

INDEPENDENT PROJECT DISSERTATION, KATIE RICHARDS

By Katie Richards

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Title: **How does a reconnection with the natural environment create a positive aesthetic experience that stimulates a willingness to change behaviour to not only reverse climate change but to leave a 'positive handprint' on the world, through the mediums of art and technology?**

Name: **Katie Richards**

Student Number: **1902311**

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Supervisor: **Alex Duncan**

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Introduction

“Seeing comes before words. The child looks and recognises before it can speak. But there is another sense in which seeing comes before words. It is seeing which establishes our place in the surrounding world: we explain that world with words, but we can never undo the fact that we are surrounded by it.” (Berger, 1972:7).

In a society that is self-indulgently disconnected from the natural spectacles of the world and disinterested in the destruction it has caused through mass consumerism and urbanisation, it is imperative that a dialogue is created to evoke a collective desire to change. By looking and seeing the world that surrounds us, the ideology that imagery represented in a simple form can be used to communicate to the viewer in a way that evokes a response, will be explored.

Everyone ‘looks’ but just how hard do they look and what do they see? Do they just gaze or glance at their environment or are they observant, discerning and perceptive? Is it possible to inextricably link the emotions of the viewer to an art form that represents the reality of a broken nature? The concept that nature is an endless infinity and time is transient, shall be explored and the idea that the landscape of non-human objects (Earth’s natural landscapes and landform, wild nature and cultural man-made landscapes), whether painted, sculpted, drawn or experienced, is a mirror on the world that can be connected to, will be developed through extensive research of historical

and contemporary sources to meld the philosophies of biophilia, sustainability and environment in such a way that leads to understanding and action.

The idiom that art can be considered a dialogue of expression that is both thought provoking and can elicit a humankind response will be supported by visual sources from artists including Olafur Eilasson, Nils-Udo and Ned Kahn and critically investigated and supported by several philosophies proposed in the first instance by John Berger, Edward O Wilson, Holmes Rolston III and Arnold Berleant.

Through research of how contemporary environmental, land and sustainable art challenges our perceptions of the natural world, it will be discussed and argued that art forms can have an important place in society: art becomes an observatory of climate issues, provokes reflection, and can help turn a thought into an action to achieve a positive aesthetic approach to sustain, rebuild and prevent a climate change disaster. It will be argued that subconsciously humans seek connection with the non-human life forms that surround us, and that art becomes a bridge to that connection, by making art experiential, through which the audience can explore ideas and issues beyond the 'surface,' providing a 'narrative' that inspires change to the 'dissociated unresponsiveness' of humankind that has resulted from 'climate trauma.' (Woodbury, 2019:1)

A further line of enquiry will raise additional sub-genre questions about whether environmental aesthetics is merely a "disinterested judgement" that reinforces the

positive aesthetic experience of urbanisation and mass consumption. But can urban cities be designed to encapsulate an element of biophilia and in doing so introduce nature back into the concrete jungles, to create an energy within a space?

Historical Context

In the early 1900's there was a shift in the way that art reflected the relationship between humankind and the natural environment. Throughout history, and more specifically from the 1950's, humankind has extensively developed the world for its own benefit through industrial urbanisation, without due consideration to the degradation of the world that this drive for modernity created. From the 1970's, "the environment has become a signature issue, of both timely and timeless, relevant, and perennial interest" (Rolston, 2020:1) and concern which has awakened "a vigorous new interest in nature and human responsibilities towards it" (Rolston, 2020: 2) A new philosophy was developed - Environmental Ethics. This era has become known as the Anthropocene Epoch, a concept proposed by Paul Jozef Crutzen, a Nobel Prize winning meteorologist and atmospheric chemist, to define the geological era in the history of the planet that was dawning, one which is significantly impacted by human activity. (Crutzen, 2006; Zalasiewicz, et al., 2010; Rolston III, 2020; 47).

The Anthropocene is evidenced by the extraordinary rates of extinction in animals, fauna, flora and other organisms, extreme weather, global oceanic and atmospheric warming, rising sea levels, as well as the levels of carbon dioxide and methane in the atmosphere which is now permanently recorded in glacial ice, (Carrington, 2016), levels which, as noted by Timothy Morton (philosopher and ecologist), will "not be absorbed into the oceans... for another 25,000 years,". (Blasdel, 2017)



Fig 1: Consequences of Climate Change, Sky News, 2021

Many artists have, during this time, tried to challenge conventional aesthetic values by creating art works that symbolised their apocalyptic visions of the future instead of the realism of landscapes, seascapes, and life in general. Moving from the naturalistic and realism styles, expressionism incorporated recurring motifs to animals that suggested a spiritual, symbiotic connection to nature. The symbolisms of bold colours and abstract forms were used to convey life forces, energy, and emotions.

This affinity with nature has more recently been encapsulated by Erich Fromm in his book of *The Anatomy of Human Destructiveness* (1973). He proposed that humans have a psychological attraction to all that is alive and vital. This hypothesis was further explored by Edward O. Wilson, who defined the word *biophilia* (derived from the ancient Greek words for life and affection, namely, *Bios* and *Phillia* respectively). Wilson's theory, introduced in his book *Biophilia* (1984) which is now widely

recognised and evidenced both anecdotally and qualitatively, proposed that humans subconsciously seek connection with nature and all non-human life. Both Fromm and Wilson formalised a philosophical hypothesis that gave credence to the beliefs of expressionist artists who challenged their audiences to observe and really ‘see’ their profound messages about modern life.

One such artist was Franz Marc (1880 - 1916). He believed that “humankind was ugly” yet “animals possessed a greater beauty and purity,” both spiritual and ethereal, and through his art, he visualised the juxtaposition of life in conflict with the harmony of nature.

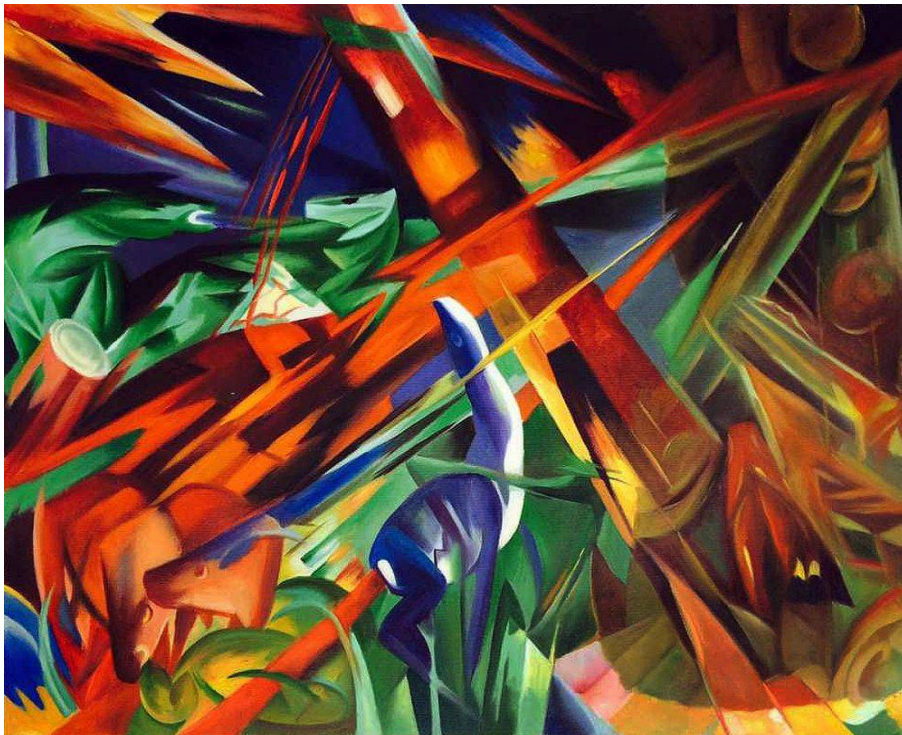


Fig. 2: *The Fate of Animals*, Franz Marc, 1913

In his 'The Fate of Animals,' Marc created an image of destructive chaos through his use of jagged lines, shapes, and angles. He used colour to impart emotion and mood, using colour symbolisms assigned by the Christian Liturgical seasons (Henderson, 2004), and in this artwork he used red to signify danger or violence against nature but introduced a symbol of hope with the inclusion of a blue deer to balance the composition. The blue deer which twists away from falling trees represents hope rising from destruction, a view that holds true today.

This painting was originally titled 'The Trees Show Their Rings, The Animals Their Veins' and Marc initially believed that this painting had no meaning, "reveal[ed] nothing" but, in actual fact, it was a window to his concerns and premonitions about World War 1 and the impending doom that the world, both human and non-human, would suffer. A colleague of Marc, Bernhard Kohler, reproduced this painting on a postcard which he sent to Marc while he was on the frontline during the war: the postcard, surprisingly, triggered an immediate response from Marc - experiencing the visual art in the form of a reproduction conferred a powerful image of the future that he had unerringly envisaged. (Levine, 1976). Such a reaction supports the idea that artistic imagery can be used to "confer a new kind of power... defin[ing] experiences more precisely. (Seeing comes before words.)" (Berger, 1972:33), reinforcing the importance of the visual arts as a language that can be both experiential and give meaning to everything that surrounds us.

Hidden from the viewer, there is an inscription made by Marc on the back of his painting “and all being is flaming suffering” (Levine, 1976:269) which, had these words been visible, would in all likelihood, have “changed the image... [to] illustrate the sentence” (Berger, 1972: 28). The words may have influenced what is ‘seen’ instead of the image conveying more dramatically, Marc’s view of the future. Words were not necessary for the spectator to appreciate the beauty of the artwork. When seeing this painting, “all its elements are there ... simultaneously. The spectator may need time to examine each element but ... The painting maintains its own authority.” (Berger, 1972:26).

Through many of his works Marc conveyed the “organic rhythm in all things” natural which attempted to “intensify feelings” and evoke responses from his audience. He encouraged the viewer to “stand before new pictures as in a dream and ... hear the apocalyptic horseman in the air.” (*Der Blaue Reiter Almanac (The Blue Rider Almanac)*, 1912). Marc believed that art works, especially paintings, should be a representation of the future, not a reflection of the past, and that the symbolism of colour was an effective way to engage the viewer. This supports the ideology that space and time can be combined to create a representation of a reality that is constantly changing and visualises a future that is in crisis.

Furthermore, this representation is inextricably linked to the emotions it evokes in the spectator: it challenges the spectator to look beyond their “disinterested contemplation” of the painting or representation in search of beauty and pleasure – a

philosophy that underpins modern theory of aesthetics in art, whereby an object is contemplated with disinterest, elevating its importance and becoming centred entirely on the arts without reference to nature (Berleant, 2016: 39) - to 'see' the connection that actually exists between nature and art. The philosophy of art appreciation (aesthetics) was originally developed by Immanuel Kant in his 'Critique of Judgement' (1790) but enjoyment of and connection to nature was central to his theory, a facet which had become lost as modern theory of aesthetics developed. However, contemporary aesthetics has recently become more concerned with the environment and is both compelling and gaining international recognition as a branch of aesthetic enquiry.

Contemporary Context

“Environmental aesthetics moves the notion of appreciation towards a more inclusive and engaged experience than we usually ascribe to our encounter with the arts.” (Berleant, 2016: 40)

As society has developed in the Anthropocene Epoch, with the challenges of over consumption, urbanisation and climate crisis, a new branch of aesthetics concerned with the environment has evolved. Environmental aesthetics now encompasses aesthetic appreciation of nature, ethics, places and “the objects and activities of everyday life.” (Berleant.2016:39). Berleant believes that Environmental Aesthetics is concerned as much with man-made landscapes as well as with the natural world which raises the question is there “a difference between nature and environment?” (p:40). According to Berleant ... “we experience the environment not primarily through one sense but through the whole spectrum of perceptual awareness...” which is dynamic and changes with the organic rhythm of nature and time: day and night, the seasons, and the elements of nature.



Fig. 3 & 4: *Mystery: More than meets the eye*, Catie Ryan, 2016

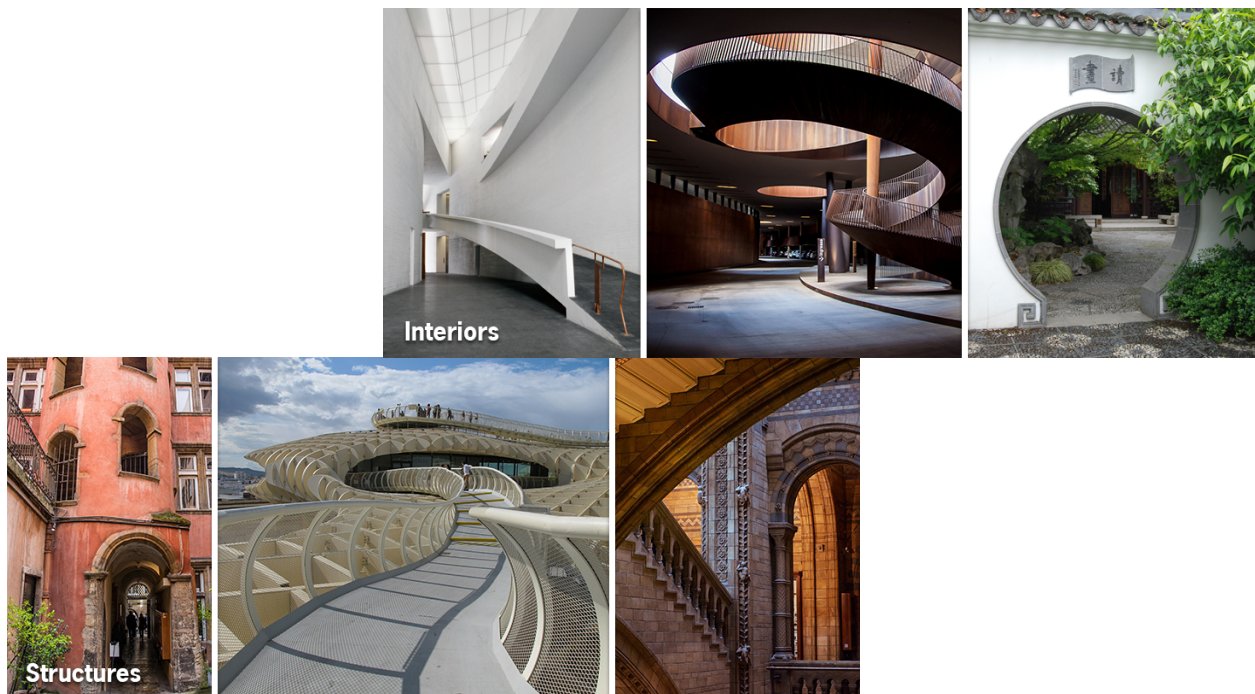


Fig. 5 & 6: *Mystery: More than meets the eye*, Catie Ryan, 2016

Appreciation of the environment, whether natural or manmade, requires the spectator to 'see' the wonderment, diversity, and dynamism of their environment, engage with, and connect to the experience with an intensity that is multi-sensory and instinctive. Aesthetic appreciation therefore has become an "illuminated and illuminating" experience (Berleant, 2016: vii) by actively engaging "with an object...with a perceptual focus by means of a developed sensibility" and encompassing both positive and negative experiential principles.

Berleant further suggested that by placing an aesthetic value on the environment, it achieves moral and ethical significance. It is recognised that positive aesthetic environments can have a beneficial effect on human wellbeing, both physically and mentally - reinforcing the principles of biophillicia.

Similarly, a more contemporary approach has been adopted by the art world. From the 1960's onwards, artistic styles, genres and media have connected to the environment in a much more symbolic way, breaking out of the confines of the gallery space and creating sculptures using natural organic materials that were embedded outdoors in the environment itself, without disturbing or disrupting it - borrowing the landscapes to reveal an art form that is also transient and subject to the energies and processes of nature. Through these art works, the symbiotic connections and relationships between human and non-human life is revealed.

One such conceptual artist, who is an important change-maker and influencer on the global stage about environmental and climate issues, is the Icelandic-Danish artist Olafur Eliasson. Eliasson 'senses' the world around him and, through his experiences of 'making' his artworks, he strives to help others to see the connections and interdependences that exist between all non-human things by creating a vision that is both sincere in its reflection of the wonders of a natural environment and accessible to his audience. By encouraging his audience to engage and interact with his large-scale sculptures, Eliasson empowers the viewer to create their own dialogue from an immersive experience - to assign their own aesthetic value to the narrative - which is designed to stimulate an emotional awareness of and response to natural phenomena, in a particular place, at a specific point in time. The viewer becomes the 'co-producer' of the installation by interacting with others as they too, encounter the artwork, sharing an enlightening experience. The viewer is central to his art works - participation is designed to evoke a civic response, reinforcing his belief that "If you don't take a step, nothing changes" (O'Rourke, 2019). Eliasson challenges his audience to turn a thought into an individual action which collectively can instigate change. Experiencing art in this way (moving within it), it is possible to achieve a tangible visualisation of the human connection to its environment, enhancing our ability to sense the world around us and to take responsibility for it.

“Art and creativity offer an amazingly powerful toolbox... art is about transforming a feeling, an idea, a dream into action.” (Alderson,2015)

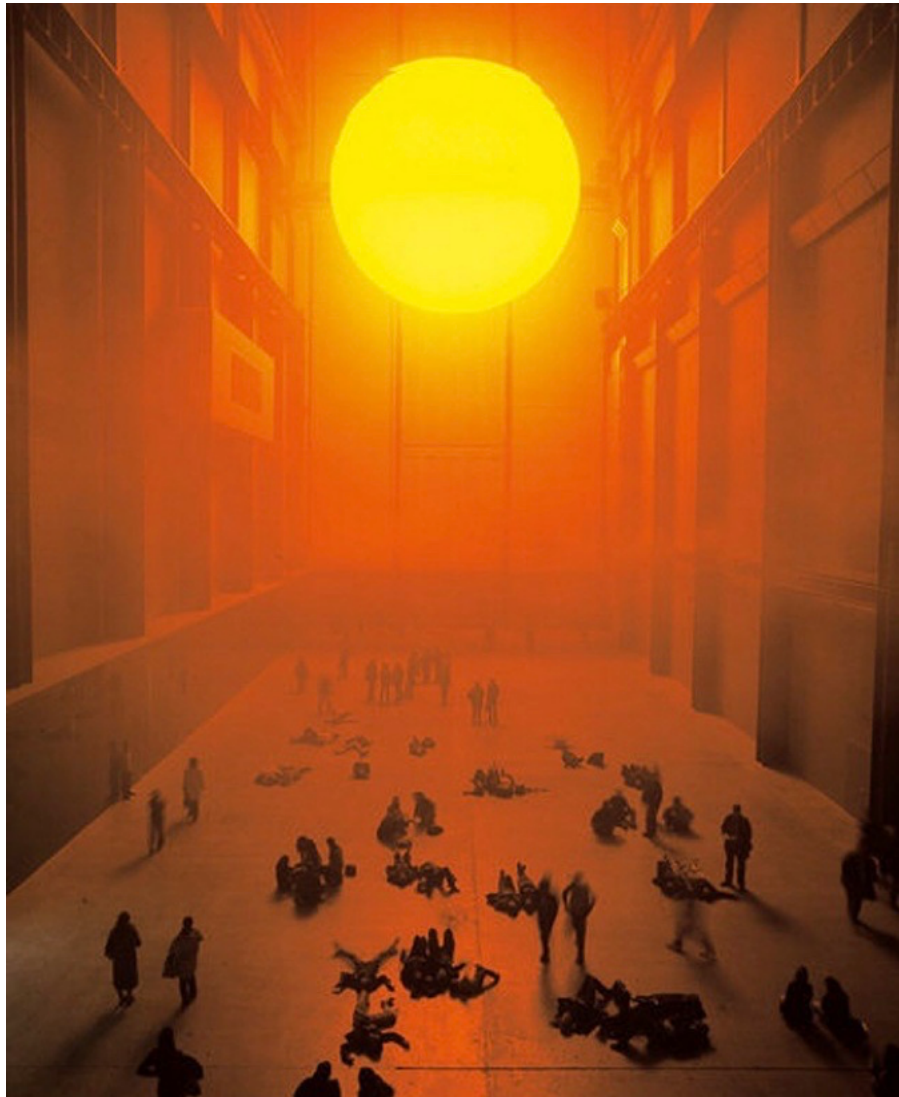


Fig.7: *The Weather Project*, Olafur Eliasson, 2003

Eliasson's *The Weather Project*, an installation created within the Turbine Hall at London's Tate Modern in 2003, was viewed by over 2 million people. (Chui, 2020). Using mono-frequency lighting (low lighting that conceals all colours other than yellow and black) to create a duotone scene, Eliasson created a 'space' replicating the sun, close-up, appearing through clouds of mist produced by vapour machines, bringing the outside world indoors, an artificial representation of a natural phenomenon - weather. Mirrors strategically placed reflected the images all around the hall - the sun's brilliance, fine mists that created clouds which then dissipated into the ether and movement and responses of the audience were all visible. The audience became an integral part of the artwork's impact: silhouettes interacting with each other became a shared experience of observation and re-discovery, emphasising the aesthetics of nature's energies and elements by capturing the essence of the world. This interaction helped create a concept that was fluid, ethereal and symbolic. The mono-frequency lighting of yellow instils a sense of positivity, energy, and hope but also of wariness and caution, whilst black suggests power and instils a sense of seriousness, and when black is combined with the yellow of the 'sun' it makes the experience more impactful and meaningful. (Public Delivery, 2021)

The idea for this art installation was to create an environment that challenged the audience to consider the unconscious bond between humanity, the world and the universe: to "see clouds today that you will never see again," (Public Delivery, 2021), to experience the dynamics of weather and the elements of nature, raising awareness and looking beyond the surface in order to challenge the cognitive dissonance of climate

change and to engender feelings of responsibility for the ever-present existential threat. Eliasson's Weather Project has left an indelible mark on his audience, even today. It still has the power to evoke individual shared awareness which promotes action towards recovery and healing - it confirms art as a powerful tool to evoke a spiritual responsibility.

In 2014, Eliasson, in collaboration with geologist Minik Rosing, harvested twelve giant icebergs that had broken away from Greenland Ice Sheet, a natural material yet not a sustainable one, to create the first of his *Ice Watch* installations and transported them to Copenhagen for display to coincide the UN IPCC's Fifth Assessment Report on Climate Change. The ice blocks harvested were a minute fraction of the glacial ice that falls into the oceans every day, a direct consequence of global warming.



Fig.8: *Ice Watch London*, Olafur Eliasson, 2018

Site specificity was important - the ice blocks left to become meltwater in remote oceanic locations are never in the consciousness of humans, intent on pursuing a materialistic life. Locating these momentous ice blocks in an artificial urban environment were designed to highlight the devastating impact of global warming on the glaciers around the world. Eliasson believed that “facts alone are not enough to motivate people, they even create the opposite effect. We need to communicate the fact of climate to hearts as well as heads, to emotions as well as minds.” (Interview in Artichoke, 2018).

His abstract message was poignant and powerful and so to further instigate and influence debate, he repeated the artwork in two further series, in Paris 2015 and London in 2018, coinciding with the forum of global leaders meeting for COP24. *Ice Watch* was a visible reminder of the reality of the devastation that humankind is inflicting on the world.

The installation encouraged people to experience the tangible reality of global warming directly and intimately through interaction with the ice. The ice blocks were beautiful and engaging, arousing a subconscious and instinctive impulse to touch, taste, smell, hug and listen to a story that is millennia years old - the essence of biophilia. The ice blocks were transient and affected by the elements of an unnatural climate. Their melting - the ultimate narrative of the art - became a metaphor for radical and urgent action that was needed to tackle climate change. The ice was a tangible

representation of what scientific data was telling us about the state of the Earth, a tangible consequence of human activity, a reality that was being denied and marginalised through individual irresponsibility. In the words of J. Herman (1972:197), “empowerment and reconnection are the core experiences of recovery,” a sentiment that drives Eliasson - he empowers the masses by compassionately connecting them within his experiential art forms. In a recent statement relating to his contribution to the ‘Future Assembly’ created for ‘The Venice Biennale 2021: How will we live together?’, Eliasson reiterated that “the viewer’s perspective becomes both explicit and complicit through each element” - their experience is intrinsic to the appreciation and contemplation of his art which “illuminates and is illuminating” of a displaced ‘artificial’ nature representing a broken nature.

But is this sort of art environmentally friendly: does it not contribute to the problem of global warming? Or can it really be an effective tool to inspire people to change? Eliasson recognised that transporting the ice to destinations around Europe did create a carbon-negative footprint, but he believed that its potential to reach and influence millions of people far outweighed that footprint. He has since then planted trees to balance the carbon footprint of this art source. In the United Nations General Assembly Document, *Transforming our World: The 2030 Agenda for Sustainable Development*, 2015, the UN challenged the creative world to innovate to raise awareness of political and ecological issues, to “protect the planet from degradation, sustainably manage its natural resources and take urgent action on climate change.” (UN, 2015:3). Eliasson’s installations, whether indoors or outdoors, provides a multi-sensory aesthetic

experience that is very effective in visualising the juxtaposition between the beauty of nature, its fragility and human indifference, disinterest, and hedonistic consumption. It is art that is creative, innovative and meets the challenge set out by the UN in raising awareness. It is art that can influence behaviour of its audiences and collectively can achieve change.

Like Eliasson, modern American Environmental sculptural artist Ned Kahn is fascinated with capturing the invisible energies and forms of nature. He creates kinetic ‘observatories,’ choreographing the complex recurring patterns and dynamic forces within nature by integrating natural elements, science, and technology within his art, making visible the invisible fluid forces that surround us. Kahn creates illusions of “turbulent landscapes” that continually shape-shift and change as they interact either with artificially generated elements or with natural phenomena, especially wind, but also with the elements of water, fog, sand and even fire. He constructs “dazzlingly complex but comprehensible images of nature that respond to viewers, conform to architectural structures, and reveal environmental conditions.” (Mather, 2021)

Kahn explores “Where ... an environmental sculpture begin[s], and where ...it ends... there [is] never a real border between the sculpture and the whole atmosphere of the world.” (Greenwald, 2011)

His artworks are scientific experiments that are designed to be ‘experienced’ by his audience, a sensorium of sight, sound, and touch. He invites them to ‘see’ his visualisation of nature’s energies and to explore how their own interactions with the installations have an immediate, visible effect upon the artwork. In doing so, the audience can learn and re-discover with a sense of wonderment and excitement how the beauty and power of nature can subconsciously, as well as physically, touch the soul. The interconnectedness of all things, human and non-human, is revealed and empirically evidences the smallest action can affect and alter the natural course of

events 'The Butterfly Effect' (the concept within chaos theory developed by Edward Lorenz) is revealed and is cleverly illustrated in his *Encircled Cloud*, *Tornado* and *New York Crossings*.



Fig. 9: 'Encircled Cloud', Ned Kahn, 2012



Fig. 10: Tornado, Ned Kahn, 1990

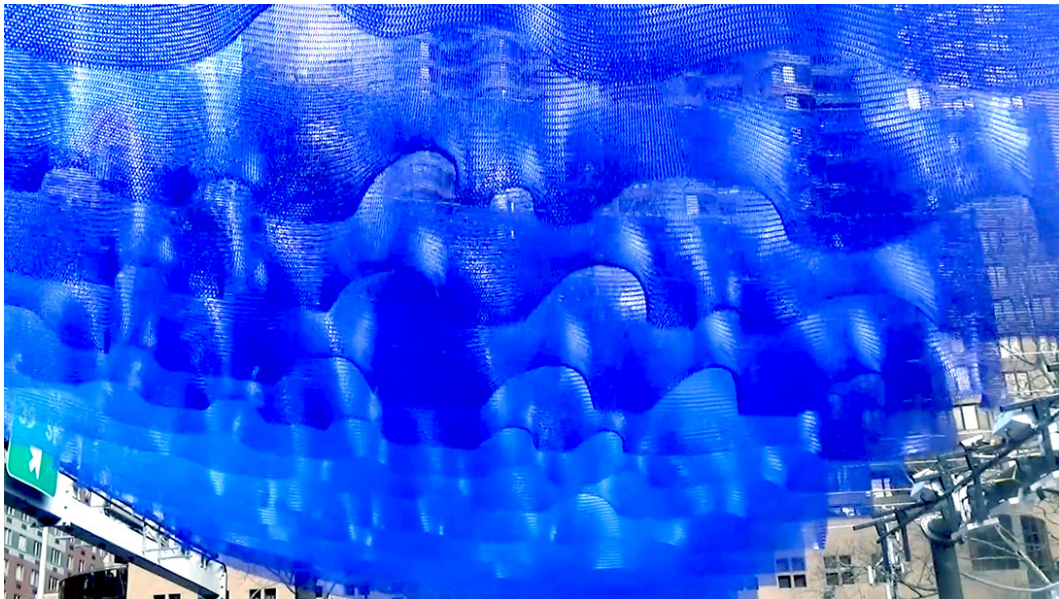


Fig. 11 New York Crossings, Ned Kahn, 2017

In his *Encircled Cloud*, Kahn constructed a steel ring to frame the outdoor landscape, from which mist diffused into its centre, obscuring the view. His audience was encouraged to jump through the hoop to experience the changing dynamics of the atmospheric energies in the circle and more importantly, to feel them. *Tornado* was similarly interactive - Kahn's 10-foot "fog twister," artificially created using air blowers and an ultrasonic fog generator, continually changed shape in response to the prevailing invisible forces (wind and breezes, its fascinating movements encouraging the viewer to explore their own interaction with the vortex. In his installation *New York Crossings*, he constructed blue polycarbonate curtains of chainmail above the entrance to the tunnel in Queens, Manhattan. The effect of the wind caused by weather conditions and that generated from the traffic below created undulations in the blue curtains replicating turbulent waters.

The interdependency of humans with nature and human instinct to interact with other life forms in nature is effectively demonstrated through his biophilic interactive art. Kahn's sculptures and installations are a real and profoundly symbolic attempt to evoke a deeper understanding of and connection to nature. In the words of Kukulhaus, "the eye sees, the ear hears, the nose smells, the skin feels, the fingers touch, the foot recognises the ground, the hand recognises objects, the brain thinks, the lungs breathe, the blood pulses, and the body moves" through the senses. (Kukulhaus, *Field of Experience*)

Another photographic artist that uses technology to impart an ecological message of a de-natured or artificial world is Trevor Paglen. He “investigat[es] the invisible through the visible, with a wide-reaching approach [to] image making, sculpture, investigative journalism... and other disciplines.” (Pace Gallery, 2020). In 2020, he created a series of conceptualised images of trees and flowers using AI and computing systems from original black and white photographs taken whilst out walking during the Pandemic lockdown. He believes that this new digital or virtual reality life creates a synthetic life, which reinforces Holmes Rolston III’s idea that civilisation is heading towards “a synthetic life on an artificial planet...that would rupture history.” (Rolston III, 2020:53). The AI-generated images are colourful but have an intensity that is disturbingly inconsistent with the human perception of natural landscapes and reality.

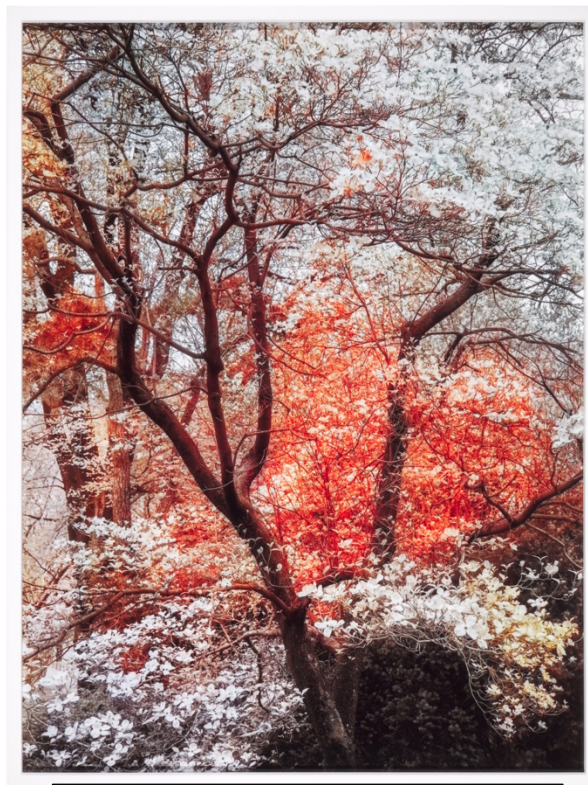


Fig. 12: *Bloom*, Trevor Paglen, 2020

During the enforced isolation and limitations placed on society during the Pandemic, technology allowed Paglen to create his Octopus exhibition in London where visitors from around the world were invited to experience his artworks

“through a live web portal connected to [surveillance] cameras placed in the gallery. Online participants ... observe visitors experiencing the work in person and can be present in the space by streaming their personal webcams on monitors displayed within the exhibition.” (Pace, 2020: *Enter Octopus*)

Online audiences could monitor those visiting the gallery space and likewise, in-person visitors could observe the reactions of the virtual visitors, all of which might have influenced their aesthetic experience. This ‘surveillance’ might also have engendered a feeling of paranoia - of being watched. But who is watching whom?

Paglen’s Octopus exhibition does show that technology facilitates a novel way to experience art and engage with an exhibition space. More importantly, it challenges the spectator to not only see the world around us but to understand the invisible workings of the modern-day technological surveillance systems that capture and analyse humanity’s every move - “technology is never neutral” (Heathcote, 2020) and in the words of Paglen himself, “nothing is what it seems.”

One of Paglen’s more extreme experiential performance art pieces involved taking ten divers to see first-hand the hidden fibre-optic cables that lay across the ocean floor

in deep trenches: to make visible the invisible, to understand the reality of the concepts of the 'internet, cloud and cyberspace' and to teach his audience "how to see the society they inhabit." (Jobey, 2015).



Fig. 13: *Columbus III, NSA/GCHQ-Tapped Undersea Cable Atlantic Ocean*, Trevor Paglen, 2015

These international cables connect the world and they all come together on the seabed before coming ashore on the American and European continents and it is at these choke points that "governments survey all information that passes through these cables," covertly. He believed that simply photographing stretches of sea or land where these cables might be didn't reveal what lay beneath or impart any message, and so after meticulous research, he located the cables and photographed them during a dive. These images reveal "the tension between the familiar, sometimes banal images

- sea, skies, deserts - and the sinister implications of what they contain” and they “help us develop a vocabulary to understand the historical moment we live in.” (Jobey, 2015). Paglen’s art challenges his audience to see and understand the world we live in and to realise that it is their right to look, learn and react. Art encourages people to challenge what they see.

The philosophy of looking, seeing, observing, learning, and questioning that underpins the works of Paglen, Kahn and Eliasson is made more relevant when supported with factual evidence enabling the artists to highlight the warning signs and realities that impact our consciousness. This philosophy was adopted by the marine biologist, conservationist and environmentalist, Rachel Carson, during the 1940’s and 1950’s, who tried “to raise awareness about the interconnectedness of life” and the need to preserve a viable planet for human and non-human life. (Carson, 1951: x). Carson is one of the foremost advocates of environmentalism and introduced the concept of “moral responsibility... not only to our own generation but to those of the future.” (Carson, 1996-2021) This moral responsibility underpins the United Nations drive for environmentally friendly development, as defined in their definition of sustainability which “meets the needs of the present without compromising the ability of future generations to meet their own needs.” (UN General Assembly, 1987:43).

As a marine biologist Rachel Carson believed that life itself began in the sea and that human development of the Earth for their own purpose has resulted in humankind

forgetting or ignoring the true nature of our planet. She believed that being adrift on the oceans revealed the circadian rhythms of time: during the daylight hours, oceans are seen through distant horizons marked by the motion of the waves and currents, and at night, the rotation of the earth is clearly visible by the passing of stars overhead: by the seasons, reflecting a sense of awakening and new life.

“The face of the sea is always changing. Crossed by colours, lights and moving shadows, sparkling in the sun, mysterious in the twilight, its aspects and its moods vary hour by hour. The surface water moves with the tides, stirred to the breath of the winds, and rise and fall to the endless hurrying forms of the waves. Most of all they change with the advance of the seasons.” (Carson, 1951:32)

This insight of being alone on the seas arouses a biophilic connection to nature which imparts the sense of humankind’s insignificance on our planet and the “loneliness of ... Earth in space ... that [the] world is a water world dominated by ... oceans in which continents are transient intrusions of land above the surface of the all-encircling sea.” (Carson, 1951:17). Her understanding of the ecology of the oceans stimulated her environmental ethics and her life’s work attempted to educate the public of the challenges of climate change - issues that the public had the right to know.

Carson provided facts that supported her belief that human interference with nature’s balance leads to fatalistic events which destroys and degrades the environment and ultimately humankind. She evidenced one of the greatest rhythms of

the Earth ... rising sea levels. Over geological time, oceans have always ebbed and flowed over the continents, the waves eroding landforms, sculpting the edges of continents, and generating sediment that would raise sea levels, receding back over millennia. The boundary between land and sea has always been transitory and the oceans have regulated and stabilised world temperatures, absorbed carbon dioxide and, in the words of Carson, been responsible for a profusion of life.

But the influence and impact of humankind during this Anthropocene Epoch, a minutiae of time in geological history, has accelerated the rise of sea water levels with melting freshwater polar ice flowing into the seas, altering currents that control life, weather patterns and storm waves around the globe. The oceans evoke a “powerful sense of presence, felt but not seen” (Carson, 1951:149) which ignites an innate sense of connection with the world and change behaviours to ensure that we preserve all its life forms to achieve a planet that is viable.

Today environmental ethics focuses on human responsibilities to nature and questions humanity’s lifestyle choices. Environmental ethics has now become much more comprehensive and inclusive, encouraging respect for all lifeforms, both human and non-human, for all species of animals and plants, ecosystems, land, and sea. In the words Holmes Rolston III, “humans are a paradox on Earth, both a part of nature and apart from nature.” (Rolston, 2020:61). Rolston challenges us to decide “what kind of life [do] we want on what kind of planet?” He concludes that “we do not want a synthetic life on an artificial planet. That would rupture history” (Rolston, 2020:53) and

that the wonderment of the world should be celebrated. Rolston believes that humans should develop their cultures in “intelligent harmony with the way the world is already built, rather than take control and rebuild this promising planet by ourselves and for ourselves.” (Rolston, 2020:51)

Rolston’s environmental ethics reinforces the importance of caring for our planet, not simply managing it as a resource for humans to use without consideration or recourse. It attempts to reintegrate culture with nature, to show that sustainability should not imply infinite development and exploitation of the natural world for maximum human satisfaction, globally. Not to follow this new ethic would be dangerously self-defeating, with humankind “destroying their planet and themselves with it.” (Royston, 2020:245). There is a moral responsibility on our shoulders to “see Earth as a planet of promise” respectful of life on Earth: Rolston introduces the term “Earth Ethics.”

Artists have, since the early 1960's, embraced that moral responsibility, challenging and rejecting consumerism, urbanisation and ultimately the “commercialisation of art-making” and culture (Artland ApS), releasing their artistic spirit. The Land Art movement (also known as environmental and earth art) emerged, where art moved beyond the confines of the gallery space into the greatest space of all - nature's outdoors - creating site-specific sculptures that had a spiritual connection to Planet Earth. Pioneering artists Robert Smithson, Nancy Holt, Ana Mendieta, Agnes Denes, Christo & Jeanne-Claude and Nils-Udo all used natural materials, sourced from within the specific landscape and ecosystem, to create monumental art forms that interacted with and were a part of nature, altered by the forces of nature over time.



Fig. 14: *Spiral Jetty, Salt Lakes, Utah, Robert Smithson, 1970*

The inspiration for Smithson's art form came from photographs of Earth taken from space by American Astronauts and the words by Michael Collins, remembering:

"What I saw when I looked back at my fragile planet - a glistening, inviting beacon, delicate blue and white, a tiny outpost suspended in the black infinity. Earth is to be treasured and nurtured, something precious that *must* endure." (Collins, 1980:6: Rolston, 2021:216)

This vision of Earth prompted Smithson to create his 3-D earth sculpture (using natural materials of basalt rocks, mud and salt crystals), the size of which dwarfed the spectator. It was designed to represent the enormity of our galaxy and evoke a sense of humankind's proportionality within it, requiring his audience to wander anti-clockwise around the spiral to give the perception of moving back through ecological time. Since its construction in 1970, the earthwork became submerged in the waters of the Lake, but Utah State suffered continued drought conditions since 2000, a direct consequence of climate change: its water levels have receded, making the Spiral visible once again, challenging its audience to perceive again the negative impact of endless development, and more profoundly, their interconnectedness with Earth and the cosmos (Artland ApS).

Another inspirational artist who embraces nature as his source and celebrates its beauty is Nil-Udo. He believes that nature "achieves absolute purity" and in his words, he aims:

“to unite, condense and amalgamate the specific possibilities of a landscape at a given season to form a unique pinnacle, the apotheosis of that season in that landscape. Implementing what is potentially possible, what latently exists in nature, to allow what never existed but was always there to become reality ... Utopia. Even one second of a lifetime is enough. The event has happened, I have awakened it and made it visible.” (Nils-Udo, Han Art, 2020).

Nils-Udo conceptualises “Art in Nature” by “Drawing with Flowers, Painting with Clouds, Writing with Water” (Nils-Udo, Han Art, 2020) and achieves artworks that highlight moral responsibility.



Fig.15: Bamboo Palm Fronds, Lanzarote, Nils-Udo, 2002



Fig. 16: Water House II, Germany, Nils-Udo, 1982

In his artworks, Nil-Udo makes visible nature's propensity to recreate and renew life, connecting space and time, something that often goes unseen and becomes irrelevant in everyday life. His sculptures challenge his audiences to really see the reality of our natural environment, overcome their disinterestedness and reflect on its beauty - to see how a reconnection to nature can achieve a greater understanding of the human impact on our planet whilst providing a means of self-healing through caring hands.

Conclusion

The importance of art as a narrative in the climate change discussion has become evident. Contemporary artists Olafur Eliasson, Ned Kahn, Trevor Paglen, Robert Smithson, and Nils-Udo have all, in creatively different ways, embraced the philosophy of environmental ethics and revealed the deep-seated emotional connection that exists between humanity and its surrounding, especially the natural one.

These artists have all created artworks that provide extraordinary experiences for the spectator, using nature as their source of inspiration, elevated to a new experiential level through technological advancements and scientific knowledge. The gallery space now includes the great outdoors so that it becomes accessible to many more people. Art therefore can influence the masses, raise their awareness and desire to change behaviour, with the power to heal.

The impact of a rapidly changing environment causes distress to the world ecosystems and consequently, because of humanity's innate connection to all that is alive (biophilia), that distress is felt by humans.... a recently developed concept of Solastalgia. Reducing environmental distress should help alleviate the impact of humankind distress – Art can have a positive impact on well-being and reduce solastagia.

Humans have the capacity to dissociate themselves from this existential threat, to assume that their individual action will be inconsequential, to deny and consciously ignore the issues - Climate Trauma. However, through art and technological creativity, humanity can choose to collectively, through shared awareness, become a powerful voice, politically and economically, to change the world, to achieve reparation and harmony... the Butterfly Effect. "Empowerment and reconnection are core experiences of recovery." (Herman, 1992:197)

In such experiential art forms, the spectator is a significant element of that experience which creates an emotional connection to what truly is seen, an aesthetic experience that has a positive impact or 'handprint' on the world.

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