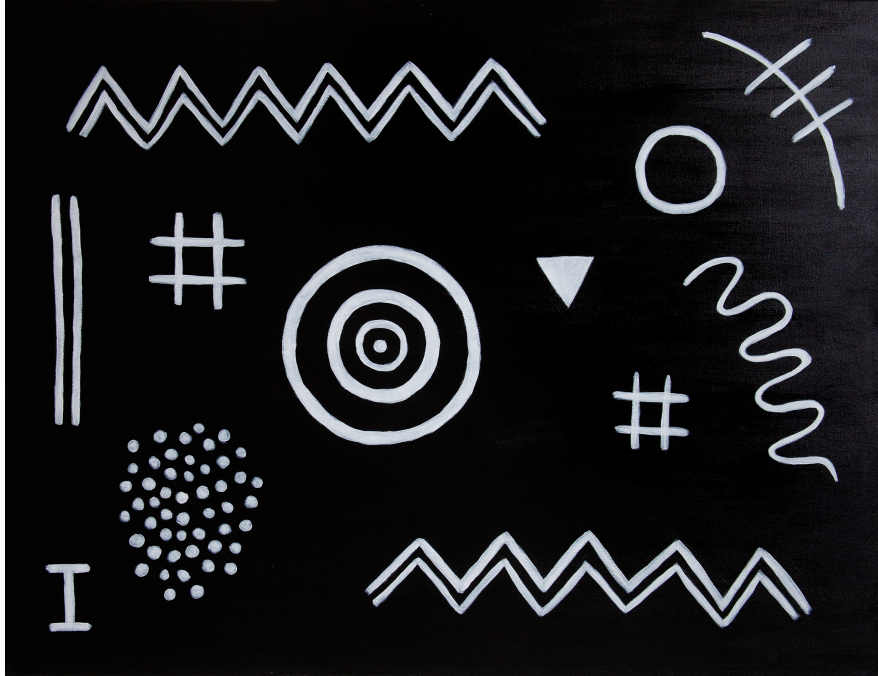
PICTURE 32. A sketch. Photo by Minna Annola.



PICTURE 33. AR content in Arilyn Manager. Photo by Minna Annola.

The ideas for paintings I have taken straight from the ancient cave paintings which I have found on the Internet (PICTURES 34-37). All paintings are in size 89 cm X 116 cm. Due to the situation in Corona, our graduation exhibition was

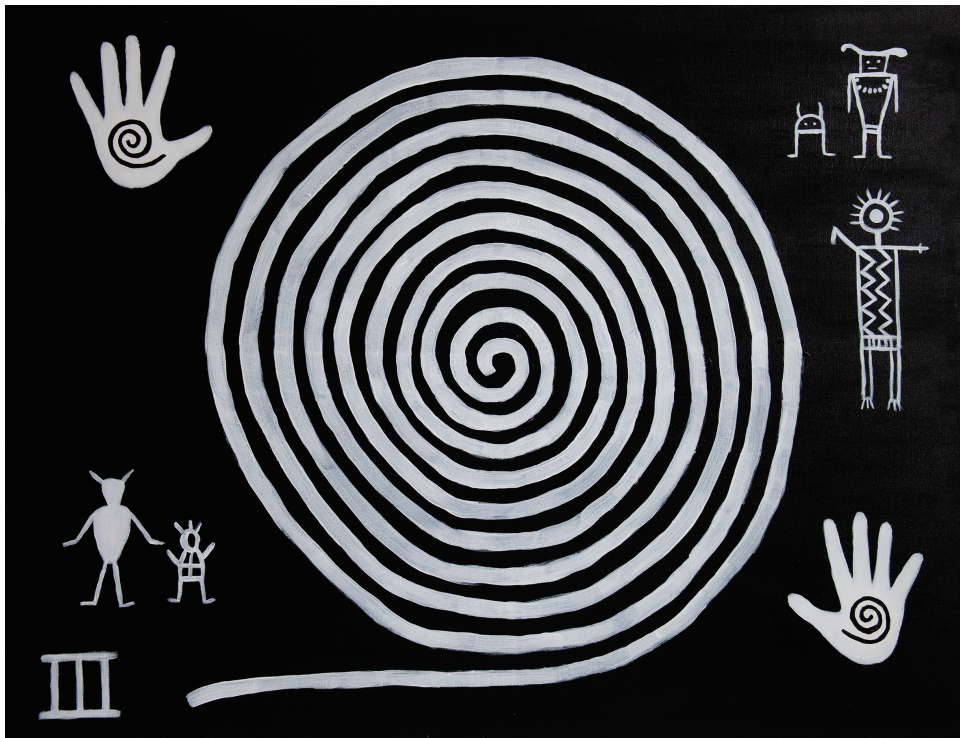
postponed to be held later in 2021, so I did not get the installation done before the completion of this written thesis (PICTURE 38).



PICTURE 34. Image target 1.



PICTURE 35. Image target 2.



PICTURE 36. Image target 3.



PICTURE 37. Image target 4.



PICTURE 38. An AR installation.

6 CONCLUSIONS

Hallucinations are often associated with madness or drugs in our society; however, neuroscience and art history show interesting perspectives on the subject. Writing this thesis has been a mind-blowing journey that has taught me to better understand art and its impact on the development of our culture. It makes you wonder if a piece of the eternal wisdom of life would still live in the things, we consider crazy. It is interesting to think that religions and part of our culture originally come from our subconscious, from experiencing miracles, on the encounters of spirit beings and elves.

Neurological studies show that after experiencing a hallucination experience, there may not be an immediate fear of going insane. Studies also showed that experiencing hallucinations in healthy people who have not used drugs proved to be common. Hallucination studies in the 1950s reveal an interesting point, in addition to sensory isolation, hallucinations were caused by belief in them.

There have probably always been seers in the world. Interestingly, the practice of shamanism has survived in the world to this day in our society as well as in primitive cultures such as the Kogi people. By studying their lives, we can better understand the life of ancient times, the cultural heritage of humanity, and perhaps learn something from it to maintain a harmonious and natural life.

When you look at the many great artists in history who have made a significant contribution to the art movements of different times, one can notice in many their interest in the deep questions of life. The great artist is like an initiated prophet, driven by the invisible forces of evolution to create something new and take our development and culture forward. The rise and fall of spirituality in our society has made a constant wave of movement. Sometimes we have dived deep into the matter and sometimes great thinkers have risen from among us to lift us back towards the spirit with the idea that we would not be destroyed.

In recent years, new spirituality has been growing rapidly around the world. When you think about the problems of today's world, then the growth of spiritual thinking

is probably not a bad thing. What would our world be like, where everyone would only strive for rational thinking?

As one example we can consider fast-industrialized China, where many scholars have seen the country morally decaying. This has been reflected in the increase in crime, corruption, and the worship of money. The spiritual and religious vacuum of the Chinese has been counterbalanced by China's cultural heritage of Confucianism, which is once again allowed to be taught in Chinese schools. (Ådahl 2005.)

Hilma af Klint, who painted under the guidance of spirit guides, was ahead of her time. Today, art centers around the world compete to display her work. It seems that now is the time for af Klint, which also tells us what today's people need in their lives. Many people are so tired of their material life and their problems that it must be counterbalanced by the nourishment of the spirit, what matter will hardly ever be fulfilled. It will be interesting to see in near the future how the impact of Af Klint's art will be reflected in our society, and whether it will increase the courage to make spiritual art in the footsteps of Af Klint.

The wheel of our evolution is moving forward, and technology is evolving as it evolves. It will be also interesting to see in the future where Emerging Media Technologies still bends as an explainer of spiritual and mental phenomena.

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