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A World in Flux: Envisioning Climate Change from an Ecocentric Perspective

By

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Submitted in partial fulfillment of the requirements

for Graduation *magna cum laude*

University of Louisville

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I. Introduction

The issue of climate change has repeatedly been declared one of the greatest challenges humanity will face in the 21st century. This statement has come from world leaders, economists, and many in the scientific community. Even public opinion polls reveal that most people now believe that anthropogenic climate change is real, yet efforts toward mitigation remain slow coming and half-hearted. World leaders and policy makers have emphasized the importance of keeping an increase in global temperature average under 2 degrees Celsius—a warming that would constitute dangerous climate change. However, with annual carbon emissions in excess of 35 metric gigatons (Olivier et al. 2015), and only promises of future emissions cuts coming from many of the world’s economies, climate scientists have suggested that a 2 degree average global temperature rise is now unavoidable and that we are on course to experience an average global warming of 3 or 4 degrees Celsius over the next century (Roach, 2014).

In many ways, the challenges we face with climate change and other environmental problems stem from a cultural attitude of complacency or indifference toward the natural world. From the early examples of land art and earthworks to the contemporary scene of ecological (eco) art, artists have attempted to examine more closely our contact with the earth and address these current attitudes through a variety of art-making practices and conceptual approaches. For my own artwork these examples have been seminal.

My work is an attempt to engage with the dialogue surrounding climate change by focusing less on the anthropocentric threats, though there are many, and closely consider the ecological impacts of our environmental carelessness. By shifting the focus of environmental discussion toward a biocentric and ecocentric examination, I have striven to make salient our current egoistic and near-sighted self-perception, highlighting the triviality of our modern

priorities and moving toward what philosopher Arne Naess describes as a “self-realization” of our intended place within and in connection to the greater ecosphere (Naess 1986).

The first section of this thesis details the specific challenges posed by climate change and the perceptual gaps that prevent the enactment of serious climate change mitigation. In the second section, I will consider the ways that art movements since the mid 20th century have explored our connection to the natural world and engaged with specific environmental problems, advocating against further damage and offering solutions. The third section describes my own artistic response to the issue of climate change and our cultural disconnect from the Earth. Lastly, I will discuss the philosophical ideas and environmentalist perspectives that have motivated my work, and how a continued discourse of ecocentric environmentalism may lead to tangible and effective solutions for the issues facing our species and the living world.

II. A Changing Planet

In many ways, the ecological transition to be attributed to climate change is well underway. Over the past several decades, studies and research from a pool of over 1,000 scientists has been collected and assessed by the Intergovernmental Panel on Climate Change (IPCC). Their latest assessment report indicated that the global temperature average from the time of the industrial revolution to 2012 increased by about 0.85 degrees Celsius. (2014) The IPCC along with other research groups monitoring climate change and its effects have reported varying degrees of response in many of the Earth’s natural systems and geographic regions, while new trends and possible impacts continue to emerge.

Though 0.85 degrees may seem like a small increase, several studies and records indicate that parts of the Earth are experiencing serious and, in some cases, profound transitions. For

example, in direct response to a warmer climate, the American Meteorological Society found that over the last century, ocean levels have risen on average about 7 inches due to the expansion of warmer ocean water (Henson 2014, 144). Along with heat, oceans also take in large amounts of atmospheric carbon dioxide, and increased emissions in recent decades has led to lowered pH levels in many regions of the world's oceans. This process of acidification, if allowed to progress is predicted to have major impacts on marine ecosystems and has already affected some individual organisms including oysters, coral and species of fish (Henson 2014, 166).

Other organisms affected by climate change range from areas all over the globe. The IPCC found that some animal species are moving north or into deeper waters as climates and weather patterns shift, and in some species of birds, earlier nesting periods and changes in migration times has been observed (Dell'Amore, 2014). Though for many unable to change habitat or behavior, endangerment and even extinction can be the result. The golden toad's extinction has been attributed with medium confidence to climate change and other species of amphibians and reptiles are especially vulnerable (Henson 2014, 199). In another part of the globe, krill, a creature particularly sensitive to temperature changes, and upon which much of the Antarctic's food chain depends, have continued to fall in numbers, and subsequently species that rely on them, including the Adelie penguin, have come under greater threat of extinction (Dell'Amore. 2014). Lastly, on the other side of the world, the polar bear—perhaps the most quintessential symbol of climate change—also remains threatened as a result of decreasing sea ice, which during the summers of the mid-century is predicted to melt away completely (IPCC, 2014).

These studies and observations indicate that climate change is not a problem waiting in the distant future, but has already had an effect across the globe, and threatens to create even

greater alterations, such as the collapse of major ecosystems, if and when a global 2 degree centigrade increase is reached. However, public sentiment about climate change in the U.S. appears to be lagging behind the observed trends. A Gallup poll from 2015 revealed that only about 55% of Americans believed that climate change is *already* occurring. Only 37% said that they believed it would eventually pose a threat to their way of life, and 42% felt that the seriousness of climate change is generally exaggerated. Although a majority of people in the United States (roughly 70%), now believe that climate change of some cause is real, many still do not view it as cause for concern.

This attitude is problematic for a number of reasons. For one, it prevents the immediate implementation of any major policy solution that would effectively slow the effects of climate change. Second, it demonstrates a lack of connection to and awareness of the world outside human society, granting priority to short-term lifestyle needs and economic interests. This second issue is particularly crucial to address when considering the massive influence human societies have exerted on the environment in the last several decades.

Compounded with the effects of climate change, human impacts on the globe in forms of pollution and waste, nuclear fallout and plastic production have changed the environmental state of the earth to such an extent that geologists have proposed the declaration of a new geologic epoch, the Anthropocene (Vaughan, 2016). This notion should provide some context for the enormity of humanity's influence. Nature as a system in the scope of geologic time is certainly not fragile, but the way humans have impacted it in the last century is without parallel and we could produce even more drastic changes if our current practices are allowed to continue. The IPCC estimates that 20-30% of the world's species face extinction over the next century as a

direct impact of climate change (2014). By the end of the Anthropocene, over the next few centuries, that percentage could be greater than 75 (Vaughan, 2016).

But humans will no doubt face many challenges as well, and it is essential for our own benefit that we grasp the magnitude of our impact. During the last glacial advance of the Pleistocene, about 20,000 years ago, the earth's climate was, on average, 5 degrees Celsius cooler compared to the present (Hansen and Sato 2011). The warming that proceeded over the next millennia, according to climate expert William Burroughs, changed the course of human development profoundly and contributed significantly to our survival and global flourishing as a species (Burroughs 2005). However, another warming event is not predicted to turn out as favorably. While we may be successful in securing our place in the geologic record, our treatment of the environment, if left unchecked, will mean extreme challenges and adjustments in the coming decades and centuries. Five degrees Celsius is the difference in temperature average between our current world and an ice age; we are faced with a potential increase of 4 degrees.

Whether a great number of the general public is aware or not, the Earth is poised to undergo a major and global transition that could pose an existential threat to human society and numerous non-human species. For many, such a transition may be outside the realm of imagination, yet it is necessary that we attempt to place this issue in greater context by considering the long-term implications of our current actions more deeply and the responsibilities we have to the environments that sustain us. This requires a reevaluation of the way human cultures, specifically in the West, relate to the nature and a reconceptualization of humanity's role within, not above, the larger natural world.

In my attempt to engage with these issues, I have looked to the work of other visual artists and their efforts to represent the issues we face culturally and environmentally through visual languages and conceptual works that offer a new or more thoughtful perspective. Many within the activist eco-art movement have grappled directly with the problems of our current interaction and attitude toward nature, and are constructing dialogue that demands its re-assessment. For my own work, these and other artists of the environmental and eco-art movements have provided a philosophic and methodological foundation, upon which I hope to contribute.

III. A Genealogy of Eco-Art

Contemporary art's engagement with the environment has its roots in the land art and earthworks movement of the 1960's and 70's. Initiated as a rejection of the gallery institution and what many felt were insular and synthetic definitions of art, land art was hallmarked for its site-specificity and its attempt to engage directly with the landscape of the American West (Kastner and Wallis 2010, 15). The requirement of the landscape connotes a perception of authenticity that can only be gauged through the setting of the wildest and uninhabited locations, suggesting that the experience of natural space allows for a higher realization of the artist's vision. In many ways, land art challenged and redefined traditional conceptions of art and art making practices. The works were neither sculpture nor monument, and required neither the gallery nor studio, utilizing the landscape as subject, material and setting (Kastner and Wallis 2010, 12). Perhaps the most famous and emblematic of these early "earthworks" is Robert Smithson's *Spiral Jetty*, which reaches into Utah's Great Salt Lake, disappearing and reappearing as water levels fluctuate.

This and other kinds of spontaneous and natural interactions contribute to the works' integration into the landscape, which are subjected to wear and erosion against time and the forces of nature. Walter Da Maria's *Lightning Field* is a geometric grid of steel rods in the New Mexico desert, which are occasionally, though rarely, struck by lightning.

Yet these early examples of what would eventually lead the way of environmentally conscious art, while created as an active attempt to connect with and reimagine the land, still existed more or less as an exertion of the artist's vision onto the landscape, in a way recycling notions of manifest destiny and mythologizing the open vastness of the American West and other still wild regions. In many cases the artists' work actually adversely impacted the landscape, deconstructing and reconstructing sites with bulldozers and machinery. For instance, Smithson's *Jetty* required 6,650 tons of black basalt, limestone and dirt to be extracted and moved for its construction (Hall 1983, 50). In this way, the Earth was treated less as collaborator and more as open space and raw material, treatment similar to our present industrial practices of land use and development.

Yet as political activist causes and sentiments gained traction in the 1970's, artist's engagement with nature became more conscientious and would eventually become interventionist. The work of artist Andy Goldsworthy is one example of a departure from earlier land art. Though his works directly engage with natural spaces and the materials of the landscape are similarly utilized in the construction of the art object, Goldsworthy's works are created with virtually no impact on the natural spaces that hold them. Arrangements of leaves in a stream, twigs arranged in arches, spirals of driftwood and spheres of ice left to melt were works regarded for their brief, and often momentary existence (Moyer 2011, 33). In their impermanence and seamless connection with the environment, Goldsworthy's arrangements treat nature as a

creative partner, honoring the specific nature and physicality of his varying materials and settings. Additionally, the ephemerality of Goldsworthy's artworks expresses an awareness of the environment's ever-changing nature, and a notion of symbiotic interaction between human and nonhuman.

Other artists of this newer form of environmental art also exhibited a heightened awareness and sensitivity to the natural world, yet addressed more directly ways in which societies treat or mistreat their environments. Against the backdrop of Manhattan, Agnes Denes' *Wheatfield—A Confrontation* was a 2-acre planted wheat field located directly in front of New York's world trade center as a critique of modernistic values and is, in one sense, a demonstration of the disconnect between city life and the environment. The field was planted directly on top of a landfill and maintained for four months, after which 1,000 pounds of wheat were successfully harvested (Denes, 1982).

Mierle Laderman Ukeles' works also address the environmental attitude and presence of urbanity, specifically acknowledging the issue of waste management. In her performance work, *Touch-Sanitation*, Ukeles personally shook the hand of every garbage collector in New York City as a show of appreciation and gratitude for their commitment to a necessary, while unappealing, aspect of city maintenance (Heartney 1990, 39). Her work *Flow City*, is a documentation of a garbage moving facility, which, as Eleanor Heartney describes, depicts the "city as organism, in which the flow of garbage operates as a kind of circulatory system," (Heartney 1990, 40). Through her observance and documentation of the material waste generated by huge city populations, Ukeles' work serves to remind us of the impossibility of throwing something away.

Both the works of Ukeles and Denes are effective in directing our attention to the most isolated of human spaces, the cityscape, and raising awareness of how this isolation can be diminishing and destructive. Denes' wheat field symbolically shows us what we stand to gain from nature, while Ukeles highlights what we absent-mindedly give back to it. Through their works it becomes obvious that our separation from the natural world is not only physical, but cognitive as well.

Within the last 20 years, environmentally conscious works have become even more adamant and intensely focused on the ongoing mistreatment and indifferent attitude toward the natural environment, becoming increasingly politically mobile, interventionist and interdisciplinary. Many artists and artist groups create works that actively engage with communities, spreading information and offering solutions for sustainability. Others advocate by documenting environmental catastrophes, such as Daniel Beltra's photographs of the Deepwater Horizon oil spill, forcing their viewers to confront and become aware of the direct effects humans have on their environments. Others, in the tradition of Ukeles and Denes, question our cultural conceptions of nature and critique our complacency and disconnection to the natural sphere.

It is specifically this latter group within the current eco-art movement that has directly motivated my work and approach to the specific issue of climate change. Though my work does not communicate through populist geared political rhetoric, nor does it recommend tangible solutions for environmental healing, I find a connection with the ways eco-artists have used imaginative hypothetical scenarios and thought experiments, as well as projects that stimulate long-term thinking, in order to engage with the deeper issues of environmental abuse.

In her work, contemporary eco-artist, Vaughn Bell takes the notion of a “relationship with nature” to a literal place, creating terrariums and living plant works that are intended as kinds of domestic pets. Bell parodies the notion that nature is something that can be possessed, yet highlights the absence of personal responsibility in our imagined ownership, likening our behavior to bad parenting (Moyer 2011,188). Through her ongoing performance work *This Land is Your/My Land*, Bell offers small terrariums and pieces of earth to the public, on the condition that the new owner will not allow the plants to die (Moyer 2011, 189). The exchange of these plant works are complete with contractually binding adoption forms, and through the nurture and care of one small plant or tuft of grass, Bell’s work teaches new plant parents to nurture and care for the larger biosphere (Moyer 2011, 188).

The use of real plant and organic materials is also central to Mark Dion’s, *Neukom Vivarium*, which houses a fallen hemlock tree along with fungi, moss, insects and plants which are sustained by the tree’s nutrients. Dion’s work is intended to show the cyclical nature of life in the natural world and exemplify the complexities and perfect balance of forest environments. The greenhouse-like structure housing the tree is technologically designed to simulate nature, altering sunlight exposure, temperature and simulating rainfall that would occur in the space from which the tree was extracted. The work, located in Seattle’s Olympic Sculpture Park, relates somewhat to Denes’ *Wheatfield* as an effort to bring natural life in contact with city-life, supplementing our experience of natural spaces and organisms, and emphasizing the complexity and perfect symbiosis of natural environments.

Lastly, in what Maya Lin calls her “last memorial”, the artist addresses the ongoing disappearance of natural organisms in what could turn out to be a sixth great extinction. *What is missing?* is a multimedia, collaborative effort to document declining species, flora and other

features of the natural landscape from all over the globe and over time. The project includes permanent and travelling installations, a billboard in Times Square and a website complete with images, video, animation and sound. The website's homepage is a clickable map of species already lost, contributed entries that share disappearances on the local level, and historical quotes that describe biodiversity and experiences of nature from the past. In addition the project offers solutions for current problems and future scenarios. In its thoughtfulness and scope, *What is Missing?* asks its audience to contemplate the tragedy of ecological loss and inspire preventative action, while acting as "a collective memory" of the planet that remembers our changing world for the future (www.whatissing.net).

Through my own work I hope to contribute to the dialogue facilitated by these and many other artists who seek to engage with and address our cultural and cognitive disconnect from the natural world, while warning against the damage and carelessness of our current behavior. Similar to the works of Denes, Ukeles and Lin, I aim to express that the issues we face environmentally come from a place deeper than mere policy failure and political dispute, but from an absent-minded lack of appreciation of the ways that we are bound with and indebted to the world beyond our own species. If we cannot come to address this limited perception of ourselves and nature, we will be unable to avoid the impending environmental challenges that not only threaten our own well-being, but will transform the only world we have ever known.

IV. Picturing the Future

As I approached this project I was reminded of a sketch by Leonardo of an old man contemplating the flow of water around a post in a stream. The study shows a fascination with the water's cyclical, inward moving motion. Inspired by this kind of movement, Leonardo went

on to mimic its cyclical force in several works, including the lost *Battle of Anghiari*. The constant, turbulent movement of the stream, to Leonardo, described a fundamental power—a force that extended from and is regenerated by nature itself (Kemp 2006, 311-314).

My work intends to focus on the power, tenacity, complexity and beauty of the natural world, and is influenced by philosophies of deep ecology and ecocentrism. In this approach, my work is not an attempt to explicitly acknowledge the impending challenges that humans will face, for I believe that in the mainstream discourse of climate change and other issues, this is already the major focus. Additionally, I feel that addressing environmental destruction only as it affects our own comfort and interests is an extension of the anthropocentric attitudes that brought about these crises to begin with. Instead, I have striven to create work that encourages my viewer to focus primarily on the ways that our behavior influences the natural world, and only implicitly as it relates to the welfare of human life.

In her essay, “Does Nature Matter?”, environmental and animal ethicist Clare Palmer questions whether humans have an ethical responsibility to the non-human world, and notes that the lack of knowledge of the specific ways in which many species will be effected by climate change impedes our ability to answer this question presently. One interesting suggestion she makes in this argument is that climate change could, over millennia, turn out to be as productive as it is currently destructive.

My work is an attempt to place the issue of climate change in the context of deep time by imagining a future in which nature, impacted by our current activities, is regenerated into something new. Though our species has proven to be amazingly influential, anatomically modern *Homo sapiens* is a relatively young species, and on a timeline that stretches 13.7 billion years, could be regarded as insignificant. The enormous changes we risk inflicting on the planet

will certainly have ramifications for the world in the near future and will have enduring effects over the next several thousand, or even hundred thousand years. Yet, with the disappearance of one species, another will undoubtedly come to the fore, adapting and evolving to fill the absence. The earth, as described by scientist and environmentalist James Lovelock, is a self-regulating system, always striving for equilibrium. Thus, though it will alter the current planet to a vastly different state, whatever damage is done during the Anthropocene will not produce any permanent debilitating effect, but merely induce a shift toward a new equilibrium.

By imagining this evolutionary transition, I ask my viewer to consider the resilience and ability of nature, as an entire system, to persist for eons before and after, with or without, the presence of humans. I hope that through this kind of contemplation, and exercise in deep-time thinking, we as a species can come to realize our smallness and relative obscurity in the scheme of evolution and the greater ecosphere. This understanding directly challenges our present and historically Western view of nature as a depository of resources, an object of aesthetic appreciation, or empty space waiting to be colonized. It challenges the notion that human society has a rightful status above the natural world, or that our society and nature can even be conceived as separate.

My vision of this ecological future emphasizes flux, growth and interconnectedness. I decided to describe these elements through the abstraction and integration of natural forms. The natural materials I worked from for this project are found objects, personally collected over time and extracted from a variety of places, mapping my own experiences across the different terrains of the natural world. These objects included cypress pods from Tuscany, walnut shells from my parent's backyard, dried wood and rocks from the Arizona desert, as well as leaves and animal bones from the forests of Appalachia. From these objects I made studies. Though I referenced

the objects directly I did not try to copy them, but mimicked their patterns and forms, manipulating them into something familiar to the original, but new. These studies were then collaged into the final drawing. Rather than start from a preliminary sketch or outline, I decided to work section by section beginning at the center and working to the periphery of the paper, creating a visual suggestion of outward moving growth. In this way, chance and evolution become aspects of my process, from the serendipitous discovery of something on the ground, to the gradual unplanned appearance of the final work.

My personal approach to image-making is one that uses traditional media, and I chose for this project to work in charcoal. I felt that the grey-scale of this technique supports the notion of viewing an altered world that is separate from our present visual understanding of the Earth. Additionally, by using only charcoal pencils, I was able to create areas of fine detail and intricacy, which I tried to integrate throughout the entire image to further emphasize a sense of complexity (Figures 1-2).

In order to convey a sense of vastness and variety, I decided to work large scale (approx. 6'x4'). By assuming the visual field of the viewer, my intention for the work is to create a sense of immersion, while describing a quality of complexity and extensiveness in natural systems and spaces. Further, in my attempt to create a sense of natural order and structure in my composition, I referenced natural geometries and patterns, including bilateral symmetry and fractals, along with the natural surface textures and patterns of my reference materials. This allowed me to achieve a final image that was relatable to something real in nature, while also suggesting a sense of scale-less universality. While the overall bilateral symmetry suggests micro-scale phenomena such as splitting cells and microorganisms, the textures of wood grain, leaf veins, pedals and stones, along with the physical size of the work also suggests the macro-

scale. Through this ambiguity of scale and proportion, I hope for the work to communicate a sense of infinite, scale-transcendent complexity and order that arouses a feeling of the sublime.

Usage of the sublime has a tradition in art history and especially in descriptions of nature and natural phenomena, though my usage of it here varies quite radically from earlier examples. In the landscape depictions of European Romantic painting, Burke's definition of the sublime, as that which is inspired by terror, is overtly referenced. Images of shipwrecks, storms and jagged, mountainous landscapes cast the natural world as a threatening chaotic opponent to the will of mankind. Through this use, nature was depicted in contrast to the culture and thought of the contemporaneous Enlightenment (Bell 2013).

Beginning around the mid 19th century, the concept of the sublime also found use in the depictions of the American landscape by painters of the Hudson River School. Expansive forests, mountain ranges and winding rivers depicted the land as vast and awe-inspiring. However, as noted by art historian Elizabeth Kessler, these natural vistas were often painted from an elevated perspective or included figures in the foreground gazing down on the landscape, motioning to ideas of exploration and manifest destiny (Kessler 2012). These references again place nature in opposition to, or in a category of "other" in relation to human society and culture. Additionally, the dynamic suggested in the ideology of manifest destiny, in which nature is waiting to be claimed, is a view criticized by eco-feminists as an attitude of patriarchal dominion over the natural world (Birkeland 1993, 13-17).

Though my usage of the sublime as a way of representing nature relates in some ways to these traditions, I do not attempt to use the sublime in nature as a way of drawing boundaries or connoting opposition between humans and nature. Rather my intention is to reference the Kantian idea of the mathematical sublime, in which the vastness, interconnection, complexity

and seeming infinity of nature makes us aware of our incapacity to grasp or understand the natural world in its entirety. In the hopes of evoking this sense of awe and wonder, I attempt to encourage recognition of the human role within and partial to nature, and challenge current attitudes of superiority and privilege.

V. Living in the World

Ethicist Aldo Leopold said that, “a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.” (1949, 224-225) My artwork and goals for this project are informed and motivated by this and other ethical views of ecocentric philosophy and deep ecology. Not only does our cultural understanding of the natural world require a reconceptualization, but in order to legitimately address and mitigate an environmental crisis as sweeping as climate change, we must also redevelop the human role within it.

Philosopher Arne Naess advocated an idea of “self-realization” which is intended to do just this. A departure from the predominant view of the self in Western culture, which is confined to the individual ego, Naess’ definition of the *ecological self* is one that extends to other people, our species as a whole, and species of the non-human world (Naess 1986, 81). This understanding is in accordance with many traditions in Eastern philosophy and religion, especially Zen Buddhism, which conceives all beings as part of a singular whole (Naess 1985, 199). Additionally, Naess relates the ecological self to Eastern concepts of the *atman*, which means soul or essential self, and according to some Buddhist texts, stresses an interconnectedness with living beings and the collective living world, encouraging the

preservation and love of nature, and emphasizing principles of non-violence against both people and the Earth (Naess 1986, 91).

Through the perception of ourselves as part of nature, and conversely, of nature as part of us, the flaws in our current treatment of and isolation from the natural world are made obvious. Self-realization necessarily makes apparent that the perceived power structure predominant in the West, in which human beings are assumed to possess superiority and a right to exploit the natural world, is not only wrong, but akin to self-harm. If there is no real or perceived boundary between individuals, the human species and the living world, restoring ecological balance becomes imperative to our own self-interest, and current priorities such as lifestyle and economic interests, which disrupt this balance enormously, appear trivial and myopic in the greater scheme of things.

Following from Naess' understanding of the ecological self is the principle of biocentric equality, which asserts that all life forms have inherent worth and an equal right to live and flourish (Devall 1985, 67). Though humans must utilize nature to some degree to meet basic lifestyle needs, it is excessive and immoral to deplete the natural environment to the point of collapsing entire ecosystems for non-essential material needs. Further, these actions deprive humans of an experience in nature that many cultures regard as vital.

Ecologist E. O. Wilson believes this need to experience and engage with the natural world may also be motivated by evolutionary biology. In his 1984 book by the same title, Wilson proposes the concept of "Biophilia", which he describes as an innate human attraction to and fascination with life and living systems. This concept shows similarity to Naess' ideas of the self in the way that it links to our own self-understanding. Wilson states that, "to the degree that

we come to understand other organisms, we will place greater value on them and ourselves.”
(1984, 2)

The notion that we are biologically conditioned to appreciate and admire the natural world, when considering the timeline of human existence, is not unreasonable. The human species has existed on Earth for around 100,000 years, urbanized society emerged around 10,000 years ago, and industrial society has existed for less than 200 years. Our species evolved and lived for nearly its entirety, with the exception of the very recent past, in direct connection to and as part of the natural world. Though to many in the West the idea of living in direct relationship to nature may seem alien, when considering the longer timeline of human existence, it is really our current lifestyle that is highly unnatural.

Yet, it is unlikely, and perhaps unnecessary, that we will return to a nomadic pre-technological society. Rather we must seek out ways to adjust and tailor our current, technologically advanced civilizations in a way that preserves balance in the ecosphere while facilitating the relationship between humans and nature. Ecologist Michael Rosenzweig proposes ways of achieving both of these ends through what he terms “reconciliation ecology.” Rosenzweig posits that, rather than give up our technologies and modern lifestyles, we need only be conscious of the living beings with which we coexist by designing infrastructures and living spaces that work in harmony with the requirements of other species. Examples of this “reconciliation” range from the construction of birdhouses for the use of declining species, to the design of building ledges that support the nesting habits of Peregrine falcons in urban spaces. Through these and similar efforts, humans can have powerful and positive impacts that help sustain biodiversity even within cities and communities (Rosenzweig 2003).

Though reconciliation may not be a catchall solution for every environmental challenge, it takes conservation and mitigation in a new direction that honors the interests of the nonhuman world and embraces the interactive relationship between humans and nonhuman species. It is a practical step in the process of self-realization that develops a sense of place and belonging of human societies within the greater whole of the natural world.

I believe that solutions such as these as well as a conceptual shift in the way that humans relate to the natural world are the best chance we have of making substantial progress in addressing environmental problems. The current dynamic described and upheld by Western culture between humans and the Earth will not allow for the policy changes necessary to substantially address problems as large as climate change. Yet, with a deeper understanding and respect for the natural world in conjunction with an understanding of the human place within and in connection to nature, I am hopeful that the solutions and motivation to act will naturally follow.

Conclusion:

The issue of climate change poses an environmental threat beyond anything human civilizations have dealt with in the past and requires swift and significant action if further ecological damage is to be prevented. Through my own artwork I hope to bring awareness to the deeper issue of our cultural attitude and disconnect from the world beyond human society and build upon the precedents of the ecological art movement by attending specifically to the influence of our behavior on the natural environment. In my attempt to contextualize our current treatment of the natural world within geologic time, I hope to engage with the philosophic views of deep ecology and move our own self-regard away from the current egocentric model by

describing the resilience, expansiveness and complexity of the natural world that we are encompassed by. Through the valuation of nature for its intrinsic worth and the acknowledgment of our own dependence on the health of the biotic community, I believe that the motivation to address and mitigate climate change and other environmental crises is well within the realm of possibility. Though nature as an entire system will long outlast us and the damage we inflict on it, we are held responsible for the destruction and species die-off that will become ever present in the next century. By acting in accordance with nature rather than exploiting it for our own use, we will not only support the preservation and balance of the natural world but will ultimately move toward a more fulfilled and enriching existence as equal members of the greater ecosphere.

Figures:



Figure 1: *Bioverse I*, 2016, 72''x45'', charcoal.



Fig. 2: *Bioverse I* detail, 2016, 72''x45'' charcoal.

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