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Beauty and Decay

Chiung-Ling Jyan Siebert

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Fine Arts

Brian Christensen, Chair
Bryon Draper
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ABSTRACT

Beauty and Decay

Chiung-Ling Jyan Siebert
Department of Art, BYU
Master of Fine Arts

The intention of the project was to create an environment where the viewer can explore and form a personal narrative in the process of organic interaction with the work. The ideas of time, beauty, decay, mortality, and interdependence will be discussed in this paper. The visitors were invited to interact with the work, where spontaneous audience interaction resulted in evolution of the work. The balance and tension between patterns and evolution, between creativity and predictability evolved naturally.

Keywords: art, diatoms, ceramics, installation, evolution, interaction, family, molds, mutation, beauty, decay

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Introduction

All creatures, big and small, share the same cycle of life. There is birth, waxing, prime, decay, and death. The cycle of life is experienced by all living organisms; all organisms go through the same stages in life. With this exhibition, I aspired to show the cycle of life. Genesis 1:25 from King James Bible reads, “And God made the beast of the earth after his kind, and cattle after their kind, and everything that creepeth upon the earth after his kind: and God saw that it was good.”¹ God provided necessary pieces for natural evolution to take place. For this body of work, I created over 1,300 individual ceramic pieces representing microscopic diatoms that visitors could freely move and reconfigure in the space. I hoped to incorporate enough information for the viewers to contemplate on life and death as they saw and felt the different stages of diatoms’ life cycle.

When viewers entered my thesis exhibition, titled *Beauty and Decay*, they would see the work consisted of many small ceramic diatom-form sculptural pieces merging into one great whole on the floor. The sculptural population density concentrated in the middle of the floor, diverging as the forms got close to the south and north walls. The arrangement on the floor consisted of twelve species of diatoms at different stages of life, each with ornate patterns and holes to mimic how they filter water in nature. Their colors ranged from green, avocado, and turquoise blue. In this arrangement the audience could see each species “go back” to the respective molds, which were used to create individual diatoms. The molds acted as the life-giving mothers bestowing patterns of fans, zigzags, stars, and circles that harked back to diatom

¹ “Gen. 1:25,” King James Bible, (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1979), 2.

colonies in nature. A film of the ocean was projected on the east wall, accompanied by the sound of waves.

To communicate the idea of adversities associated with the life process, I chose to sculpt diatoms because of their short life span and ability to adapt and survive even with fragile exoskeleton and inimical surroundings. Diatoms release oxygen into the atmosphere through photosynthesis—producing about thirty percent of the global oxygen supply. That is three in every ten breaths that we take. In a nature setting, most often diatoms give birth to daughter diatoms through asexual reproduction. The mother diatoms gradually deteriorate and die. Compared to the human life cycle, the diatom cycle of life and death happens fast in their natural habitat.



Figure 1. Beauty and Decay. Clay. Installation view.

Many artists employ metaphors to decode difficult concepts as I have done with this body of work. I drew a parallel between my family and diatoms. Although my parents struggled through life, they never stopped trying. My mother, especially, would always get back up ready to fight again. She possessed the ability to hold on to eternal hope and believed strongly in reincarnation. Her resilience and courage still inspire me.

To me all things experience the cycle of life. My mind perceived life and death in everything, even in habits. I wanted my parents' destructive habits to die as much as my father wanting his orchid to survive the move. After an unfortunate event, my parents finally decided to move far away from bad influences. My father had equivalent to seventeen American dollars in his pocket when we moved to a strange township. Life got more stable. Bad habits seemed to have died, until one of my father's friends found us. This friend was responsible for my father's affairs. I was so afraid this friend would facilitate the resurrection of my father's affairs. My father said to his friend that he was not going back to that lifestyle. My father demonstrated incredible resilience and determination in the two years followed the move as he tried to provide for us. For the rest of his life, he never went back to those habits even when my mother did. I shared with my siblings that both of our parents died conquerors.

Concerning diatoms' adaptation to harsh environmental changes, Mark Hildebrand, a world leader in algae research from Scripps Institution of Oceanography at the University of California, San Diego, said,

At the cellular level, diatoms are characterized by having cell walls made of silica, and as the largest class of silicifying organisms on the planet, also are major contributors to biogeochemical processes. Diatoms are subject to varying environmental conditions from which they cannot readily escape, and so they must deal with environmental changes by altering cellular metabolism.”²

I viewed both of my parents and diatoms' approach to unfavorable challenges as a metaphor of resilience and adaptation. Diatoms have evolved and adapted to harsh environmental changes for

² Mark Hildebrand, “Marine Diatoms and Their Role in the Ecosystem,” *American Association for the Advancement of Science*, (Washington D.C., February 20, 2010).

millions of years just as I had witnessed my parents' effort to overcome each difficulty they had encountered.

The aesthetics of the thesis exhibition reflected the Eastern philosophy of Taoism and Confucianism. This school of thought celebrates deep-rooted connectedness, whereas individuality is embraced in my adopted home in the West. To a Chinese person, Taoism and Confucianism are practiced daily. It dominated my thought process growing up and dictated my behavior before I started a new life in the States. Emotionally, I did not realize how extensive this philosophy was concealed in my paradigm until I started making sculptures. Subconsciously, I have always made multiples and grouped them into a whole. I never made just one; it had to be a family of individuals.

I also looked at this exhibition as an opportunity to let go of emotional cargo and to accept paradigm shift if the audience dissolved the families into individuals. When the spectators interacted with the pieces, I hoped they could connect their participation to the overall evolution of the exhibition.

The Origin

Journey in Art

As a child, books, drawing, intellectual inquiry and nature were some of the things that made sense in a contentious home life involving gang members, violence, and substance abuse. I enjoyed drawing growing up. Although I loved art, my national test score placed me at the best nursing school, and it made financial sense to major in it. I reasoned that art would not give me enough money to support the whole family.

After my youngest child was in third grade, I went to BYU to recertify as a registered nurse because nursing was familiar. But a conversation with my oldest son about changing his major rekindled my desire to use art as a form of intellectual inquiry. In 2011, my second-oldest son and I took Ceramics 105 together. After taking the class, my husband encouraged me to apply to the department of art. Consequently, I changed my major from nursing to art.

Microbiology

As a maternity nursing major, I was required to take microbiology. It was in this class I learned about diatoms. I was fascinated by the micro-organisms; I had developed a great interest in this subject to take more microbiology classes. Therefore, when I started making sculptures the microbiology classes that I had taken offered a good source for inspiration. The forms of bacteria, coronavirus, pollen, and oceanic organisms are evident in my work.

The Cycle of Life and Death

Everything that lives will eventually die. The lives of organisms, plants, and virus depend on the death of other organisms. A fallen nurse log supports many lives as it decays and dies, in the process of dying the nurse log is a wonderful world of the intricate ecosystems.

While in nursing school, I had a choice to declare a specialty, and if accepted, it would require one additional year to train as a midwife. It made sense when my major was maternity nursing. I loved to deliver newborns, there are such hope and potential associated with births. However, in deciding which offer to accept, I chose to work in the Intensive Care Unit because of a much higher salary. In the ICU, I observed more deaths than my heart's capacity to contain. I hated it, but my family needed the money. It was easier to see an older individual expired than

the young. There was a patient in his late twenties who suffered from an acute liver failure. He died two days after transferring to the ICU. I had cried for him, for the loss of potentials only to receive another patient a few months later with a similar situation and outcome. The coastal city where the hospital I worked at was famous for its sunset. I would make it a point to stay close to the windows so I could see the sun going down and the sun rising to announce for a new day during a graveyard shift. This spectacle became a ritual, a ritual to witness the new beginning and the end of the sun.

In recent years there has been many deaths in my family due to cancer—I went through cancer treatments myself. Two of my uncles died from the disease in 2017. Between February and November of 2018, my parents and a sister-in-law died from cancer, and my youngest sister was diagnosed with stage-four lung cancer in July of the same year. Coming out of grief from losing both parents in such a short time, and the thought of burying my baby sister who I raised, forced me to confront the loss of time and opportunities with them. I felt an enormous sense of sorrow, loss, and the cruelty of the irreversibility of time. The fact that no one was free from death in the cycle of life became close and personal. Recurring on my mind was one phrase in Chinese: 時光一去不回, which means, “Once time has died it will never return.” I started to look at time as a precious commodity that currency could not buy.

Contributions of Diatoms

While I pondered on the nature of life and death, my thoughts kept coming back to something both beautiful and ephemeral: diatoms. Diatoms are microscopic; thirty diatoms can fit the width of one strand of human hair. But unlike most microorganisms, they have cell walls made of glass. Their exoskeletons are so ornamented that they earned the nickname “jewels of

the sea.” They are as beautiful as the highly desired Chinese lacquer boxes. Their shell, called frustule, is composed of carbohydrates and amino acids, and has two halves that fit together to form one diatom. The top, which is slightly larger, overlaps the smaller bottom. Many types of diatoms are planktonic. Diatoms are almost ubiquitous, living in aquatic environments, soils, ice, mud, attached to trees, or strive anywhere there is humidity.

Diatoms are single-cell algae. Diatoms are similar to marine plants that filter water to create food for their survival. Oxygen released into the atmosphere is a by-product during photosynthesis. Diatoms produce about twenty-five to thirty percent of global oxygen supply. They live in shallow waters to access the sun. In the research paper “The Evolution of Diatoms and Their Biogeochemical Functions,” it is stated,

Diatoms today are found throughout the world's oceans, wherever there is sufficient light and nutrients. They typically dominate well-mixed coastal and upwelling regions, where the organic carbon they generate supports productive fisheries such as in the Peruvian and Benguela upwelling systems. They appear well adapted to surviving long periods of nutrient and light limitation and often dominate oceanic spring blooms because they can divide more rapidly than other phytoplankton when conditions become favorable for growth, at least as long as silicon is not limiting.³

Diatoms and phytoplankton are the dominant marine primary marine food source in the world-wide food web and play a key role in carbon cycle through photosynthesis. Diatoms are consumed by zooplanktons, smaller fish or baleen whales eat zooplanktons, larger fish, such as sharks and tuna fish, or seabirds then eat smaller fish. The food web continues. Diatoms are responsible to support a healthy ecosystem directly or indirectly. In this ecology, the cycle of life

³ Anne-Sophie Benoiston, Federico M. Ibarbalz, Lucie Bittner, Linoel Guidi, Oliver Jahn, Stephanie Dutkiewitz, and Chris Bowler, “The Evolution of Diatoms and Their Biogeochemical Functions,” *Philosophical Transactions of the Royal Society B* 372:20160397 (July 17, 2017), <https://doi.org/10.1098/rstb.2016.0397>.

is maintained since parts of the earth are interconnected in the system. After diatoms die, their remains accumulate at the bottom of the sea floor, forming diatomite, a type of soft sedimentary rock that is sometimes used in toothpaste, swimming pool filters, pest control, forensic investigations, and metal polishes. As small as diatoms are, their contribution to the planet is anything but small.

Origin of Concept

Installation art fed my curiosity and need to investigate. Because of an unorthodox childhood, I found that nature and books played an important role in helping me stay focused on escaping my predicament. I discovered the following two quotes in two Chinese books, and they were attributed to Albert Einstein and Marie Curie, respectively. The first one says, “Look deep into nature and then you will understand everything better” and “Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.” Trying to understand oneself and one’s relationship with others is as old as the history of humanity.

Letting go of control of my art and collaborating with the visitors made sense and fit my philosophy. It is the organic collaboration that helps us recognize shared experiences, as we go through the same circle of life. In the process of making, I realized change and fragility are human. Birth is universal, just as decay and death are inevitable. Despite the negative connotations associated with decay, mutation, and death, life and hope are found in such a cycle.

Exhibition in Gallery 303

When the exhibition was held in Gallery 303, the only instruction that I gave the viewers was, “This is an interactive exhibition.” They could see the video of the ocean on the east wall and hear the sound of waves before entered they space. In the arrangement of diatoms, I planted a secret: all but one species went back to their respective mother molds. I intentionally placed the diasporic species toward the back, toward the dark. I did not expect this clue to be found. This secret was for me. However,

six days into the exhibition, I was pleasantly surprised to find this specific diatom leading up to the east wall of Gallery 303 where the species was hung. At that moment I felt the participant sent me a message that they had discovered the well-hidden secret and facilitated



Figure 2. Beauty and Decay. 6 days into the exhibition.

the family reunion.

At first, the arrangement of diatoms looked chaotic, however, I applied chaos theory to the exhibition. Once the visitors spent time to look for patterns, they could find rules were applied to the arrangement. The arrangement on the floor consisted of twelve species of diatoms, each with ornate patterns and holes to filter water. Their colors ranged from green to avocado to turquoise blue. The visual clues for the viewer included the arrangement of diatoms on the walls

disclosed evidence of decreasing in size. This arrangement served two functions: first of all, it was to demonstrate the occurrence when diatoms reproduced asexually—the daughter diatoms are smaller than the mother cell; secondly, it was to give visual clues before the viewer started interacting and collaborating with the installation. The various sizes of diatoms on the floor were consistent with natural evolution. I had also included small clay balls inside some of the diatoms that would rattle when handled to augment the audio sensory experience. I hoped through interaction with the work the visitors could make their own connection to the natural world.



Figure 3. Beauty and Decay. Day 5.

I documented the evolution every day. I honored all arrangements made from the viewer and made no alteration, even if they were not aligned with nature. It was a challenge to create an artwork that the audience could use to reflect and explore their feelings and past experiences.



Figure 3. Beauty and Decay. Day 9.

Sensory stimulation helps the brain to form stronger and more lasting connection.⁴ The visual, auditory, proprioceptive, and tactile sensory stimulants were all implemented. The design of the diatoms and the original arrangement were a reflection of my aesthetics, which embraced imperfection and deterioration.

On Friday, eight days into the exhibition, I took some pictures then went home. The next morning, when I got to Gallery 303 at 10 am, there was no trace of the previous arrangement. Instead, in the center stood an amazing Mandala, organized by shape and color. This new arrangement showed harmony between manmade objects and nature. It looked like a garden designed by an ancient Chinese high-level scholar.

Afterwards, I pondered on the amount of time or people it took to re-arrange the whole space. It took me two days to make my original pattern. I marveled at the level of interaction involved--studying the colors and forms, gathering, organizing, and labor. The overall change was made between 5 pm on the 22nd and 10 am on the 23rd. It was a delight to see how the viewer could freely test ideas with the work.

Contextualization

My youngest sister was diagnosed with stage four lung cancer in July of 2018. Her doctor performed a pneumonectomy, so breathing was difficult the following months. After the operation my sister had to train her lungs so breathing would not be so laborious. Breathing is

⁴ Isabelle Brocas and Juna D. Carrillo, *From Perception to Action: An Economic Model of Brain Processes* (Los Angeles: University of Southern California, 2018), 5.

such an involuntary function that we take it for granted. Because of watching her, I became very conscious about taking in the air.

A few months after my sister's surgery I flew home to see my father who was dying from stomach cancer. I had gone two days without closing my eyes before I arrived home. When I stayed next to my father's hospital bed I did not dare going to sleep, fearing he might die while I slept. On the fifth day, the exhaustion won, and I fell asleep. My oldest sister was so tired that she also fell asleep. After the four-hour nap the Spirit woke me up. I had never had such an experience, so I obeyed my body's need to rest and fell back on the bed. Again, I was awoken. I found my father's breathing so shallow and far apart. I took his vital signs and knew he was taking his last breaths. I was the last person to be with my father. I heard the incredible sound of his last breath: profoundly gentle and surprisingly peaceful. My eyes were fixated on his chest hoping it would rise and fall. My mind turned to the diatoms and trees that provide so much of the oxygen to the world—oxygen that I unconsciously breathe every day. That question led me to research on global oxygen production.

I became aware that there was a misconception that the rainforests contribute the most to the oxygen that we breathe. They do produce an incredible amount of oxygen. However, the animals, plants, trees, insects, and micro-organisms living in the rainforests consume most of the oxygen produced there. Scott Saleske from the University of Arizona comments,

A net release of oxygen occurs only if the carbon sequestered through photosynthesis is buried in a place where it cannot combine with oxygen to form carbon dioxide. On a global scale, the main location for it is at the bottom of the ocean, where some of the organisms sink to the bottom when they die and are buried in the sediments.⁵

⁵ J.A. Dunn, S.R. Saleska, and M.L. Fischer, *Integrating Experimental and Gradient Methods in Ecological Climate Change Research*, (Wiley Online Library, 2004), 904–916.

The difference between the rainforests and the diatoms and phytoplankton is that the oxygen is re-consumed in the rainforests, but the oxygen produced by diatoms is released into the atmosphere without organisms re-consuming it. Scott Denning, a professor in the Department of the Atmospheric Science from Colorado State University said in an essay that the global oxygen production comes from the ocean. He said,

But virtually all of the oxygen produced by photosynthesis each year is consumed by living organisms and fires. Trees constantly shed dead leaves, twigs, roots and other litter, which feeds a rich ecosystem of organisms, mostly insects and microbes. The microbes consume oxygen in that process. Forest plants produce lots of oxygen, and forest microbes consume a lot of oxygen. As a result, net production of oxygen by forests—and indeed, all land plants—is very close to zero.⁶

He further explained in the same article,

For oxygen to accumulate in the air, some of the organic matter that plants produce through photosynthesis must be removed from circulation before it can be consumed. Usually this happens when it is rapidly buried in places without oxygen – most commonly in deep sea mud, under waters that have already been depleted of oxygen.

Diatoms play an important role in the global carbon cycle as they photosynthesize and release an impressive amount of oxygen into the atmosphere. When they die, they sink to the bottom of the ocean, trapping oxygen and forming diatomite.

Understanding the amount of oxygen that diatoms produced became more than just a scientific pursuit for me. Making diatoms visible would make their functions more visible. Their glass house was opaline with highly decorated patterns on the silica exoskeleton, which appealed to my ceramicist aesthetics. Their cycle of life mirrored the fragility that seemed so omnipresent, the cycle of life and death was obvious with diatoms.

⁶ Scott Denning, “Amazon Fires Are Destructive, But They Aren’t Depleting Earth’s Oxygen Supply,” *The Conversation*, August 26, 2019, <https://theconversation.com/amazon-fires-are-destructive-but-they-arent-depleting-earths-oxygen-supply-122369>.

There is a spiritual perspective to my thesis exhibition. God created all things to belong to a family, I arranged all twelve species of diatoms according to families. Family is central to God’s plan, and through intensive work and time spent in my studio I wanted to portray such an importance. Although my work is science-inspired, the process and exhibition were spiritually oriented. As mentioned before, the guiding thought was from the King James Bible, where it says, “And God saw that it was good.”⁷ I revered the creation and evolution of natural history, so this exhibition was an augmentation of spiritual reverence for creation.



Figure 5. *Beauty and Decan.*

This creation is still going on because God has provided necessary materials for evolution and creation to continue. Conceptually, my thesis work was a love story: a love for kin, children, and families. With this exhibition I tried to convey the ideas of gathering, generosity, evolution, and meditation through my work.

After I had made the original arrangement according to families, I left everything over to the visitors to interact and change the arrangement. About thirty percent of the sculptures presented in the exhibition had signs of decay and mutation, reflecting the national cancer

⁷ “Gen. 1:25,” King James Bible, (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1979), 2.

statistics from 2017.⁸ Each species went back to its respective family on the walls. The number of diatoms hung on the wall ranged from three to five, the general number of children to a family in Utah County. The slip dots on the diatoms also ranged from three to five. I gave the diatoms holes to filter water and photosynthesize.

Thesis Exhibition Process

Finding a Robust Slip Casting Recipe

Slip is specially formulated liquid clay particles suspended in water to use in ceramics. Aside from slip casting clay work, it is also used to join thrown forms and sculptural pieces together to form one work. For thousands of years, slip was also used for surface decoration, which was exemplified in Greek pottery. For this project I used slip to add the texture and dots seen on all the diatom forms. The robust slip recipe that I wanted to use had to accomplish the following requirements. First of all, it had to come off the molds easily, secondly, it had to be porcelain white after firing because I wanted the slip body to be as translucent as possible so to highlight the glazes I used for the exhibition, thirdly, it had to contain a lower percentage of water so I could cast as many diatoms as possible in a day, fourthly, it needed to extend the malleability of the slip, Finally, it had to have good thermal expansion for low fire sculptural work.

I added sodium silicate to the liquid clay to deflocculate (meaning this chemical can break up the substance of the liquid clay suspended in a liquid), to neutralize the charges of clay

⁸ “The Genetics of Cancer,” National Cancer Institute, last modified October 12, 2017, <https://www.cancer.gov/about-cancer/causes-prevention/genetics>.

particles, produce an even suspension. The first slip did not release from the molds easily. After weeks of struggle and frustration, I researched possible reasons and it turned out that the type of clay mattered in slip casting. Clay with higher iron content actually retards the effect on deflocculants such as sodium silicate.⁹ Martin also mentioned the need for a secondary deflocculant: soda ash, which made the porcelain clay body slip release easily from the molds.¹⁰ The recipe for the slip cast body that I used came from digitalfire.com. It contained high percentages of talc and ball clay. It is stated on the website that, “Without the talc it is very difficult to create glazes with a low enough thermal expansion to prevent crazing on clay bodies.”¹¹ Once I found the working ratio, the work progressed more smoothly.

Working with Molds

I made the diatom prototypes out of clay. I used them to cast molds that I would later use to construct 1,000 diatoms. Molds are made out of plaster of paris, a quick-setting gypsum plaster consisting of a fine white powder, which hardens when moistened and allowed to dry. At first, I designed two-part molds for both the top and the bottom of the diatoms. I used those molds to slip cast the diatoms. Slip casting is practiced by ceramists, factories, and industries to produce identical forms by pouring liquid clay into molds made out of plaster of paris. Since nothing in nature is truly identical, though, I had to adapt new methods to represent varieties. I went from making multiple molds with minute imperfections for one diatom species to single-

⁹ Andrew Martin, *The Essential Guide to Mold Making & Slip Casting* (New York: Lark Crafts, 2007), 117.

¹⁰ Martin, *The Essential Guide to Mold Making & Slip Casting*, 116.

¹¹ “Low Fire White Talc Casting Body Recipe,” Digitalfire.com Reference Library, accessed September 2020, <https://digitalfire.com/article/low+fire+white+talc+casting+body+recipe>.

part mold. In the end, all of the molds that I used were one-part molds. First, I slip cast the halves (It took two slip castings to make one diatom), then I joined the top half and the bottom half by hand to form one diatom. The characteristics of the same species/family were present.

A plaster mold is similar to a sponge; it sucks water from the surface into the mass. Plaster molds used for slip casting absorb water from the slip at a consistent rate throughout the mold.”¹² To make a normal diatom, I let the liquid clay sit in molds for ten minutes. For the thirty percent of diatoms that would show mutation I let the slip sit between four to eight minutes. This yielded different thickness as the longer the slip is kept in the molds the more the moisture is absorbed into the molds, leaving thicker walls. Martin shared in his book, “The longer a casting slip sits in a mold, the thicker the casting becomes.”¹³ After I joined the two halves, I then added texture and punched holes in the form, the diatoms with thinner walls would break by itself eliminating necessity for intentional manipulation from me. After the first firing, or “bisque,” the clay is porous so the various thicknesses of walls would absorb glaze differently, yielding different saturation. This results in color variation. Because molds were an important part of this project that explored decay, I wanted to hang the molds on the gallery walls to show deterioration after many uses. Soluble

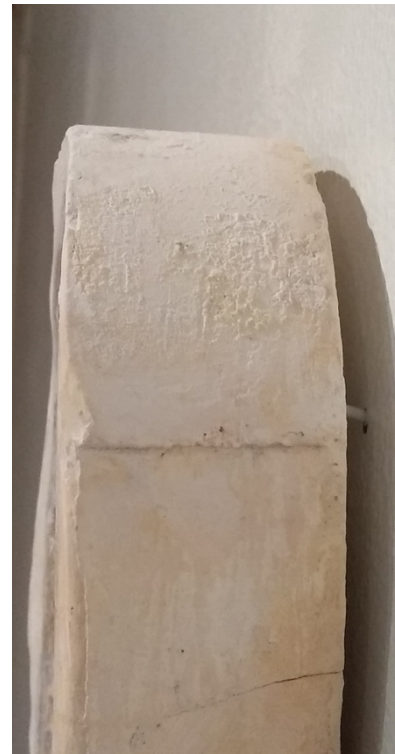


Figure 6. This photo showed the soluble salt inside the plaster of paris mold migrated to the surface. A sign for decay.

¹² Martin, *The Essential Guide to Mold Making & Slip Casting*, 27.

¹³ Martin, *The Essential Guide to Mold Making & Slip Casting*, 27.

salts inside of the molds migrated to the surface revealing themselves as a white powder. This phenomenon happened because the molds were over-used. It was important to me because I intended to show signs of decay and death (this was shown on broken molds) in all things.

Experimenting on Glazes That Fit the Clay Body

It is essential to test all glazes before applying them to sculptures. I chose low fired slip casting clay body because of economic reasons. The biggest challenge was to find glazes that would fit the chosen clay body and show the vibrancy of colors. I experimented on two glazes that I liked. Using Frit #3110 (a commercially milled glaze forming ingredient) proved to be a perfect fit for my clay body. Both glazes also highlighted the texture on the sculpture, which was one of the main goals.

Because diatoms contain chlorophyll, I utilized the interplay of the chemical composition in the clay body, added copper carbonate, iron chromate, and Mason stains to achieve the colors that were appropriate for my thesis exhibition. Besides the normal colors on majority of diatoms in waters, I also tried to mimic albino mutation by not adding any oxides or stains to the glazes so the diatoms would be porcelain white just like an albino diatom would look in nature.

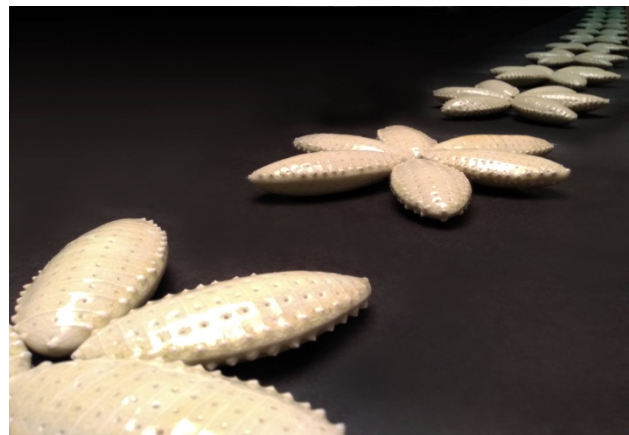


Figure 7. Beauty and Decay. Photograph of Albino Diatoms.

Influences

Although I grew up surrounded by gang members and addicts, I was blessed to have a devoted first grade teacher who saw something in me. She felt I could live a successful life, to escape the predicament that I was born into. She ended up requesting me to be in her class throughout my whole elementary school education. In another word: we moved up grades together. Again, in 7th grade, my history teacher believed that I could get in one of the top high schools with the national examination testing system. I cannot imagine where I would be without their encouragement and mentorship. My teachers' influence on me went beyond the academic awards that I received; their faith in me made me the person that I am today. Most of my life, I try to encourage family, friends, and sometimes strangers to reach for their highest potential.

Felix Gonzalez-Torres

I came to know Felix Gonzalez-Torres' work when I was researching Relational Aesthetics—a set of artistic practices which take “as their theoretical and practical point of departure the whole of human relations and their social context, rather than an independent and private space.”¹⁴ I appreciated his work because his works were essentially love stories, just like mine. The author of *Relational Aesthetics*, Nicolas Bourriaud, included Felix Gonzalez-Torres as an example of a new generation of artists working in participatory practice. Adair Rounthwaite, who authored a book on Gonzalez-Torres, believed the reason why the artist's work was so timeless was because of his elegant and minimalist visual vocabulary and his approach and

¹⁴ Nicolas Bourriaud, *Rational Aesthetics*, trans. by Simon Pleasance and Fronza Woods (Dijon: Les Presse Du Reel Edition, 1998), 113.

quality of his art.¹⁵ An agreement between SFMOMA, The Art Institute of Chicago, and The Felix Gonzalez-Torres Foundation states, “Not only did Felix know that he would not be able to determine the work’s future form, so it was indebted to the owner’s involvement, but Felix firmly believed that change was the only way to make the work remain permanent and relevant.”¹⁶

Felix Gonzalez-Torres’ had created many works featuring candy piles where the viewers were invited to partake of the sweets such as in *Untitled (Portrait of Ross, in L.A.)* (1991). In this work, the ideal weight of the pile of brightly covered candy was 175 pounds, the healthy weight of Gonzalez-Torres’s partner Ross before he withered away and succumbed to AIDS-related illness. Rounthwaite mentioned, “In Gonzalez-Torres’s metaphorical universe, a stack of give-away printed papers was a rehearsal (but endlessly replenishable) for the inevitable death of his lover from AIDS; a glistening carpet of candies, free-for-the-taking, is a portrait of the body politic.”¹⁷

Although Gonzalez-Torres invited viewers to walk away with some of his art, my project is about collective arrangement and using the work as a dialog between myself and different visitors. I appreciated Gonzalez-Torres’ attitude toward his participatory work. He was willing to let the curators reconfigure his installation with each exhibition. Because he allowed others’ choices to help his work evolve, it extends beyond the confinement of time.

¹⁵ Adair Rounthwaite, “Split Witness: Metaphorical Extension of Life in the Art of Felix Gonzalez-Torres,” *Representations* 109, no. 1 (Winter 2010): 43.

¹⁶ Rounthwaite, “Split Witness,” 38.

¹⁷ Adair Rounthwaite, “Split Witness,” 48.

Maria Taniguchi who was a multimedia artist born in Philippines, said about Gonzalez-Torres' work, "His works are really events. With him, what should be messy slurries of language, materiality, histories, and social relations come together brilliantly in forms that are both precise and giving."¹⁸ Gonzales-Torres' work speaks of emotion, love, sorrow, loss, helplessness, and finality. There is a sense of decisiveness and finality as he allowed his work to submit to time. In a life cycle, death is often time a beginning.

Mark Bradford

The first time I saw Mark Bradford's work was with the BYU Study Abroad program in spring of 2017. We had an amazing opportunity to attend the Venice Biennale. The title for Bradford's work in Venice was *Tomorrow is Another Day* (2016), which symbolically offered hope, growth, and resilience. This is another circle of life in nature.

The first work I encountered was *Spoiled Foot* (2016) in the US Pavilion. It was hung from the ceiling in an oppressive fashion. It had bright color papers: red, black, and white. This work took me back to my childhood, just outside of our small Japanese style house. We lived in a dark alleyway on the margins, in the way that people just did not even notice us. This alleyway also contained a low-class movie theater, so it was usually full of litter, bubble gum stuck on the road, and cheap sex. Even though all the neighbors shared the same lower socioeconomic status, my family was looked down upon even more because of what my parents were doing at the time. A big builder saw the potential of cheap land and decided to "develop" our area. They bought the deteriorating paper factory, bulldozed everything, and built one of the first five-story apartment

¹⁸ Maria Taniguchi, "One on One: Maria Taniguchi on Felix Gonzalez-Torres and Judy Freya Sibayan," *ArtAsiaPacific* 17, no. 118 (May 2020): 17.

complexes on top of it. It was hip; new age; with a white, black, and red exterior. I remembered the feelings of looking up at that tall apartment complex. It made our dark alley more downtrodden. It made me feel even smaller.

With Bradford's collage paintings and sculptural work, he again discussed the struggles of marginalized people like my first family. The paintings had a shimmering effect, which gave them incredible depth. There was a site-specific installation named *Oracle* (2017) that hinted the ability to predict the future. It consisted of multiple layers of paint; evidence of gathering, generosity, history, and struggle to stop time and decay. Here he showed mutation, the decay of a city that had seen the years. I was instantly inspired by the rough and deep texture of his work. Although he incorporated discarded material into his abstraction paintings, there was an order to his work. Bradford said, "My work always had to do with how people occupy this world; demanding that we have a seat at the table of power. If power is abstraction, which many black men, black women, and people of color have very little voice in. Well, then I want to sit at that table. And I am not going to ask."¹⁹ Bradford is not shy about expressing his agenda. I look to his work to find order, motion, system, and layers in the seemingly meaningless chaos.

Wolfgang Laib

Wolfgang Laib's work speaks of the quietness that is valued in eastern culture. I could identify with his philosophy, meditative manner of working, minimal display in color and shape,

¹⁹ Barry Jenkins and Mark Bradford, "The American Artist Heads to Venice With the Hope of Turning Activism Into an Art Form," *Interview*, June 12, 2017, <https://www.interviewmagazine.com/art/mark-bradford>.

materials, gathering, labor, and generosity in nature. Taoism and Buddhism influence his work as they influenced my paradigm. Both religions question the meanings of the cosmos.

Laib is best known for his pollen work. He has created installations that address the ephemeral, connected through the artist's extensive vocabulary of common, repeatable shapes, and degradable materials. His Minimalist works often inspire the viewer to process inwardly rather than externally. To Laib, pollen speaks of new life. He has said that "pollen is the potential beginning of a life of a plant. It is as simple, as beautiful, as complex as this."²⁰ In my work, I gathered parts of nature to reference their form in sculpting. It is a process of intense gathering and creating.

Pollen is not the only material he uses. He also works in beeswax, milk, honey, rice and other natural materials. His materials are fragile, pure, spiritual, and transient; yet when he composes them into a sculpture, they speak of the power of the whole. Every grain is a world all to itself, and through the act of gathering Laib intertwines the grains into a collective world.

Celina Jeffery who is an art history professor and a curator, said,

The patient, constant, and meditative manner in which the pollen is collected is thus reciprocated in their formal pronouncement, as the artist cautiously places the pollen onto the floor of the gallery. The image of Laib humbly leaning over the ground, carefully sifting pollen through muslin has become quintessential in our understanding of the large pollen pieces.²¹

As a student of eastern philosophy, Laib embraces stewardship and respect for nature. In his performance, he is calm and collected. He treats his work almost like a ritual, both in the

²⁰ "Wolfgang Laib," MoMA.org, accessed January 2021, <https://www.moma.org/calendar/exhibitions/1315>.

²¹ Celina Jeffrey, "To See the World in a Grain of Sand: Wolfgang Laib and the Aesthetics of Interpenetrability," *Religion and the Arts* 17, 57–73 (January 2013), 62. <https://doi.org/10.1163/15685292-12341254>.

conception and the execution. I approach the cycle of life like a ritual. I adore simple beauty such as his work. I enjoy looking at his work (albeit mostly on the internet) because it always helps me see the intensive gathering and making.

All those who talked to me about my thesis show said the same thing: Diatoms are so beautiful. Aligned with Laib's intention to show beauty in nature, I was delighted to know the visitors interacting with my thesis exhibition found beauty from a simple source of life.

Klaus Kemp

When I was twelve years old, I bought myself a basic microscope. I had read many books about the world that naked eye could not see and was fascinated by it. I collected water to observe and draw living organisms, but I could not identify what I was seeing until I started my nursing degree. The name was diatoms

Klaus Kemp has been working on the art of diatom arranging for decades. Using a microscope slide as a canvas, he shapes them into complex geometric patterns. His work speaks of sublime in a tiny sense.

He uses glass slides and a microscope to form single-cell algae into patterns which are later glued to the slides. In creating his diatom arrangements, Kemp has developed his own glass shells and glues, which maintain pliability for days to allow him to move the algae around. Looking at his creations is as captivating as looking into a kaleidoscope.

Once the specimen was gathered, he washes them several times with acid to leave only the silica shells. With the aid of a microscope and a tiny needle, Kemp picks up each diatom and moves it to a fresh slide to make his patterns.²²

I'm influenced by other artists' philosophies, ideals, concepts, and forms, but Klaus Kemp's influence permeates every part of my work. Personally, I feel he is the authority of diatom art. Diatoms are some of the most impressive organisms that make our world inhabitable. Kemp has said, "I just could not get over how nature could produce something that beautiful."²³ Much of the world never sees that beauty. His work shows a world that we cannot see, beauty and form of diatoms as they really are.

Conclusion

Throughout the making process, I have learned the importance of repetition. It is in that stillness of the mind that repetition can teach valuable lessons, asking questions that lead to solutions. Repetition connects neuron networks and builds pathways in the brain. As I worked, my muscle memory formed, speed improved, and confidence increased. Because of the silica exoskeleton, diatoms seemed a perfect organism to model. We know of over 100,000 species of diatoms, with more being found daily. It makes me wonder how many of God's creations that we have yet to discover.

²² Matthew Killip, "A UK-Based Microbiological Artist Transforms Single-Cell Algae into Kaleidoscope Victorian Art," *Dive*, accessed February 15, 2021, <http://divemagazine.co.uk/eco/6775-the-beauty-of-microscopic-algae>.

²³ Megan Gambino, "Secretive Victorian Artist Made These Intricate Patterns out of Algae," *Smithsonian Magazine*, September 2014, <https://www.smithsonianmag.com/arts-culture/secretive-victorian-artist-made-these-intricate-patterns-out-of-algae-180952720/>.

I am still mining the great resources from diatoms and other oceanic organisms. I want to preserve the lessons that I had learned from being one on one with the diatoms. I hope I can continue to be a bridge to facilitate understanding and empathy.

It seems this chapter of my life as a student will close shortly after this paper is published. However, this journey that I am taking with diatoms is only the beginning, a very good beginning to say the least. There is a Chinese saying, “好的開始是成功的一半,” which is equivalent to “a good beginning is comparable to half of the success already.” As my confidence grows while repetitively modeling diatoms, I am confident that the next chapter will be grand.

Thesis Exhibition Images



Beauty and Decay. Clay. The original arrangement on January 16, 2021, 2 days into the exhibition.



One of the photographs from January 18, 2021, 4 days into the exhibition, showing very limited change.



This was taken on January 19, 2021, 5 days into the exhibition. This photograph showed there were more different arrangements.



Another pattern taken on January 21, 2021, 7 days into the exhibition.



This was taken on January 23, 2021, 9 days into the exhibition. This photograph showed all the pieces on the floor gathered to arrange for this mandala. The height of the center was made by stacking three diatoms together, just as the albino diatoms to the left. This was the most beautiful mandala.



This photograph taken on Monday, January 25, 2021, 11 days into the exhibition It was showing the dissolution of the mandala from Saturday.



Taken on Tuesday, January 26, 2021, 12 days into the exhibition.



Taken on Wednesday, January 27, 2021, 13 days into the exhibition. I called this formation: Katrina, as in Hurricane Katrina that broke the levees causing deaths and destructions. I referred this arrangement as the great circle back to the cycle of life and death.



Before *Beauty and Decay* was taken down on January 28, 2021, the final day of the thesis exhibition.

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