

DEEP NOW &  
THE SEED BANK PROJECT

by  
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## ABSTRACT

The Deep Now & The Seed Bank Project critically examines flaws in Western Society's tendency towards singular perceptual and singular analytical ways of constructing reality. The exhibition is built from cultural signifiers of both loss and hope, expanding on the belief that what we leave behind is an indication of the future. I am among one of the first generations to expect a future in flux, and in order to adapt, our methods of problem-solving need to expand to include both analytical and automatic thinking strategies. As a relatively new civilization that has expanded its influence globally, the instigation of metacognition between the head and the heart could ignite the fundamental psychological shift to understanding *deep time* within Western Society. Only with a sense of empathy, as well as deep humility for reconciling our place within the larger eco-system of the earth, will the future look brighter for future generations of all life forms.

Looking at both analytical and automatic thinking patterns exhibited within Western Society's evolutionary trajectory, this paper posits that both are valid problem-solving strategies depending on context and flexibility. This involves understanding our reality as a construct, fabricated from both cognition and phenomenological experience. Accepting that this construct will demand flexibility in interpretation as the future changes insures a more cognizant relationship with our environment. Deep Now & The Seed Bank Project was formulated with a rich recognition of cultural signifiers that relate how the 20<sup>th</sup> and 21<sup>st</sup> century established Western Society's values as well as a self-consciousness of our era. Through flow state drawing processes, artefactual sculpture and ritualistic, reliquarizing seed banks, the work hopes to deviate from apocalyptic visions, while recognizing an eminent paradigmatic shift in the future of Western Society. The exhibition harks to focus clearly on the clues from the past to rebuild a more interconnected and sustainable intention for our projection into space and time.

## INTRODUCTION

Our environment, our constructs of reality are evolving at a dizzying pace. Glaciers are shrinking, sea levels rising and catastrophic disasters are becoming mainstream events, no longer punctuating months or years, but exploding in frequency to weekly if not daily occurrences across the globe. Our grasp of a linear time looks like one of these glaciers, a part clinging to a whole, seemingly stable until the slightest degree of difference causes the release, a calving event so shocking the microcosm of sea below is sent air born, the glacier plummeting and rolling in a boiling wave of ice water. Settling into its' equilibrium, it bobs about, an exhaling whale sounds as the water slips down the protrusion and joins the sea. The last remaining pockets of trapped air find their way to the surface, sizzling around the fresh cleavage of the newly formed, isolated mass. It's an exotic sight, a moment in time defined by the push/pull of the complexities of living within an epoch that has been geologically altered by the Human species.

Rocks, plants, space dust... matter. It is the materiality of these objects that have been analyzed for centuries in the pursuit of the construction of meaning: why, how, when did we begin to exist? What is our intrinsic relationship to earth? How do we construct this thing called reality? Have our actions begun to accelerate time? How do we perceive time in the first place? A calving glacier is an indicator; it is the poster child of global warming. An event that draws the line in the proverbial sand, a line that is eerily similar to the criss-crossed scars left on the moraines of mountain ranges. These scars, slowly grinding their way through bedrock, fueled by the slow crawl of the ice shelf above took millennia to form, as lucid as the swift scrawl of a stick in soft

aggregate.

My curiosity lies in finding the connections between systems in nature, ancient knowledge, and modern technological advances in order to enhance the quality of all life, while maintaining a more balanced and ecologically responsible relationship to our environment. This involves understanding our reality as a construct; fabricated from both cognition and phenomenological experience and accepting that this construct will demand flexibility in interpretation as the future changes. It will also require the dismantling of the anthropocentric tendencies Western Society has exhibited towards the Earth. The sculptural work that I have been exploring during my graduate studies at Montana State University (MFA 2018) delves into the sensuality of natural systems, and how our bodies relate to the transformational capacities of geological and organic cycles. I explore shifts of perceptual understanding of reality through installations that heighten specific phenomenological awareness within the body. These installations become metaphors for humankind's interconnectivity with other humans, other life forms and other inanimate forms. The sculptures also explore the artefactual evidence of human evolution alongside the geologic progression of Earth.

## BODY

My practice is fueled by promoting agency among individuals to explore their personal, cultural and ecological lenses used to construct their sense of reality. Seed saving and storage is a powerful gesture that can transcend generations, ensure nutrition, and a spiritual connection to our ancestors. Currently, there is a dominant food monoculture, controlled by pharmaceutical and chemical companies. My thesis research is a response to this, and I am hoping to encourage a deeper understanding of the seeds ability for diversification through seed saving, understanding our actions within an interconnected, self-empowering lens. To begin to shift predetermined perceptions, individuals of all disciplines need to come together to compliment one another's strengths and weaknesses. I want to merge material exploration, cultural investigation, and creative problem solving with agriculture, scientific research, architectural planning and ecologically sensitive symbiosis. How can we begin to observe, and learn from natural cycles occurring in our own backyards? What kind of insight could be integrated into a whole systems approach to promote symbiosis between natural and human-driven cycles? How can complex systems be realized through art and integrated into life? The importance of inquiry over assumption has been the leading force guiding my practice.

Our species has come to an evolutionary apex elucidated by the rise of technological advances, globalism and the widespread inequalities that exist as a product of anthropocentric environmentalism<sup>1</sup>. Artists, scientists and psychologists have come to

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<sup>1</sup> Kortenkamp, K.V. & Moore. "Ecocentrism and Anthropocentrism: Moral reasoning about ecological commons dilemmas." *Journal of Environmental Psychology*, vol. 21, no. 3, pp. 261–272.

recognize that natural cycles observed within our environment intrinsically include our own species, and the rise and fall of previous civilizations hold the precious keys to translating the elusive tracks of the next extinction. With the hope of providing a better future for all species on this planet, reflection on previous cognitive tendencies could shed light on our current ecological predicament. Laura Spinney, a writer for the online publication, *New Scientist*, looked to the David Rand & Jonathon Cohen whose research entailed decoding previous patterns of cognition in previous civilizations in search of clues as to how the 6<sup>th</sup> extinction could be reined in, or at least slowed:

“Cognitive scientists recognize two broad modes of thought- a fast, automatic, relatively, inflexible mode and a slower, more analytical, flexible one. Each has its uses, depending on the context, and their relative frequency in a population has long been assumed to be stable. David Rand, a psychologist at Yale University, thought argues that populations might actually cycle between the two over time.”<sup>2</sup>

Cohen and Rand looked closely at how our species’ problem-solving tendencies in the past were influenced by either the automatic mode, or the more analytical flexible mode of thought. This transition is exemplified through the advent of technologies that relieve mass populations of analytical thinking and, consequently emits a collective shift towards automatic thinking. As automatic thinking is much less flexible, and contingent on emotional, instead of rational response, it comes as no surprise that the rise of capitalism and mass media has gripped the United States in such a strong-hold with the promise of security, prosperity and individualism. This tendency has spread globally. Cohen

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<sup>2</sup> Spinney, Laura. “End of Days: Is Western Civilization on the Brink of Collapse?” *New Scientist*. Published January 17, 2018. <https://www.newscientist.com/article/mg23731610-300-end-of-days-is-western-civilisation-on-the-brink-of-collapse/>. Accessed 3 Feb. 2018.

recognized that although societies often fluctuate between the two modes of thought, in the past 50 years or so, those who exhibited analytical tendencies were often not the ones in control of political or economic systems. This has posed critical consequences on the balance of earth's ecosystem and our individual ability to recognize metacognition.

“What we are considering here... are the psychic and social consequences of the designs or patterns (of thought produced by media) as they amplify or accelerate existing processes”.<sup>3</sup> McLuhan talks about the importance of separating the “content” of the medium, and the actual effects that the medium has on the person engaging with it. He points out that often times, it is the content that distracts us from realizing how the medium has changed our physiological tendencies of constructing our reality.

Technology has the power to entice our neurons in such a way that is beyond cognitive control; we now seek instant gratification through social media much in the same way a junkie extracts complacency from methamphetamine or heroin. Comprehending the effects of our choices has held little weight up until the past few decades.

Often in my work, I use the discarded, broken fragments of industry pulled from the landscape as an indicator, or a relic of past and present. By juxtaposing them with natural forms (albeit unnaturally composed, as the same rock is often repeated over and over again in the same composition) the form begins to speak of humankind's evolutionary tendency towards control. The work also explores human-kind's

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<sup>3</sup>“The effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily without resistance.” See McLuhan, Marshall. “Understanding Media: The Extensions of Man.” *The Medium Is the Message*. 1964.

vulnerability, and susceptibility to natural cycles of morphisms such as growth, death and decay.



Figure 1. Detail of *Landmark II*. Photo courtesy of the Artist.

The content of the piece dissolves into the formal similarities of broken glass, ice and rock as it gets more difficult to discern the references through fragmentation, re-association and material autonomy as the viewer's body occupies the same space as the signifier.

McCluhan argues that the fragmentation of processes disassociates us from truly understanding how to cope with growth and change, particularly in relation to the mechanization of production. Through industrialization and the creation of mass media, our understanding of time transmuted from linear connections to complex configurations.

This is not a negative progression, but in some, it has heightened their awareness of interconnectivity, or a desire to understand a sensory awareness of the whole. In others, the technological progression has spawned content-oriented complacency, or what he dubs a “subliminal state of Narcissus trance”. It is important to recognize the psychological trends associated with such an influential way of modifying communication and synthesizing information.

Technological advance has also begun to influence our interpersonal relationships and the projection of our beliefs. The typical Western person jumps to conclusions and ties his/her point of view, or judgements to the construction of self. We are losing our ability to suspend emotional judgment for rational thought when appropriate.<sup>4</sup> This very different from the lulling effect of new technology, and can be explained through a project called “In Real Life”.<sup>5</sup> In an attempt to actualize the online bullying phenomena, a team of actors and actresses take quotes from online sources and then act them out in public settings. By doing so, the wall of extension that cyber-users hide behind falls away, and their verbal brutality becomes a stark reality. The statements proclaimed by the actors and actresses are borderline abusive, and only pronounced further by the victimization of a complete stranger. McLuhan goes on to state that is the role of the artist to pull this phenomenon out of the darkness, to de-pixelate this occurrence into the flesh so as to inflict self-actualization onto a sleep-walking society. I completely agree

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<sup>4</sup> Marshall McLuhan. “Understanding Media: The Extensions of Man.” *The Medium Is the Message*. 1964.

<sup>5</sup> “Real Life: a social experiment that shows what happens when online bullying is taken offline.” Published 9 Oct. 2017. <https://www.youtube.com/watch?v=EA8klLd-zdA>. Accessed 20 March 2018.

that it is the role of the artist to begin to visualize the steps we need to create a better future for all of humanity and offer more flexible modes of perception. When we begin to recognize the intense diversity of perception, empathy for one another and our environment, our society can become a mandatory regulator.

In a discussion I had with Michael Jones-McKean about our evolving relations with time and the environment, he illustrated this concept directly in geologic terms. “We have accelerated our evolution through the distinct choice to burn fossil fuels, an energy source that takes millions of years of ecological rotation, sedimentation and pressurization to formulate. Just in the second it takes to start your car engine, we are burning away millions of years of time in an instant. How can one not think that this will cause a massive shift in the earth’s geologic progression, as well as how we as a species relates to time?” Once released into our atmosphere through carbon trapping, this transmutation of energy starts a chain reaction that will affect the earth’s atmosphere long after our generation is gone if we don’t take precautions to carbon offset, such as a dedication to land conservation. There is no “other” or “over there” in which the emissions can escape to, much like Timothy Morton’s description of the Hyperobject. The strange uncanniness of interconnectivity that he speaks of is always within and around us, whether we choose to acknowledge it or not.



Figure 2. Detail of *Out of Site*. Photo courtesy of the Artist.

This concept is interwoven in the piece titled *Out of Site*, in which materials are simultaneously overflowing, melting, boiling and oozing from one funnel on one side of the wall to the other (out of sight) through a neat yet precarious tube (reminiscent of the oil industry's pipelines).<sup>6</sup> The similarity of the funnel forms from one side to the next

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<sup>6</sup> "We should then entertain the possibility that hyperobjects allow us to see that there is something *futural* about objects... If time is not a neutral container in which objects float, but is instead an emission of objects themselves, it is at least theoretically more plausible that an object could exert a backward causality on other entities, than if objects inhabit a time container that slopes in one particular direction. This wake of causality would

exposes the intrinsic interconnectivity between “place”, both local and global and the exertion of the future on the present.

Being able to recognize the interconnectivity of our social, political and economic landscape will be the key to designing a more harmonious future. As our western society evolves through the industrial revolution, we move away from an object-oriented structure, and towards a systematic structure. As Jack Burnham states:

*The priorities of the present age revolve around the problems of organization. The systems viewpoint is focused on the creation of stable, on-going relationships between organic and nonorganic systems, be the neighborhoods, the industrial complexes, farms, transportation systems, information 0 centers, recreation centers, or any other matrices of human activity. All living systems must be treated of a system of hierarchy of values. Intuitively, many artists have already grasped these recent distinctions and if their “environments”, are on the unsophisticated side, this will change with time and experience.<sup>7</sup>*

The fragmentation of ideas, communication and organization in Western Civilization has brought us to a point of crisis. No longer can the same modes of problem-solving begin to tackle the magnitude of exclusive disjunction created from the naiveté of the interconnectivity of all living and non-living structures. We need to reckon both our instinctual and cognitive ways of *Knowing* the world by employing both automatic and analytical modes of thought appropriately.

David Abram speaks of referential reciprocity between us and our environment

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appear to flow backward “into” the present. The strange strangeness of things is futural. Its shadow looms out of the future into the present.” See Morton, Timothy. “Hyperobjects: Philosophy & Ecology after the end of the world.” University of Minnesota Press. 2013. pp. 67.

<sup>7</sup> Burnham, Jack. “System Esthetics.” *Artforum*, September Issue, 1968. pp. 29-35.

through the phenomenological experience. He advocates that language can be a significant tool to shift our perception of how we construct reality. *Only if words are felt, bodily presences, like echoes or water-falls, can we understand the power of spoken language to influence, alter and transform our perceptual world.*<sup>8</sup> There is an important interplay that happens between the perceived and the perceiver, a sort of equal grounding. When I touch the leaf of a huckleberry plant, the leaf also touches me. This establishes the plant as another life form sharing my space, giving me oxygen and subsuming my carbon dioxide. A symbiotic relationship emerges that encourages a sense of empathy within me. Feeling can mean a physical sensation, it can also mean the expression of emotion, all of these things are related. In an interview with Olafur Eliasson, Robert Irwin presents the argument that we link the formation of value through investment of our feelings, and this is how we predominately formulate our perceptions of reality<sup>9</sup>. All of our previous experiences, knowledge, connotations and preconceptions work together to formulate this investment of perception, and, especially in western society, it begins to shape our outward identities. But the fallibility of perception simultaneously shows us that there are multiple perceptions or “truths” that exist at once in the formulation of reality, which amplifies the need for *empathetic knowing* in order for symbiotic co-existence to occur.

This culmination of knowing a place is the primary source of inspiration for the

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<sup>8</sup> Abram, David. “The Spell of The Sensuous: Perception and Language in a More than Human world.” First Vintage Books Edition, Random House of Canada. February 1997.

<sup>9</sup> Eliasson, Olafur and Robert Irwin. “Take Your Time: A Conversation.” Edited by Madeleine Grynsztejn. *Exhibition catalogue*. San Francisco Museum of Modern Art, San Francisco, California, Thames & Hudson, 2007. 51-61.

two-dimensional works in the exhibition. Producing them in a flow state, I do not know what they will look like when completed. Although they are inspired by the sounds, textures, smells and emotive qualities of the landscapes in which I have lived and visited (The Bayou of Louisiana, the planes of Alberta, CA, the red deserts of Arizona, the deep rainforests of Brazil, the strange moonscapes of Yellowstone National Park in Wyoming/Montana and the Andes of Peru), they are the antithesis of traditional scientific drawing and were created to evoke the of feelings of curiosity, empathy and an immediate interconnection with my environment. The style of illustration leaves a wide berth for alternative interpretation, an intentional empathetic decision made with the viewer in mind.

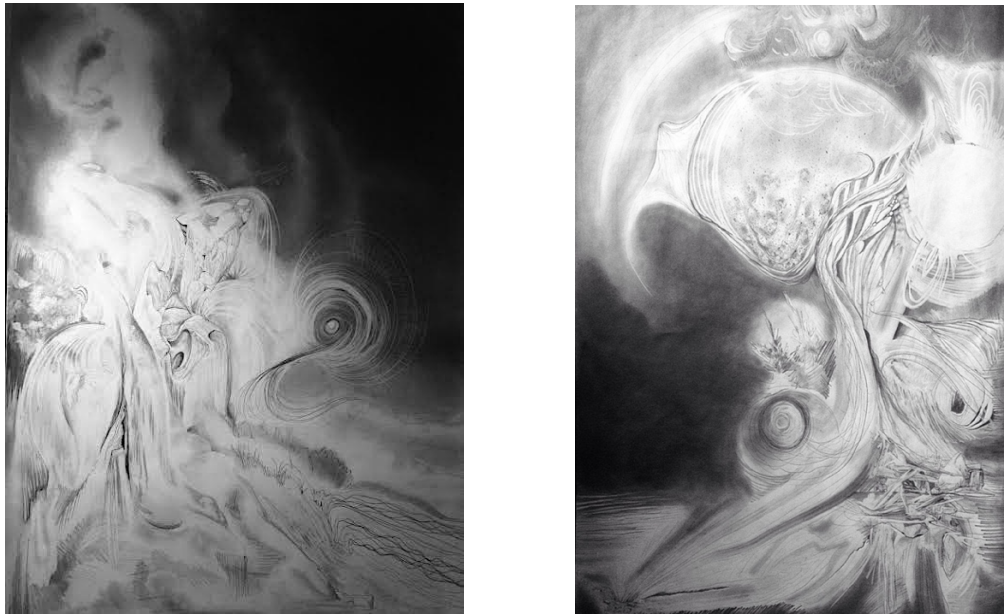


Figure 3. *Flow State Diptych*. Photos Courtesy of the Artist.

The instructional drawings created for The Seed Bank Project have a more direct message, but were still created with a visceral and haptic sensibility towards the environment to emphasize the importance of ecological stewardship through action. As a

visual aide, their narrative quality guides the viewer to the direct implications that their actions could have on the landscape and for future generations.



Figures 4 & 5. Instructional Illustrations for The Seed Bank Project. Photos Courtesy of the artist.

With whizzing, 2 dimensional screens relaying spatial information, the loss of our sensual sensitivity (using all senses instead of just eye sight to construct reality) is the paradox of the 21<sup>st</sup> century. Very little reciprocity happens between me and the google map that takes me from point A to point B. My landmarks become flat pins, instead of the poised cairns that used to guide us (as a species), in tandem with the geographical features of the land.

What relief is felt when once lost, and the beacon of a cairn exposes itself amongst the unpredictability of our constructions. All is right again, hope restored.

Rock Cairns are a cross-cultural, phenomenal landmark. Used to orient the wayward traveler, they stand as a testament to the land and to human nature. Working in conjunction with valleys, water-ways, mountain ridges, dense forests and tumbling meadows, cairns are the points between the human species and the land in which they depend upon. The tradition of being built over time, the traverse of one rock from the bottom to the top, these un-naturally stacked structures represent a ritualistic presence, providing assurance to future travelers. There is an inherent humility towards carrying the weight as a physical and mental signifier. They are inherently stable to us, but fragile and susceptible to geologic shifts and time spans. If all that was left was the stacks of rocks, concrete, glass & steel, those happening upon the rubble would likely wonder of the inter-complexities between those who built these structures and why they chose to settle where they did. They might also wonder how that place influenced the lives and realities of those who went before us. Fragile objects remind us of our own vulnerabilities. They also remind us of our tenuous reliability upon the earth.

As our national parks become more and more popular, trodden fragile landmarks multiply and cairns have taken on a new signifier. Once used as gestures for the future and markers within the unknown, they have now become a testament to the ego, a marker of self (“I was here”) and less so a humble, minimal gesture for future way-finders.<sup>10</sup>

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<sup>10</sup> “As a hiking culture, we have, it seems, an infatuation with piles of rock. Or maybe we have an infatuation with ourselves, and piling up stone is an opportunity to leave our mark in what many might deem a most innocuous way. The prevalence of tampering along popular trails and roads suggests to me that the intent is not malicious but due to unfamiliarity with a cairn’s purpose. People do worse, with spray paint, etching bedrock, or carving trees. But the tradition of stacking stones came not from building a monument to one’s self. It was to build for others—a memorial or a navigational aid. The intent lacked ego; it was just the opposite, an act of service.” See Gaige, Michael. “A Natural & Social History of Cairn Building and Maintenance. Appalachian Mountain Club.” *Outdoors*. Published February 28<sup>th</sup>, 2013.

But this is the nature of any object, of any signifier. Once displaced, the object has many truths, what it once was, what it is now and what it could be in the future. To embrace the inevitability of change with the ability to be flexible in perception seems to be a significant evolutionary strategy, while recognizing intention within and taking responsibility for one's actions.

To process reality with both rational and automatic thought processes, and simultaneously acknowledge your metacognition as well as your flow state, or the influence of subconscious tendencies allows one to shift their perception like a kaleidoscope. This can become the greatest tool for empathetic ways of knowing. "To me the greatest potential of phenomenology lies in the idea that subjectivity is always susceptible to change, I like to think that my work can return critically to the viewer as a tool for negotiating and reevaluating the environment." <sup>11</sup>

Artists and scientists share the innate drive of inquiry; to explore their world with a critical and reflective eye. It requires a certain vulnerability (particularly of the ego) to ask a question that may or may not have a definitive answer. Instead we need to seek a commonality between the questions asked that have propelled our species evolution and the desire to have a better understanding of our world and our place within it. There is a shocking reciprocity exposed from holding an object from another time/space continuum. Now, while existing in the same continuum in which it was made, take that object and

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<https://www.outdoors.org/articles/amc-outdoors/cairns-history-building-maintenance>. Accessed 16 March 2018.

<sup>11</sup> Eliasson, Olafur and Robert Irwin. "Take Your Time: A Conversation." Edited by Madeleine Grynsztejn. *Exhibition catalogue*. San Francisco Museum of Modern Art, San Francisco, California, Thames & Hudson, 2007. 51-61.

fast forward a few hundred thousand years-worth of geologic processes. Much like the cinematic *pull focus* employed by Alfred Hitchcock, the result is somewhat strange, familiar and disorienting, dissolving the immediacy of our understanding of the term “now” to a perpetual effervescence.<sup>12</sup> My work reconfigures geologic and human-made objects into artefacts, or present day fossils. By imagining what our society might look like to a future civilization, the work begs to be read in the same meticulous approach of Stephen Jay Gould examining the morphological diversity of land snails. Fossils have created a paradigm shift in our construction time and our relation to it, much in the same way that artists challenge and dissolve the intricate preconceptions of social norms. In recognition of mainstream thought, artists have been holding mirrors to societal norms and taking-action to perpetuate the shift of both.<sup>13</sup>

Inserting her body directly into the ground, Ana Mendieta was one of the more intimate, body-centric of the Land Artists of the 1960’s and 70’s. Juxtaposing the anthropocentric time scale of her body, with the magnitude of the geologic landscape around her, she was not shy of challenging the art world’s colossal and often-times monumental preconceptions of what constitutes an “Earthwork”. Instead of taking a minimalist approach like many of her contemporaries (Richard Smithson, Richard Long, and Nancy Holt among many) she reveled in the spirituality of the human body deeply rooted to the land.

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<sup>12</sup> Morton, Timothy. “Hyperobjects: Philosophy & Ecology after the end of the world.” University of Minnesota Press. 2013. pp. 19.

<sup>13</sup> Galanter P. “Complexism and the Role of Evolutionary Art.” In: Romero, Juan J., *The Art of Artificial Evolution*. Natural Computing Series. Springer, Berlin, Heidelberg. 2008.



Figure 6. Ana Mendieta. Four stills from *Silhueta Sangrieta*. 1975. Super 8, color, silent. 1 minute, 54 seconds.<sup>14</sup>

“My art is grounded in the belief in one universal energy which runs through everything... from insect to man, from man to spectre, from spectre to plant, from plant to galaxy.”<sup>15</sup> In an artist statement from the early 1980’s, Ana Mendieta acknowledges the interconnectivity of life on earth as a driving force behind her works of art. Her body was her medium; the reciprocity of her curves to the landscape was her content. Never afraid to challenge the male-dominated art world, Mendieta’s work dripped with emotive, phenomenological triggers. Presence/absence, physical/spiritual; these were dualities that

<sup>14</sup> “Ana Mendieta, Four Stills from *Silhueta Sangrieta*. 1975. Super 8 Color. Silent, 1 minute 51 seconds.” *Chinquapin*. Accessed 10 Feb. 2018. <http://chinquapinlitmag.org/post/132943371371/cihuanaba-ana-mendieta-cuban-four-stills>

<sup>15</sup> O’Hagan, Sean. “Ana Mendieta: Death of an artist foretold in blood.” *The Guardian*. Published September 21, 2013. <https://www.theguardian.com/artanddesign/2013/sep/22/ana-mendieta-artist-work-foretold-death>. Accessed 16 March 2018.

influenced the questions that she posed while creating her *Silhueta Series (1973-1980)* and these inquiries still hold relevance to the 21<sup>st</sup> century. The work was intuitive, highly responsive and cognoscente of context as well as challenging the anthropocentricity of modern time constructs.

The 10,000-year clock, currently under construction, is also an attempt at stretching humankind's ability to think long term. As part of a series of projects funded by the *Long Now Foundation*, the millennial clock challenges modern society's tendency towards disposable consumerism based on short-sited ideology of time. Designed by Danny Hillis and powered by solar energy and the energy of its' visitors, the contraption is comprised of marine grade 316 steel, titanium and dry running ceramic ball bearings.



Figure 7. Prototype of the Long Now Clock, completed December 31, 01999<sup>16</sup>

The Long Now Foundation's primary goal is to get our species thinking about time on a larger scale, not just the 100 years or so we will be alive, but the thousands of years that our actions have affected future generations of other species (as well as our own) and the earth itself. Back in the 1940's, scientists worked tenaciously, splitting atoms to create the atomic bomb. The time in which it took to create the atomic bomb compared to environmental consequences of the fundamental elements involved is infinitely staggering. The radioactive metallic elements discovered, (such as Plutonium-

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<sup>16</sup> Horn, Rolph. "The 10000 year clock prototype I." *The Long Now Foundation*. <http://longnow.org/clock/prototype1/>. Accessed 3 March 2018.

239) can retain a half-life of upwards of 24,100 years.<sup>17</sup> The clock works to expand our anthropocentric time scale to one that might begin to compare to a larger geologic scale in congruency with the material re-appropriation that our species has instigated.

Agnes Denes was known for her ability to materialize the challenges of land reclamation in such a way that linked government accountability to the people's best interest, and her installation *Wheatfield- A Confrontation: Battery Park Landfill, Downtown Manhattan* was no exception. The year is 1982, in downtown Manhattan just 2 blocks from Wall Street of the former World Trades Center. The soft *thwap* of furry tufts rhythmically patter against one's thighs through a traverse of golden wheat; the city looms like an amoeba on all vertices, threatening to engulf the tender crop at any moment. The monochromatic steel only heightens the vibrancy of the reflective golden food source. At the edges, hewn dirt is scattered about, small bits of plastic and rubbish peak from the soil in place of country mice.

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<sup>17</sup> United States Nuclear Regulatory Commission. Last reviewed 1 May 2017.  
<https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/plutonium.html> Accessed on 16 March 2018.



Figure 8. Agnes Denes, *Wheatfield- A Confrontation: Battery Park Landfill, Downtown Manhattan*<sup>18</sup>

Weaving together wreck-less consumption, world hunger and economic discontinuity, the field stood as a paradoxical symbol of misplaced priorities. Over 1,000 pounds of wheat was harvested from the 2 acre plot, which as a piece of property in downtown Manhattan was worth \$4.5 billion, was exhibited around the globe as part of an "The International Art Show for the End of World Hunger", organized by the Minnesota Museum of Art (1987-90). In conjunction with the exhibition, she also created a questionnaire that was "composed of existential questions concerning human values, the quality of life, and the future of humanity". These questionnaires were then compiled into a time capsule buried in a concrete-encased lead-box, 9 feet underground.

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<sup>18</sup> Denes, Agnes. "Wheatfield - A Confrontation: Battery Park Landfill, Downtown Manhattan, 1982." Image courtesy of Leslie Tonkonow Artworks + Projects, NY. **Artsy.net**. <https://www.artsy.net/article/artsy-editorial-10-female-land-artists>. Accessed 2 Feb. 2018.

The box was marked with a plaque which requests to be opened in the year 2979, exactly 1000 years from its' burial date. Denes intention was to promote the importance of open communication within the dialogues she created with her questionnaire, and hopes that future generations will decipher who- and what we valued based on the collective responses, while also challenging preconceived perceptions and recognized the fallibilities of modern civilization. There is an intrinsic intimacy within collaboration, seeds, time and communication that speaks to the very roots of being human that Denes advocates for within *Wheatfield: A Confrontation*<sup>19</sup>, as well as fundamental challenges within the making of long scale work for the future.

Because seed banks and vaults have long-term objectives, they often fall out of the confines of grants and funding opportunities that require definitive, short-term objectives or goals. The Crop Trust Organization recognizes the continuous inability for gene banks to receive funding in the past, and have set up investment strategies for these banks to continue the training of personal, and keep Seed Banks operating. The CTO has also organized Genesys ([www.genesys-pgr.org](http://www.genesys-pgr.org)), an online database to keep information regarding the contents of these banks public, as well as launching DivSeek ([www.divseek.org](http://www.divseek.org)) which promotes the use of biotechnologies and bioinformatics among researchers and breeders to more effectively mobilize plant genetic variation for crop improvement. Thanks to the CTO, the Gene Banks around the world are being viewed as financially and technically credible institutions and investment backers, as well as funding organizations have begun to reconsider and extend the confines of their

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<sup>19</sup> Denes, Agnes. *Personal Artist's Website*. <http://www.agnesdenesstudio.com/works7.html>. Accessed 16 March. 2018.

application requirements.<sup>20</sup>

Seed Saving has been an *in-situ* practice among indigenous peoples for generations, and as the height of globalization peaks, the art of seed saving has gone global. Banks around the world, most notably the Svalbard Global Seed vault, located in an old mine shaft on the Norwegian island of Spitsbergen near Longyearbyen in the remote Arctic Svalbard archipelago, hosts seeds *ex-situ* from countries all over the world. The seeds are processed and stored by a team of highly trained staff who are experts at testing for potential fungal/bacterial disease, and receive and disperse the seeds with the utmost care. Despite all cautions being taken to provide the most hospitable environment for prolonged seed viability, the permafrost on this little island has begun to melt, permeating the vaults exterior chambers. Luckily, the water was only able to breach the entrance hall and none of the 890,886 samples were damaged but this occurrence exposes the vulnerabilities in human error, particularly in the attempt to create a closed control in an open system.

Despite its' fallibility, the Svalbard Seed Vault is an invaluable asset to humanity, as genetic diversity among crops around the world is shrinking due to the rise of monoculture in agriculture. As farmers are using genetically modified seeds, and only planting one or two types of crops a year to boost income instead of rotating crops, the health of the soil degrades. When the quality of the soil becomes less biologically diverse, the plants become more susceptible to changes within their environment such as drought, pests, fungal and bacterial infections, which encourages the use of more

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<sup>20</sup> Guarino, Luigi, Jamora, Nelissa & Lusty, Charlotte. "Securing Crop Diversity for sustainable development, forever." *Crop Trust*. Published 15 April 2016.

pesticides and germicides being sprayed onto the crops. This has become a very profitable cycle for the leading chemical companies, such as Dupont and Chemex. It comes as no surprise that the leading seed companies such as Monsanto are own and run by these leading chemical companies. Detailing the economy of the major seed corporations could engulf the entire contents of this paper, so I will remain focused on the insistence that genetic diversity is key to our (and all) species survival, and will continue to highlight the people and organizations that are focused on making this a reality.

The Indigenous Peoples of Mexico have combatted these problems using the inherent symbiotic relationships of certain types of plants. Through thousands of years of *in-situ* domesticated plant management, these peoples cultivated crops that provided full nutrition to growing populations due to the increase in sedentary lifestyles and climates becoming mild and favorable to agriculture after the Pleistocene<sup>21</sup>. By selecting seeds from plants with favorable phenotypes, the most basic form of genetic modification was born, and has shaped almost every single plant product that any modern human has put in their mouths, if not foraged from an undomesticated environment. The *Three Sisters* consists of a plot of land intermittently seeded with corn, beans and squash. The Corn provides a stalk for the beans to grow upwards towards the sun, and the squash produce low vegetation coverage to discourage weeds, while creating a moisture trapping micro-climate that also repels pests due to its prickly vines. The beans also produce an excess of nitrogen within the soil that the corn and squash plants benefit from. The Ancestral Puebloan Peoples of the Southwestern United States also included the Rocky Mountain

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<sup>21</sup> Landon, Amanda J. "The *How* of the Three Sisters: The Origins of Agriculture in Mesoamerica and the Human Niche." *Nebraska Anthropologist*. 2008. pp. 119-120.

Bee Plant to attract bees to pollinate the beans and squash.

Both the Puebloan Peoples and the Hopi Peoples created simple ovular jars with ornate black and white patterns inscribed into the smooth, burnished surfaces.<sup>22</sup> Hidden within the patterns was a tiny hole to insert seeds; the terra cotta clay forms kept the seeds at a more constant temperature than the surrounding environment and the small opening would not allow for pests to abscond with the farmer's future crops. The Indigenous makers understood that the seeds stayed viable for the following year if stored in a dark dry container with low humidity. Clay has always had a very intimate connection to traditional practices with the land, especially after human's transition from a nomadic existence to a sedentary lifestyle through the advent of agriculture.

The historical, and contemporary connection to seed saving has influenced my practice considerably. Such a simple gesture towards future generations holds a very intimate connection to the land, and hope for the ability of our species to adapt alongside a rapidly changing environment. Western Civilization will need to adopt to break the cycle it's currently entrapped within. Currently, my thesis work explores the importance of local ecologies by researching, and *in-situ* planting multi-generational seed banks as part of *The Seed Bank Project* (2017-ongoing). The project becomes a gesture towards promoting a multigenerational dialogue of ecological stewardship.

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<sup>22</sup> "Seed Jars". *The Smithsonian National Museum of the American Indian Collections*. <http://www.nmai.si.edu/searchcollections/results.aspx?objtype=Containers+and+Vessels&objid=Seed+jar>. Accessed 18 Jan. 2018.

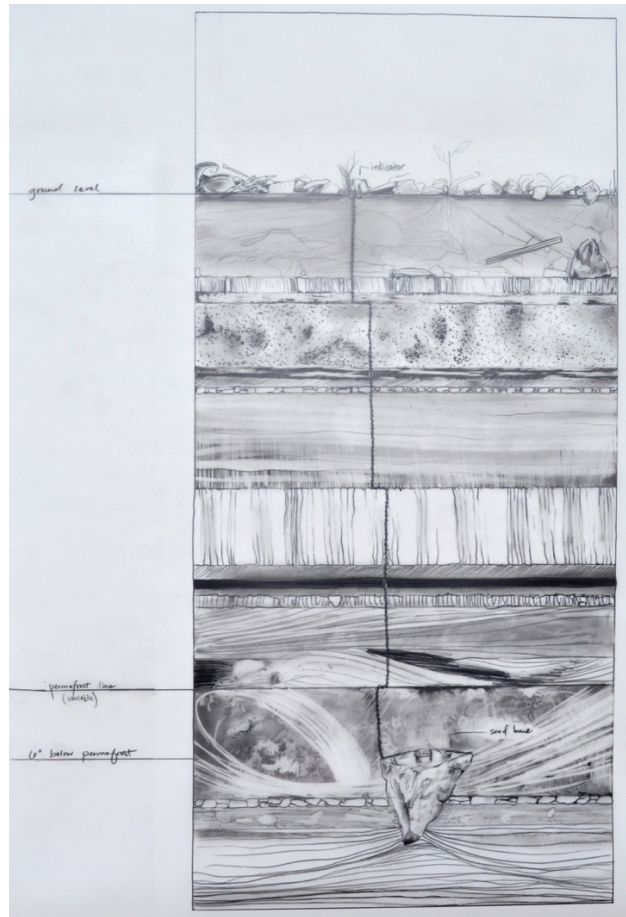


Figure 9: TSP Instructional Series: Seed Bank Buried at Proper Depth below Permafrost level. Graphite on Paper. Photo Courtesy of the Artist.

Although the seeds are planted *in-situ*, they are kept as an artefact of the specific place, time and culture that buries them. No longer able to adapt through environmental changes, they lie dormant within the bank, waiting to be unveiled by potential future generations. As much as fossils have unlocked many mysteries of the Earth's geologic past, the seed banks stand as a testament of recognition of human fallibility and a marker of the apex of our evolutionary history. It is my sincere hope that they project far into an unknown trajectory, vulnerable to future discovery.

I cast the seed banks from locally sourced granite rocks in porcelain; the forms are hollow with a double wall for insulation and a water-tight, air-tight screw-top, sealed in beeswax. They also are equipped with a chain and small “Indicator rock.”

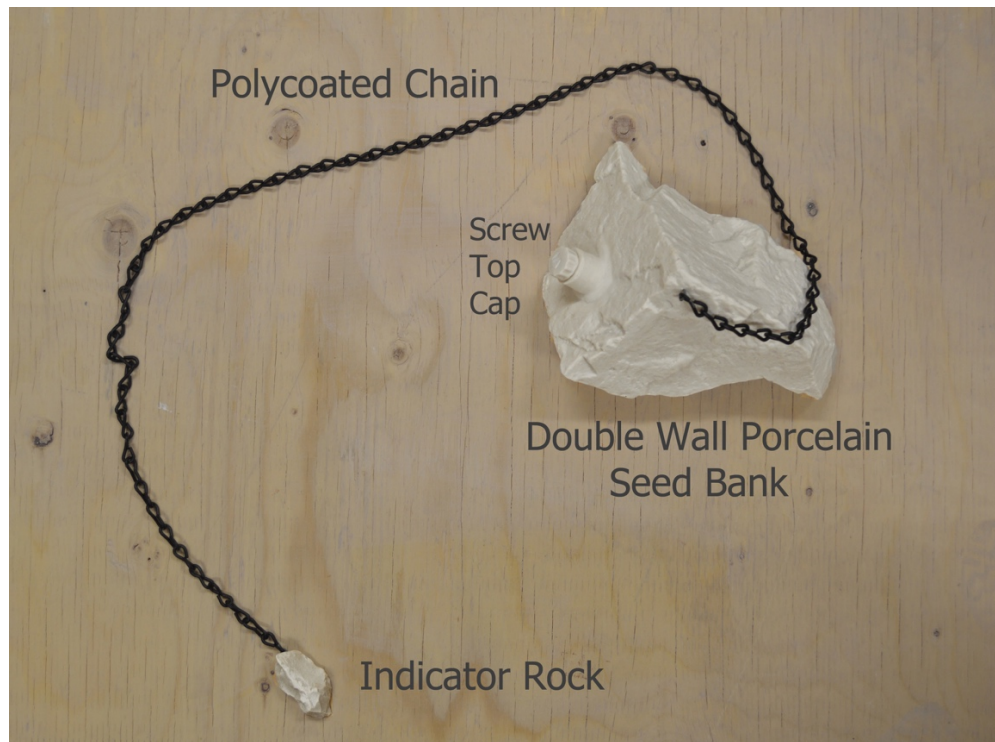


Figure 10. Seed bank Design for The Seed Bank Project. Porcelain, Chain & Beeswax.  
Photo courtesy of the Artist.

I chose to use rock forms to accentuate what I see as the dialogue between geologic and anthropocentric timescales, and for the practical reason that this would allow the banks to blend more easily into the natural environment. The pilot-round of these banks, 25 in total, are currently being distributed around the world (locations have included Montana, central France, southern Brazil, northern Utah, central Arizona, and Vancouver, B.C. thus far). I ask my collaborators to: 1) Find seeds of a plant that they have a personal or cultural connection to. These plants must be either indigenous or have a longstanding

presence in the local environment. 2) Fill the bank with the seeds. 3) Bury the bank near where they located the seeds, underneath the permafrost level, such that the small locator rock sits on the ground's surface where it can be seen. They provide the GPS location, a photograph of the chosen plant, and a short synopsis of the plants cultural and ecological significance that I will include in the online database.

At the local scale, the seed banks indicate the cultural and ecological significance of a single plant (e.g.; huckleberry, Wild Sage, Agave, or Hopi Corn) and ignite a multi-generational dialogue among the families who plant them about the importance of environmental stewardship, and the cultural significance of ritual and storytelling. On a global level, I hope that they will become a network of markers, small monuments to a specific moment in time. As large Seed Banks, such as the Svalbard Seed Vault in Norway are globalizing the efforts of seed diversity with *ex-situ* seed saving, these seed banks acknowledge those efforts and work in tandem to create an *in-situ* effort of conservation. This moment in time is the apex of a civilization that has recognized that its actions, (or inactions) have brought it to a crisis point. These seed banks become artifacts or relics of this collective epiphany. The gesture of saving them becomes the artwork. Porcelain can last thousands of years, and it is my hope that, while this project begins with a small, intimate audience of collaborators, the physical evidence of the project can speak to a much wider audience in the near and far futures. My dedication to this project will extend throughout my lifetime, and I intend to work towards creating an open-source resource so others can build their own banks to expand the audience of the project. This will consist of sharing my methods, slip recipes and processes with the public, as well as

teaching workshops to communities so they can begin designing their own banks.

In the near future, I also intend to design sets of seed storage vessels for families to keep their own seeds in. These sets will hopefully be passed down generation to generation, getting emptied and refilled with each growing season as the seeds of the chosen plants evolve to adapt to their specific environmental factors. In this practice, the seeds are no longer relics; they are living libraries that acknowledge the specificity of time, space and environmental changes. The gesture of the Seed Bank Project becomes a living reality as the seeds transform through time, space and culture. We are entrusting future generations with the act of seed-saving, therefore my research within the Seed Bank Project and the documentation provided by each participant are publically available through an online database, which can be accessed through my website.

## CONCLUSION

The Deep Now & The Seed Bank Project critically examines flaws in Western Society's tendency towards singular perceptual ways of constructing reality. As a privileged, technologically advanced civilization, it is our responsibility to explore the mitigation of environmental detriment with a sense of intention and empathy for all life-forms that we share this planet with. Through both phenomenological translations of experience through drawing, sculpture and functional collaborative work, the exhibition hopes to ignite a deeper understanding of the construction of personal perception. How we know things, is just as important as the knowing itself. Our previous experiences, spaces, relationships and knowledge all work together to weave our construction of reality. How we empathize with one another is an important factor in the consideration of the future, and a deeper understanding of the world we live in today.

“Evolutionary art demonstrates the reconciliation of the sciences and humanities by providing a visceral experience of the distribution, emergence, co- evolution, feedback, chaos and connectionism that are the hallmarks of the new paradigm of complexism. Evolutionary art, especially when offered as an ongoing process rather than a static object, presents the dance of formalism and dynamism. It underscores how each arises from the other, and marks a radical shift of emphasis in art away from nouns and towards verbs. In short, evolutionary art creates the dynamic icons by which complexism can become known and understood, and in doing so creates a new paradigmatic meeting place for the sciences and humanities.  
 “ –Galanter, Philip<sup>23</sup>

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<sup>23</sup> Galanter P. “Complexism and the Role of Evolutionary Art.” In: Romero, Juan J., *The Art of Artificial Evolution*. Natural Computing Series. Springer, Berlin, Heidelberg. 2008.

Within the exhibition, all ways of knowing our reality are reconciled.

Phenomenological and empathetic ways of knowing are explored through the flow-state drawings and the instructional drawings of the Seed Bank Project. Cultural indicators are transformed into relics within the large cairn sculptures. The indication capacities of lichen as an air quality monitor exposes the subtle ways in which our environment speaks to us, and encourages us to heighten our sensitivity and empathy. The thrust of the shovel, trickling of gravel, and the quickened breath of the digger are all meant to merge one's senses to the space. Discovery erupts from the slow, unwinding drawl of the screw top as chains rattling heightens the anticipation for a futuristic unknown.

Through the intentional use of a technological data-base, the cultural and ecological data collected from the collaborators (of the Seed Bank Project) become public knowledge, while the digital pins on the screen are directly linking a physically expansive, global network of people, places, plants and culture buried beneath the surface and marked with a small, white Indicator rock in the physical plane. This is a very calculated and analytical approach, one that exists as long as our technological network does, and can disseminate knowledge quickly and efficiently. The Banks themselves exist on a very different, incalculable time frame that is more analogous with the time that the Earth keeps. Many unknowns exist within this frame and the hope is that the larger number of banks that are buried, the higher the chances that they can transcend most of these unknowns to carry forth the honor that our species' cultures hold for the land. Some will be found in a not too distant future, others will be lost to possible landslides, eruptions or floods. The stories they tell may, initially, seem cryptic to those

that find them, but one thing will be known: What is inside is important. It was intentionally chosen for you, the finder. Hold it dear to your heart as we did, because what is inside gives you a bit of our culture and our love for the land. Amongst all we have said and done, we hope(d) to carry forth new beginnings for the future.

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