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The Devil Can’t Find You If You Hum: Post-Environmental Conductivity

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The Devil Can’t Find You If You Hum: Post-Environmental Conductivity

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Fine Arts at Virginia Commonwealth University.

By

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Abstract

THE DEVIL CAN’T FIND YOU IF YOU HUM: POST-ENVIRONMENTAL CONDUCTIVITY

By Thomas Burkett, MFA

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What would a repositioned concept of environmentalism look like, one that is specifically determined by the geography and the human rights at stake within the environmental politics of a place? I am interested in determining how performative engagements act as an art form that counters dispossessing industrial, political and environmental regimes. Within this discussion of environmental dispossession I will discuss ways I have used drawing as a conceptual space to explore resistance, redefine cultural capital and challenge archeological structures of knowledge, through my presence and protest.
Transitory Environments

The James River is flowing through the Richmond valley today at 33,000 cfs\(^1\). Meaning at this specific point in time, every second 33,000 cubic feet of water rush by any given point in Richmond, Virginia. This measurement is a customary way to define the volume of water flow but gives us relatively no physical relationship as to what this means. Another way to think of this measurement is to picture every cubic foot physically resembling the shape of a basketball. So that would be 33,000 basketballs rushing by every second. But perhaps even this doesn’t fairly address the physical power of the river’s form because each basketball would weigh approximately 62 lbs. meaning 2,046,000 lbs of orange rubber per second. By contrast on a day of median discharge the river measures at 9,000 cubic feet. If we were to break this down into a more recognizable form of measurement, a gallon of milk, that would mean on an average day in late February you could see roughly 67,500 gallons of milk flow by Belle Isle in a given second. This measurement analogy has been a visual tool to examine the spatial dimensions of environmental forms, in this case a specific river. The perceptions of such invisible forms have primarily been

\(^1\) Cfs: cubic feet per second
equated through mathematics and statistics but what I am interested in is showing the physicality of such measurements.

There was no known use of the word science in ancient Egypt, although they developed the first recorder device to mark the elevation of a river's water flow. The measurement of water was done in Nilometers for 5000 years, a concept developed in Egypt to measure stages of the Nile River. Every year the Nile River floods from the snow melt in the Ethiopian mountains 10,000 miles away and Nilometers were marked as etchings into the riverbanks as a measurement scale to determine flood stages. If the river was registering at high stage marking it meant more irrigation and rich sediment could be placed on the flood plain for crops, while a low river stage registration would mean rationed irrigation water and impoverished crops. These markers determined Egyptian tax levels along the Nile River allowing the Pharaoh to order either a high tax for food crops or relief to the peasants in times of poor crops. Today these systems of measurement are gathered via satellite and directly converted to cfs\(^1\) for transmission to various flood warning systems and irrigation stations that monitor local irrigation systems and infrastructure. The information I gathered from the James River was found online from a USGS "instantaneous-data availability statement" of discharge.
The etchings on the Nile are a sign of physical measurement designed to further understand the spatial dimensions of a specific regional environment. The markers are seen as scratches and carvings climbing the granite slabs in two-inch increments. In the spring, as the water climbs from the lower marks towards higher lines, and with each mark, the potential for a fruitful crop year comes into vision. But if the water is seen at the upper-third ring of marks, the potential for flood disaster is unavoidable. The marks are a form of organizing governmental structure, an environmental logic put into being by the state, but the area that is unknown is the fluctuation between the marks, a breakdown of marked categories. This place of transient exchange between two knowns is something that year after year challenged cultural intelligence, returning the marks back to a state of mythic reasoning. The marks are a diametrical structure, something that has been scratched into the surface as a constant, but also a temporally held measurement and understanding of what is ultimately a transitory object, water. These temporal positions, marks on granite, acted as a cultural suture to try to understand extremes and to reason with what was seemingly out of human control and justified through the fate of gods.

Now these marks are looked upon as a point of anthropological interest, to see how the Egyptians interacted and attempted to monitor, understand, and control their regional environment. From a particular point of view, they can be seen as a demarcation of comfort. They are a reconciliation with nature that tallies a cultural existence and balance with natural forces and the constant fluctuations of state-changes, snow to water, dirt to mud, water to vapor. Understanding the invisibility of such elemental movements has a place within global environmental consciousness. In order to begin perceptively comprehending the subsequent behavior of human-triggered environmental problems the materials displacing human populations have to be physically reordered.

The constant fluctuation of cultural intelligibility has a current holding on the psycho-spatial dimensions of our developing environmental problems. We
are in a transitory state balancing between an idealized global environmental initiative and the loss of human identity.

Edward Said, *Culture and Imperialism*. pp. 7

Just as none of us is outside or beyond geography, none of us is completely free from the struggle over geography. That struggle is complex and interesting because it is not only about soldiers and cannons but also about ideas, about forms, about images and imaginings.

In order to further discuss performative art within the frame of environmentalism, I see a need to set up both a context for talking about the current state of global environmentalism, what has been termed “post-environmentalism”, as well as the parameters of human rights connected to industrial human dispossession and the inequality of climate change.
Post-Environmentalist State

In 2005, the fourth string of hurricanes had just devastated Florida and the Caribbean, leaving more than 2,000 Haitians dead and thousands of humans homeless. The usual response “God, you’ve made your point. You’re all-powerful”, was rendered inadequate and pointed at a need for new conventional wisdom. In 2006 Al Gore rose as the political spokesman for climate change and delivered to the public his film, *An Inconvenient Truth*. The emotional documentary laid the groundwork for a massive public fear of global warming and climate change. The film sold the term “climate change” through movie tickets and positioned the concept as a monstrous environmental enlightenment. Within this enlightenment, a sort of appropriated religious propaganda was born that simply replaced the word God with climate, “the wrath of your climate”. Relaying the news of catastrophic environmental destruction became a righteous task, and environmentalists came forth as a sort of second born [born again?] Christian asking others to join in conversion. A moral argument for climate action was presented as a Democratic Party initiative, which turned a human rights issue into a binary political position and belief-based imperative. Al Gore’s delivery of the term, with the perversion of environmental evangelism, catalyzed a global model of fear and the idea that you are either a “believer” or a “sinner”. Crowds left as Earth-betrayers wondering how to connect to calving glaciers in the Antarctic and melting ice in Patagonia. With no specifics about how to act, or even how to relate to these distant crises, the documentary turned environmentalism away from being a tangible and local initiative.

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3 John Stewart, Comedy Central, *The Daily Show*, 2005
The Gore period of Hollywood environmental enlightenment “the scariest movie you'll ever see”\textsuperscript{5} fed a global fear that only accelerated the competitive race for resource extraction. Post-environmentalism, a hybrid form of environmentalism that aligns itself with global economy and the special interests of business, rationalized a future where environmental action is rooted in resource extraction and new energy development.

This new environmental alignment with business identified itself as the solution to climate change. Environmentalism then became a point upon which neo-liberalists could build an argument for new economic development. By aligning the climate war with an economic argument for potential new business growth and development, post-environmentalism continued to ignore the social injustices involved with climate change and industrial displacement. Ultimately, the promise of national economic growth became the primary reason to campaign for the environmental cause. In 2007, lobbying groups on K Street were simultaneously representing burgeoning hydro-fracturing practices and solar energy industries alike. The developments of alternative energy resources, wind, solar, wave, gas, and nuclear were all positioned as solutions to climate change. But within this industrial promise, post-environmentalism has continued to fail because it solely relies on the laissez-faire and deregulated structure of the energy industry and capitalist economy to support its foundation.

\textsuperscript{5} Gore, Al, dir. \textit{An Inconvenient Truth}. Paramount Classics, 2006. Film.
In early January of this year, 18,000 gallons of MCHM (methylcyclohexylmethanol)\(^6\) waste spilled from the tanks of a Freedom Industries chemical facility and poured directly into the Elk River. The Elk River, the fresh water source for residents and citizens of Charleston, West Virginia and the greater basin,\(^7\) was turned into a hazardous mixture of chemicals testing above the DEP\(^8\) safety standards. As residents continue to live with polluted wells and without access to clean drinking water, they have become more reliant on a government that didn’t ensure the proper regulation and oversight to prevent this disaster. This same government now rides into town as the “saint of aid” with FEMA deliveries of bottled water.

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6 MCHM, methylcyclohexyl methanol, is a chemical used in a bathing solution used to wash clay and sediment from coal before the burning process.

7 Elk River Spill was just two miles above West Virginia’s largest water treatment facility, serving around 300,000 people

8 DEP, Department of Environmental Protection
As the cleanup continues, the Freedom Industry tanks can be seen as a sort of monument to the town of Charleston, WV. However, at this point, these monuments take on a different psychological implication. With the failure of environmentalism, it is not just a conversation of “environmental” empathy but an issue regarding a population of people that are being subjected and displaced by industry.

I wanted to open with a current regional environmental issue to talk about how political rationality has formed a post-environment, where human rights are compromised. Environmental dispossession is both a physical and psychological abuse of human rights. Being dispossessed refers to the state of feeling disowned and abjected by powers of cultural intelligibility. Through the political framework of post-environmentalism, industry is given the highest capital power. As cultural intelligibility is ordered through industrial power, industries are able to construct a human’s legitimacy through use of land and to potentially dispossess the people that live near industrial property. This act of dispossession turns people into illegitimate subjects and second-class citizens. To be dispossessed is to occupy a place of non-being, where a precarious dependence upon social norms regulates the way life is lived. Dispossession originally referred to the practices of land encroachment, but the escalation of globalism has expanded the epistemic structure of the word into something much broader. Dispossession now speaks to how human bodies, through power structures originating from the inherent ownership of property, become “materialized and dematerialized through various histories of slavery, colonization, apartheid, capitalist alienation, and securitarian government.”

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9 Cultural intelligibility refers to the production of a normative framework on humans. An example would be the heteronormative subject that recognizes the conditions of the heterosexual as legitimate and these normative ideals of sex and gender are circumscribed to illegitimate subjects.


Post-environmentalism strengthened the current industrial order of power. This sphere constructs, or rather limits, the ability to live, choose, and engage in a place not otherwise displaced by industrial forces. We are therefore confined to contributing to climate change and further dispossessing the land we rely on.

Disappearing Island: Satellite photo of The Carteret Islands. The entire population fled for refuge by 2014 due to sea rise.

The Elk River Spill and the Carteret islands present varying environmental issues, but both constitute the displacement of large bodies of people as the result of ongoing industrial expansion. The lack of regulation in current government policy continues to give industries the power to drastically impair the homeostasis of a place, to the point that citizens are subjected to a competitive environmental and economic struggle for survival. Inequalities attributed to economic struggle can just as easily be attributed to the inequalities of climate change.\(^{12}\) Being reliant on the geographical setting of your community is becoming regarded as a form geographic precarity. This precariousness can be seen most frequently in developing countries and southern hemisphere populations that severely lack the ability to relocate and are acclimatized further.

into insecurity. Such precarity can also be seen in local, rural communities throughout Virginia and West Virginia where coal mining and energy industries have placed populations in a “resource curse”. High levels of poverty and environmental degradation result from the reliance on a sole resource and the particular assets of a geographic place.

As sea levels rise, and hurricanes become more frequent, the concepts of “nature” and “human” become more intertwined. What is “environmental” includes human life; yet the phenomenon of global warming is still considered merely an “environmental problem”. The environment should no longer remain a category that is to be protected, conserved, and defended by environmentalists when the public’s engagement in the matter is a pressing issue of inequality, human health, and environmental rights.

Our current post-environmental state continues to alienate individuals as it moves from a public agenda towards a global initiative. At this point, I’m interested in identifying the potential roles of post-environmental sublimation and specifically, ways that art has and will continue to direct environmental voice and action towards a local agenda, one that acknowledges individuals' rights within specific environmental issues.
Placing Global Environmental Problems: Psycho-Spatial Dimensions and Discontinuous Phenomena

Ice is the medium most alien to organic life, a considerable accumulation of it completely disrupts the normal course of process in the biosphere.

P.A. Shumkii, *Principles of Structural Glaciology* 13

This quote marked the opening of Smithson’s essay *Crystal Land*. It seems appropriate that glaciers, being such a suspended body of entropic force, drew the attention of an artist consumed with human subjection to land masses. However the Shumkii quote was pulled from a different era of environmental science, pre-dating the alienating worries of global warming and glacial/polar melt. Perhaps if it were to be reframed today it would read, “Heat is the medium most oppressive to organic life, a considerable accumulation of it completely disrupts the normal course of process in the biosphere.”

Working within this point of environmental precariousness, I have rethought my relationship with environmental art. Over the last two years, my work has continued to engage with the spatial dimensions of environmental problems. Seeing myself within a particular opposing point of human existence and geological movement, my actions speak directly to the breakdown of human composure while trying to exist within a specific geological and industrial time. In *Craters* and *James*, I was working with both the physical and mental capacity of the body to exist in a precarious state. These performances act as a sort of attempted stunt to test the boundaries of my own composure during an experience of catastrophe.

One of the most distinctive theories coming from the study of thermodynamics and situational physics is the catastrophe theory. Rene Thom applied bifurcation physics to the conditions of small increases of stress, which combine with human behavior to produce large, non-linear dramatic responses or “catastrophes”. “Push on something. It will move. Push just a little bit harder and it will move just a little bit more.” In unpredictable conditions such small increases compound incremental stresses and produce large dramatic responses, landslides, earthquakes, floods, heat waves, avalanches, and volcanic eruptions. In my work, I am not just subject to elemental catastrophe but also industrial catastrophe. I am, in effect, testing the point of overload and whether my foundation will fail as it continues to absorb the pressure of both elemental and capitalist placement.

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14 Rene Thom, French mathematician in the 1960s Catastrophe Theory
Still from Craters, 2013 (still frame demonstrates the orange ribbon inducing reciprocity failure before breaking)

The point of collapse is something that cannot be measured. The timing of the event and the disappearance, however, can be understood as discontinuous phenomena.\textsuperscript{16} Discontinuous phenomena happen as the propagation of small increments of stress places an unbearable load on the material and the material succumbs to deformity.\textsuperscript{17} The materials I choose lend themselves to deformity. Dye, ribbon, string and electricity all adapt to the physical pressures of the site. As the material and color undergo “the event”, they pass through a phase of reciprocity failure, a failure that includes

\textsuperscript{16} Discontinuous phenomenon was developed from Thom’s catastrophe theory and related to particular material studies in 2006 in an attempt to understand the collapse of finite materials.

\textsuperscript{17} L. Madej, P.D. Hodgson, M. Pietrzyk, \textit{Multi-scale ecological model for discontinuous phenomena in materials under deformation conditions}, Computational Materials Science. 2006.
an inability for the aperture, and the eye, to properly perceive the conditions of color and form.

The sites I choose to engage also bear the mark of such deformity. While in Peru, my work was responding to the multitude of deformities simultaneously occurring under the catastrophic strain of heat. One particular focus is the propagation of negative albedo in the Andes. Albedo is a non-dimensional, unit-less quantity used in thermodynamics, indicating how well a surface reflects solar energy. Albedo commonly refers to the whiteness of a surface, 0 being black and 1 being white, the perfect reflector. Sun reflecting from the white masses back into the atmosphere keeps the landmass in a frozen state. Polar ice and glaciers previously had higher measurements of albedo. However, as ice now melts the dust exposed from previous geological periods creates a darker compounded surface and traps heat, leading the material into a state of deformity. What is compelling about this matter is that escalation then feeds a continuous absorption of heat, sending the body into a runaway feedback loop. Heat is now building in these landforms, not in a continuous linear fashion, but instead in a catastrophic manner, which can be experienced in the Andes as a series of rapid snow melt, early spring floods, and the repercussion of summer droughts.
While on Mt. Salcantay the emergency blanket I carried fractured the progression of the walk. The reflected light became a part of an “inactive history,” syncopating a reflection that kept pace to the endurance of the glacial retreat.

Dan Flavin referred to “inactive history” as a form of entropy and energy drain. I am interested in the properties of inactive history in regard to a stored history. A charged car battery has a stored history of electricity in a similar way a glacier’s ice has a stored history of sediment. As the body of ice moves and expands it embeds a preexisting location in it’s core but as it progressively melts it then reveals this embedded sediment and expels organisms in it’s degenerative crevasses and fractures. The end trace of this body then amounts to a trail of debris and dust. The transference of energy in electricity has multiple processes and state exchanges. In my studio I have two 12-volt batteries, one charged directly by coal and the other directly by the sun but in reality they both represent two different geological histories of the sun. One originating from a material that at the time it combusted it erupted a 300 million year storage of fossil fuels (energy that was collected by plants from the sun) and the other that when collected it had just traveled 93 million miles to earth (one astronomical unit, the distance from the sun to the earth). The charged batteries contain two drastically different histories of state exchanges and therefore signify different meanings although their potential energy may be equal.

When the electricity is transferred to a fluorescent tube it conducts, breaths, and omits. But at this point of omission the battery then becomes a body dependent upon organs of new energy conduction. Without new conductivity the body will eventually fully expel, drain, and retire to a point where the amperage is so low the body cannot be resuscitated.
Proof for Days of Autonomy, 2013, Coal powered battery, fluorescent light, video of walk

The coal ash ponds I have been walking in Virginia represent a retired body. The prehistoric vegetation of peat bogs and swamps became fossils fuels, were mined millions of years later, crushed, combusted, turned to an expended dust and then returned back to the geographic form of a pond. When I walk across the expended body the unknown of the known dust constantly shifts with each unsure step. The form underfoot goes form dry to wet and “the visibility of the visible cannot by definition, be seen.” Comprehension of possibly vanishing in to the slurry extends the immediate reality beyond the thing itself. The body becomes a transparent form, a field of dissolved energy and dissolved light and continues with each step in an unresolvable dialectic as two bodies of dust.

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"Perception of space is a complex phenomenon. It is a double dihedral changing at every moment in size and position: a dihedral of action whose horizontal plane is formed by the ground and the vertical plane by the man himself who walks and who, by this fact, carries a dihedral along with him. The living creature, the organism, is no longer the origin of coordinates, but one point among others; it is dispossessed of its privilege and literally no longer knows where to place itself."
Rogger Caillois, “Mimicry and Legendary Psychasthenia,” Minotaure, 1935

When Theseus ventured, into the Maze of the Minotaur he brought with him a ball of twine. Stringing and recording his way through the labyrinth enabled him to retrace the line back to the exit. The line becomes a trace form navigating the fissure of a space that is unknown, recording both the distance and direction of a taken path and the form of the body’s transient course. When I refer to transience, I am talking about the indeterminable break between one point and another: being between two points of geological time, the form of a house between the building period and its collapse, the moment before a glacier calves, or the pause before a collapsed lung. Taking the string to the Virginia coal ash ponds marks a point of entropic pause. The string measures the temporal distance between an indeterminable starting point and an unknown ending point. As I walk from the entrance gate of the pond’s dumping grounds to the confluence of the river, the string I carry marks the physical distance. The string becomes the recorder of space, measuring both the reality of a place but also the abstract and potentially destabilizing idea of size and distance.
The Three Walks Across Virginia’s Coals Ash Fields: Bremo, VA North Ash Pond: The distance from the tailing pond to the wetland; Chesterfield, VA New Upper Ash Pond: The distance from the gate to the tailing stream and Clover, VA Stage 3 Landfill: The distance from the West dike to the leachate pool, have taken the role of performative drawing. In this continued action of trespassing, I am re-contextualizing the work of artists such as Sharon Hayes, Andrea Bowers, and Trevor Paglen into a particular form of walking and measuring that can be identified with earlier land artists such as Hamish Fulton, Richard Long, as well as measuring concepts identified with Duchamp’s “Three Standard Stoppages”. The act of walking and trespassing on these properties becomes a public presence that is legally recognized as a form a civil disobedience. The walks are a refusal to stay in one’s proper place, to reterritorialize a specific place through presence and measurement. The act of
Taking a physical measurement of these private spaces seems like a minimal act, but when personal presence is aligned to the physical properties of elemental measurement\(^{20}\) in a capitol controlled state, the small action takes on a larger public role.

Navigating various public and environmental spheres through the use of my body and the visual language of drawing, I have been occupying a place where non-being and alienation turns in to a site of resistance. Drawing can be used as a space to explore resistance, redefine cultural capital and challenge archeological structures of knowledge, through our presence and protest. I’m interested in acting out such performative forms of drawing that move past a conservative role and towards demonstrations that establish the importance of the individual and a re-territorialization of identity.

In the case of the *Measured Walks Across Virginia’s Coal Ash Fields*, the trace metal analysis acts as a form of generative knowledge. Challenging private interests’ impact on the public domain, that information can be used to “fingerprint” trace metals in low-lying wells and watersheds back to the polluter, potentially resulting in lawsuit.

As humans continue to accelerate and overload of environmental systems, the geological time between the occurrences of disasters will become shorter and shorter. Life within this runaway feedback loop will be a test of adaptation as we are pushed towards a constant reactionary state. Adaptation however can take on many different roles. I grounded my work in local initiatives as a way to continue confronting the psycho-spatial dimensions of a post-humanist environment. This focus recognizes the performative role of my work as both a responding signal (as in earlier work) but also as a physically directed role, challenging property, authority and environmental policy control.

\(^{20}\) Minimalist artists invested in elemental measurements that I am referring: Walter De Maria (Broken Kilometer), Fred Sandback
The runaway loop pedal will continually compound and overlay levels of time until sound derives into a chaotic display of overload.

Within the last year, I set up two websites that act as adaptive community exchanges for environmental knowledge and activity pertaining to the local geography of Richmond. Dominions Power (dominionspower.com) acts a resource where citizens can find access to affordable plans and instructional courses on implementing sustainable power sources. The site is aimed at destabilizing the economic gap of renewable energy sources and breaking affluent borders of energy commodification by providing an accessible public domain for applied energy modules. A more recent project, Virginia River Healers (virginiariverhealers.com), which I plan to continue developing, operates as an independently monitored soil and water testing facility for concerned citizens dealing with toxicity issues. The VRH is producing public documents and data through specific testing and analyzing that are not otherwise available to the public. At this point the VRH has put out a coal ash analysis report of various Dominion Power coal ash ponds and landfills. The documents are made available online and are open for public download and comments. The VRH also provided these coal ash samples to inorganic scientists at Virginia Commonwealth University with the hope of fingerprinting the material. By fingerprinting the samples, the toxicity in residents’ water wells and watersheds could possibly be traced to Dominion’s leaching ponds and landfills.
Re-Organizing Data Production and Relatable Measurements

To dispossessed souls, space seems to be a devouring force. Space pursues them, encircles them, digests them in a gigantic pit. It ends by replacing them. Then the body separates itself from thought, the individual breaks the boundary of his skin and occupies the other side of his senses. He tries to look at himself from any point in space. He feels himself becoming space, dark space where things cannot be put. Roger Caillois, “Mimicry and Legendary Psychasthenia,” Minotaure, 1935

The dichotomy between individual perceptions of environmental problems and the global level sets an alienating relationship between the individual and the local environment. Environmental alienation, as I discussed before, can arise from many disruptions: from industrial toxins, government deregulation, policy and democratization of citizenry. Environmental globalization has made it hard for local communities and citizens to form appropriate political responses, mainly because the information and data produced in regard to environmental issues is not designed for their benefit.
Environmental data has primarily been developed and studied in service of economic interest. On the Environmental Protection Agency’s website, one can find PDFs listing field studies of possible environmental disasters. These field studies have generated numerous categories of equations that are now used to gauge the severity of possible environmental disasters. They break down the risk of human life into an infinite number of possible scenarios. The EPA equations are trying to find and determine human conditions within non-parametric statistics—statistics generated from non-standard subjects placed on human populations outside of the mean of conduct. They are the product of an attempt to understand the severity of human placement within an industrial and environmental conflict. However, the excess of information has an alienating effect, as empirical data describes our fate. What was intentionally created to help assess our current form succeeds so well that we become stunted in a precarious state. Stunted in this sense is to be placed in a position of retarded development where positive human action seems outweighed by the unknown environmental state.

\[ \text{Lifetime cancer average risk} = LADR \times \text{CSF} \]

where

- \( LADR \) = lifetime average daily dose for ingestion pathway (\( \text{mg/kg BW/da} \))
- \( \text{CSF} \) = cancer slope factor (\( \text{mg/kg BW/da} \)).

*EPA equation list in color, 2014* (specific equation assesses human risk of developing cancer by living near a coal ash dam)
The data I am interested in developing differentiates itself from the "rational logic" of the EPA, which counters human life with governmental interests that serve businesses. I am using systems of measurement as a destabilizing form of current economic rationality and repossessed cultural capital. The coal ash analyses I initiated revealed the toxic conditions of a specific place. The trace metal contamination found in Chesterfield, VA and Clover, VA ranked well above human health standards—to the point that the ash could qualify as a hazardous material. I am sure this data already exists within field studies conducted by Dominion Power, but it is currently withheld from the public. The production of data for the public domain becomes a tool that places human rights before corporate benefits.

Coal Ash Analyses for Chesterfield, Bremo, and Clover Stations, 2014
NASA’s Jet Propulsion Laboratory is currently responding to rising environmental temperatures, quickly melting snow reserves, and threatened natural water reservoirs in the Sierra Nevada Mountains by implementing a new way to measure snow pack from thousands of feet in the air. Aircraft-borne sensors are now able reflect light off mountain ranges, gauge the snow’s depth and determine accurate measurements of held water. The Lidar is a 1.5 million dollar machine that is said to calculate a reliable measurement of snow pack by gauging both the snow’s depth and albedo\(^{21}\), and then determine potential fresh water runoff. States such as California and countries such as Peru, Turkey, and Iran can then apply this data to more efficiently allocate their entire yearly water supply.

The terabytes of information that each plane gathers as it flies from the Sierras to the San Juans similarly reflects how coal rich mountains in West Virginia go through survey assessments. Radar pulses sent from planes bounce off hard rocks giving a dimensional reading of the geology and locating coal rich seams and mountain tops that are then completely wiped of their resource. These new estimates are the future of production, a new kind of environmental wealth, or rather the global potential energy budget (the monetary exchange affiliated with banked resources). It is a continuation of a measuring system that

\[
A = \left( \frac{1329 \times 10^{-H/5}}{D} \right)^2,
\]

where \(A\) is the astronomical albedo, \(D\) is the diameter in kilometers, and \(H\) is the absolute magnitude.

\[
\alpha = (1 - D)\tilde{\alpha}(\theta_i) + D\bar{\alpha}.
\]

\(^{21}\) Albedo as described earlier is a non-dimensional, unitless quantity used in thermodynamics that indicates how well a surface reflects solar energy. Albedo commonly refers to the whiteness of a surface, 0 being black and the value 1 being white, the perfect reflector. Sea ice has a higher albedo compared to other earth surfaces and snow has an even higher measurement than sea ice.
quantifies environmental potential by means of economic interest and defines future yields that can be traded and sold to various populations.

These systems of measurement are continuously updated as the minerals and reserves become scarcer. But the measuring of the produced waste and environmental degradation from the burning and consumption of such reserves is proving to be much more difficult. Environmental effect is not a smooth and linear process but rather one of exponential expansion. I am interested in the physical measurement of environmental waste. To measure both the accumulation and impact of waste is an abstract task.

The coal ash ponds that mark various riverbanks along Virginia can be viewed as large dams, their various depths unknown. These landforms are waste, an accumulation of human dust. Compressed and packed toxic carbon dust that continues to settle, leech, dry and become airborne. The coal ash ponds are a concentration of a specific dust. A toxic, metal-laced dust that is a byproduct from
the coal burning process, it is an ash that was cooled after the time of combustion, and transported by form of liquid slurry and earthmovers and dumped in surrounding industrial landscapes.

Duchamp, Agnes Denes, and Paul Thek are all artists that have worked with the concept of human dust. Human dust is a form the anthropomorphized self. A trace of what is left post-consumption but also a decomposing transitional form. Dust is an object substance that embodies a physical transference-the combustion of coal into energy into dust. Such transference turns a material with potential energy into a form that is useless. Bodies become dust, but before they do they can be measured by their production and output of dust.

Performative Politics as Environmental Art: Conductive Body, Disobedient Public Amateur

“How can we be moved to the other by the other beyond the logic of ‘proprietariness’- with all its undertones of property, priority, propriety when the other constructed is ultimately disposable and transposable by forms and norms of governance?”22

Athanasiou’s question asks whether environmental art could possibly work within these matrices of struggle, art that does not reproduce liberal manipulation, adjudication, tolerance, and governance of difference.

Many environmental artists have followed Smithson’s model of land reclamation. Mel Chin is a particular standout mainly because of his alliance with both the Federal government and the corporate. Mel Chin’s Revival Field took place on a closed lot in St. Paul, Minnesota where heavy metals left from a

previous industrial landfill had created a toxic environment. Through the process of bio-remediation Chin used the field to test the possibility of art returning federally recognized industrial wastelands, what now are commonly referred to as Super Fund Sites, back to a state of healthy composure. Furthermore, he pitched the concept through a series of economic incentives aligned with corporate benefits. Seeing the ingenuity of art not only as a way to pastoralize exploitive industries but also strengthen their role with implemented smelting procedures developed with tax revenues.

Mel Chin, Revival Field, 1991-Ongoing

We take a child and have him run hundreds of times clockwise in the box until the sand gets mixed and begins to run grey; after that we have him run anti-clockwise, but the result will not be a restoration of the original division but a greater degree of greyness and an increase of entropy.

Robert Smithson, *A Tour Of The Monuments of Passaic* ²³

Land reclamation has continued to align itself with the modernist ideas of Fredrick Law Olmstead’s Central Park. The modernist idea of “beautification” is

an admired state that attaches itself to traditions of the sublime.\textsuperscript{24} Environmental work in this frame of construction is then seen as a way to cleanse the industrial wake of land exploitation, tying reclamation directly to the campaign of industry.\textsuperscript{25} I am not interested in the artist functioning as a remediator for corporations but rather an activist that pushes policy on particular corporations to remediate their own issues of pollution. I find this position more in line with a role of art that steps outside of consultation and places itself in line with the role of capitalist sublimation.\textsuperscript{26}

If the current state of environmental politics is a field of deregulated policy and environmental dispossession, art, specifically the role of public performative knowledge, may be a tool for physical and psychological repossession.

During the afternoon of April 30\textsuperscript{th}, 2014 a train carrying crude oil from the Bakken Reserves derailed in Lynchburg, VA spilling an estimated 50,000 gallons of crude into the James River. This occurrence happened at a point of peak flood stage, the river already a froth of sediment and turbulent rainwater then took a magnificent form of explosive fire.

\textsuperscript{26} Sublimation; Referring to the state exchange from a solid into a gas. Later used in Foucault’s theory of dialectic sublimation.
The Richmond Department of Public Utilities stated that the oil would arrive in Richmond in an estimated 48 hours. In preparation the DPU placed booms across the water treatment facilities’ diversion channel in hope that this would skim the surface oil from the water heading for treatment, and distribution to the greater Richmond area. The DPU, although stating the water was safe to drink, has not released the results of tests conducted throughout the time period following the spill.27

Following the spill I took tests of river water upstream from the Richmond Water Treatment Facility. The tests were taken every hour starting at 9 PM, 7 hours after the time of the accident, until 8 AM the following morning for a total of 12 hours. At 3 AM the river tested positive for oil. At this point I do not have results for parts per million so I cannot speak for the specific concentration of oil but can only sate that it was present.

Sample from James 05/01/2014 1 AM 45,900 CFS ½ mile
up current from Richmond water treatment facility

This three-part catastrophe; derailed train, combusted oil, and a flooded river birthed the potential for runaway catastrophic events contaminated drinking water and a marine habitat turned toxic inferno. But the unknown state of the spill’s consequence continues due to the lack of public disclosure. From a Kantian point of view, a citizen’s enlightenment within this environmental frame is completely subjected to the government’s paternal managing of information. By
withholding information, the event remains in an "immature"\textsuperscript{28} and unrealized state. The citizen is placed in a precarious, unknown relation to their (now-toxic) environment and remains a subordinate without the rights to assess and independently react to the issue.

James River oil spill spatially quantified by a basketball, 50,000 gallons of oil equals 6,755 basketballs passing by in one second.

Environmental “maturity” can arise through the constant negotiation of art’s autonomy within the role of informative propagation. Information can resonate as a symbol of human rights. The artist can challenge the fields of specialized knowledge and the authority of the public sphere by taking the role of a disobedient “public amateur”.\textsuperscript{29} In the space of that role, subordinate fields of

\textsuperscript{28} Kant, Immanuel. \textit{What is Enlightenment?} Berlin Monthly, 1784. Print.  
\textsuperscript{29} In “Beyond Face,” Claire Pentecost examined the role of the artist as a public amateur as a way to destabilize specialized fields of authority and governmentality.
information specialization can be challenged through various forms of generative knowledge. New information arises as a tool for reevaluating the circumstances that produce authority, value, and environmental dispossession.

_May 2nd Update:_ “The oil from the Lynchburg spill arrived in Richmond between 2 AM and 3 AM on Thursday May 1st. VRH samples tested positive for oil starting on the 3AM sample. Parts per million will be determined with further testing. Until then the concentration of oil will be unknown. Richmond DPU’s water analysis data and oil concentration results and have not been released to the public following the spill. The VRH will continue contacting Angela Fountain (Richmond DPU Public Information Manager (804) 646-7323) until information is obtained and released to the public.”

Not only do I see this occurring through physical presence in a place, but also through knowledge that comes from being present, situated, and sharing information. In this place of presence is conductivity.

As my research develops within the coal ash ponds and nearby watersheds of Virginia, I have come to a point where the dissemination of information becomes an abstract and desirable place of reterritorialization. It is a field of response and propagation allowing me to continue working within the political dimensions of community rights (alongside the measurement of my own will.) This role, however, has continued to be a breakdown of environmental phenomena where the sublime is exposed to a realization of its own transversal state, a continuous state of a sort of precarious global balance, where a rogue conductive organism seems to be pushing around the hot compost under a single rock. But such localized pushing has the possibility of building, if only in small cumulative increments, leading towards a catastrophe of its own. That catastrophe can be a particular folding point, where the breakdown becomes the repossess of physical and social rights.
Bibliography


