

City University of New York (CUNY)

CUNY Academic Works

School of Arts & Sciences Theses

Hunter College

Fall 12-15-2017

INTERTIDAL

Alta Buden

[How does access to this work benefit you? Let us know!](#)

More information about this work at: https://academicworks.cuny.edu/hc_sas_etds/268

Discover additional works at: <https://academicworks.cuny.edu>

This work is made publicly available by the City University of New York (CUNY).

Contact: AcademicWorks@cuny.edu

INTERTIDAL

By

Alta Buden

Submitted in partial fulfillment
of the requirements for the degree of
Master of Fine Arts Studio Art, Hunter College
The City University of New York

2017

Thesis sponsor:

December 21, 2017
Date

Andrea Blum
First Reader

December 21, 2017
Date

Nari Ward
Second Reader

TABLE OF CONTENTS

List of Illustrations.....	3
Introduction: Anthropocene.....	5
I. Lithosphere.....	7
II. Asthenosphere.....	9
III. Earth's Outer Core.....	12
IV. The Inner Core.....	15
V. The Geomagnetic Field.....	17
VI. Solar Wind.....	21
BIBLIOGRAPHY.....	24
Exhibition Image List.....	25
Exhibition Images.....	26

LIST OF ILLUSTRATIONS

New York City Skyline with the East River seen from Greenpoint Brooklyn, photo by Alta Buden, 2017.....	5
Photo of New York City taken from the International Space Station by Jeff Williams, 2016, NASA.....	6
”Maldives Shore - working alone on future obsolescence” film still, Republic of Maldives, Alta Buden, 2017.....	9
”Coral” solarfast on linen, 2017, ”Beach Debris” solarfast on linen, 2017, Alta Buden.....	11
Map of New York City with North Brother Island Labeled taken from the International Space Station by Jeff Williams, 2016, NASA	13
”North Brother Island I”, ”North Brother Island II” Cyanotype on linen, Alta Buden, 2016.....	15
Map of New York City with Newtown Creek Labeled taken from the International Space Station by Jeff Williams, 2016, NASA	16
Shore of Newtown Creek, 2017 and Map of residential area affected by Newtown Creek.....	17
Oil on the surface of Newtown Creek, Brooklyn, 2017.....	17
”Eurasian Water Chestnuts”, solarfast on cotton, Alta Buden, 2017.....	18
Eurasian Water Chestnut, Trapa Natans, covering part of the upper Hudson River, NY. 2017.....	19
Robert Smithson selected Non-sites.....	20
Alta Buden selected sculptures.....	21
Untitled Fire Painting, Yves Klein, 1961.....	22

ACKNOWLEDGEMENTS

I am so grateful for the love and support I am lucky to be surrounded by, the Hunter community and my many friends and advisors who have spent time with me and given me considerate feedback. I am indebted to Andrea Blum for her dedicated guidance and honest advice. I would also like to thank Nari Ward and Daniel Bozhkov, who have encouraged me and helped me so much as I began to work with sculpture. Michael Lobel and Mariah Loh are two art historians whose work and classes have changed me and I am indebted to them each in different ways for their generosity and humour.

In my work I have endeavored to talk about specific and disturbing issues, for each disaster I have stumbled upon in my research there is a legitimate activist group working hard to help solve the problems we are faced with. I want to acknowledge the important work of RiverKeeper, The Bronx River Alliance, The Natural Areas Conservancy, The Newtown Creek Alliance, The Billion Oyster Project and the thousands of other organizations and people who work to change the environmental problems we face.

I want to thank all my friends who helped me carry heavy objects from weird places and also listened to my doubts and fears. My family for their unwavering love and support and Jeff Johnson who puts up with me everyday and has signed up to do so forever. Finally I must thank my dogs Zorro and Mazie who have no idea what is going on.

“The Anthropocene names two levels we usually think are distinct: Geology and Humanity.”¹



New York City Skyline with the East River seen from Greenpoint Brooklyn, photo by Alta Buden, 2017

On September 11th, 1609, Henry Hudson and his crew sailing in the *Halve Maen*, Half Moon, entered the mouth of what was to become the Hudson River. They had come across the Atlantic from the Netherlands in search of a mythical north eastern route to China, and their journey marked the Dutch claim on that land, beginning a series of events that would eventually create the city that became New York. While Hudson was sailing across the ocean, Galileo Galilei in Italy, had spent time perfecting the glass lenses of the newly developed telescope, he wrote down his observations in a book called *Sidereus Nuncius*, Starry Messenger, in 1610. Using his

¹ Morton, Timothy. *Dark Ecology: For a Logic of Future Co-existence*. (Columbia University Press, New

observations of the stars through his telescope and the ocean tides at his feet, he proved that the earth revolved around the sun, refuting the prevailing ideas of heliocentrism. During his subsequent trial for heresy, his geocentric model was forcefully denied by the prevailing government, and he was forced:

“to abstain completely from teaching or defending this doctrine and opinion or from discussing it... to abandon completely... the opinion that the sun stands still at the center of the world and the earth moves, and henceforth not to hold, teach, or defend it in any way whatever, either orally or in writing.”²

Hudson never found a route to China and the crew of his next voyage mutinied, setting him adrift with his teenage son in what was to be named the Hudson Bay, never to be seen again.

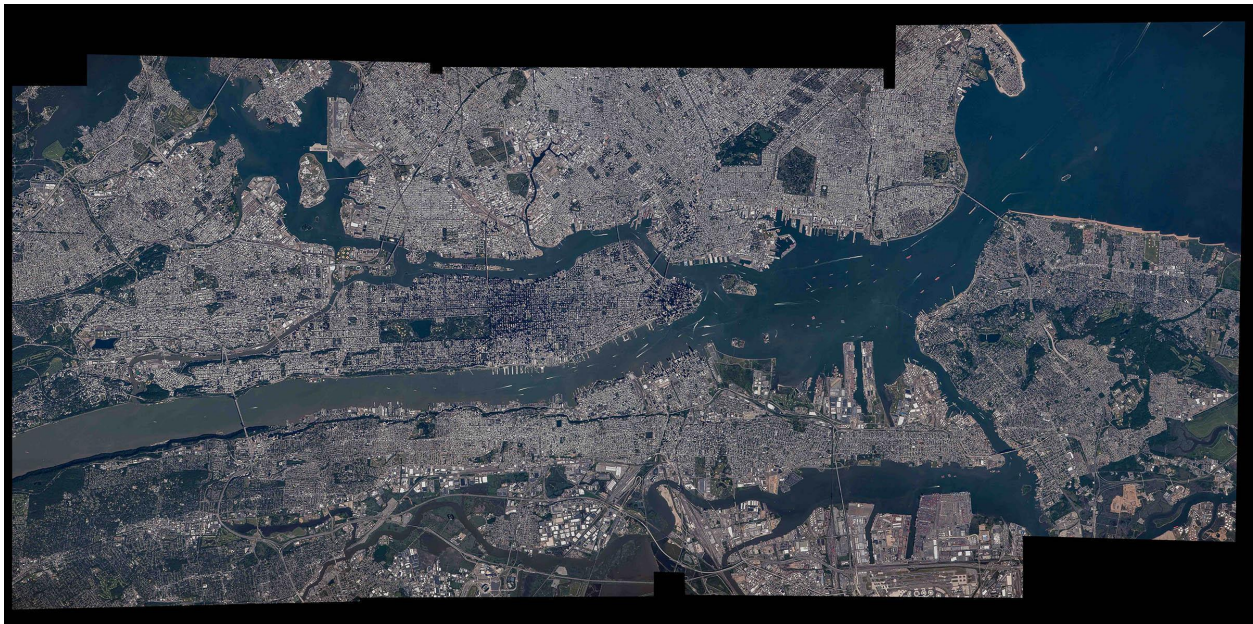


Photo of New York City taken from the International Space Station by Jeff Williams, 2016, NASA

² J. L. Heilbron. 2010. *Galileo*. Oxford: Oxford University Press. 218.

I. Lithosphere

the solid part of a celestial body (such as the earth); specifically: the outer part of the solid earth composed of rock essentially like that exposed at the surface, consisting of the crust and outermost layer of the mantle, and usually considered to be about 60 miles (100 kilometers) in thickness.

Since the industrial revolution, we have been undeniably altering the surface of our planet, not on-purpose, but through unforeseeable means. We are leaving our special layer: of carbon, plastic, and annihilation. Part of this has to do with the idea that we are somehow separate from nature and that once we throw something away it is gone. The Anthropocene, as this geologic layer has been termed, will register as a tiny blip in the history of our planet making perhaps as much of a mark as the dinosaurs of the Mesozoic. But perhaps like them, it will be our undoing. The artist Yves Klein, working in the 1950's presciently wrote in his text "Some False Foundations, Principles, etc. and the Condemnation of Evolution" a disparagement of the advancement toward truth through analogy, he exclaims:

*"Nothing in the universe can be compared, nothing resembles anything else. Everything is unique, different, privileged...The system of evolution produces the phenomenon of development, blossoming, and degeneration....To improve constantly is to expect to witness the dissolution of everything, of entire civilizations."*³

This dark and concise view of both the past and the future of our civilization has become more and more relevant and has been a concern of many artists in the 20th Century. The advent of western scientific thought categorizes things and uses analogy to relate them to each other allowing us deeper understanding in many ways, while also leaving huge gaps.

³ Klein, Yves, Klaus Ottmann, and Yves Klein. 2007. *Overcoming the problematics of art: the writings of Yves Klein*. Putnam, Conn: Spring Publications. 5.

The brittle surface of the earth dotted by oceans is our reality. As a species with awareness of the abstract possibilities of both geologic depth as well as infinite space, we exist physically in one place, with the liminality that comes with the feeling of potentially being able to go elsewhere. Here we are, feet on the sidewalk, fantasizing about dinosaurs and life on Mars. As science progresses we gain ever more data related to our surroundings, rendering them more specific as well as more abstract. The abstraction inherent in the specificity of scientific knowledge can take on the tone of fantasy - just look at an image of your finger through a scanning electron microscope. There is a gap between our ability to perceive data about the world, and our experience of it. There is also a gap between the hopeful logic of the systems we create in order to further our civilization and their efficacy. Robert Smithson, picking up on this gap in logic wrote in the 1960's about his "Non-sites":

"By drawing a diagram, a ground plan of a house, a street plan to the location of a site, or a topographic map, one draws a "logical" two dimensional picture. A "logical picture" differs from a natural or realistic picture in that it rarely looks like the thing it stands for. It is a two dimensional analogy or metaphor – A is Z."⁴

⁴ Smithson, Robert, and Jack D. Flam. 1996. *Robert Smithson, the collected writings*.



"Maldives Shore - working alone on future obsolescence" film still, Republic of Maldives, Alta Buden, 2017

II. Asthenosphere

:a zone of a celestial body (such as the earth) which lies beneath the lithosphere and within which the material is believed to yield readily to persistent stresses.

We are physically trapped on the surface of our planet. Viewed from space, it is a spherical vessel containing all the life we will ever have. The year is 2017, and current scientific predictions for our future focus strongly on climate change. The use of carbon fuels is changing the earth's atmosphere causing it to retain the heat of the sun in a way that, over time, will devastate life as we know it. Former California Governor and actor Arnold Schwarzenegger, in an effort to gain bipartisan support for clean energy asks us to consider this analogy:

"There are two doors. Behind Door Number One is a completely sealed room, with a regular, gasoline-fueled car. Behind Door Number Two is an identical, completely sealed room, with an electric car. Both engines are running full blast.

I want you to pick a door to open, and enter the room and shut the door behind you. You have to stay in the room you choose for one hour. You cannot turn off the engine. You do not get a gas mask.”

No one would choose Door Number One, and yet we all do, collectively, every single day. What he is up against is a Galileo like inquisition, with the president of the United States, Donald J. Trump, the leader of the most powerful nation on earth claiming: “The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.”⁵

What is happening has been called The Sixth Extinction⁶ and already, species are disappearing at an alarming rate, ice that has been frozen for centuries is melting away. Unlike Galileo’s time, science has learned to question itself, that its truths come hard won, and 97% of scientists agree that climate change is real. To live now with any scientific or environmental awareness is to exist in a state of constant despair. As philosopher Timothy Morton in his recent book “Dark Ecology” points out:

“I am the criminal. And I discover this via scientific forensics. Just like in noir fiction: I’m the detective *and* the criminal! I’m a person. I’m also part of an entity that is now a *geophysical force on a planetary scale.*”⁷

The elements around us often seem to be as they were, but data tells us they are changing subtly in ways we cannot see directly. The strangeness of the times we live in are what make life at present so uncanny. The use of analogy can help us greatly, but what Klein stated is true, nothing is exactly like anything else - each species that goes extinct is distinct. Each place has its own special history, haunting its present and potential future. To live in the world with any environmental awareness, one must learn to negotiate between feelings of constant despair, the

⁵ <https://twitter.com/realdonaldtrump/status/265895292191248385>

⁶ Kolbert, Elizabeth. 2014. *The sixth extinction: an unnatural history*.

⁷ Morton, *Dark Ecology*, 9.

desire to understand things on both a micro-level and a planetary scale, and the uncanniness of living with the former two things on a daily basis. Sometimes this negotiation can result in a comical type of laughter along the lines Antonin Artaud's wish in *The Theatre of Cruelty*: "I call for actors burning at the stakes, laughing at the flames."



"Coral" solarfast on linen, 2017



"Beach Debris" solarfast on linen, 2017, Alta Buden

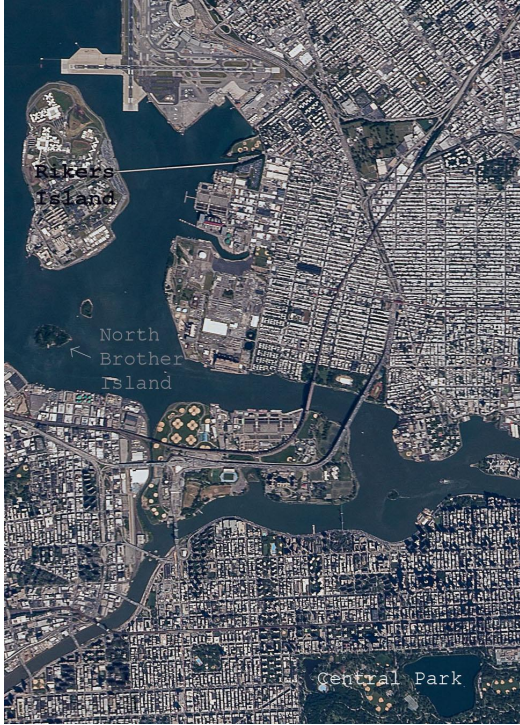
III. Earth's Outer Core

The Outer Core is the second to last layer of the Earth. It is a magma like liquid layer that surrounds the Inner Core and creates Earth's magnetic field.

In the HBO series "The Soprano's", the main character, Tony Soprano is an Italian mob boss who suffers crippling panic attacks when the accumulation of his life of crimes intersects with the facade of idyllic suburbia he has created for his family. He is able to exist calmly in each of the two personalities he must inhabit, criminal and father, but when a shift occurs and one bleeds into the other he falls apart. Having a background in evolutionary ecology and philosophy of science has given me observational access to places that force a similar kaleidoscopic shifting of mindset. In my work I am trying to express the complicated moment of observing the total beauty of our planet as the geophysical force that is being implicated in its destruction.

Tony Soprano was born into his life of crime, with the generations before him paving the way for and dictating his fate, he is haunted not only by his awareness of how he must commit crimes in the present to survive, but also by the pressure of the past crimes of his family. The uncanniness of environmental awareness is often manifested through a complicated relationship to the past - industries which have allowed for our very homes to be built are often the culprit causing us harm. This idea, termed legacy contamination, of places where past environmental atrocities remain emergent, even centuries later, speaks to the generational nature of the connectedness of ecological systems.

Consisting of a series of sculptures made of hand blown glass vessels holding water, I trace the path of pollutants from the heart of a superfund site that was contaminated in the 1800's in Brooklyn from the Hudson River to the Atlantic Ocean. It was here that these specific pollutants



become part of a global entity as they entered the water cycle. These vessels, filled with water samples from the polluted source, juxtapose the disconnect between knowledge and beauty. Like Klein, I understand that things are unique, like Morton, I am aware of the possibility that unique things influence each other in unexpected ways. Making this work I spend time in specific places, collecting samples, resulting in a series of objects that reflect the specific nature of each place - the rocks and plants that can be found there and even the strength of the sun's rays at a particular time of day.

In past work my interest has been to focus on the intertidal zones from places relevant to the history and future of science - North Brother Island, The Republic of Maldives, The Hudson River, and The Great Lakes. The intertidal zones in these places are physically and visually accessible, and show the interconnectedness of our planet on the geologic time scale. Objects from across the globe wash up on the shores alongside rocks that have been worn down for centuries. My work explores how the nature of all confluence is looped. A simple way to think of it is to look at the water cycle, which begins with rain or snow, moving into rivers and lakes, leading to the ocean where it evaporates and turns to clouds, which produce rain or snow. A more complex way to think about it would be to think of how Henry Hudson never made it to China, and yet the global trade he set in motion eventually brought enough Asian plants and animals from there to the Hudson Valley to slowly begin taking over indigenous plant life. One day the flora and fauna of the two places may become identical. The loop form can be found

any place in nature and it is how our planet functions and also the source of most of our environmental problems. As Morton states:

“The basic anxiety described here is the characteristic attunement of an ecological age in which we know full well that there is no “away”--waste goes *somewhere*, not ontologically away.”⁸



“North Brother Island I”

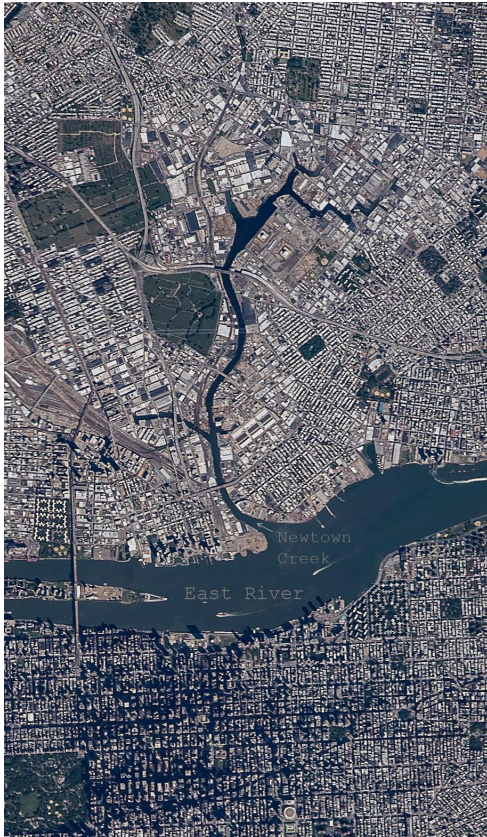


“North Brother Island II” Cyanotype on linen, Alta Buden, 2016

⁸ Morton, *Dark Ecology*, 78.

IV. The Inner Core

The inner core is the centermost layer of Earth and is in many ways similar to the outer core. It is also primarily iron and nickel and has a radius of about 1,220 km. The differentiation between the outer core and inner core is density driven. The pressures become high enough that despite very high temperatures, the inner core is solid. It is also enriched in unusual heavy elements including gold, silver, platinum, palladium, and tungsten.



The Hudson River flows from north to south mostly through eastern New York. It originates in the Adirondack Mountains, flows through the Hudson Valley, leading eventually into the Atlantic Ocean. The water it carries, pulled by gravity and the tides moves so fast as to create a current of its own that extends along the Jersey Shore for 150 miles⁹. In the 315 miles of land that it covers, it serves as a political boundary between New Jersey and New York, and as a home to multitudinous species of flora and fauna. The tidal estuary making up the lower half of the river connects to the Hudson Fjord, which formed during the most recent period of North American glaciation, approximately 26,000 to 13,300

years ago. The tides of the sea move up and down the river as far north as Troy, NY.

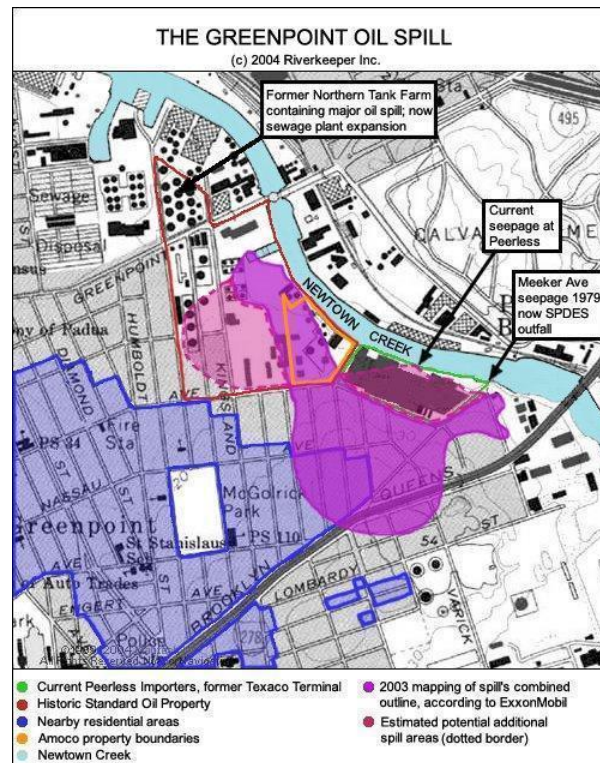
In Greenpoint Brooklyn, a branch of the Hudson and East River joins at Newtown Creek. For 200 years, the creek has been the a dumping ground for the industrial waste of New York City,

⁹ Sanderson, Eric W. 2009. *Mannahatta: a natural history of New York City*. New York: Abrams. 87.

with raw sewage being the nicest thing that was poured in there, the worst probably being between 17-30 million gallons of crude oil leaked by Exxon, Chevron and BP oil companies when they were Standard Oil. As a consequence, thinking of the loop this creates, the residents of Greenpoint suffer from various cancers caused by the chemical plume. And though the water is gross brown in color with the shimmer of rainbow oil on its surface, tiny fish and shrimp swim in it; mussels and barnacles grow in abundance; and a cormorant or duck may swim by; the wind rustles the trees and despite it all, nature is doing its thing, and it is beautiful.



Shore of Newtown Creek, 2017



Map of residential area affected by Newtown Creek.

The trickery of beauty can be the power of aesthetics to influence and change things, as Morton observes :

“You can’t know a thing fully by thinking it or by eating it or by measuring it or by painting it...this means that the way things affect one another (causality) cannot be direct (mechanical), but rather indirect or vicarious: causality is aesthetic.¹⁰”



Oil on the surface of Newtown Creek, Brooklyn, 2017

V. The Geomagnetic Field

Earth's magnetic field, also known as the geomagnetic field, is the magnetic field that extends from the Earth's interior out into space, where it meets the solar wind, a stream of charged particles emanating from the Sun.

To trace the history and the path of a body of water in terms of the knowledge of the pollutants it contains is a slippery proposition. To know that the past haunts us invisibly through the air and

¹⁰ Morton, *Dark Ecology*. 16.

water is one of the strangest of the problems we face as a direct result of the looping nature of ecology. There is no aesthetic drama, no one image to react to. If we want to see something we can look closely at the plant life around us: here is the strangeness we can see but perhaps don't register such as the invasive species like the kudzu vine. Kudzu is a plant that kills other plants by blocking their access to the sun, first introduced from Japan at the Japanese pavilion in the 1876 Centennial Exposition in Philadelphia, it has become a common along roadsides in the southeastern US and quickly takes over disturbed areas of forest. Because of our belief that we are somehow separate from the landscape around us, invasive species take on an extra uncanniness - how can something *of itself* be so destructive? Yet, like the Eurasian water chestnut- a water lily like plant which chokes the upper Hudson, blocking the sun in a similar way, or red eared sliders - bigger faster turtles - than our native ones, both introduced from China in the late 1800's, each of these is concrete evidence of our important role within the fabric of ecology.



"Eurasian Water Chestnuts", solarfast on cotton, Alta Buden, 2017



Eurasian Water Chestnut, Trapa Natans, covering part of the upper Hudson River, NY. 2017

In the 20th century, artists have accessed natural phenomena in different ways. Smithson's Non-sites bring the idea of a place *being* its own work and the selection of that place being the specific activity of the artist, he writes:

“The investigation of a specific site is a matter of extracting concepts out of existing sense-data through direct perceptions. Perception is prior to conception, when it comes to site selection or definition. One does not *impose*, but rather *exposes* the site--be it interior or exterior.¹¹”

Smithson's Non-Sites were about specific places revealing themselves and the relationship created in the tension between the inherent information of a “Site” when transported to another location. The inability of one to fully be the other was an important part of the work, with one

¹¹ Smithson, Robert, and Jack D. Flam. 1996. *Robert Smithson, the collected writings*. 60.

becoming a sign for the other. He also perceived the evolving similarities between geologic structures and the architecture of American culture, in his essay 'The Crystal Land' he writes:

“The highways crisscross through the towns and become man-made geological networks of concrete. In fact the entire landscape has a mineral presence. From the shiny chrome diners to glass windows of shopping centres, a sense of the crystalline prevails.¹²”

Smithson had begun to see the Anthropocene even if it had not yet been named. For me, using non-art materials: concrete, glass, steel, fabric and dye, that have a strong industrial presence evokes the important resonance between man-made environments and natural ones. These materials each contain an important historical reference. The use of glass in western culture is directly responsible for path that science has taken, without his glass lenses Galileo would never have been able to see what he saw. Concrete and steel are among the first technologies human's developed that allowed us to build our own environments, places where the human nature divide has been brought to its apex.



"A Nonsite, Franklin, New Jersey"
1968

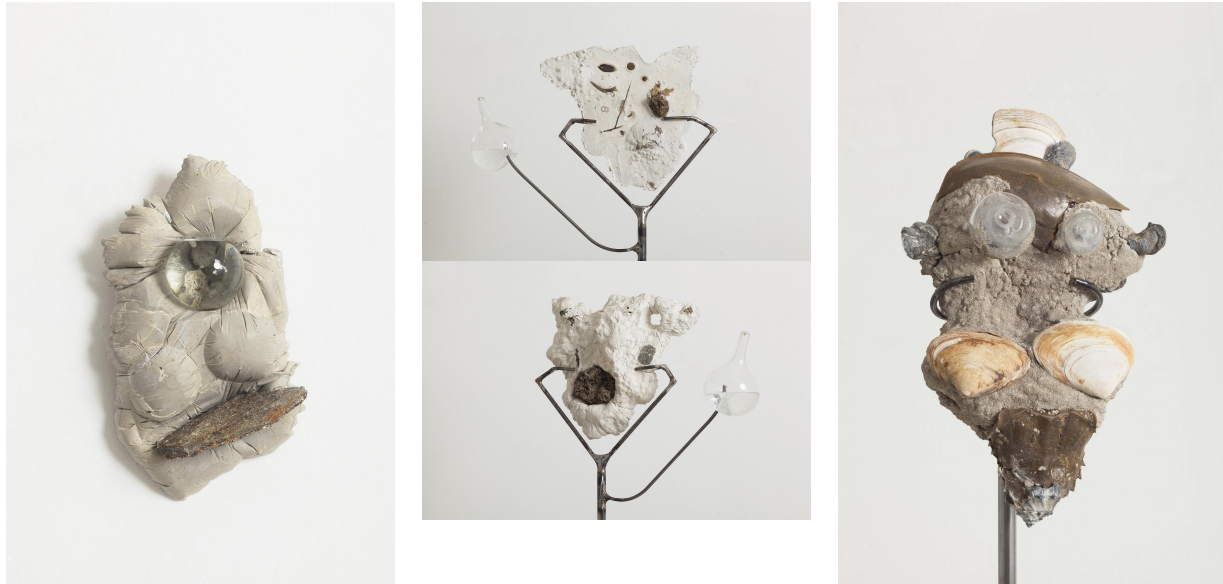


"Nonsite petrified coral with mirrors"
1971



"Line of Wreckage Bayonne New Jersey" 1968, Robert Smithson

¹² Smithson, *The collected writings*.



"The East River", "The Allegheny River" and "Ft. Tilden", cement, glass, steel and found objects, Alta Buden, 2015

VI. Solar Wind

The solar wind is a stream of charged particles released from the upper atmosphere of the Sun, called the corona. This plasma consists of mostly electrons, protons and alpha particles with thermal energies between 1.5 and 10 keV.

The rivers surrounding New York City, and almost all cities, have high concentrations of estrogen, parabens, lead, oil and even nuclear waste. The ocean is now full of microplastics. Nuclear waste from Japan is washing up on the shores of California along with new invasive species dislodged by tsunamis. The human/nature divide set up by 20th century Philosophy, beginning with Descartes and helped along by Darwin, Kant, and Marx, has begun to degrade, our interconnectedness to our planet is evident. Klein made a series of fire paintings in which he covered nude models in water and had them press themselves against cardboard using a

flamethrower to burn the surface of the cardboard. What emerged through the process are haunting ghost images of a human layer of touch defined by water, brought to visibility by fire.



Untitled Fire Painting, Yves Klein, 1961

The activities of individuals matter. Without Galileo, Hudson, and Trump, history would be different. The work I am making is the direct result of one human interacting with a specific place. Each piece is indexical to its environment and I believe that unique specificity opens up a pathway to signify larger meanings. The concept of the index, first put forth by semiotician Charles Sanders Peirce was defined as:

“a representation, which refers to its object not so much because of any similarity or analogy with it, (...) as because it is in dynamical connection both with the individual object, and with the senses or memory of the person for whom it serves as a sign.”¹³

Rosalind Krauss, in her seminal essay “Notes on the Index” introduced the term to examine strategies of American art of the 1970's:

“They are marks of traces of a particular cause, and that cause is the thing to which they refer, the object they signify. Into the category of the index, we would place physical

¹³ Peirce, C.S., "Division of Signs" in *Collected Papers*, 1932 [1897].

traces (like footprints), medical symptoms, or the actual referents of the shifters. Cast shadows could also serve as indexical signs of objects..."¹⁴

My work with cyanotype takes prints from specific places that are indices of objects and light. My current process is to push molten glass onto a rock from along the shore of the pollutant path. Just as the cyanotypes become images of the absence of objects via the presence of light, the sculptures are three dimensional impressions of specific objects, holding the shape of their referents. My hope is for each piece to lure people in with its beauty and eventually open up a place for questioning the viewer's relationship to that beauty and by analogy the beauty that is seen in nature. What these objects contain is some of the horror imparted by knowledge. By using indexical objects contained in different ways, water, rocks, impressions of plants in cement, I hope that that questioning can be pointed to the direct relationship that we each have with what surrounds us and moves through us.

¹⁴ Krauss, Rosalind. "Notes on the Index: Seventies Art in America." *October* 3 (1977): 68-81. 71.

BIBLIOGRAPHY

Klein, Yves, Klaus Ottmann, and Yves Klein. 2007. *Overcoming the problematics of art: the writings of Yves Klein*. Putnam, Conn: Spring Publications.

Kolbert, Elizabeth. 2014. *The sixth extinction: an unnatural history*. New York : Henry Holt and Company.

Krauss, Rosalind. "Notes on the Index: Seventies Art in America." *October* 3 (1977): 68-81.

Morton, Timothy. 2016. *Dark Ecology: For a Logic of Future Co-existence*. New York: Columbia University Press.

Peirce, C.S., "Division of Signs" in *Collected Papers*, 1932 [1897]. OCLC 783138

Sanderson, Eric W. 2009. *Mannahatta: a natural history of New York City*. New York: Abrams.

Smithson, Robert, and Jack D. Flam. 1996. *Robert Smithson, the collected writings*. Los Angeles: University of California Press.

THESIS EXHIBITION IMAGES LIST

Installation View.....	26
Installation View.....	27
Installation View (detail).....	28
Installation View (detail).....	29
Installation View (detail).....	30
Installation View (detail).....	30
Installation View (detail).....	31
Installation View (wall text detail).....	32



Installation View taken at night



Installation View



Installation view - detail



Installation view - detail



Installation view - detail



Installation view - detail



Installation view - detail



Installation View - detail

Most of our environmental problems are uncannily invisible. Often their results are beautiful - an L.A. sunset, oil on water, a swath of green Kudzu.

The rivers surrounding most cities have high concentrations of estrogen, micro-plastics, parabens, lead, oil and even nuclear waste. The magnitude of our collective actions manifests a geophysical force on a planetary scale.

Installation view - wall text detail