

Inter nos: Between us

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INTER NOS: BETWEEN US

In the Anthropocene, the human epoch, humans have become increasingly disconnected from their natural environment. People have forgotten that they are a part of nature's ecosystems and depend on them for their survival. The very act of breathing depends entirely on plants producing oxygen. Darrin Qualman suggests that nature's cyclical processes of production, in which everything is transformed and recycled so that nothing is wasted, have been replaced with linear ones that rely largely on fossil fuels, which has led to oceans full of plastics and other objects that take centuries to decompose (2019, 6-10). This shift to linear systems of production has encouraged the human race to see themselves as separate and above non-human life.

Inter nos: Between us explores interconnectivity and the spaces between industry and ecology in the Anthropocene through transdisciplinary knowledge and interactivity. The juxtaposition of plants living within the oil drums speaks to the traditional binary framework in which ecology and industry are opposed as well as the tangled and complicated history between them. The delicate patterns cut into the oil drums reference the parallels between the structural binaries supporting the oppression of women and those supporting the exploitation of nature. Bio-sonification acts as reminder of our connection to non-human life around us by transforming the invisible life force of the plant, which is influenced by its environment, into something that can be experienced audibly, creating a relationship between human and plant life. This relationship encourages the viewer to consider their influence on their immediate environment and their responsibility to care for and maintain it in the Anthropocene.

The Anthropocene, which was coined by Paul J. Crutzen in 2000, is a means of communicating the change from the relatively stable world of the Holocene to one in which humanity has altered the earth state into a new unstable one (Walters & Zalasiewicz, 2018, 36). In this new and unstable world, nature and culture have become polarized and humans have come to see themselves as separate and superior to the non-human world. It becomes increasingly important for the human race to consider the way they interact with the non-human world upon which they are dependent to survive. One way to do this would be to reflect upon the ecosystems that humans belong to. Ecosystems are incredibly complex and as such need to be examined from a variety of perspectives in order to understand them. This can be accomplished through transdisciplinarity.

Transdisciplinarity is an emerging approach to problem-solving which involves the emergence of a new approach that transcends the boundaries of disciplinary perspectives. The objective of transdisciplinarity is to understand the present world, in all of its complexities, instead of focusing on one part of it. As theoretical physicist Basarab Nicolescu explains “Disciplinary research concerns, at most, one and the same level of reality . . . on the contrary, transdisciplinarity concerns the dynamics engendered by the action of several realities at once” (Nicolescu, 2018, 76). I consider my practice to be transdisciplinary because I draw knowledge from various areas of discipline and have been involved in collaborations with people of various fields including engineering, microbiology, and drama. I enjoy working this way because it allows me to look at things from multiple perspectives and helps me to develop a language that enables me to convey those perspectives.

Olafur Eliasson, a Danish-Icelandic artist based in Berlin, uses a transdisciplinary approach in his practice that is influential to my work. His transdisciplinary studio, which employs over 100 people, is made up of architects, art specialists, technicians, engineers, designers, and cooks, among others, who work collaboratively to create projects as diverse as its staff. Due to the diversity within the studio, continuous discourse is its driving force: “I basically find it inspiring to look at something and think about it with other people. . . This back and forth between looking at something for yourself, by yourself, pondering the issue and then looking at it from plural points of view of the team, of friends, knowing from where they speak, knowing and evaluating through the glasses which they see, is very inspiring. A kind of shared, felt looking develops” (Coles, 2012, 193-4).

Multiple points of view are evident in Eliasson’s work. Michelle Kuo describes Eliasson’s work as “utopian - interweaving the scientific and mathematical with organicism, irrationality, and disorder, posing the universe a kind of teeming communing, material plane. And yet Eliasson’s utopia is also rebellious, critical. . . Eliasson thus aligns with art that paradoxically binds human and machine, structure and nature, affect and objectivity. Against technological rationality, this art is visionary” (Kuo, 2018, 12). Eliasson’s work with Einar Thorsteinn’s quasi bricks is an example of this. Thorsteinn, an Icelandic architect and mathematician and a collaborator of Eliasson’s studio, developed a three-dimensional polyhedron in the 1980s which he would go on to call the quasi brick. Eliasson’s interest in the organic topologies that these geometric blocks could create caused him to begin experimenting with them. He found that tessellation was the link between the organic and the technological. He went on to use the quasi bricks in several architectural projects in collaboration with architect

Sebastian Behmann including the facade of the Harpa Reykjavic Concert Hall and Conference Centre. Considering the organic and the technological from multiple perspectives including mathematics, architecture, and art bridges the gap between these two polarized entities.

Multiple points of view are important to Eliasson's work because his work is rooted in Object-Oriented Ontology, a "21st-century Heidegger-influenced school of thought that rejects the privileging of human existence over the existence of nonhuman objects" (Harman, 2002, 2). In an interview with Daniel Birnbaum, Eliasson states "Many people polarize nature and culture, inside and out but I think it's possible to be critical and to work within what we are criticizing at the same time." This interest in the rejection of polarization of nature and culture is evident in his work *Moss Wall* (1994) in which reindeer moss is woven into wire mesh and mounted to the

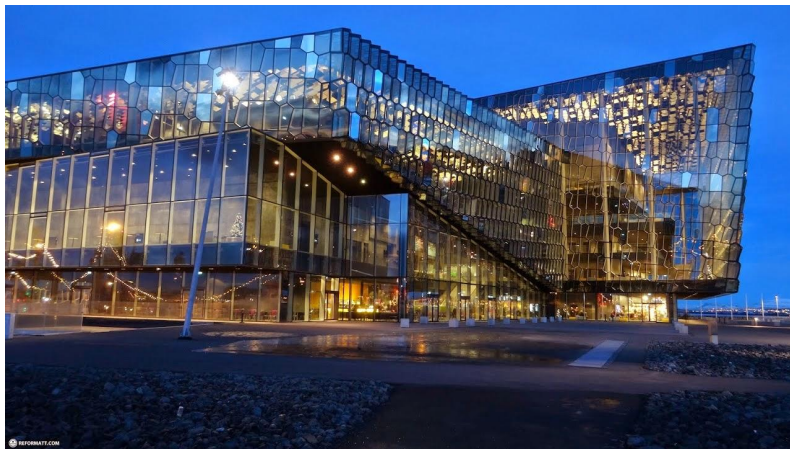


Figure 1. Olafur Eliasson, *Harpa Reykjavic Concert Hall and Conference Centre*, 2005.

gallery wall. By bringing moss into the gallery it has now become a part of culture and the two are no longer polarized. From the viewpoint of object-oriented ontology in the Anthropocene epoch, human-kind can no longer be

distinguished from nature, everything has become culture. Eliasson's practice spans across disciplines and considers both human and non-human life.

In our modern world, it is often forgotten that our existence depends directly on the natural environment. Our ancestors looked to their immediate environment for nourishment and shelter. They also looked to the natural environment for inspiration for everything they built using materials that were locally available to them. Steven Kellert explains that “Most of our problem solving, critical thinking, and constructive abilities continue to reflect skills and aptitudes



Figure 2. Olafur Eliasson, Moss Wall, 1994.

learned in close association with natural systems and processes that remain critical in human health, maturation, and productivity. The assumption that human progress and civilization is measured by our separation from if not transcendence of nature is an erroneous and dangerous illusion” (Kellert, 2008, 4). Unfortunately, because we see ourselves as separate from nature, we have developed processes that work against nature rather than with it. Most processes in nature work in cycles, such as the food cycle, in which plants grow in soil, plants are eaten by humans and animals, and the waste produced by humans and animals is returned to the soil, where it decomposes and provides nutrients to the soil which produces new plant life. In this system, nothing is wasted, and resources are constantly being recycled. Our ancestors were aware of these cycles and lived in harmony with them, however since the industrial revolution, humans have moved from these cyclical forms of production that are in line with the natural cycles of their immediate environments to linear modes of production that rely largely on fossil fuels (Qualman, 2019, 6-10). Because linear systems do not recycle or repurpose the items that they produce, we are left with large amounts of waste such as plastics in the ocean and other objects

that take a long time to decompose. This shift to linear systems of production has encouraged the human race to see themselves as separate and above non-human life and has led us to the current Anthropocene geological era.

Our obsession with consumption has led us to deforestation, mass extinctions and rising sea temperatures. Our need to consume has become more important than the need for other non-human beings to live. Eliasson acknowledges the importance of considering more than just humans in the modern world, “The need to see everything, including animals and inanimate objects - not just human beings - as agents in the intricate networks that make up our world, biological and lived, I think it’s very healthy to take this perspective. It sharpens the question of what it means to take responsibility, both locally and globally” (Olof-ors, 2015, 3). The notion of responsibility is important to Eliasson’s work as he encourages us to consider our place in this world and our responsibility in creating and maintaining it.

Dutch artist Jeanne van Heeswijk also considers what it means to take responsibility within a relational practice. Nicholas Bourriaud defines relational practice as “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.” (Bourriaud, 2002, 13) For van Heeswijk “a work is created in collaboration with the community it is addressing, and the projects are dependent upon the community’s continued involvement for their sustainability” (van Heeswijk, 2004, 87). It involves setting up situations where participants become aware of their investment in public space through collaborative dialogue. *Westwijk* (2002) and her *Oud-Beijerland* (2002) projects are great examples of these practices. In Oud-

Beijerland, which is located in the Netherlands, she facilitated an intervention of an existing public site, the Oud-Beijerland town hall. In regard to this project, she stressed the importance of listening and checking your agenda at the door. In *De Strip*, a part of the *Westwijk* project, old abandoned shopping centres were repurposed into cultural centres and artist studios by residents of the community. Allowing community members to take part in the creation of their environment gives them the sense of responsibility in maintaining the environment that they created. Removing hierarchies between government and community members is crucial to van Heeswijk's work as she believes that it "moves responsibility from authority to the people who use it" (van Heeswijk 2004, 292). Van Heeswijk's work influences participants to recognize their stake in the environment that they want to create and their responsibility to that environment.

In order to engage the viewer and encourage them to consider their influence on their environment and their responsibility in creating an environment that they want to engage in Eliasson uses an experiential approach. Eliasson's *Your Utopia* (2003) consists of a white metal tube fitted with a projection foil with a button on the end. When viewers press the button, the word Utopia becomes visible. It addresses the feeling of powerlessness on an individual level. The title *Your Utopia* takes a concept like utopia with all of its historical baggage and transforms it into something very personal. The deliberate use of the pronoun 'your' in the title not only encourages the viewer to engage while imbuing a sense of responsibility but also creates an experience that is very personal. Viewers must engage with the work by pressing a button to bring the work to life. The word utopia does not appear without the viewer's physical

engagement. He refers to this as seeing yourself seeing, “the introspective quality of seeing: you



Figure 3. Olafur Eliasson, *Your Utopia*, 2003.

see whatever you’re looking at, but you also see the way you’re seeing. You can find pleasure or fear in whatever you’re experiencing, but your experience of the thing is integrated as a part of the thing itself” (Eliasson and Irwin, 2011, 54). This approach to art-making influences

the viewer to be aware of their influence on their immediate environment without coercing them to experience the artwork in any particular way.

Through my own work I hope to engage the viewer to encourage them to consider their relationship with non-human life. To do this I will be using metal and live plant sculptures as well as a bio data sonification device.

Starting point

Plants and metal are the two main materials I work with. These materials hold personal meaning for me. Metal and plants are symbolic of my parents and their established gender roles; my father ex-military, working in many industries that are harmful to the environment including mining, logging, and trucking. My mother a gardener, and seamstress, ran a daycare out of her home. These traditionally defined gender roles made a distinct impression on me and limited me in the ways I felt I could explore the world. I was often told as a child that things I wanted to do weren’t for girls. These limitations were drivers in my interest in transdisciplinary knowledge because it allows me to explore various ideas from many different perspectives. This is one reason why I find Eliasson so inspiring because his work seems limitless in the way that it

crosses boundaries and is considered from the viewpoint of several disciplines. Taking this approach helps me to transcend these limitations of gender.

On a larger scale, metal represents industry and capitalism and plant life is an obvious reference to ecology and environment. The juxtaposition of materials speaks to the conflict between industry and ecology in the Anthropocene. There are parallels between the structural binaries supporting the oppression of women and those supporting the exploitation of nature, which I will cover in the following sections. The juxtaposition of metal and plant life speaks the oppression of patriarchal structures in my personal life and on a large scale. I choose to rust the metal because I feel that these oppressive structures are proving themselves outdated, out of touch and in the process of collapse.

My first experimentations were pieces of sheet metal into which I had cut macro patterns of plant life. To do this, I had taken macro images of different lichens,



Figure 4. Dani Dale, Metal cut outs, 2017.

mushrooms and plant life and projected the patterns on to the sheet metal, which I then cut out using a plasma torch. I enjoyed the reductive process of plasma cutting and decided to continue with larger objects such as oil drums.

Cyanotypes

Towards the end of my first year I started experimenting with cyanotypes and barren landscapes. I would go out in search of some of the most barren landscapes I could find including sand dunes and desolate winter landscapes, abandoned alleyways - anything area that I could find that lacked life. I spent a significant amount of time researching the most uninhabitable places on earth, both natural such as the Atacama Desert & the Antarctica and man-made like Lake Karachay in Russia. I was fascinated by the physical strength of certain species to survive in these environments. For me, this was also a reflection of an inner barren landscape. My mother passed suddenly in 2015, and at this point I was working through some grief. As I was going through her stuff after her passing, I found an image of her as a child holding a snake in her hand, with a crow perched on her head. I struggled with this image for a while because I found it difficult to reconcile the picture of this girl who was spirited and adventurous with the mother I knew, who was quiet and meek and obedient. I spent time contemplating what would have caused such a drastic change in a person's character. I started to question the damaging effects of gender constructs and the impact of their limitations on the psyche.

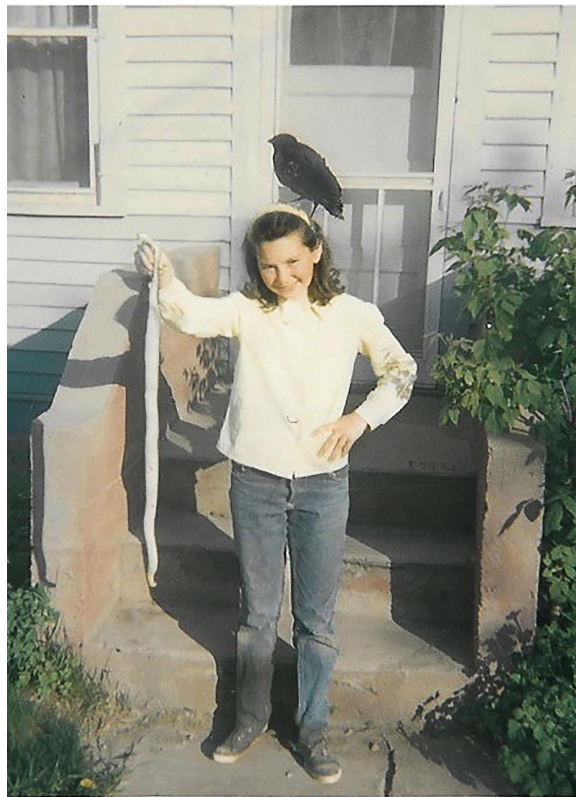


Figure 5. Dani Dale, Photograph of my Mother, circa 1960s.



Figure 6. Anna Atkins, New Zealand, Cyanotype print, circa 1860s,

Cyanotypes became a consideration of strength, both physical and emotional to deal with harsh environments. The icy blue of the cyanotype printing process adds a visual coldness to the barren landscapes in the photographs. It is also a nod to Anna Atkins. Atkins was a nineteenth century botanist and photographer from England who used the cyanotype photogram process to document plants. As a woman in the 19th century, she would have experienced considerable limitation as well. Barren landscapes were also a consideration of the

way the landscape may change in the face of climate change. My experimentation in cyanotype photography became a tool for exploring grief, resilience and limitation. I chose not to continue with this work at this time because I wanted to work more sculpturally, and I found the two mediums hard to connect.



Figure 7. Dani Dale, Field, cyanotype print, 2018.

Moss Barrel

Moss Barrel began with the desire to challenge my ability to make even finer cuts into metal, this time I decided to use an oil drum. I copied an intricate floral lace pattern onto it and cut the pieces out. This approach is largely influenced by Cal Lane. Lane is a Canadian artist

who uses a plasma cutter to cut intricate lace patterns into metal objects. The size of the objects varies from shovels to sea cans. Her exhibition *Car Bombing* (2007) includes shovels, wheelbarrows and parts of a car body that have been dismantled. Lane subverts the history of male dominated industries and the history of sculpture also largely dominated by males (Peck,



Figure 6. Cal Lane, *Wheelbarrow* from *Car Bombing*, 2007.

2014, 1). I find her approach of using an industrial practice to create very intricate works reminiscent of lacework and other textile industries very liberating because it speaks to the limitations that I experienced growing up female. As a child, it was made very clear to me which activities were suitable for girls. Industries such as welding and metal fabrication and methodologies such as STEM always seemed out of reach because they were characterized as male-centric.

At this point, I was also beginning to familiarize myself with plant life, and spent time experimenting with plants in the studio, learning propagation, experimenting with hydroponics and aquaponics etc. It was at this point that I started to take an interest in biomimicry. Biomimicry is the act of learning from nature, borrowing designs and strategies that have worked in place for billions of years” (Benyus, 2008, 28). It is here that I began to understand the complexities of nature, how interconnected ecosystems are and our place within it. I started learning about the health benefits of nature and including plant life in architecture and urban planning and considering the solutions that nature already has for different problems.

However, I wanted to more than mimic plant life in my barrel, I wanted to juxtapose the materials directly in order to explore the spaces ecology and industry. I foraged moss and attached it to the barrel using a landscaping felt substrate glued to the barrel and a mud slurry. The moss is now living on the interior walls of the barrel. This is where I began to question how nature and industry coexist as well as nature's regenerative capabilities even in the face of human caused disasters such as Chernobyl, which after 30 years has been referred to as an irradiated Eden because despite high levels of levels of contamination that continue to exist today, plants and animals are thriving there.



Figure 7. Dani Dale, Moss Barrel, 2018.

Corset Barrel

In making corset barrel I want to push my plasma cutting abilities even further with intricately detailed designs. At this time, I was focusing quite a bit on feminism and although the focus of my work is centered on our interdependent relationship with the non-human world in



Figure 8. Dani Dale, *Corset Barrel*, 2018.

the Anthropocene, it's important to note the parallels between the exploitation of women and the earth. "Ecofeminism in particular has a robust liberatory history, built around its recognition of the parallels between the structural binaries supporting the oppression of women and those supporting the exploitation of nature . . . structural homologies between patriarchy, capitalism, racism, and technoscience, each of which depends on enforcing hierarchical dualisms between dominant and oppressed entities, often on behalf of the mutual liberation of women and nature" (Gursin, 2017, ix). Upon

reflection of these structural binaries I wanted to create a sculpture that addressed the parallels between them as well as the weight and constrictive nature of these hierarchical dualisms.

Corset Barrel is a steel oil drum into which I cut the intricate pattern of a lace corset. The intricate patterns speak to the intense labour involved in traditionally feminine work such as lacemaking and textiles, and to the immense efforts of feminists to resist and replace patriarchal structures. I later filled the barrel with plants to grow and take over the barrel. The contrast of

green plant life and rusting metal is visually appealing, but it also speaks to the tension between structural binaries and the women and ecologies that they oppress.

Living wall

I became very interested in biophilic design, an innovative approach that emphasizes the necessity of maintaining, enhancing and restoring the beneficial experience of nature in the built environment (Kellert & Heerwagen, 2008, vii). I began learning about the health benefits of

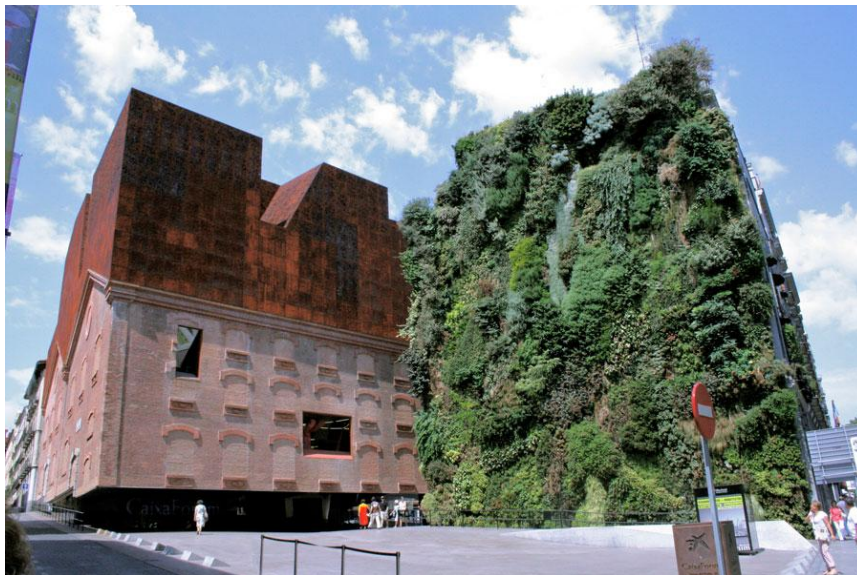


Figure 9. Patrick Black, Living wall at the Caixa Forum Museum, Madrid, Spain, 2007.

incorporating nature into urban spaces. I started to take an interest in living wall systems, in particular those of Patrick Blanc. Blanc is a French botanist who spent his childhood, observing nature. These observations led to the creation of his vertical wall

systems, which recreate the environment that the plants naturally thrive in. Blanc has created living walls, both indoor and outdoor all over the world including the Caixa Forum Museum in Madrid and the Siam Paragon Shopping Center in Bangkok. According to Blanc, the vertical wall changes the relationship that humans have with plants. “Seen at eye level or from underneath, plants reveal themselves. Set vertically, they can at last have a dialogue on an equal footing with human beings” (Blanc, 2008, 87). This dialogue with non-human life is important in

the Anthropocene as we are confronted with our relationship with it. What does it mean to coexist with non-human life and what is our responsibility to it?

I decided to attempt creating my own living wall using plants that I had propagated in my studio. At this time, I was still concerned with eco feminism and I wanted to convey the feeling of patriarchy bearing down on nature and women, I created a metal cut out of Mary Magdalene in the form of stained glass, which was laid over the plants. I chose a Mary Magdalene as a symbol of the patriarchal binary placed on women as either martyrs or whores. I wanted to convey the weight that these simplistic labels bear on women. This work was an



Figure 10. Dani Dale, Mary Magdalene, 2018.

experiment to help me to understand the living wall concept, I chose not to continue with wall pieces because they create a very specific and formal relationship, I wanted to create a more dynamic and personal relationship with my work.

Living Barrel

After working with the living wall, I wanted to emphasize this tension between nature

and industry by creating a living wall within an oil drum.

Plants were removed from their dirt and placed between

layers of felt substrate which had been secured to the barrel.

I cut floral patterns into the barrel, however I used a much

looser approach to patterning than in my past barrels

because my focus was beginning to shift from gender to

environmental concerns and I was becoming less interested

in cutting detailed patterns. I rusted the metal and placed a

mirror in the bottom of the barrel to add the illusion of

depth and insert the viewer into the piece to encourage them

to consider their place within the industry and ecology

binary. Enough room was left at the bottom of the barrel to

fill it with water in order to introduce an irrigation system so that the plant can live in the gallery

for an extended period of time without needing to be watered. Considerable effort has to be made

to keep the plants alive which reflects the labour that goes into caring and maintaining the things

I cherish, whether it is the Earth, my child, or our rights as women.



Figure 11. Dani Dale, Living Barrel, 2019.

Full Living Barrel

I continued to explore the spaces between ecology and industry and experimenting with the living wall inside of a full metal drum this time, not cutting aside from the top to gain access to the inside of the barrel. The full barrel holds a visual weight that the intricately cut barrels do not and as such conveys a heavier presence and greater contrast to the plants living inside of it. The barrel was fully covered with landscaping felt and plants and a mirror placed in the bottom. The lack of cutting encourages the viewer to look into the barrel. The mirror placed in the bottom immerses the viewer into the piece. In seeing themselves within the piece, I hope that viewers consider their place within the traditional ecology industry binary framework. While peering into the barrel, I hope viewers also consider the plants that are producing the oxygen that they are breathing.



Figure 12. Dani Dale, *Full Living Barrel*, 2019.

If Plants Could Speak...

Following the living barrels, I was considering the interdependent relationship that humans have with the non-human world. The simple act of breathing is entirely dependent on plant life. With this in mind, I wanted to encourage the viewer to consider their relationship to plant life by making them aware of it using a Bio Data Sonification Device.

A Bio Data Sonification device is made up of electrodes which are attached to the leaves of plants. They read the fluctuations in galvanic conductance, these readings produce MIDI notes that are then converted to sound. This turns the invisible life force of the plant into something that can be experienced audibly.

The plants themselves are influenced by their environment, so they will be affected by any

touch, noise or simply the energy in the room. Using an experiential approach similar to that of Eliasson I hope to create a relationship between human and non-human life that can be experienced. Eliasson's belief is that it's an artist's responsibility "to help people not only get to know and understand something in their minds but also to feel it emotionally and physically. By doing this art can mitigate the numbing effect created by the glut of information we are faced with today, and motivate people to turn from thinking into doing" (Eliasson, Global Climate



Figure 13. Dani Dale, If Plants Could Speak..., 2019.

Action Summit, 2018). Through this experience, I hope to encourage the viewer to consider their influence on the world around them leading to a sense of responsibility and the motivation to act.

Through transdisciplinary knowledge and interactivity I have explored interconnectivity and the spaces between industry and ecology in the Anthropocene. By creating an environment within the oil drums, in which the living plants can thrive I have created a juxtaposition that speaks to the traditional binary framework in which ecology and industry are opposed as well as the tangled and complicated history between them. I have also addressed the parallels between the structural binaries supporting the oppression of women and those supporting the exploitation of nature through the intricate patterns cut into the oil drum, which reference the intense labour involved in traditionally feminine work such as lacemaking and textiles, and to the immense efforts of feminists to resist and replace patriarchal structures. Finally, through the use of a bio-sonification device, I have created a relationship between human and non-human life which can be experienced audibly encouraging the viewer to reconsider their influence on the non-human world and their responsibility to care for and maintain it. My hope is that this felt sense of responsibility will lead to action as humans consider their place within the Anthropocene.

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APPENDIX A



INTER NOS: BETWEEN US

DANI DALE

In the Anthropocene, the human epoch, humans have become increasingly disconnected from their natural environment. People have forgotten that they are a part of nature's ecosystems and depend on them for their survival. The very act of breathing depends entirely on plants producing oxygen. Darrin Qualman suggests that nature's cyclical processes of production, in which everything is transformed and recycled so that nothing is wasted, have been replaced with linear ones that rely largely on fossil fuels, which has led to oceans full of plastics and other objects that take centuries to decompose. This shift to linear systems of production has encouraged the human race to see themselves as separate and above non-human life.

Inter nos: Between us explores interconnectivity and the spaces between industry and ecology in the Anthropocene through transdisciplinary knowledge and interactivity. The juxtaposition of plants living within the oil drum speaks to the tangled and complicated history between industry and ecology. The delicate patterns cut into the oil drums reference the parallels between the structural binaries supporting the oppression of women and those supporting the exploitation of nature. Bio-sonification transforms the invisible life force of the plant, which is influenced by its environment, into something that can be experienced audibly, creating a relationship between human and plant life. This relationship encourages the viewer to consider their influence on their immediate environment and their responsibility to care for and maintain it.

























