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# Teleterrestrial: The Universe of Technological and Natural Scenes

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**Teleterrestrial**  
or  
**The Universe of Technological and Natural Scenes**

By  
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A thesis presented to the Sam Fox School of Design and Visual Arts  
At Washington University in Saint Louis

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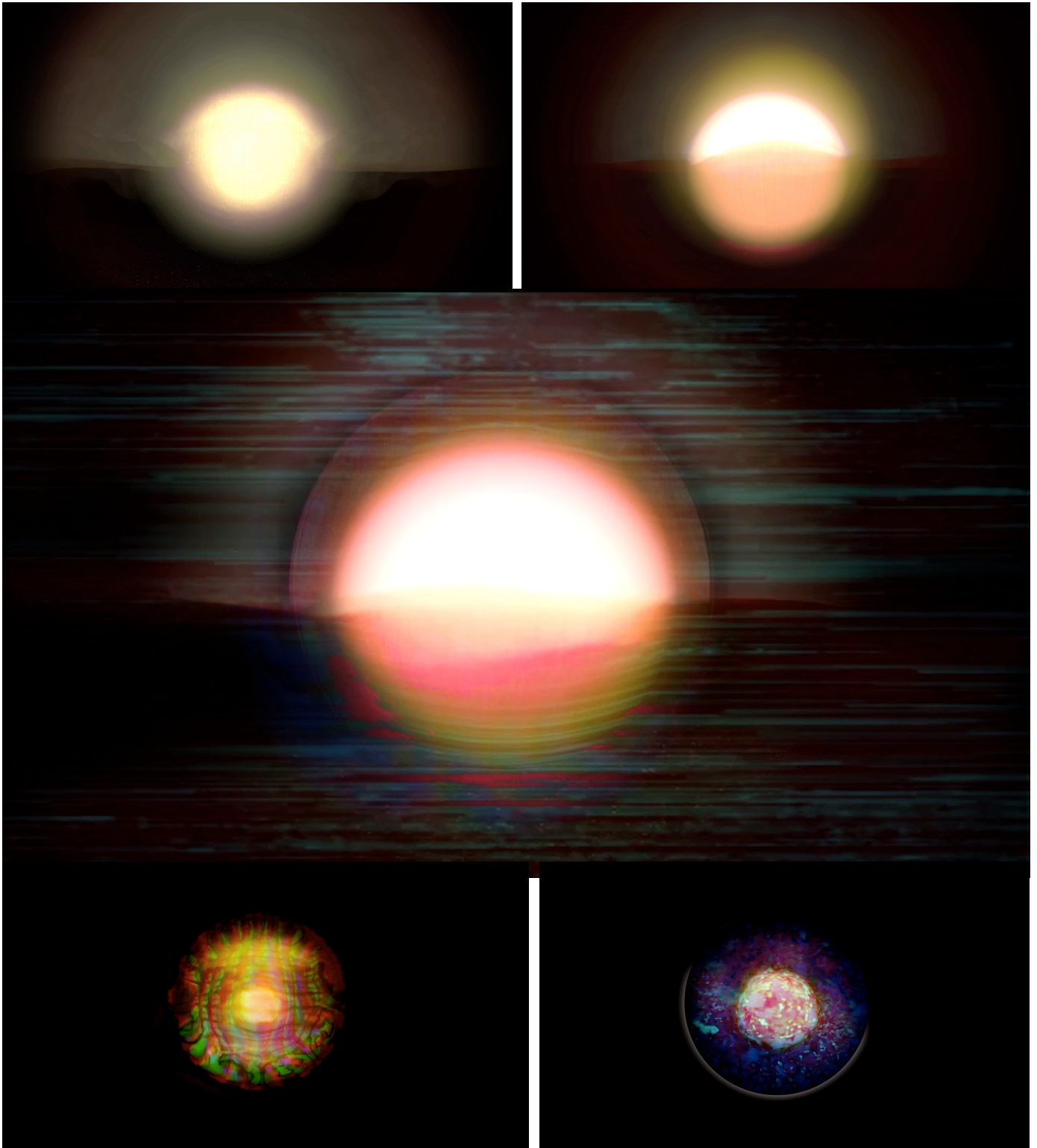
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## Abstract

In the Universe of Technical and Natural scenes, is *Telerrarin*. *Telerrain* is composed from my point of view as an artist. This terrain of combined forms is seen in three scenes that assemble technology, humanity, and the natural world. Each scene is set in different landscapes: the desert, the countryside, and the ocean. As an artist, I see these settings with the vision of a director that drives the atmosphere, life forms, and cyclical verves that make these landscapes real. As a writer, my voice describes how technology, humanity, and the natural world fit together, and then asserts the kinds of adaptations this composite needs to survive. In these scenes, the combined forms of technology, humanity, and the natural world dissipate, evaporate, condense, and emerge to form the most extraordinary strategies to survive.

*“Telerrain”*



Natalie Rainer  
2017

## Introduction

I direct my view of humanity, nature, and technology in three scenes: the desert, the countryside, and the ocean. I write about these scenes as a human being fascinated by the way technology is becoming a digital tool affecting the way I think about the reality of life forms around me. In scene I, I see life forms in a landscape with hallucinatory and simulated capacities to anxiously disturb what is “real” and what is not. In scene II, I see forms of life springing out of a landscape grounded in a network connecting nature, humans, and technology in a lush reality. In scene III, I see a vast, fluid landscape teeming with life forms emerging from the flux of currents that animate the natural world, digital technologies, and humanity.

Within these scenes I see particular matter that looks like a stream of molecules flowing through deltas of veins and root structures, lightning strikes of electric currents firing between synapses, and clouds of points billowing into images that waft between screens and memory banks. I see forms of matter that take shape as stars, planets, black holes, and entire universes that presumably support peculiar atmospheres and extra-terrestrial forms of life.

Looking at different levels of matter that shape the universe I see is like looking through a “window”. In the words of Patricia Olynyk, this “window” is “affective” to how I view myself as a human being in the universe.<sup>1</sup> Further into the *Fantastic Voyage and Other Scales of Wonder*, Olynyk elaborates that being able to “encounter” scales is affective because it brings awareness “in relationship to other entities” on micro and macro levels.<sup>2</sup> This is powerful. By the time the human species first looked at an image

of planet earth, our species also saw an X-ray of a person's DNA for the first time.<sup>3</sup> (see Figure 1.) Another example this "affective" power of scale holds is hailed in Charles and Ray Eames *Powers of Ten*. (see Figure 2.)

My power as an artist adds to this cannon with *Telerrain*. I believe the power of my point of view through the "window" lies with digital devices that will read and render a scaled, expansive universe as real. Smart phones, computers, telescopes, electron-scanning microscopes, satellites, laser scanning devices, medical machines like X-rays and MRIs, etc. illuminate and frame the micro and macro worlds I see.

As I see, I am writing in scenes that are just in view of becoming.

Now, they will keep on becoming.

*Scene I*

“You’re probably pretty wierded out, now. I’m guessing...

How old did you say you were... ?

...

So you won’t remember Xerox machines. Do you know what a photo copier is?”

*[Deep breath]* “What?”

“Do you know what a copy is?”

*[Exacerbated]* “As in a copy of something? Of course I know what a copy is!”

“Well. That’s... what you are.”

*[Disdainfully]* “A copy of... ?”

“A copy of *you*.

Try to blow in my face.

You can’t.

Because you don’t have a body, where are your fingers?

Your arms? Your face?

Nowhere, because you are code.

You’re a simulated brain full of code...”

- Black Mirror. Season 2: Ep. 4.<sup>4</sup>



## Desert of the Real

Imagine a world where the temperature rises to a suffocating degree. There is no escape from heat, dust, or wind. Imagine a world with close to no substance to feed on or hydrate. A drop of water here radiates almost instantly into a blistering, delirious landscape. The atmosphere here is virtually non-existent, and whatever does appear in the air is a hallucination; a reflection of forms already mutated by radiation and disintegration. These conditions cloak nearly one third of the landmass on planet earth. Any forms of life here need the most extraordinary strategies to survive.

Human beings have become extraordinarily savvy by adapting to and defying the odds of survival, especially in spite of environmental conditions. If environmental conditions seem to be pre-dominant over the evolution of species, then the evolution of tools and technologies seem to be pre-dominating the evolution of the human species. Hence tools and technologies shape humanity alongside humanity's shaping of the natural world.

Alongside me, almost always, is a digital tool. It is on me a lot of the time; literally, on me either in my pocket, clutched in my hands, close to my ears, and under my fingertips. This technological tool is so integral to my life, and it is my cell phone. It tells me the time, it is my alarm that I wake up to, it knows what the weather is like outside, it knows how to connect me to the people I care most about, it knows how to orient me geographically, and it is my newspaper that I read before going to bed. My cell phone knows things. I rely on it virtually every day.

Amber Case is an anthropologist studying how and why digital technology is becoming such a big part of human life. She is part of a field in the anthropology of science that looks into the relationship between humans and technology, how technology affects culture, and what this changes overtime. To be precise, Case is a cyborg anthropologist. When I heard Case say, "... to a certain extent, we are all becoming cyborgs now" in her talk on the TED stage, was I surprised?<sup>5</sup> No. Was I concerned? Yes. I winced. She used the word "cyborg"; cyborgs are those weird, amalgamations of machines and living beings that are menacingly admissible only to annihilate the human race, or the natural world, or both. Cyborgs are capable of not only out-smarting, but also devastating the un-tech-enhanced living. Depictions of cyborgs in popular Western culture including *Ex Machina*, *The Matrix*, *Blade Runner*, *Robocop*, *Black Mirror*, *The Terminator*, and Darth Vader, are all examples that conceive and propel the sinister aftermath of fusing human beings and machines. Where technology appears to be so interconnected with human beings, that the two seem inseparable, artists like Jon Rafman are working to comprehend what impact this has on contemporary consciousness. The impact of technology to this effect is also revealed in Bill Viola's piece *Anthem*.<sup>6</sup>

Watching a piece by Jon Rafman is like the creeping, invasive feeling of sensing something is about to go horribly wrong. Rafman's video pieces sequence internet-user-created content that project the sights of technology, humanity, and the natural world bound by a twisted anxiety that continues to spin, and spin, and spin out of control. A washer machine spins again and again until it literally can not stand its own rotating force and deconstructs. A man in a suit frantically bashes his personal computer to pieces, then gingerly contrite; he tries to put it back together. Images of people, who drank and over-

satiated themselves to a point of “black-out”, are helplessly passed out, defaced, and demeaned by dark, permanent marks. (See figure 3.) A snake eating its own tail appears throughout scenes of a mediated, convincingly human eyeball. A mechanical, motorized, and “talking” mouth instrument appears before a towering loop of computer memory banks, and animals are biologically studied to a travesty. (See figure 4.) Experiencing these scenes from Rafman’s works *Mainsqueeze* and *Erysichthon* are prickling and creeping, stirringly mundane, and unfold into a sickly viewing pleasure that can not be purged. These unsettling sensations caused by the digital unwinding of humanity’s control in Rafman’s works are also exemplified in the anxiety prone, technologically fraught *Anthem* created by Bill Viola. As scenes of radiating cities, machines, human bodies, and ecological organisms, *Anthem* sings the unsettling praise of a technologically progressing world that crescendos into a screaming, preying pitch of angst and horror. (See figure 5.)

In these literary, cinematic, and artistic examples, the fusion of human and technology is sickly spinning out of control, and they detach the human species from a natural world where technology seeks to deteriorate it. Technology is fragmenting materiality by becoming increasingly digital and “immaterial”.<sup>7</sup> When technology facilitates a treacherous traction towards disembodiment and immateriality, the balance of biological nuances fracture and fade. By the time Morpheus turned to a T.V. and channeled Neo into the technologically deviated terrain of the 1999 *Matrix* film, Jean Baudrillard had already come up with the term “desert of the real” to describe this new, tech-infested reality where “... digitality is with us. It is that which haunts all the messages, all the signs of our society.”<sup>8</sup>

I think the “digitality” Baudrillard is referring to can be described through the process of digitization. In her introduction of *Animal, Vegetable, DIGITAL*, Swanstorm describes digitization as, “the... process by which information is encoded and translated into binary language that a computer can process.”<sup>9</sup> Swanstorm maintains that this process is “wholly material” though; whereas Baudrillard describes this process in terms of a “precession” which he maintains is the “liquidation” of material. Baudrillard’s “precession of simulacra” is a term he uses to describe the process of reducing signs and symbols into code that is then processed even further into another code:

“The real is produced from miniaturized units, from matrices, memory banks and command models- and with these can be produced on indefinite number of times. ... In this passage to a space whose curvature is no longer that of the real, nor of the truth, the age of simulation this begins with a liquidation of all referentials- worse: by their artificial resurrection in a system of signs... It is no longer a question of imitation, nor a reduplication... It is rather a question of substituting signs of the real for the real itself.”<sup>10</sup>

If material really is liquidated, then the “real” could evaporate and “disappear with simulation”.<sup>11</sup> Once natural “Its” are mapped as digital “Bits”, and then coded into digital bytes, maybe some realities do dry-up?<sup>12</sup> Baudrillard might not be so far off in setting the world of “digitality” in the stifling, barren hearth of the desert. What if what is “real” truly deserts the earth and a technological “hyperspace without atmosphere” becomes the new landscape? Then anything living there must be a hyper-virile, cyber organism that has adapted the most extraordinary strategies to survive.

However, in her TED Talk, Case says, “You’re not Robocop. And you’re not Terminator. But you are cyborgs every time you look at a computer screen, or use one of your cell phone devices.”<sup>13</sup> I agree with Case, and I believe her description directs the

position of cyborgs toward a broadly refreshing horizon. I believe the combination of digital technology, humanity, and the natural world does not have to be set in such a hyper-focused, heated, eroded, and cracked environment. Baudrillard forms components of “digitality”, humanity, and the natural world like hard, binary bits of sand, hence creating a desertification process through coding and simulation. This scene is directed into dust and artists like Rafman and Viola deeply intensify the grit. Nevertheless there are a slew of literary thinkers and visual artists, that direct the composites of nature, technology, and humanity into quite a different scene.



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Photo: Alex Delfanne

(See figure 6.)

*Scene II*

“I don’t know anything about plants. I stay inside all day and play video games. ”

- Quinn Tate. Fourth-grader.

“Today was a sunny day and I was able to sunbathe a lot...  
I had quite a bit of fun today.”

- Midori-san. *The Talking Plant*.<sup>14</sup>

“The cyborg is not in the garden, the cyborg *is* the garden.”



- Ken Goldberg, *Telegarden*.

- Tree Alphabet by Katie Holten (see Figure 8).<sup>15</sup>

## Countryside of the Real

Imagine a scene under a tree. By the banks of a trickling stream is the countryside, lush with green and golden grasses. There is a humming buzz of singing cicadas noting the humid engrossment of ripe summer heat. The atmosphere here is cloying, and the landscape is a muggy mixture of condensation: sweat, dew, and the delirious clinging of succulence.

Walking along these banks are two characters in a warmhearted conversation of what it means to be in love, if lovers can also be friends, and if there exists such a thing as the human soul. This setting and conversation are both metaphorical and literal. As a metaphor, the countryside implies a natural, romantic landscape away from human civilization. Landscapes like this imply a sublime escape; the wild, and natural create an experience that shifts a body out of its center and into something outside of itself. This is offset by the automated, mechanized cities of the human race. While the natural-ness of the countryside is a deep part of the earth's history, cities are the newest habitats on earth.

This setting is a buzzing, radiating metaphor as the scene for Plato's *Phaedrus*. Written in 360 B.C., *Phaedrus* is one of Plato's few texts to take place in a countryside outside of the city. A dialogue unfolds between Phaedrus and Socrates as they contemplate what seems to verge the profundity of human expression: love, attraction, friendship, the soul, madness, feeling subject, and being object.<sup>16</sup> Their talk around the soul is my point of focus; I believe the conversation in this dialogue is important to the interconnection of human beings with technology and the natural world. Plato's peculiar

narrative between Socrates and Phaedrus constructs a soul that exists in three parts; human, animal, and machine.

“Of the nature of the soul... let me speak... and in a figure. And let the figure be composite- a pair of winged horses, and a charioteer... I divided the soul into three. ...the animal is the element which is most akin to the divine... the divine is beauty, wisdom, goodness, and the like; and by these the soul is nourished and grows. ...the chariot settles on solid ground- there, finding a home, she receives an earthly frame which appears to be self-moved, but is really moved by the power of the driver, the charioteer; and this composition of soul and body is called a living and mortal creature.”<sup>17</sup>

This passage tells Plato’s “composite” of chariot driver, horse, and chariot as a poignant, yet romanticized interaction. Nature here is pristinely “divine”, and the chariot, as a tool, connects humanity to the unearthly atmospheres. The human in this passage harnesses “power” to direct, and interestingly enough, Plato uses the word “cybernete” further along into *Phaedrus* to describe the driver as the “pilot of the soul”. This word “cyber” comes from *kybernetos*, which is Greek for pilot or steersman, and later used by Norbert Wiener during his research throughout World War II. Wiener, needing a name to publish his research, coined the term *Cybernetics* or *Control and Communication in the Animal and the Machine*:

“We have decided to call the entire field of control and communication theory, whether in the machine or in the animal, by the name *Cybernetics*, which we form from the Greek *kybernetos* or *steersman*. In choosing this term, we wish to recognize that networks governing the natural world are one of the earliest forms of communication. We also wish to refer to the fact that the steering engines of ships are indeed one of the best-developed communication systems for feedback mechanisms.”<sup>18</sup>



Subsequently, the word “cybernetics” was joined with the word “organism” to form the term “cyborg” in the 1960’s.<sup>19</sup> The significance of a cyborg being a living thing that synchronizes, rather than annihilates, the natural world alongside technology is part of what I want to draw out in Wiener’s original intent for *Cybernetics*. I also want to draw this out in Plato’s reflection of the soul: to exist as a human being is because nature and technology are merged into a *composite* assemblage. However, this “composite” interconnection between technology, humanity, and nature is set in a pre-digital, and pre-modern setting. Now, I believe this assemblage, as a pre-modern, natural form needs to be re-set and re-directed as post-modern, technological figure that constructs nature.

"We didn't pass through the countryside, the countryside passed by us, readily assembled, depicted, reproduced, and framed," wrote Olafur Eliasson in a journal he kept throughout a trip to Iceland in 1997.<sup>20</sup> With first glimpse, Eliasson’s work appears to resonate in romantic notions of pristinely natural phenomena. Yet idyllic, quixotic imprints of nature are precisely what Eliasson's art contends with. "I don't travel to Iceland to get closer to nature..." Eliasson explains, "I go there to peer out."<sup>21</sup>

When peering at Eliasson’s *Rainbow Assembly* and *Fog Assembly*, after a longer period of time, his “assemblages” begin to reveal quivering, ephemeral arrangements composed of networked details emerging from technical apparatuses. (See figures 9 & 10). When viewers find themselves in a composite scene of "manufacturing instructions for natural occurrences," the stage is re-set and the assemblage of nature, technology, and humanity is re-directed. From this point of view, landscapes are the new natural and technical power is a vital force. Technology powers *Your Natural Denudation Inverted* and its counterpart *The Mediated Motion* as Eliasson transforms entire galleries and

museum spaces into his “natural” landscapes. (See figures 11 & 12). By utilizing the machinery of humanity’s constructed, architectural environments, these works of art consider how there is almost always, “a degree of mediation” in the perception of human beings. Eliasson choice not to hide the machinery or technology in his artwork leads me with keen awareness that perception is like a “sensorium” of both technological and biological mediations.<sup>22</sup>



Figure 12



Figure 13

Vilém Flusser poses an interesting question on discussing the matter of mediation by contemplating the location of humanity's perception: "... For man is always *in* the world. How then can he speak about it or hold discussion over it?"<sup>23</sup> Haus-Rucker-Co., Neil Harbison, and Donna Haraway are also contending with this question, though I will return to Flusser in the following scene. In the meantime, these artists, and writer, augment the location of humanity within a techno-natural landscape by extending perception into a vast phenomenological world of experiences outside human sensibilities. Haus-Rucker-Co., and Harbison quite literally take on this extra-sensory "assemblage". "Flyhead Helmet", "Mind Expander", and "Environment Transformer" for instance look

like technological apparatuses meant to be worn as head-gear. Each apparatus is programmed by a power pack, equipped with mint green, translucent bubble masks, prismatic eyepieces, and their own sound systems.<sup>16</sup> (See figure 13.) By expanding human sensibilities to experience the world differently, the work of Haus-Rucker-Co is very similar to Harbisson's. However, while Haus-Rucker-Co create a temporary mind-expansive experience, Harbisson's cyborg fashion is much more permanent. This is because Niel Harbisson is a cyborg artist. Also known as "cyborgism", a cyborg artist viscerally experiences new senses via cybernetic implants and in turn, creates art due to these "new senses". Harbisson interconnects and understands the natural world through an antenna implant in his skull. (See figure 14.)



Figure 14

This permanent implant enables him to perceive ultraviolet and infrared colors.<sup>24</sup>

Whether permanently or temporarily, Harbbison and Haus-Rucker-Co become cyborgs by breaking down boundaries that separate technology, human, and the natural world. This opens new ways to for humanity to perceive as biological and technologized bodies. Haraway furthers this boon of the cyborg in “A Cyborg Manifesto”. Haraway comprehends the cyborg in her *Manifesto* as a 20<sup>th</sup> century creature that boldly rejects, breaks down, and extends boundaries in three parts: the human and animal, animal-human and machine, and physical and non-physical.<sup>25</sup> Although exceptional an assemblage as these examples present, it is important to bear in mind that being human is the epicenter of this arrangement. The human is the charioteer, the director, and the *driver* of these elements. Between nature and technology, human beings posses a power in the crux of directing perception

I want to direct a scene where the landscape is teeming with life; where nature, technology, and humanity can adapt in flux. I perceive nature and technology as a soulful, harmonic augmentation in my mediated perception of the world. I am a cyborg in this sense, and as my five senses expand in the augmentations of being a cyborg, perhaps another reality will emerge that does not desert this earth. Maybe what is “real” in a techno-bio-human “universe of unraveled structures and binary oppositions” can be flooded with further understanding still.<sup>26</sup>

After all, evaporation is inevitable with enough heat.

Then, comes condensation.

Next, comes the rain.

*Scene III*

“... I was trailing my hand in the water. And I thought about how the water was moving around my fingers, opening on one side and closing on the other. That changing system of relationships ...that was difficult to visualize and express. Generalizing that to the entire universe; that the world is a system of ever changing relationships and structures struck me as... a vast truth- which it is! ...Today’s computers, they’ve betrayed that. There is a problem because sequencing interconnection and expression is similar to the issue of water.”

- Ted Nelson<sup>27</sup>

*Lo and Behold: Reveries of the Connected World*

“... the Anemones have highly susceptible souls. ”

- Charles Darwin

*in his discussion on anemones and mollusks*<sup>28</sup>



- James Turrell. *Light Reignfall*.<sup>29</sup>

## Oceans of the Real

And finally, rain. The source of all fresh water. Virtually all life on the plant earth is dependent upon fresh water. Fresh water is characterized by having low densities of any concentrated solids and thus is a source of renewal and hydration.<sup>30</sup> A downpour of revitalization precipitates the scene of human, technological, and environmental composites in *Light Reignfall*. The experience of *Light Reignfall* is like:

“...a shower across the entire “room” of pulsing colors morphing from one hue to another in some orderly sequence, but not in a pattern I could discern. Time dilated. I worried that if I wanted to I wouldn’t be able to move my hands. I worried, because the combination of light and sound had taken me from myself. It felt like my ego had dissolved into a primordial wash of unformed human ectoplasm from which we might all originate... I knew at some point I had to raise my arm, just so I still knew it was mine. I did. My left arm came up and I looked at it, glowing a phosphorescent blue.

This is the small astonishment of “Light Reignfall”: that through a combination of light and sound, for a few moments at least, the work can strip you of all the typical assurances of selfhood, of what I think make me my own special person, and in that moment I suppose I glimpsed something that felt almost infinite — the totality of our collective experience as the human species of which I am, and will always be, a small part.”<sup>31</sup>

Like the experience Seph Rodney describes in Turrell’s *Light Reignfall*, I believe that the “liquidation” of the “real” precipitates into a *shower* of new realities. If humans drive this composite as a “collective” full force, then the “totality of our collective” is my humanity, my technologies, and the natural spaces I inhabit where all three can fluidly co-exist in an ocean of possibilities.

Oceans are the largest bodies of water on planet earth.<sup>32</sup> They are fed by fresh waters that trickle, stream, rain, and roar in the flow of rivers, creeks, and deltas. The waters in earth's oceans are churning in a rhythmic flow; sometimes violently cresting in sweeps of dense torrents, and sometimes mellifluously grazing shorelines as water rushes, then retreats with the tide. Patterns emerging in the flows of oceans are known as chreods, and a team of artists are using digital motion capture coding to "read" chreods that then "read" the text of poems describing the artists' use of digital coding.<sup>33</sup> This is the art work of Strickland, Jaramillo, and Ryan. They create code, and then create a code of the code, to create *slippingglimpse*. (See figure 16.) Code and the simulation of code does not dry-up into a desert-like mirage in *slippingglimpse*, but rather, it emerges as a composite system within a system based on pooled perceptions. Much like the ecology of an environment, a composite system of nature, technology, and the poetic human "I" surge together in *slippingglimpse*. What emerges renders "digitization" within a deep, fluid circuit of information exchange and meaning. In this landscape, the scene is filled with signs of emergence.

The ocean is said to be the "impetus for the emergence of life".<sup>34</sup> In an ocean of digital, cellular automatic impetus, *Pri-mor-di-git-al Soups* riffs on primordial soup by creating life as an emergent process of code. This particular code is a translation of the evolution of "cells" based on eight rules of survival in John Conway's "Game of Life". Processed in a grid, each "cell" emerging in *Pri-mor-di-git-al Soups* will "live" or "die" and "evolve" into a form based on the system of Cell Theory that organizes cells into tissues, tissues into organs, organs into organ systems, and organ systems into organisms. (See figure 17). By creating life as a translation of code, *Pri-mor-di-git-al Soups*



contends with ideas surrounding DNA as a code for the living and artificial life as a digital counterpart by blurring the margins between life as evolutionary, biological code, and digital programmable code as life.<sup>35 36</sup> Char Davies, creator of *Osmose*, and Laura Colmenares Guerra & Todor Todoraff, creators of *Lungs*, code organic processes as well to blur these contours using a very primordial process: breathing. (see Figures 19 & 20.)

To experience breathing through *Lungs* is to experience breathe as bodily exchange that is both digital and organic. This give-and-take exchange of earthly atmosphere is just as vital to living bodies as it is to any body in the digital world of *Osmose*; when the body breathes, “the grid in *Osmose* recedes into the clearing”, “a river filled with glowing creatures flows across it”, “points of lights come into view”, and a space teeming with subtle activity flourishes.<sup>37</sup> While these artists transform breathing into a metaphorical phenomenon that connects human beings, technology, and nature, the literal phenomenon connecting this composite is electricity. When *Electric Currents Flow. Where it Stops, No One Knows*. as images of lightning striking, retinal arteries flashing, synapses firing, stars forming, light bulbs illuminating, T.V. screens glitching, and swarming cellular automata overlap. (See figure 18.) There works of art direct humans, technology, and nature into a scene where forms can emerge in the flux and flow of currents teeming with abundant, emergent potentials.

The ocean’s waters flow in churning, teeming currents that are just as much an impetus for creation as they are for destruction. This fluidity creates habitats that support a lush, diverse resilience for life. Covering almost 71% of earth’s surface, the planets oceans are habitat to nearly 91% of the earth’s biosphere.<sup>38</sup> Fossils of cyanobacteria from three and half billion years ago are some of the oldest known remnants of life on

earth. (see figure 21.) Even some of earth's earliest life-forms are still living in today's oceans.<sup>39</sup> Mollusks are among these timely creatures of life on earth, and they are the largest marine phylum.<sup>40</sup> Mollusks have soft slimy bodies and are squishy, slow animals. They drift as plankton along the surface of every sea, and they inhabit oceanic depths that know no sunlight.

Within the deepest parts of the planet, and closet to the it's core, lives the *Vampyrotheuthis infernalis*. *Vampyrotheuthis infernalis* literally translates to vampire squid from Hell. Vampire squids are intense specimens of deep-sea mollusks, and the space they inhabit is so hyperbolic, that it is below the oxygen minimum zone; the atmosphere here is so dark and suffocatingly dense, that virtually no living, breathing organism can exist there. Nevertheless, *Vampyrotheuthis infernalis* has adapted the most extraordinary strategies to survive; it lives, breathes, and "flies" through its aphotic habitat. If a comprehensive cyborg composite is possible for technology, nature, and humanity, then an attitude for what is "real" must consider the nuances of these hyperbolic spaces in the natural world and technological world alike.

Allthewhile, Vampire squids are flaccid scampies living in a liquefied hell. They have gelatinous bodies ranging between pallid red and burnt-grease black hues. They have red or blue eyes and eight "arms" connected by a webby cloak of skin lined with rows of fleshy, petrified "teeth". Flusser writes *Vampyrotheuthis infernalis*, a treatise along with a report on the vampire squid, and in it he is not only considering me; my humanity, patterns of thought, and culture- from the perspective of a spineless, soggy mollusk that can thrive in space with "no atmosphere", he has chosen the *bête noire* of all mollusks. Is this organism just another post-apocalyptic, metaphorically devoid

simulation for experiencing a world that is barren and deserted of “the real”? In some ways, yes: Flusser’s direction is analogous to Baudrillard’s in similar aspects. Flusser, like Baudrillard, maintains that “the real” has dissipated, or rather “collapsed into particles that must be gathered up”.<sup>41</sup> He elaborates on this view in *The Universe of Technical Images*, “... threads fall apart and the concepts lose coherence. In fact, the situation disintegrates into a swarm of particles and quanta, ... into a swarm of bits and bytes...”.<sup>42</sup> Yet unlike Baudrillard’s deserts, Flusser’s “swarms” of “particles”, “quanta”, “bits”, and “bytes” are like mosaics in my oceans where new forms of “the real” are emerging in the constant ebb and flow of changing currents.

“The universe is disintegrating into quanta, judgments into bits of information. In fact, the rules are dissolving exactly because we followed them into the core of both the universe and our own consciousness. . . .and so we have no choice but to risk a leap into the new”

- Vilém Flusser

### Conclusions

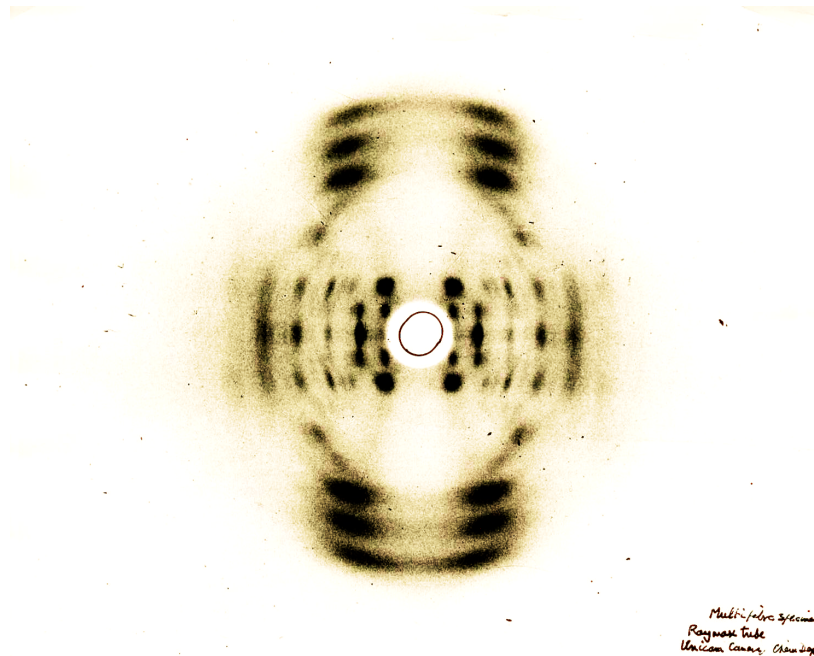
Beyond the desertification of loss that Baudrillard claims to represent reality, beyond the countryside that condenses nature into a techno-digital construct of humanity, I see an oceanic flux beyond the matrix of the “window” pane and beyond my own reflection in its glass. My scope of technology, nature, and humanity comes at a time where there is no direction for a modern, universal scope, but rather a post-modern scope that fragments the universe into a multi-faceted mosaic of views. Therefore, my vision In the Universe of Technical and Natural Scenes bears the scope of my time.

The views I see through this scope are written in three scenes: the desert, the countryside, and the ocean. To see a scene in its expansive scope- down in its disintegrated forms of code and gritty, miniscule particles, then up into condensing forms of augmented mediation, and even further into the vast flux of what could be- is to direct a vision that opens a larger ecology of interconnection and meaning between humanity, “digitality”, and the natural world.

In *Telerrain*, I compose my vision in landscapes that do not stand still. In a cycle of dissipation, evaporation, condensation, and precipitation, the combined forms of nature, humanity, and technology is in flux. It is becoming, and it will keep on becoming! I write this as an artist, a director looking at the universe with forms of life that have adapted the most extraordinary strategies to survive.

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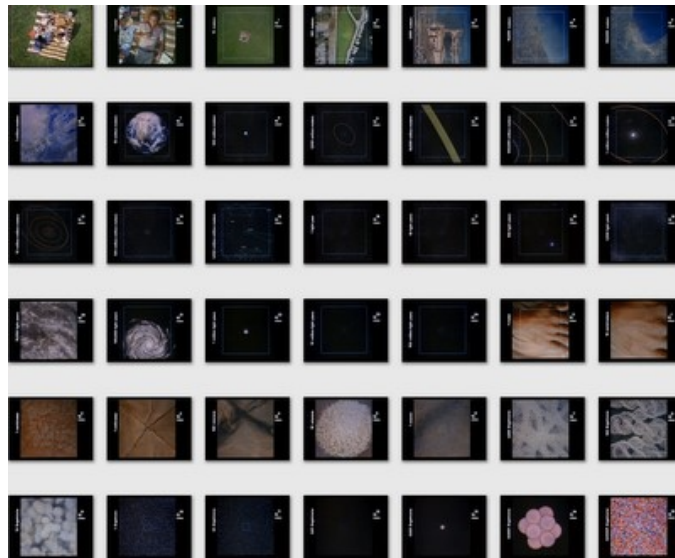
*"Photo 51".*  
Rosalind Franklin.  
1952

*Multi-film system  
Raymax Tube  
Union Carbide, Champaign*



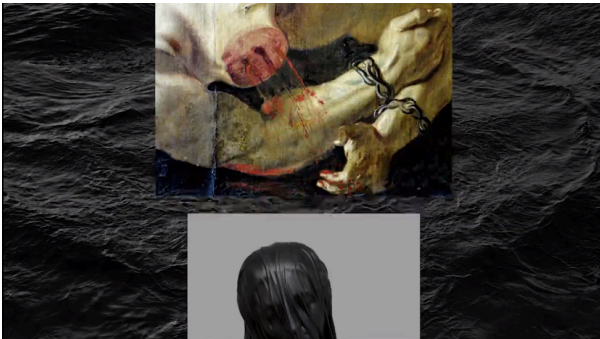
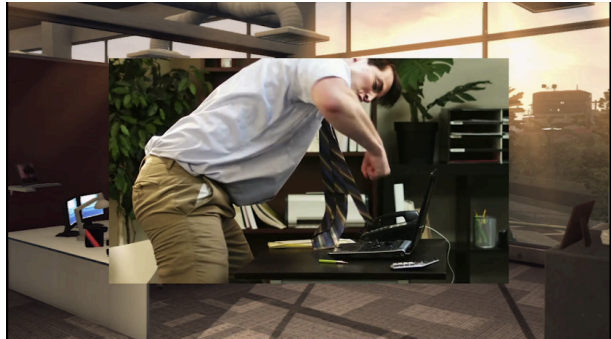
*"Blue Marble".*  
Photograph Courtesy NASA Johnson Space Center.  
1972

Figure 2



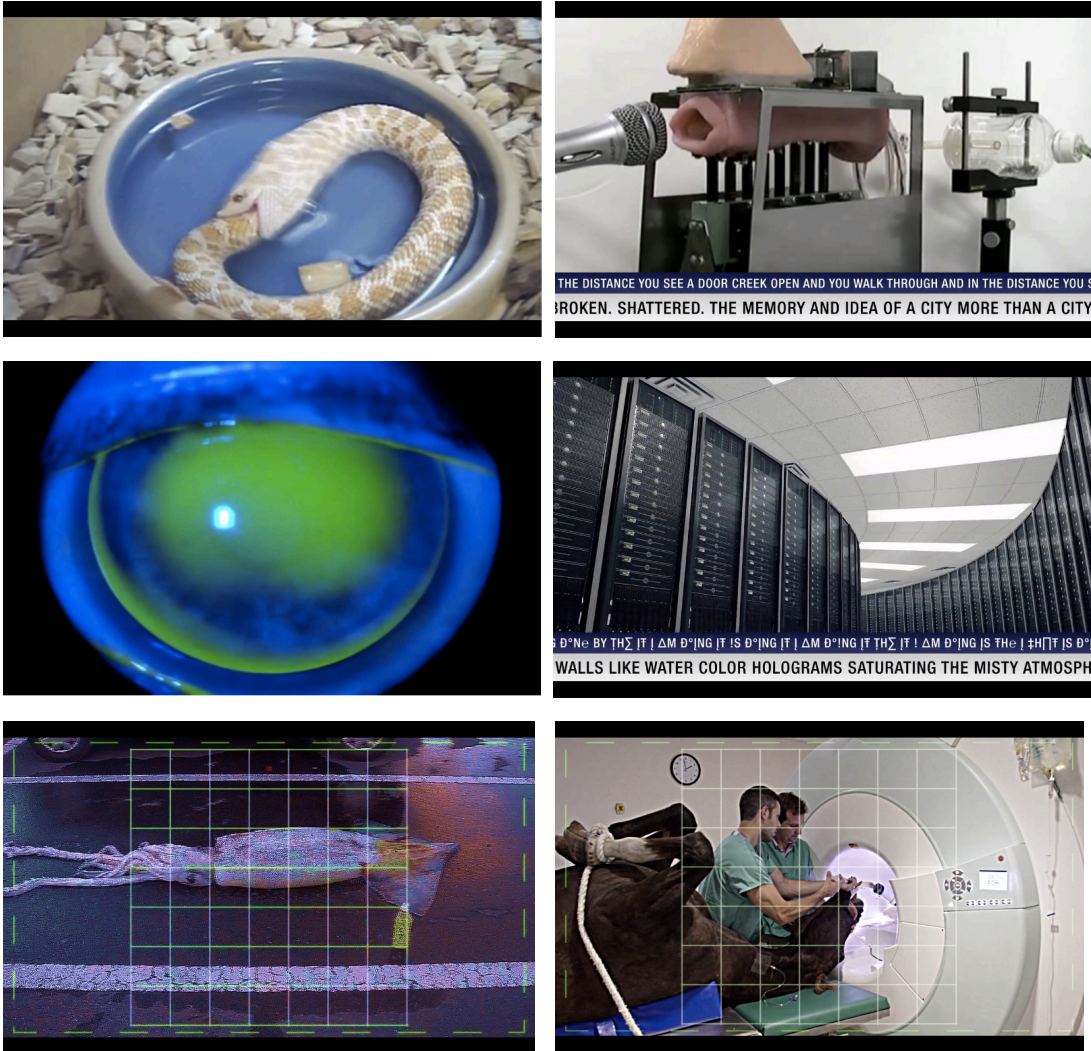
*“Powers of Ten”*  
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*“MainSqueeze”*  
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*“Erysichthon”*  
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Figure 12



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Figure 13



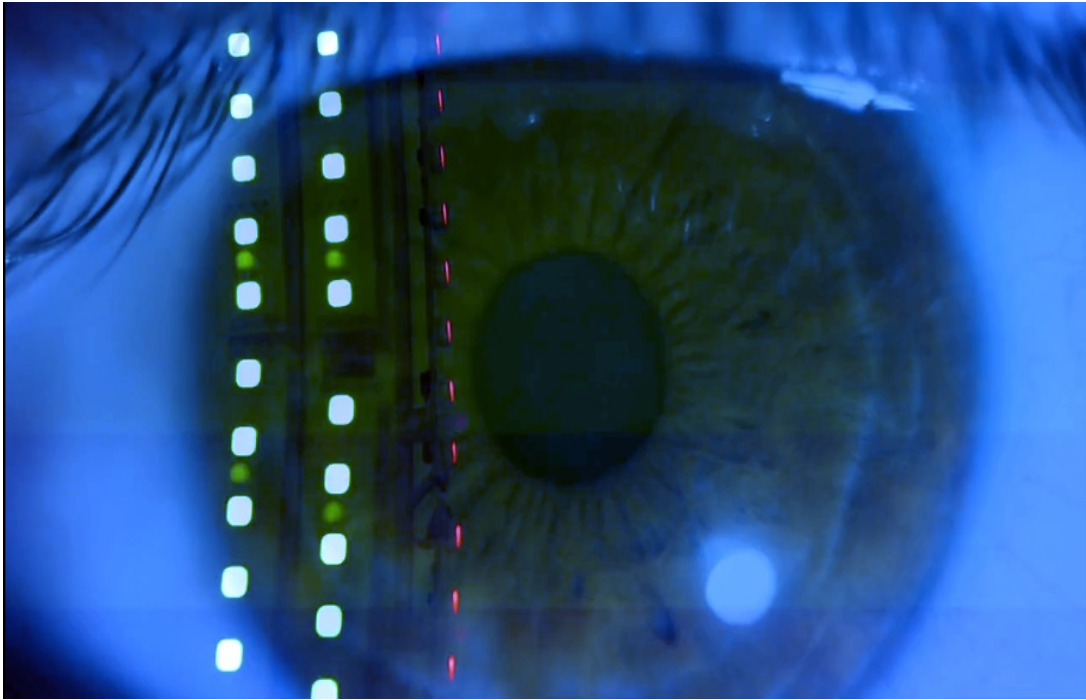
“Flyhead Helmet”  
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Cyborg Artist.  
Niel Harbbison

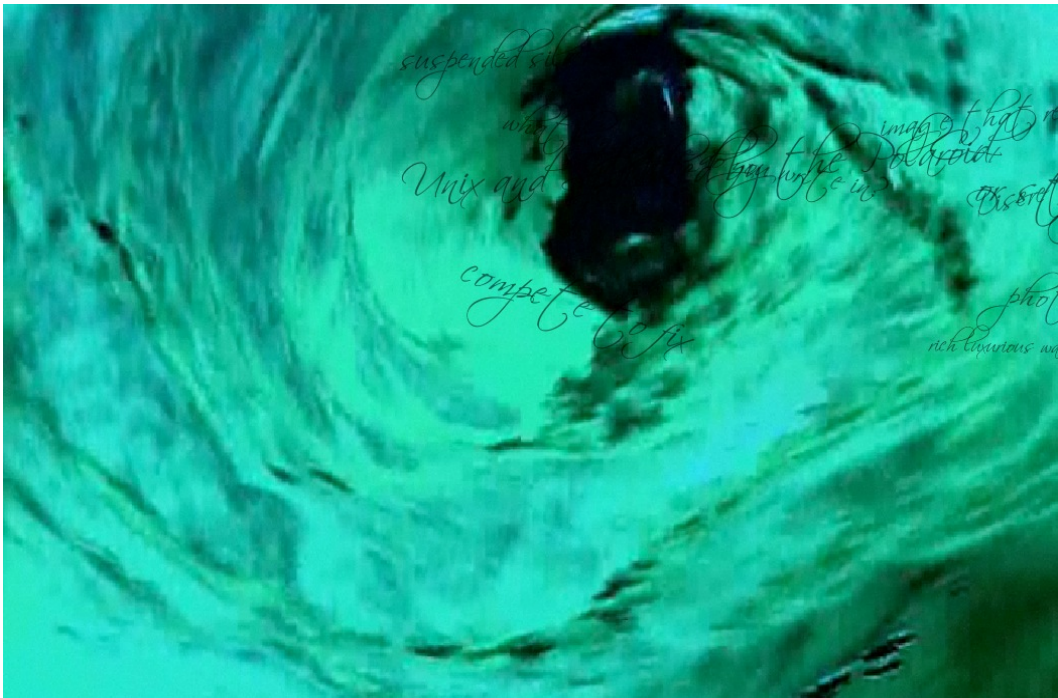
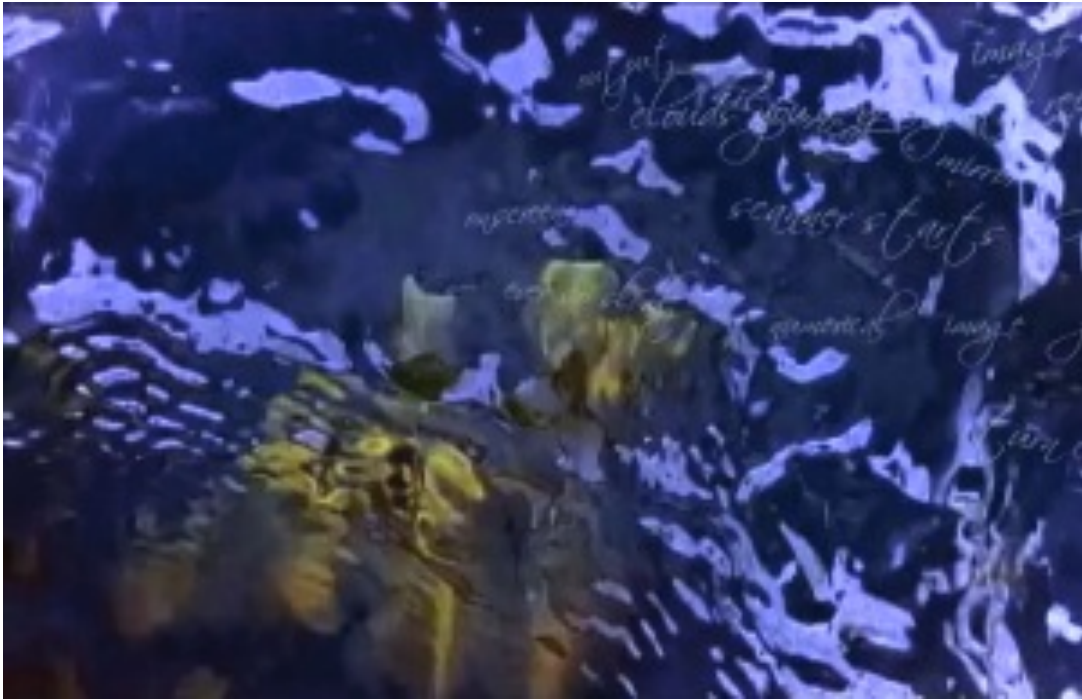
Figure 15



Los Angeles County Museum of Art, gift of Hyundai Motor as part of The Hyundai Project: Art + Technology at LACMA in honor of the museum's 50th anniversary, © James Turrell, photo © Florian Holzherr

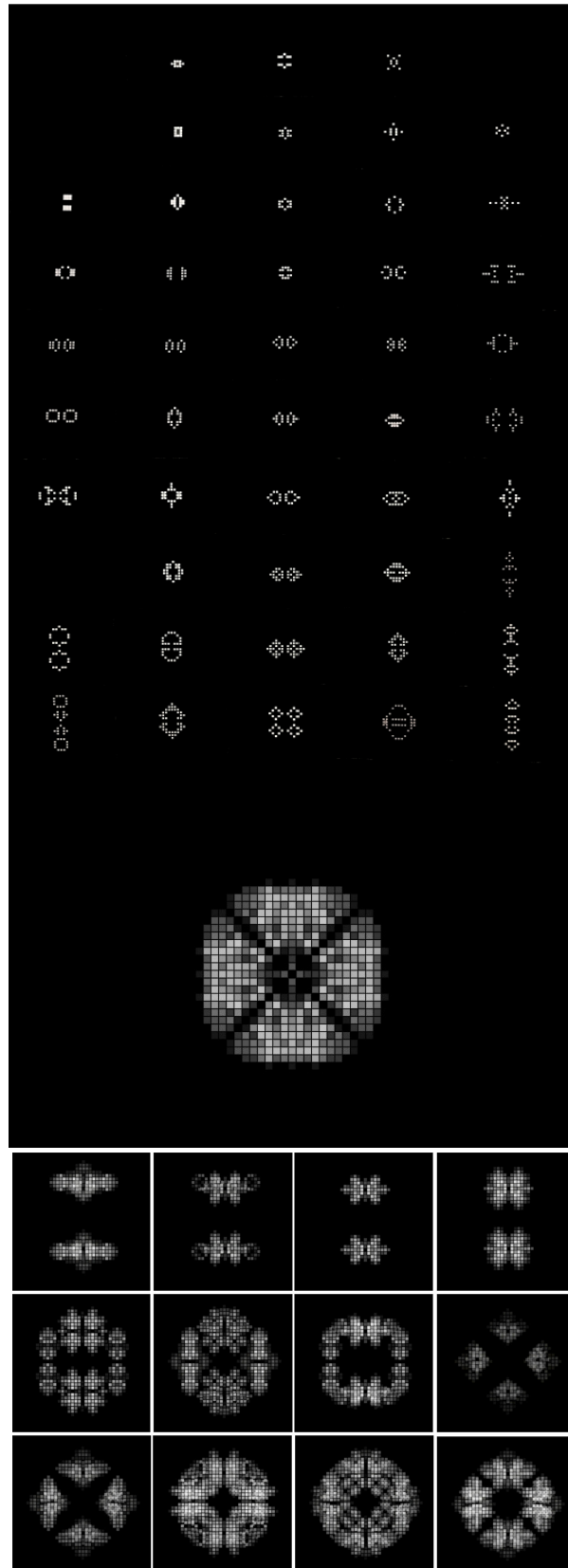
*"Light Reignfall"*  
James Turrell  
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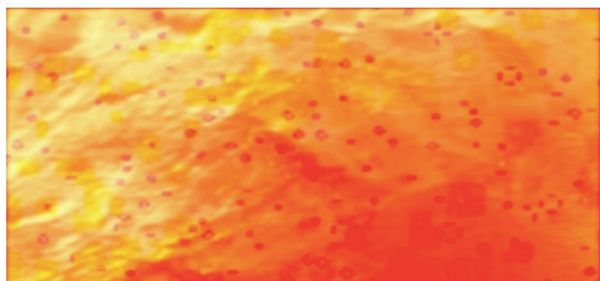
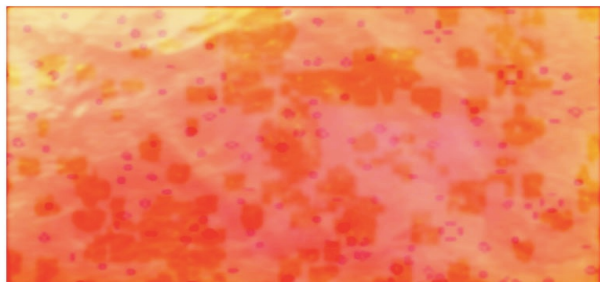
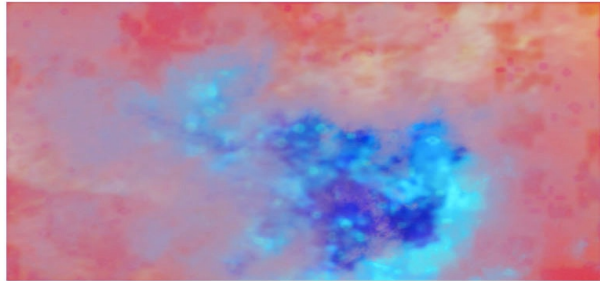
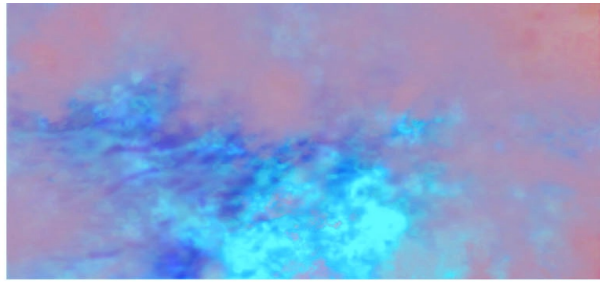
Figure 16



*“slippingglimpse”*  
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Figure 17





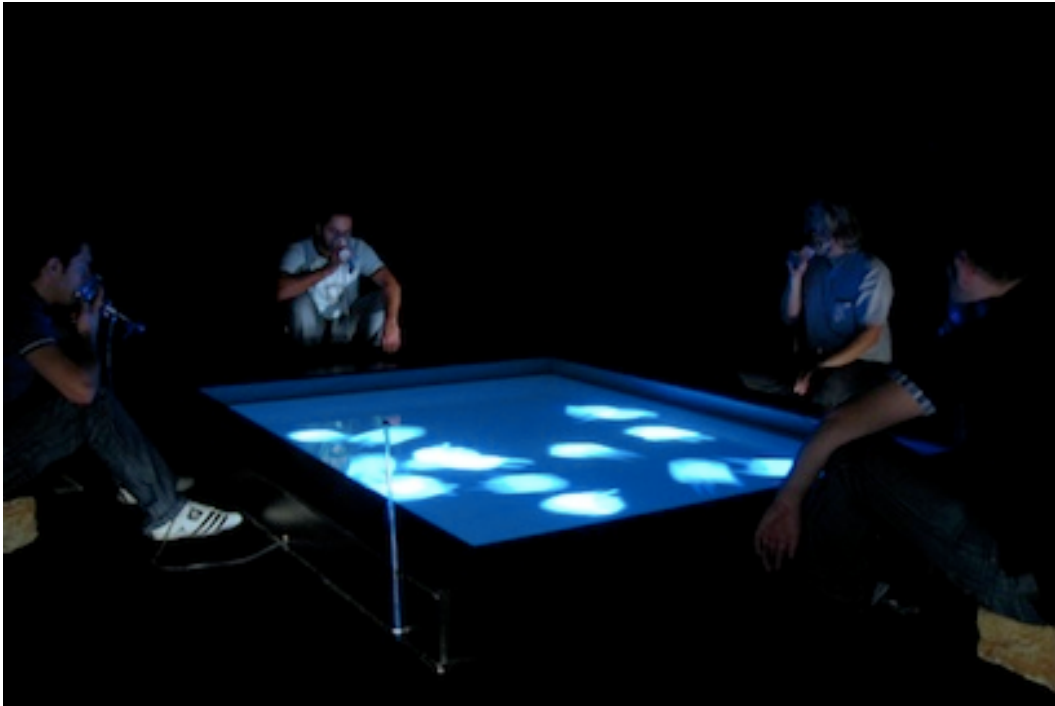
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Rainer  
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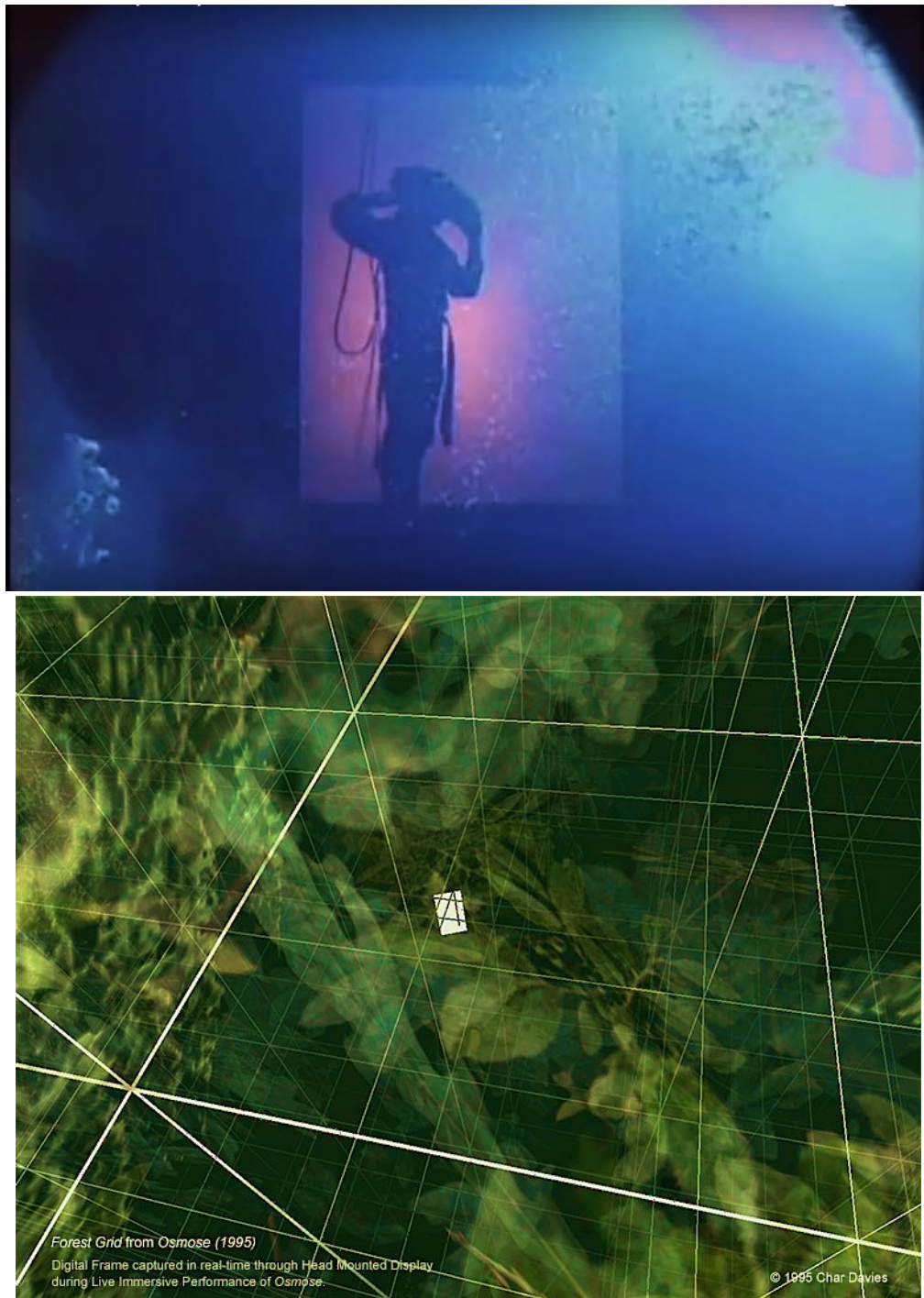
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Figure 21



P. Carrara, NPS - National Park Service -

[http://www.nature.nps.gov/geology/cfprojects/photodb/Photo\\_Detail.cfm?PhotoID=204](http://www.nature.nps.gov/geology/cfprojects/photodb/Photo_Detail.cfm?PhotoID=204)

Original caption: Close-up of PreCambrian stromatolites in Siyeh Formation, Going to the Sun Highway, Glacier National Park.



Cyanobacterial bloom in the Baltic Sea July 11, 2005.

Satellite image from NASA's Terra satellite, MODIS instrument.

<http://su.se/deep/english/publications/cyanobacterial-summer-blooms-progressively-earlier-in-the-baltic-sea-1.197802>

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<http://www.pbs.org/wgbh/nova/body/DNA-photograph.html>

1972. The crew of Apollo 17 captured the “first full-view photo of Earth”, also known as the Blue Marble. <http://www.nationalgeographic.com/photography/photos/milestones-space-photography/>

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[http://www.ted.com/talks/amber\\_case\\_we\\_are\\_all\\_cyborgs\\_now](http://www.ted.com/talks/amber_case_we_are_all_cyborgs_now)

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<sup>14</sup> See Figure 7.

<sup>15</sup> Holten, Katie and Katie Brown. *Trees font. About Trees*. 2015.

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<http://www.katieholten.com/AboutTrees.html>

<sup>16</sup> Plato. *Phaedrus*. 360 B.C. Translated by Benjamin, Jowett. Accessed December 2016.

<http://classics.mit.edu/Plato/phaedrus.html>.

*Phaedrus*: “My tale, Socrates, is one of your sort, for love, in making both subject and object, are the theme which occupied us... If he can persuade you to break with them, you are left without friend in the world; or if, out of a regard to your own interest, you have more sense than to comply with his desire, you will have to quarrel with him.”

*Socrates*: "Every one sees that love is a desire, and we know also that non-lovers desire the beautiful and good. Now in what way is the lover to be distinguished from the non-lover? Let us note that in every one of us there are two guiding and ruling principles which lead us whither they will; one is the natural desire of pleasure, the other is an acquired opinion which aspires after the best; and these two are sometimes in harmony and then again at war, and sometimes the one, sometimes the other conquers. When opinion by the help of reason leads us to the best, the conquering principle is called temperance; but when desire, which is devoid of reason, rules in us and drags us to pleasure, that power of misrule is called excess. ... I had better say further that the irrational desire which overcomes the tendency of opinion towards right, and is led away to the enjoyment of beauty, if this force of passion is reinforced, from this very force, receiving a name, is called love."

<sup>17</sup> Ibid. Plato

<sup>18</sup> Wiener, Norbert. *Cybernetics: or Control and Communication in the Animal and the Machine*. Second ed. Fourth Printing. Cambridge, MA: The M.I.T. Press, 1965.

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<sup>42</sup> Ibid. Flusser. pg. 7