

2017

## Challenging the Dark Pools of Neoliberal Affect in Materialist Theories

Stephanie Buongiorno

Follow this and additional works at: <https://researchrepository.wvu.edu/etd>

---

### Recommended Citation

Buongiorno, Stephanie, "Challenging the Dark Pools of Neoliberal Affect in Materialist Theories" (2017). *Graduate Theses, Dissertations, and Problem Reports*. 5281.  
<https://researchrepository.wvu.edu/etd/5281>

This Thesis is protected by copyright and/or related rights. It has been brought to you by the The Research Repository @ WVU with permission from the rights-holder(s). You are free to use this Thesis in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you must obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This Thesis has been accepted for inclusion in WVU Graduate Theses, Dissertations, and Problem Reports collection by an authorized administrator of The Research Repository @ WVU. For more information, please contact [researchrepository@mail.wvu.edu](mailto:researchrepository@mail.wvu.edu).

Challenging the Dark Pools of Neoliberal Affect in  
Materialist Theories

Stephanie Buongiorno

Thesis submitted  
to the Eberly College of Arts and Sciences  
at West Virginia University

in partial fulfillment of the requirements for the degree of

Master of Arts in English Literature

Lowell Duckert, Ph.D., Chair  
Michael Germana, Ph.D.  
John Jones, Ph.D.

Department of English

Morgantown, West Virginia  
2017

Keywords: Neoliberalism, Materialism, Water Degradation  
Copyright 2017 Stephanie Buongiorno

## ABSTRACT

# Challenging the Dark Pools of Neoliberal Affect in Materialist Theories

Stephanie Buongiorno

This thesis argues that materialist theories like OOO subversively create a foundation for Neoliberalism and shows how readapting materialist theories combined with SCUBA submersion destabilizes Neoliberalism. Materialist theories announce themselves as venerators of objects by arguing that all actors contain leveled importance, and thus are not defined as tools for human exploitation. Yet, leveling all objects has uneven social results. While leveling the importance of an object with all other objects, materialist theories justify the subjugation of invisible bodies and remove conversation from social concerns that are denounced as not ontologically present. This thesis destabilizes materialist theories that bolster Neoliberalism by arguing that social issues are ontologically present for they have material compositions. This argument takes a close look rivers because waterways are tied to social dominance and uneven social ladders. This thesis concludes that applying flat ontology to rivers and using submersion as a way to bring the basin to the surface denaturalizes our immersion in Neoliberal philosophies and can recreate our understanding of human and non-human actors.

## Table of Contents

Chapter I: Rhetoric and the Production of Ecology .....	9
Chapter II: Rereading Maps through Flat Ontology .....	32
Chapter III: A Politics of Inclusion .....	46
Chapter IV: Creating a Map of Acid Stained Rocks .....	62

## Challenging the Dark Pools of Neoliberal Affect in Materialist Theories

The term “neoliberalism” has not trickled down to vernacular English. Its absence speaks to one of its perpetrators: the oppressed cannot see the oppressor. As Henry Giroux states, “neoliberalism has evolved into one of the most widespread, antidemocratic tendencies of the new millennium” (30). Neoliberalism reigns through its symbolic power, which paints seductive illustrations of a nation of liberated individuals (i.e. free market, free land, free thinker). After all, how can a subject be oppressed by an economic system if they are *allowed* to compete in a “free” market? Neoliberalism’s symbolic power creates abstract objects by taking the vast, complex things that exist within an ecological web of relations and compressing them into singular ideals that are extracted and then posed as inside or external to the liberated individual. The symbolic power disguises and distorts neoliberalism’s draconian power relations with human and nonhuman labor. While Neoliberalism is a global phenomenon, my thesis will look at how such destructive affect is a congratulated part of American culture. Environmental exploitation is encouraged because a frontier of resources. Human exploitation is promised to lead hardworking individuals into their dreams.

Neoliberalism is not strictly a social, cultural, or economic structure. Instead, it is an ecological structure that is in constant engagement with the ways in which space is organized. Materialist theories, while looking at interactions as ecological, have a tendency of overlooking the role of neoliberalism’s drive for capital accumulation in human and nonhuman interactions. While, the individual roots of

neoliberalism are *often* discussed in materialist theories in terms of destructive events that reap capital profits at the expense of the environment as we know it, (i.e. oil spills, deforestation, mining), neoliberalism is not analyzed as an ecological system. Some materialists like Ian Bogost and Levi Bryant have claimed neoliberalism (and power structures like neoliberalism that require human actors for their perpetuation) are not ontologically present. Such an assertion misses powerful implications of capital flow on the way objects and space are produced. By looking at neoliberalism ecologically, we are looking at it as an actual, physical location, organizing and appropriating material space. From this point, I argue for ways we can critique and transform our relationship with neoliberalism and thus ourselves since we are meshed within the web of ecology. Doing so means analyzing the ways in which neoliberalism performs through rhetorical power to create a dominator/subjugated binary. Materialisms challenge binary rhetoric, offering a foundation for dismantling neoliberal power. Yet, in doing so, pure materialism like OOO take a U-turn and subversively recreate a platform for neoliberalism to grow. Why this is will be explored in detail. In part, this is because OOO excuses exploitative business behavior as ontologically neutral. But, I am curious about how OOO as practiced by Bogost and Bryant (excusing environmental, socio-economic, and racial exploitation as things that are not ontologically present and therefore not a concern of materialism) : it is influenced by and in turn influences neoliberalism.

A selective use of materialist theories, though, can supply its thinkers with tools to dismantle neoliberalism. In this thesis, I examine how this might work. Jane Bennett and Timothy Morton offer ways we can build intimate relationships with

the nonhuman that bond human and nonhuman entities in ways that deters the behaviors of quick capital growth including labor exploitation and indiscriminant waste dumping (rivers, oceans, etc.), often dumped on silenced communities. However, the toolset materialist theories give us for reframing our relationship with ecology is somewhat incomplete. Materialists with a humanist bent tend to position us cerebrally. The secret to a respectful relationship is practicing new ways of thinking. While this is necessary, reframing our thoughts is easier said than done. Instead, I argue we should build a tactile relationship with degradation in order to assist reframing our thought. As Rita Wong argues, scholarship that discusses our relationship with environmental degradation is oftentimes exclusive. And, as observed by simply walking outside, vernacular resources that discuss environmental degradation are often, as Marisol Cortez puts it, patronizing and close us off because of shame. Or, as Susan Sontag notes, vernacular ways of engaging with trauma, such as through photography, cause us to want to deny the actions because we are placed in a tormenting position: we can see problems, and can do nothing about it because the image is frozen and our desires are unreachable. Building a tactile relationship with ecology (in this case, the economy, materialist theories, and the environment) can include many things. My title plays off the term, “dark pools,” because I observe the ways in which capitalist degradation hides itself on the floors of waterways thus continuing the myth that the economy and the environment balance themselves.

My thesis looks at neoliberalism’s relationship with fresh water rivers and building a framework that collapses the capitalist binary of an inside/outside

relationship through submersion, and in this case, SCUBA submersion. I center my analysis of the environment around fresh water because, as Cecilia Chen points out, “the achievement of domination over watercourses (however temporary) coincides with an intensification of social domination” (6).

Whether materialist thinking offers a foundation for disenfranchisement or supplies the tools to level disenfranchisement is a result of who is arbitrating materialism. My claim is controversial given that variants of materialist thinking, like OOO, argue for their role in creating a discourse over what “really is.” But, claiming this authority is dangerous. As analyzed in Chapter one, Bogost and Bryant use OOO’s “objectivity” to declare “what is,” verses, “what is not,” which excludes social disenfranchisement from an ontological presence. At points my arguments bristle with steadfast materialist stances. Human-centric ethical concerns are revisited throughout this piece through a materialist and even ontological lens, and empathy is extended to human and nonhuman entities as a way of developing a politics of inclusion between all objects. Jane Bennett’s concept of vibrant materiality influences my approach towards materialism. According to Bennett, material formations have lively powers that influence action within an interconnected web of actors (viii). Neoliberalism does not only require the subjugation of human labor that Marx articulated, but also the subjugation of the nonhuman. Our interactions with the nonhuman subsequently effects how we interact with ourselves. A politics of inclusion influenced by vibrant materiality denaturalizes neoliberal violence and challenges its authoritative voice, enabling a look into materialist theories as neoliberal. By doing so, we will be looking at what



Patricia Yaeger terms “Ecocriticism\$,” or, “a prosthetic term that insists on the imbroglio of markets and nature (529).

Chapter one, “Rhetoric and the Production of Ecology,” is concerned with the rhetoric of neoliberalism and how it works to produce and reshape space with ethical implications. Rhetoric is observed as having a draconian relationship with the environment across a spectrum of voices from the vernacular to the scholarly, while those who are most implicated by environmental catastrophe, who Rob Nixon terms as the “disposable people,” must suffer the most intense consequences of resource exploitation because they lack the linguistic capital (linguistic authority) for their narratives to be taken seriously. Neoliberalism creates a binary through rhetoric that separates the inside from the outside to create an external frontier of resources ripe for exploitation. Denaturalizing rhetoric that veils neoliberalism’s destructive relationship with water is pertinent to our revaluation of ecology. The language that subjugates environmental resources spills across borders, and discourse needs a new way of organizing water that excludes binary thinking. Moore identifies a paradox within academia as he points out: “most scholars agree that humanity is indeed a part of nature” (33). Scholars reject the Cartesian dualism that puts humans and nature in separate boxes. Yet, “conceptual vocabularies and analytical frameworks that govern our empirical investigations remain firmly entrenched in the *interaction* of these two basic, impenetrable units” (33). Moore calls this the double yes. OOO responds to this issue by collapsing the binaries between objects. However, Ian Bogost and Levi Bryant urge us to look at materiality under a premise that disregards race and symbolic power. Their construction of

materialism through OOO directly addresses bodies deemed less valuable, and continues language in a way that disregards them by arguing race and social power are not material, despite their evident ontological presence by their real, material effects. Rhetoric drives an artificial chasm between ecology, the economy, and social justice, and although the chasm is artificial, it has dire consequences.

Chapter two, "Rereading Maps through Flat Ontology," analyzes the rhetoric of the modern map as a symptom of and driver for neoliberalism and environmental degradation because of the map's authoritative, symbolic power that announces itself as an accurate representation of a location, not an externalized abstraction. I analyze a US Army Corps of Engineers map looking at the Monongahela River from Pittsburgh, Pennsylvania to Fairmont, West Virginia. The atlas housing the map I am interested in (one that looks at a local spot of the river near Morgantown, West Virginia) opens with legal text that announces "the law" of the river. The law section positions the river as a human tool and all actions done to maintain the river do so for navigational purposes. The authoritative voice what should and should not be done with the river does not take into consideration rivers as vital entities, nor does it address the environmental hazards of some of the events it addresses (loose cargo, lost barges, etc.). By analyzing the specific map from the atlas I question how the binary thinking (surface/depth) that assists the growth of neoliberalism can be challenged by a selective use of flat ontology, thus meshing the surface with the depth to bring more relevance to unseen (and not thought of) areas. Coal, acid drainage, and other pollutants line the bottoms of rivers, which are not contended with in our surface-oriented river images. By compressing the basin and surface of

the river florescent orange acid stained rocks are discovered. These florescent rocks bring us into our final two Chapters.

Chapter 3, “A Politics of Inclusion,” and Chapter 4, “Creating a Map of Acid Stained Rocks,” are experimental. Rita Wong argues that we need a radical new way of understanding our relationship with water since our current ways of engaging with the degradation of water since our current measures have become either naturalized, or as Susan Sontag argues, distanced from because popular ways of engaging with trauma (images, news sources, etc.) are paralyzing. Similarly, Timothy Morton writes that ecological awareness’s entails the dissolution of foreground and background—a state that is inherently overwhelming (*Hyper Objects* 104).

Chapter 3, “A Politics of Inclusion,” proposes one radical way to denaturalize neoliberalism’s structural violence is by creating a relationship with water that is both alien and intimate through SCUBA embodiment and submersion. I argue a tactile relationship like SCUBA embodiment gives us an angle that causes environmental violence to radiate forth through a submersed, queered, perspective. Scholars including Cecilia Chen, Thomas Moore, Mielle Chandler, and Astrida Neimanis give us analogs that make water more human, therefore easier to extend our concerns to. Though, valuable perspectives of our relationship with water are missed when we make water human. SCUBA diving keeps water strange, and by doing so, denaturalizes destructive behaviors. Through SCUBA our “normal” senses are altered and a new embodiment forces us to change the ways in which we conceptualize space. Chapter 3 is also concerned with what ecocriticism\$ claims to

be the “waste” that flows from literature into waterways. To denaturalize encounters with water even more, Sir Walter Raleigh’s sensational accounts with water are put into conversation with SCUBA. Raleigh’s fantastical accounts of exploring rivers show a deferral of desirable materiality as he creates a map of waterways that is always fleeting and always in motion.

Chapter 4, “Creating a Map of Acid Stained Rocks,” reorganizes space through acid stained rocks I found on the bottom of the Monongahela River. Commodities that end up on shop shelves like everyday household products or children’s toys appear a-historical. They are pristine, appear without origin, and when we are done with them they disappear in the trash. This commodity cycle perpetuates environmental violence by simulating the environmental checks and balances that Neoliberalism claims to exist. Once before a dive I started a conversation with an environmental protection agency officer who was testing water. I asked him about the quality and he stated it was very clean. He continued by explaining when toxic waste is dumped into the Monongahela River, “mother nature washes it away.” Examining the basin of the river shows that “washing away” does not mean disappearing. The acid stained rocks on the bottom show that the river is a waste sink for capital expansion through the mining frontier. Analyzing florescent orange acid stained rocks defies an a-historical, balanced view of the environment because acid stained rocks are historical objects. They present an evident past and their movement, having come from a mining site several miles away, speaks to the transgression of degradation into the future. Through this analysis the invisibility of neoliberal waste is brought forward.

## Chapter I: Rhetoric and the Production of Ecology

Every action produces and organizes space. As Moore argues in *Capitalism and the Web of Life*, all action is ecological, material, and exists within an enmeshment of interconnectivity. Rhetoric is a part of ecology's organization. It drives the production of systemic, organized hierarchies like institutions. Since the 1970's Neoliberalism has become an overwhelming ecological force creating destructive relationships with the environment through myths of a frontier economy (where resources are boundless) and disparaging relationships between high and low socio-economic classes. Neoliberalism's rhetoric perpetually reproduces the symbolic power necessary to re-establish its authority across time. Language's influence is material and spreads through class-consciousness. The effects of discourse can be followed and observed at an ontological level, revealing how it operates by founding material being. This is a controversial claim. Some materialists would revolt against this, arguing my statement misunderstands materialism. Rhetoric is tied with social construction, what some materialists like Bryant and Bogost credit as an anthropocentric construction without an object presence. But, I argue social construction is an object that is *built* from emergent properties of social creatures, like flesh emerging from atoms.

The ways in which rhetoric develops contributes to disparity. The absence of language that directly acknowledges neoliberalism's presence supplements the disparity of objects, which shows how language has real, material effects and manipulates objects. Stakeholders that share the same resources for growth as

neoliberalism, such as animals, humans, and other forms of life and objects are described, by capitalist rhetoric, as benefiting from neoliberalism. Often, neoliberalism is only recognized by its individual outputs, not as an overarching structural entity creates and then disposes its creation in a heap of waste. Capitalist businesses may be applauded for creating the market wherein a neighborhood develops. And contrary, individuals may be blamed for the waste of that neighborhood (garbage, oil from cars, etc.) instead of neoliberalism because its rhetoric veils neoliberalism as an ecological web of interconnectivity. Vernacular speech is built on an angle that facilitates this break. Common vocabulary organizes space through inside/outside binaries that create individualism. Language that addresses neoliberalism as a web of influences has not trickled down into vernacular speech. Such rhetorical disparity organizes power within unevenly distributed mounds of linguistic capital where some speakers have the words to represent themselves and address their plights. Others are given a vocabulary highly influenced by a neoliberal oppressor that promises all things balance themselves, and that labor benefiting capital growth will benefit the self.

Neoliberalism's exploits are veiled in watery language. Capital parallels itself with one of the most vital objects for continuing life. Money flows in a global current (aka currency). When assets are frozen, capital begins to come to a halt. A stagnating stock market is the ice we must crack to get to liquidity and an acceleration of capital. A perceptual disjuncture between ecological violence and economic movement is a symptom of neoliberal vernacular that facilitates what Rob Nixon terms as "slow violence." Or, "a violence that occurs gradually and out of sight, a

violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (2). If oil spills result from a vital driver of a neoliberal economy, a rush of circulating capital, can we excuse it as an evil that is inevitable because of our need for good capital, just like food is necessary, but occasionally we eat something rotten?

Ecological catastrophe is swamped in platitudes built on Kantian and Cartesian binaries. Vernacular terms are fodder for complacency: “these things happen.” This is a redundant statement used to end a conversation. The rhetoric of redundancy abstracts catastrophic events and presents them as if they are isolated. Events are *what* they are, and nothing else. In 2010, the BP oil spill happened, and then that is what happened. Asking *why* these things happen is a critical move that reveals not isolated events, but webs of entangled entities that devolve into emergent properties and beings. Asking *who* is implicated in ecological events deteriorates a perception that accidents occur sporadically without and without a directional, malicious aim towards any group of subjects. Having the linguistic capital to ask questions and postulate answers, and thus allocate responsibility is necessary to speak and to be heard as valued stakeholders. As Smith states, “the debasement of language and the prevalence of dog-eat-dog ethics are symptomatic of the neoliberal facts of life” (xiii).

Without interrogating the *why*, ecologically traumatic events like the BP oil spill are accredited to a malicious CEO control within a corporate structure, not a tangential behavior that comes with corporate structures because of their neoliberal attachments. Thomas Princen describes the individualizing of problems as part of “a

political economy of degradation” (103). He explains degradation spanning from business paradigms result from environmental stakeholders itemizing the actions of big business and consumers into “day-to-day decision making” that is blind to the transgression of events (103). In vernacular terms, a lone, “bad apple,” that fell from the same tree as many good apples. A bad apple can be separated from the tree. The tree is still good with an occasional bad apple. The tree is still a *natural* part of life. Looking at objects as natural feeds into capitalist exploitation. As Neil Smith points out, capitalism is not treated as a historically contingent development. Instead, it is treated as a product of human nature that can be traced to Rome or a primate’s fight for the survival of the fittest (29). In his example human nature is “internal” and Nature (with a capital “N”) is external and resists cultivation. Neoliberal rhetoric deflects attention and redirects its viewer to what it means to be human. Exploitation is given agency and beckons players to put their stakes in a laissez faire market where the house always wins and its contenders are given their “natural” place in the hierarchy of privilege. Adam Smith’s homo economicus is a singular, freethinking man who acts in the neoliberal gladiator fight. Though, even if an individual’s choices were rational in the homo economicus sense, the collective action of rational individuals propelling their own prosperity within the entanglement to which we are all involved may offer a destructive overall outcome, as made evident by the environment.

Platitudes like, “that’s just one bad apple,” seem to be spoken by homo economicus. The statement acknowledges an independent person creating an independent issue that eclipses a larger scheme of thing; “life has ups and downs,”



and “these things happen,” suggest an inherent inevitability. A shocking catastrophe that denaturalizes exploitative relationships with the environment, like a massive, oozing oil spill in an ocean, is renaturalized through trite statements. Speaking about discourse, perspective, and persuasion causes me to question where the humanities, the perceived guardians of critical thinking (which is often somewhat rebellious to the norm), dwell within this.

The binary thinking that promotes corporate growth (internalized individuals that reach outwards to collect resources) does not end at university doors. Core assignments, standardized measurement, and projected growth mirror capitalist expansion. While these lessons are necessary for those wishing to enter certain fields, capitalist influences are evident in their execution (Giroux 42). Marx might say that university curriculum is being constructed to create an output of ideal workers that can, post graduation, have the tools and perception to benefit corporate expansion. Universities are immersed in capitalist structures in their efforts of catering to corporate power. This is at odds with the humanities’ tradition of creating open-ended thinkers. Giroux argues:

Higher education may be one of the few sites left in which students learn how to mediate critically between democratic values and the demands of corporate power, between identities founded on democratic principles and identities steeped in forms of competitive, atomistic individualism that celebrate self-interest, profit making, and greed. (45)

It is time for introductory humanities courses to stop beginning somewhere along Descartes’ arguments and ending somewhere within German idealism and Kant.

Many students pass through their one (or two) humanities requirement(s) to be re-told the story of the individual freethinking human protagonist.

At first observation, materialist theories such as post-humanisms and object-oriented ontology seem like productive solutions to exploitation because they pose themselves in opposition to the driving free-willed human protagonist by challenging the binary between human and nonhuman entities. Instead of looking outwards or inwards, dissociating the self from others, a materialist perspective looks through a messy conglomerate of things that are so vast and outside of our capabilities of perception (many of these things being nonhuman) that they cannot be accounted for. But, if all activity enters an exchange with the environment, then as Princen mentions, “all production generates some costs beyond the purview or control of the firm” (108). “Some,” seems like a modest term from a material view that considers a history of interconnected objects. Princen explains, “some costs are not just externalized by the firm, that is, knowingly sent downstream. Rather, they are rendered invisible to the firm and to others” (108). Princen argues that for politics to account for degradation rather than, “taking these costs as external and treating them as a production failure . . . or as a necessary side effect that must be tolerated, it [a different business] needs to treat them [solutions for degradation] as a part of a competitive business strategy (103). But, how can methodological and environmentally conscious selective expansion be competitive when it will undoubtedly slow the flow of capital? Princen’s proposal requires neoliberalism to take a step down. Materialism seems like a candidate for facilitating neoliberalism’s dethroning because materialist theories unveil the multiplicity of an object’s

relationship and unite the binary between the internal and the external. However, investigating materialism further leads to an authoritative voice and a conflict between what is and is not “ontologically true,” and thus objectively real.

As a humanist materialism, Bennett’s vibrant materiality faces the politics of neoliberal expansion and degradation head on through her observations of the entangled relationship of the human and nonhuman. She explains vibrant materiality is meant to create “more attentive encounters between people-materialities and thing-materialities” (x), with the goal of raising “the status of materiality of which we are composed” (12). This acknowledges that we are composed of a nonhuman assemblage in which we emerge from, and having a respectful connection to the nonhuman is synonymous to respectful treatment to the human. She states, “each human is a heterogeneous compound of wonderfully vibrant, dangerously vibrant, matter” (12). This relationship extends outwards from human composition to include everyday encounters. She describes a transaction between things and people by reflecting on a walk. She states, “had the sun not flinted on the black glove, I might not have seen the rat; had the rat not been there, I might not have noted the bottle cap, and so on” (5). The necessity of an entangled way of viewing the things becomes urgent when thinking of how we might act differently towards trash, toxins, and other volatiles when the chasm between self and other is closed.

Bennett’s materialism spurs into a humanism that exceeds the traditional humanisms by creating a relationship with the nonhuman, and therefore a relationship with what makes us human. The origins of posthumanism demonstrate

such a trend. During N. Katherine Hayle's founding arguments for posthumanism she states, "even a biologically unaltered *Homo sapiens* counts as posthuman" (4). Hayle's account of posthumanism determines that humans are always already posthuman because objects are entangled. Thus, she deconstructs the hierarchy of human-nonhuman relationships, but this deconstruction defaults back to the state of the human.

OOO criticizes posthumanism as recreating the ways in which an object should be subjugated for the human. OOO's skepticism brings up a good point, that the way we "should" interact with objects through humanism has led to degradation to begin with, and leads into uncomfortable ideas like fighting the degradation brought by engineering, by applying more engineering to that thing. For example, to prevent global warming engineers have suggested engineering Earth's atmosphere to offset rising temperatures by using jets to spread fine droplets of sulfuric acid in the lower stratosphere (Rotman). Once these droplets are in the stratosphere, they are projected to reflect 1% of sunlight that would have hit Earth, back into space (Rotman). Such a drastic solution is unnerving. Engineering has provided us with many solutions to enhance our lives, many of which created unaccounted for, threatening issues like global warming. And, how will the land of each country respond to the shift in atmosphere? Could manipulating the stratosphere throw off the crop cycles of a town in Southeast Asia? Is Southeast Asia even being considered in the costs of the event and in the possible effects?

To break our pattern of object-appropriation, Harman describes objects as "withdrawn," meaning an object will always already be unknown because we are

not that object (5). By this argument an object has inexhaustible relationships that extend far beyond what can be verbalized and anthropomorphized. Timothy Morton uses OOO to introduce a heuristic for understanding the thoughts that drive anthropocentrism and, subsequently, environmental degradation that he calls, “agrologistics.” The third tenant of agrologistics emphasizes the presupposition that: “(Human) existing is always better than any quality of existing” (“There Must” 9). Agrologistics organizes space in a way that offers a foundation for capitalism because it features a human protagonist in an endless frontier of resources. As Smith mentions, “with the development of capitalism, human society has put itself at the center of nature” (8). To host neoliberalism, ecology requires space to be organized in such a way that capitalism and space develop in tandem. As Moore points out, organizing space with an inside/outside binary gives bearing to neoliberalism. He states, “the view of Nature as external is a fundamental condition of capital accumulation” (2). Once space is organized as so, space can grow neoliberal capitalism.

OOO states that all things have equality in ontological value, but are not equal in substance. This claim begins to challenge neoliberalism by closing the gap between the valuable and what is not valuable. As Moore explains, value relies on most things not being valuable. An arbitrarily ascribed binary between objects creates a drive for the production of objects containing the expansion of capital value. This drive may eclipse the wellbeing of its constituents because neoliberalism rushes towards the growth of capital value and labor, people, are useful instead of valuable (54). This promotes cheap labor and cheap Nature to be extorted for the

greatest gain in capital value. Perceiving an equality of ontological value amongst all things disrupts the binary capitalism uses in order to organize labor because if all things are ontologically equal, capitalism is highlighted as pursuing a rush towards objects that arbitrarily hold capital value and therefore lose their inherent worth.

Ian Bogost proposes OOO to be practiced as a “flat ontology” because of its equalization of all things. Calculators calculate and cats cat and bats bat and neckties necktie the way that humans human. But, flat ontology creates a new structure for neoliberalism when a human life cannot be “above” a protractor. While, at first flat ontology sounds like it could equalizing the unequal worth given to different communities depending on their class, race, or gender, flat ontology instead diffuses a need for reevaluating our relationships with silenced communities because they are already equal in value, just not in substance. The communities are equal in value because they all equally exist among a lateral plane, not a hierarchy. Value is arbitrary, and so one community is not more worthy than another. While this might be even in theory, in practice this creates unevenness through a social disenfranchisement and the inequity of linguistic capital. After dismantling the binary, flat ontology offers a new rhetoric that excuses the presence of a domination/exploitation dynamic.

Suggesting people do what people do, nothing more and nothing less, carries a familiar tone rhetoric that passes exploitative behavior as natural, or inevitable. It’s articulated by the same rhetorical structure as the statement enabling sexual assault, “boys will be boys,” enabling predator males. Although boys will, technically be boys – boys is a rhetorically defined category. Through one angle flat ontology

does not fully back the, “boys will be boys” statement because it assumes an essential nature of what it means to be a boy. Although, flat ontology simultaneously does support “boys will be boys” by stating that boys will do what boys do the way that calculators do as calculators do, and this is matter-of-fact. While calculators divide boys assault. The results of adopting a flat ontology are not flat.

Flat ontology continues to create devastating disparities amongst stakeholders through the descriptions of Ian Bogost and Levi Bryant. On a blog post with the dismissive title, “I Know! Let’s Talk about Politics and Ontology Again!” Bogost uses OOO to defend a comment by Levi Bryant that naturalizes racialized police violence. Bryant states:

A great white shark eating a seal is simply an event that takes place in the world. It is simply something that happens. A person shooting another person is also, at the ontological level, simply an event that takes place.

Bryant backs his statement with a definition for ontology, which is a discourse about the “most general and fundamental nature of being or of what is and what is not” (“On Ontology”). He explains, “Being consists of what is regardless of whether there is any discourse about it. Ontology is a discourse *about* what is” (“On Ontology”). A “being” is always already present and according to Bryant’s arguments, being cannot be socially constructed. In his blog post, Bryant calls this “earnest.”

Bryant’s relay of OOO gives it an authoritative position over determining what “is” and what “is not,” reorganizing space accordingly. But, if all objects withdraw, a socially constructed discourse about “what is” seems to be inevitable. OOO’s speakers will always need to pick and choose (and sometimes incorrectly

choose) what should be a part of the discourse. Crafting a discourse around “what is” is exclusionary, granting authority to certain actors. Bryant’s rhetoric sounds, not like post-humanism but anti-humanism. His statement is sweet and simple. On an ontological level, things do stuff. A calculator calculates. But, asking *why* accompanies answering *what* because *what* an object is, is never separate from its influences. Why does will one calculator calculate while a different functioning calculator will not? Why might an object do one thing, while another object with the same capabilities do completely different things? This suggests influence is ontologically present. Perhaps a useful way of looking at ontology is: things do stuff when they are influenced by stuff, for all things are entangled. Grass sways because it is influenced by the wind, which blows because it is influenced by global weather cycles. Otherwise, grass does not have the characteristic of swaying. Grass would not be stringy without fibers. The whole of an object is influenced by its entanglements. Without considering influence, the ontological level becomes less flat. Instead, the ontological level erects barriers around what can and cannot be, and what should and should not be considered, and ultimately who should be included in these decisions. These barriers create unlevelled disenfranchisement.

This is evident in the word choices Bryant uses to talk about things on the ontological level. Bryant is using his whale-seal comment as a response to the rising criticism directed towards white-cop, black-victim police shootings. He states a racialized police shooting is, “simply an event that takes place.” He does not refer to the race(s) or the symbolic power of the police. By doing so, Bryant states like he is erasing a social construction (race and police authority), but by arguing that



rhetoric has a material presence we can consider how our bodies physically respond to associations. Trauma is carved into our neural pathways. The emotions (chemical reactions) that influence our associations are vibrant matter. Bennett calls this “the lively powers of material formations, such as the way omega-3 fatty acids can alter human moods” (vii). Calling race solely as a social construct sounds like, “stop talking about racism and it will go away.”

To say an event is solely an event places barriers around analyses, similar to “it happens,” as both the beginning and the ending points of speech. Shootings do happen, yes, but why? They happen because a material influence at the ontological level. Expanding ontology in this way seems more ecological. Being occurs across time, so some would suggest that all being is becoming. Influence gives objects the propensity to develop or behave in a particular way. As if holding speed, a development contains the momentum to create configurations. A functional calculator may never calculate because it was stuffed in someone’s messy closet, which created more potential for it to be forgotten about. New configurations can emerge from old like how a bridge emerges from metal and bolts if the metal and bolts are found in a specific configuration. But, a bridge is *not just* metal and bolts or else all piles of metal and bolts would be a bridge. Timothy Morton argues we cannot reduce an object to its parts. He argues, things are themselves but also not themselves. They are, “contradictory... there can be sets of things that are strictly not members of that set” (*Ecology Without Nature* 74 - 75). Andrew Pickering calls this “an ontology of becoming” (3), which argues a dualist perspective eclipses the

ontological conditions from which something emerges (4). Pickering's statement affirms that binary thinking is behind Bryant's stance.

Racism is an object that emerges from an influence created by a specific configuration of materiality. This means Critical Race Theory can be seen as having some roots in ontology. A pattern of violence and discrimination towards the race of a person (race being a material configuration) is an example of humans doing what humans can do. We call this racism. While racism is socially driven, its behaviorisms are ontologically true the way that birds fly south for the winter whether we say they do or not. Acknowledging racism at the ontological level is not the same thing as excusing/defending/or denying it, but instead acknowledging racism at the ontological level allows us to see the real effects of racism as a real entity. For, even the social dimension of racism should be considered an object. As Timothy Morton states:

If the very question of inside and outside is what ecology undermines or makes thick and weird, surely this is a matter of seeing how ecosystems are made not only of trees, rock formations, and pigs (seemingly "external" to the human) but also of thoughts, wishes, fantasies (seemingly inside our human heads) 67

Understanding all thoughts as objects means that cultural consciousness is a thing, and like things it can place something, like value, on other things. Value can be placed on the white worker, on monetary, on social class. And like any object, value can be maintained, remodeled, or removed. Bogost's and Bryant's arguments ask that we ignore, *albeit temporally*, the exchange and movement of value by socially driven actors. But, what value do they claim to add to the discourse by ignoring

race? In the stock market, value grows through the flow of time. Removing race discourse from the flow of time devalues its presence and allows for a linguistic currency that ignores race to grow as the exchange of movement of value by socially driven actors determines who and what is privileged.

Timothy Morton names complex, permeating objects that are massively distributed across space and time “hyper-object.” The hyper-object informs our day-to-day life and cannot be fully comprehended in any specific, local manifestation (49-51). Morton uses global warming as an example. At the moment a raindrop hits our faces we our minds might not rush to global warming. We could even debate whether this raindrop is attached to global warming (even though everything exists within it). Although Morton shies away from calling racism a hyper-object, it certainly fits the bill. When a racial slur is directed at someone, that slur is a local manifestation of the much larger web of institutionalized racism. Institutionalized racism, as a whole entity, cannot be pointed to. Only its symptoms, like pointing at a raindrop. Yet, racism’s effects spill everywhere.

Bogost claims OOO is “earnest,” which is why OOO disregards social objects. The power of authority behind this claim rings in a totalitarian tone. Bogost depicts himself as living in a more truthful reality, and others in a reality willed by their thoughts Bogost encourages others to jump on board with his thoughts. In this light OOO looks like an anthropocentric product meant to venerate a practitioner from the rungs in which the vernacular thinker and traditional academic have settled. Bogost’s and Bryant’s ontological level is constructed through incomplete information pushed forth as absolute, and that this absolute disregards what I

postulate is an ontological characteristic emerging from humans, social force, which creates silenced bodies. To use OOO to claim something does not exist requires assumptions and thus a theoretical framework, undermining OOO's honesty.

Perhaps being driven by white-male, middleclass embodiment contributes to the discourse of OOO as a sans-race, sans-class discourse. The main thinkers that contribute to OOO, Bogost, Bryant, and Morton are missing the ontological positioning to be introduced to race, or gender, or class as an object.

To understand the implications of OOO, we must question how it influences objects. Bogost's and Bryant's shark-seal analog in their statement on white police black target is a good place to return to for answering this quandary. Bogost defends Bryant's statement that beckons us to look away from race in by saying, "There's also lots of other stuff, and Levi suggests that we take all of it seriously: metallurgy, ballistics, industrial manufacture, freight logistics, state borders, the "hunting hypothesis," urban planning, and really so many more" ("I Know!"). Bogost inspires important considerations, for more details must be put into account if we are going to engage with and solve issues, but he would disagree with my suggestion that we need to carefully decide what additional details we want to put into consideration. I suggest intentionally sorting through and debating (and revisiting after deciding) what details we think about because like Princen argues in terms of the monetary economy, the linguistic economy cannot account for all possible outcomes. The details we choose to include will spiral into a direction and reshape object relationships. So, how do we choose what we will speak of? Why talk about ballistics instead of discrimination?

Bogost explains we should turn our attention to things like ballistics to distribute our conversations beyond the go-to: racial tension, white-violence, and black-targets. His suggestion asserts that objects are subservient to the go-to conversation deemed more valuable, thus creating a hierarchy of unevenness. However, conversations about white-violence and black-targets only exists within certain pockets of thinkers and communities as evident through the perpetuation of violent acts. If white-violence and black targets were acknowledge by the general public “at large” then we wouldn’t have so much white-violence and so many black targets. Bogost and Bryant must know we do not live in a post racial society. Yet, they argue that the small sections that do discuss issues of race refocus their interests on non-racial matters. Entire sectors of people already discuss ballistics, so why expand (and dilute) a conversation about race with a conversation about metallurgy? Should a news heading read more like: “Man shot by another man using a gun made of copper alloy and zinc, which now reveals two finger prints.” Effacing race from the event enables the rise of supremacy, another object emerging from the configuration of social actors. Bryant shows this in his shark-seal analogy not just through his dismissal of black bodies, but also through his choice of words. The predator is a “great white” shark (“On Ontology”). He positions a picture next to his analog that shows a black seal. A white-predator, black-prey event is naturalized through a watery scene. His comment ends with *it happens*. He does not ask why despite that why reveals the influences and emergences in a configuration, or, the ontology of becoming.

On the same blog post Bryant continues his argument on race into a conversation about neoliberalism. He argues neoliberalism does not have an ontological presence because it is contingent upon social behavior. He states that, “when someone says that a particular technology is *intrinsically* neoliberal or capitalistic, they are making certain metaphysical [(which he uses synonymously with ontological)] claims about the world” (“On Ontology”). Bryant returns to his argument that these systems are not ontological because he associates them as socially constructed (and therefore not real). But, this reduces the web of ecology and the possible effects of discourse. Bryant explains that when one calls something intrinsically neoliberal:

They are saying that 1) entities are an *expression* of the context in which they exist (in this case the technology expresses capitalism), and 2) they are saying that relations expressed by the entity are *internal* to that entity. The claim that a relation is *internal* to an entity is the claim that that entity is *inseparable* from those for relations (“On Ontology”)

Bryant’s claim severs the web-of-being that objects exist within. An object can be an expression of a thing without being permanently attached to it. I am an expression of my mother, but not at all times and in every context. Bryant’s claim makes an essentialist assumption (that things are linked to things) that OOO undermines.

Bryant says if we claim something is inherently neoliberal, we are saying that the thing does not exist in any other realm because it is a defining characteristic of that thing, such as a chair that, as intrinsically neoliberal, does not exist otherwise. I argue a chair can be a neoliberal chair (and also a socialist chair, or a fascist chair)

because its space is produced within neoliberalism, and without neoliberalism it would not be a neoliberal chair. It would be something else. Just like how white privilege has influenced my life, skin tone is not “inherently” racist but it is the reason someone may have been sold a house or approved for a loan. As Moore argues, we should see capitalism as a physical location with transactional relationships that cause all objects to be intermingled, influencing and producing each other.

Bryant explains that people who call something intrinsically capitalistic or neoliberal create a one-to-one correlation between the object and neoliberalism, scorning this because a one-to-one correlation minimizes the object and will exhaust object relationships. But, acknowledging a chair as a neoliberal chair (verses another) enables objects *more* ways to develop relationships because the space under which the object is being organized adds to the qualities of its other relationships. Instead of a one-to-one correlation, I see those who argue that something is neoliberal as arguing that entities create an expression *for* the context in which they exist. By being neoliberal, the chair in turn influences other objects in a congruent way, which brings us back to Bennett’s vibrant materiality stating that all matter has intrinsic vitality, “for it is not a passive object, but is an actor that has trajectories, propensities, and tendencies of its own” (viii). Race and racism embeds itself in objects like shrapnel from a bomb. In this metaphor, the bomb is “difference” when put in hierarchical form. Even the mundane details and objects within life are touched by racism.

The Dartmouth institute for Health Policy and Clinical Practice published an article, "Variation in the Care of Surgical Conditions: Diabetes and Peripheral Arterial Disease" shows how racism, as an object, has a vital (and dangerous) trajectory with terrifying momentum. The Dartmouth article addresses the grave disparity of treatment between white and black patients. Black type-2 diabetic patients are three times more likely to have a leg amputated than non-black patients (2). Amputation is a climatic point culminating from many mundane things: black people are less likely to have accessibility to preventative care, and cholesterol and blood sugar testing (12). This is because racism moves across time, re-organizing the black body as an object to be distanced from the hierarchy, used, and disregarded like how neoliberalism exploits its environment.

Though, returning to Bryant's statement, by referring to "neoliberalism," Bryant might also be referring to the whole of the power structure of neoliberalism. I question whether we can call a power structure inherently neoliberal in the same way we can say that something is inherently green. Both adjectives are arbitrarily assigned to patterns. A color is a pattern of frequencies that exists on the ontological level. neoliberalism is a pattern of ecological actors. A material configuration is neoliberal like a bridge is a configuration that makes it is different than metal and screws.

Embracing a theoretical stance that discredits the emergent materiality of social construction poses issues for higher education and the social change higher education contributes to. As long observed, things often do not change without the attention from social force recreating the patterns used to interact with objects,



such as racism, neoliberalism, etc. Using Bogost and Bryant's take on OOO has an ontological influence. While OOO erases a theoretical difference in worth between men and women, OOO enables an active behavior of such by ending the discourse that activists have worked to create (as an object) to buffer hegemonic influences. However, segments of OOO offers a useful direction for an eco-humanism by asking: so what if humans do what they do, and why do they do X if they are capable of other things? What does it mean if BP spills oil in the ocean during a race to build capital and why does it happen? Answering these questions requires observing which way capital is flowing.

By selectively using OOO we can define our values using different tools than what neoliberalism conveniently provides us. In response to Bryant and Bogost, Morton argues that OOO allows us to reevaluate what we deem as important ("Ecology Without blog"), but this points us back to humanism from OOO. Morton's suggestion can be followed out by disrupting flat ontology and then intermingle it with vibrant materiality. By doing this we can devise a politics that includes the nonhuman and the human in a way that extends empathy to objects and erects importance around issues that considers the vitality of things. A politics of inclusion is a power structure that recreates space in an ethical (humanist) manner. As Bennett argues, "if a set of moral principles is actually to be lived out, the right mood or landscape of affect has to be in place" (xii).

What a politics of inclusion might look like can be hypothesized in response to Pickering's assertions of human relationships with the Mississippi River. He argues humans should stop interfering with how the river has evolved through time and

degradation (8). In this, he negates the human and the pretense of toxic water echoes the “it is what it is,” of OOO as disenfranchised communities will suffer recourse from the water’s state. Pickering analyzes the US Army Corps of Engineer’s involvement with the Mississippi River. The engineers’ actions seek to stabilize and sustain the fleeting movement of water. As Pickering notes, this is problematic because water cannot be stabilized, and in attempts of doing so, people desire control in a way that can be as disconcerting as needing to create an o-zone.

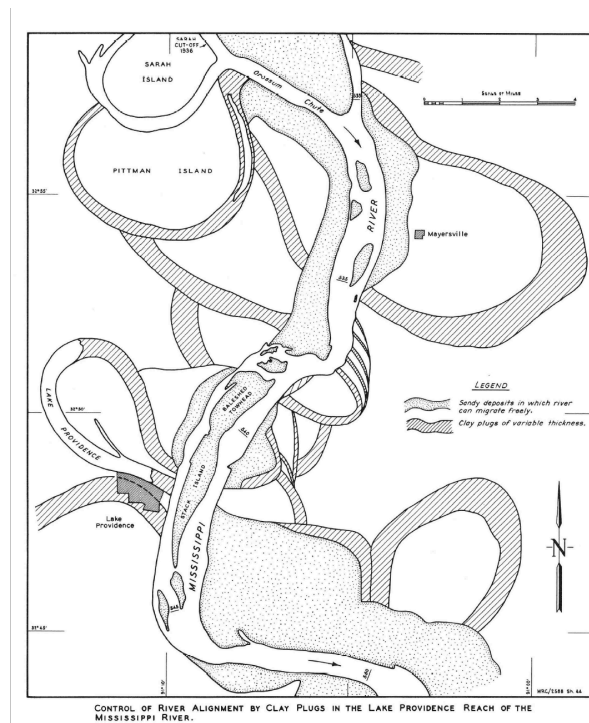


Figure 1

In 1944 Harold Fisk illustrated a map of the Mississippi River for the US Army Corps of Engineers that clashes with the want for a stable waterway (Figure 58). His map shows the many ways the Mississippi flowed before the US Army froze the waterway in place (see fig. 1). The desire to grasp the Mississippi draws a bright, red line underneath itself as evidence against a frontier economy.

The desire is a mutual realization that the Mississippi, as a resource, is not stable. The pollution of the river will not balance out through “laissez fair” treatment (i.e. industry does one thing, but then nature evens it out). But, the will to hold onto the Mississippi, to grasp it, is an idealization that the Mississippi can be made indefinite again, that we can create the balance that, according to *laissez fair* is always already

a characteristic of a thing, and that the river has essential qualities that can be re-evoked.

Pickering's response, while provocative, does not have to be the alternative response to our haphazard interference of environmental resources. Instead of a response driven by OOO stating that we ought to *let go*, we can instead *lean in* develop a more personal relationship with water that considers its vitality. Toxicity is something we can listen to and observe, and then respond to in a way that honors the mutual exchange between humans and water. Pickering does, however, offer an acute observation on how the binary veils itself as a realism. He states, "Instead of seeing dualist detachment and domination as a move, a tactic, a ploy, and a very specific way of living in the flow of becoming, we tend to mistake it for the world itself" (4). Acknowledging the symbolic power that reproduces neoliberalism's binary is imperative for understanding how the binary arbitrates human interactions with the environment.

We can begin deconstructing the neoliberal binary by looking at waterways, which have been abstracted into symbols, like on maps, instead of encountered as vital beings. How water comes into representation is telling of who has power because we can observe who the representation benefits. Representing water through a neoliberal binary is dangerous because water plays a radically important role in who gets to survive (exist), for water is tied to socio-economic class and overall health. Historically, access to water meant access to trade, power, and wealth. In modernity, the cleanliness of nearby waterways is often linked with the arbitrated "worth" of neighboring human and nonhuman communities. In this next

Chapter I explore how maps create a surface/depth binary that perpetuates neoliberal destruction by placing artificial boundaries (that, although artificial, have material affect) between things. I argue for how flat ontology can be appropriated to dismantle these boundaries and create a way of perceiving water that embraces water's fluid and vital relationships between human and nonhuman entities.

## Chapter II: Rereading Maps through Flat Ontology

Using vibrant materiality to reevaluate our position within ecology, not as a centerpiece (or a passive piece like Pickering illustrates in his discussion of us and the Mississippi as that implies a binary) gives us a tool to challenge neoliberal power structures. Flat ontology collapses the symbolic power that scaffolds hierarchies and likewise assigns subjugating roles to the objects depending on where they fall on the hierarchy. Hierarchies abstract objects into tools that are used for globalization. The map is a powerful tool that manifests itself in the way that abstract power systems organize space. The map has long played an important role in reasserting its authority as well as the authoritative power of its stakeholders. Maps of waterways are especially pertinent to neoliberalism's power because who controls water is who has access to a mandatory resource for human survival.

I will be examining a US Army Corps of Engineers map of the Monongahela River from Pittsburgh, Pennsylvania to Fairmont, West Virginia to analyze how cartography maps the environment, while also making the environment. A close reading of waterway maps as cultural artifact of capitalism demonstrates how maps reform space and its occupants in an idealized, self-serving image and how this can

be dismantled through flat ontology. The map has an ambiguous genre: it is fiction, as it is an illustrated and abstracted representation of a location. Yet the map is simultaneously a truth, because it communicates the tangible things around us in a way where we can follow the maps suggestions and experience what it presents us. The map's authority declares itself as a non-arbitrary mirror of the tangible. It reproduces an understanding of the relationship between the map and the reader as speaker and listener. Benedict Anderson describes the map as a regulator of national identities, which are modeled, adapted, and transformed in a feedback loop between a location and its abstraction. During this process the ideologies of national power dynamics become actualized and affirm or reject an entity's subjugation (141). Anderson's argument is ecological and can be used to view not just the nation, but also general space produced by a complex system that declares itself as a mirror of materiality like neoliberal capitalism.

The map plays a historical role in organizing ecology in a way that benefits capitalism, especially through waterways. This can be seen from the early explorers of the Americas who distorted the latitude and longitude lines on oceanic maps for easier travel from Europe to the untapped resources of the western hemisphere, to contemporary maps like those of the US Army Corps of Engineers. Rivers are treated like dark pools of investment for businesses. Who gets to interpret water through a map is who gets to have power. The rhetoric of the modern map is a capitalist production and is a site for capitalism to reproduce itself. The US Army Corps of Engineers' map, "Monogahela River Navigation Charts: Pittsburgh, Pennsylvania to Fairmont West Virginia," is useful to this analysis because it serves as both an

authoritative and utilitarian map. Its authoritative voice anchors itself in the forefront of concern for it is a map that regulates the use of the river and under the name of the US military. Through its authority, the US Army map sets standards for what a map is, and how it should present itself. Its placement of binaries and selective use of borders is expected from maps, and other neoliberal-influenced maps share these expected qualities. By fulfilling the conventions taught to those reading the maps, neoliberal maps create a self-perpetuating feedback loop that encourages its readers to continue subscribing to its organization of space. As Bourdieu states, “The power of words is nothing other than the *delegated power* of the spokesperson, and his speech” (107). For, “the language of authority never governs without the collaboration of those it governs” (113). Consent for neoliberalism reproduces itself until things look like they are fact. As I show later on, the US Army map format is not a default for the map. Its status among readers perpetuates slow violence through its omissions.

A section called “The Law,” is situated at the beginning of the atlas. “The Law,” addresses water vessel regulation with emphasis on navigational safety. It informs what procedures should be carried out in the instance of an event that results in losing control of previously held objects among the waterway, which may ultimately, for the US Army map, block boat travel. “The Law” is centered on human control and transportation. The US Army map is useful. It is designed to deliver quick and precise information about navigation. However, because it is an authoritative map, it announces itself as *the* map of the Monongahela River. *The* map of the river is constructed with borders: the end of one segment of the river, the

beginning of the next, the end of

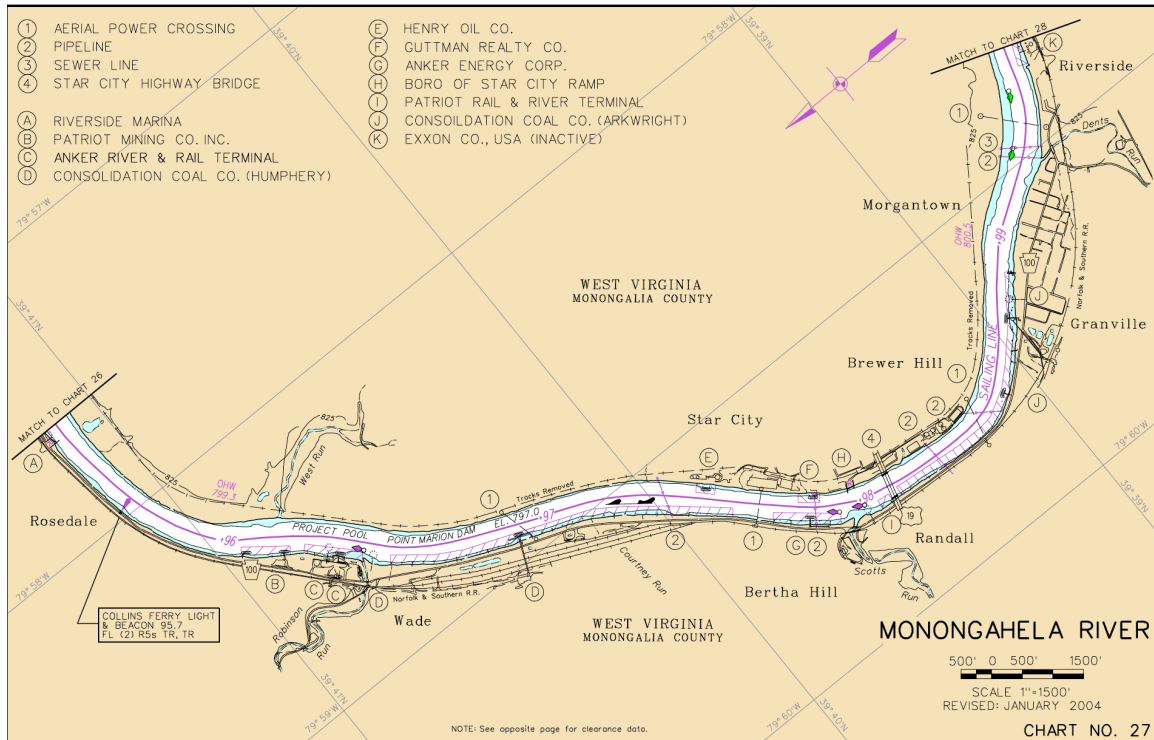


Figure 2

Pennsylvania, the beginning of West Virginia (see fig. 2). The river is divided into a binary of surface/depth and chopped up like a segmented worm. The basin, where trash sinks and spilt coal builds, is silenced.

The incidents termed as, “navigational dangers” in the atlas also double as health and environmental dangers. Navigational dangers obstruct utility, where as health and environmental dangers slowly degrade wellbeing. The immediate threat outweighs the threat that requires abstract thinking in part because Neoliberal influenced education promotes utility over critical quandary (Kumar and Hill 4). As Smith states, “the global transformation of nature wrought by industrial capitalism dominates both the physical and intellectual consumption of nature” (10). The US

Army maps frames water as a passive object for human agency that ought to be maintained in a way that promotes the continuation of capital flow.

Point 1 under “The Law,” states that all incidents resulting in uncontrolled barges must immediately be reported to the nearest lock so a worker can “initiate whatever actions may be warranted” (Sheet B). How do we know what actions are warranted? How has this worker been produced? One action is, of course, is a worker regaining control of the barge. But, what might this include? Who decides where a worker’s actions stop, or what events should alarm a worker? Are barges the only object that, if dropped, should be retrieved from the river? Point 3 states, “Sunken or sinking barges shall be reported to the nearest lock both downstream and upstream of the location in order that other traffic passing these points may be advised of the hazards” (Sheet B). The use of the term, “In order,” reestablishes the map’s authority. It dictates a singular purpose, to continue waterway transportation of consumer goods. Point 4 insinuates a more environmentally conscious tone, although it stops short of fully declaring itself as a speaker of the vitality of the river. Point 4 states: “In the event of an oil spill, notify the nearest lock downstream, specifying the time and location of the incident, type of oil, amount of spill, and what recovery or controlling measures are being employed” (Sheet B). An oil spill is the only pollutant addressed, though it is not declared as one. Without referring to the incident as an environmental danger, it remains in the context of a navigational, utilitarian danger. This is affirmed by point 5, which states: “Any other activity on the waterways that could conceivably endanger navigation or a navigation structure shall be reported to the nearest lock” (Sheet B). By following point 4 with a



statement that adds onto it as though it were one of the “other” activities frames oil as though it is ultimately a navigational danger.

“The Law,” organizes rivers as human tools to be maintained for the flow of monetary profit over the flow of water-y vitality. The river is easy organized this way when it is split into a binary of surfaces and depths. A navigational map orients the river from its surface. Movement happens “on” the river. Problems are imposed *upon* the river, like moored barges that obstruct the surface, or a sinking barge that has dropped from the surface and needs to be brought back up. However, seeing a surface is not necessarily an issue. Instead, the perception that there is something perceived as deep and unreachable is a problem. Flat ontology gives us an eco-friendly way of organizing the river by pressing the binary dimensions together (surface and depth) to unite them as entities that are contingent upon each other, and what happens at the bottom of the river is just as relevant as what happens at the top. Leveling the basin with the surface reveals a disturbing discovery. The basin is littered with florescent orange acid stained rocks, which brings a startling pause to fiscally driven ideals. The river’s subjugated status is denaturalized as the rocks radiate from their watery location. As selective communicators, neoliberal maps promote imperializing rhetoric. In *Imagined Communities*, Benedict Anderson suggests a map should declare itself as incomplete in order to prevent itself from dictatorship. Acknowledging the dispersion of information makes supplementary maps important for reestablishing a singular map as incomplete and by sharing information that counters neoliberalism. A waterway is fleeting, constantly in flux. Deleuze and Guattari state, “The map is open and connectable in all of its

dimensions; it is detachable, reversible, susceptible to constant modification” (12).

The map should not be one, authoritative voice, but a multitude of voices are fluid like water. They state, “It can be torn, reversed, adapted to any kind of mounting, reworked by an individual, group, or social formation” (12).

Moore argues we should see capitalism as a material location. A map might be labeled as representing a province in Canada or a segment of the Monongahela River, but it does not announce itself as depicting capitalism the same way it does not announce itself as representing air or even paper. The Eiffel Tower is in Paris, which is an arbitrary mode of organizing a segment of France, all of which are in, and being organized by capitalism. It’s hard to talk about economic systems as an extension of ecology when it is largely invisible through naturalization. Abstract space (the Monongahela as a blue squiggle), abstracted and external nature (that which is nonhuman), and abstract time (numerical digits) lend themselves to global conquest as it gives imperial force a tool to see the globe with (190).

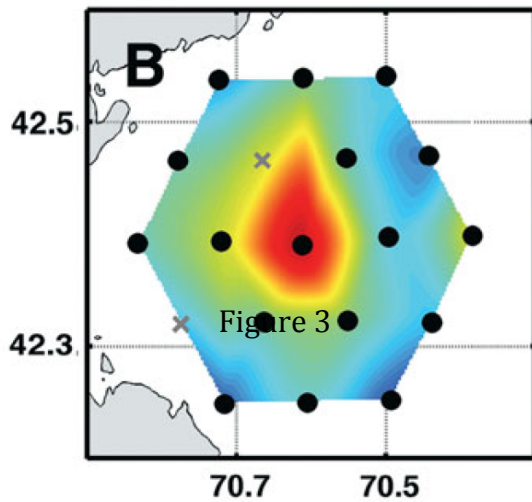
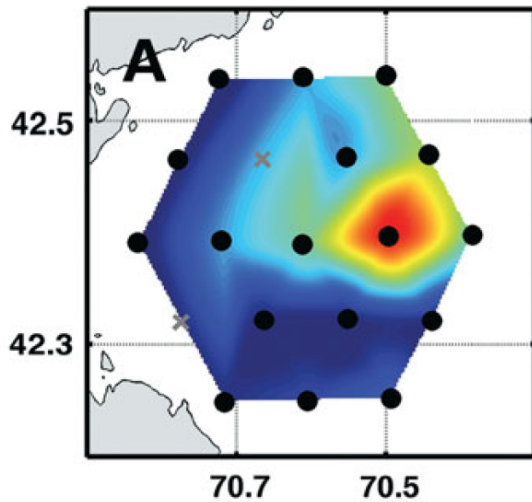
After flattening river ways we can revisit the narrative strategy that names segments of locations as individual entities, for we co-produce the river. Patricia Yaeger quotes Jane Lubchenco an administrator of the National Oceanic and Atmospheric Administration (NOAA) stating one of our issues with our interactions with the ocean is that workers engage with oceans (interconnected bodies) through segmentation. Lubchenco argues we need cohesive national policies instead of ones that look at the ocean, “sector by sector, issue by issue. One agency regulates water quality, another regulates fishing, another regulates energy extraction, and another

regulates shipping” (qtd. in “Sea Trash” 532).

In this way the nation has organized the space of the river, which denies an integral quality of water: it is a liquid web of connectivity and to touch Deckers Creek is to touch the Monongahela River, which is to touch the Ohio River, which in total crosses six states.

Chris Clark, director of Cornell

University's Bioacoustics Research Program, is working on a map that visualizes sound distribution of underwater acoustic environments that whales live in (206). It looks like a topographical map, but measures the density of frequencies (see fig. 3). Clark's map is still predicated on exclusion, for it



shows only certain types of noise (underwater noise) and still erects perceptual boundaries. But, as a supplement to navigational maps, Clark's map reminds us how many more things are contained in space, such as noise frequencies we cannot see.

The horizontal lines of the map are longitude lines, and the vertical lines are latitude lines. The warm splotches represent the density of ambient noise. Despite that Clark's map is contained and therefore another abstract look at water, his map provokes ideas that counter the rush to profit neoliberalism promotes by redrawing certain water space as volatile and dangerous to cross in the event of adding more ambient noise. Clark refers to excess frequencies as "acoustic clutter." Through this frame the topography looks like landfills. Though, Clark's map does not contain authoritative symbolic power that the Army Corps of Engineer's map contains despite that his map serves a similar function the Army's map. It, too, informs navigational safety. By seeing noise frequencies as spatial obstruction, following Clark's map can inform traditional navigational maps by influencing the locations of shipping routes and new oil and gas developments. However, this is likely to hinder fast profit, which would deter Clark's map from being adopted by businesses.

Princen argues we should create a competitive business strategy that knows it cannot internalize all costs given the complexity of ecology, and therefore pays attention to, and looks for, uncalculated outputs like acoustic clutter. Princen states, "cost generation should be assessed as a product of both production and consumption decisions, whether or not the costs are deliberately or knowingly externalized" (103-104). He continues by arguing the business strategy, "must consider how differences in power (political, financial, informational) contribute to

such costs” (104). Though, declaring the power of the exploiter does not happen under neoliberalism for neoliberalism sees no issue with individual, environmentally violent acts. As Princen explains, “For a business firm, the ideal economy is a frontier economy” (104). By this he means an economy where jurisdictional authority is absent, resource users do not have to claim responsibility, and consumers are distant enough (whether through abstraction or through time or distance) to be unconcerned with individual acts of violence.

Yaeger describes herdsmen who work to maximize individual profit. The herdsmen grow their individual prosperity by adding extra sheep to their herd, but without calculating how the actions of other herdsmen will influence each other’s future, and how in time the increasing number of sheep may hypothetically destroy the quality of the land, and thus destroy other objects that require the nutrition of the land such as neighbor animals (which would be irrelevant economically if they do not contribute to the wealth of the herdsmen), or vegetation that herdsmen need to grow crops (525). The instant spike in wealth by gathering new sheep eventually leads to the ruin of the land and greater economic instability (525). A link exists between economic rationality and a spiral towards destruction. As Yaeger quotes from Garrett Hardin, “Freedom in a commons brings ruin to all” (264).

Up to this point, I fear I might be describing laborers and materiality as mindless workers usurped in a thinking, feeling, capitalist machine. Gramsci’s arguments go so far as to create a mindless worker who is the total inversion of homo economicus. The angle in which he looks at capitalism does not seem ecological because he excludes to some extent human agency in favor of a degree of

interpellation that subsumes constituents instead of creating a transactional relationship with them. I fear his approach creates more passive objects.

Seeing human actors as passive ignores our active desire to delegate power, enact change, and actively choose what we want to feel despite this choice being influenced by culture. Morton argues that we deny environmental catastrophe because it makes us feel better (“Ecology Without blog”), not because denial has been handed to us. Groups of people are branching into an anti-capitalist, environmentally conscious perspective. Their actions are not separate from systemic ideologies, as can be seen by the profiles of those who are getting involved (they are often educated, middle class citizens), but they are also not completely dictated by systems. The eco-friendly groups and their culture participate in an ecological exchange. Stephanie Foote states there has been a rise of eco-bloggers who journal about ways they have been going green, while sharing tactics and encouraging others (74). Environmental consciousness is growing amongst certain communities. But through this the destructive actions of neoliberalism as a whole become pointed at individuals (75). This cultivates and places shame on individuals, especially in the light that an individual is powerless in a systemic problem. Cortez quotes a Texas ad stating, “People start pollution. People can stop it” (227). This orientation effaces mass corporate power and influence, far more detrimental than the individual consumer who realizes s/he is Sisyphus who reduces, reuses, and recycles but can never curb environmental degradation.

The philosophies of capitalist regimes advertise themselves as alternative solutions that rid us from the guilt of degradation and the fear of a demising future.

Capitalism plays on the term, “sustainability,” an idealization that resources can be used and then replenished, or that resources can be used and then restore themselves through an environment that regulates and balances itself. This is just one way Neoliberal capitalism organizes the environment in its image. Capitalism’s source of order is regulated by “internal relations among individual human actors” (Taylor 4). From this point of view, “the market is a self-organizing system that regulates itself” (Taylor 4). The environment, as produced by Neoliberal capitalism, sustains itself through checks and balances. Capital expansion through resource accumulation can only benefit stakeholders of the environment because the endless accumulation of resources from a spanning frontier can furnish workers. Labor carries the transcending voice of Christianity, offering promises of a thriving livelihood to those who work hard enough to participate. Cultivating “value” from ecology feels good with its dual meaning of moral goodness, inseparable from the echo of money. The philosophy of Neoliberalism declares itself as social and environmental welfare.

A neoliberal solution churns slow violence. Its outputs are poorly funded workers (because “trickles” of wealth are not enough to sustain a vital life) in an environment that has been appropriated for neoliberal needs. According to neoliberalism, labor cannot be exploitation because any degree of monetary gain is beneficial. Some accumulation of capital is better than no accumulation of capital, regardless at what cost, which breeds slow violence. Disparity is heightened by cultural distance between high socio-economic classes and the working classes. Princen explains when likely exploitative exchanges occur between classes

neoliberalism offers the exchange as a beneficial relationship. Princen explains when purchasing grapes from a farmer in Chile, “I have no way of knowing if my consumption is supporting or undermining that farmer, economically or ecologically” (118). As offered by capitalism, “I can only assume that, in a Southern country, the grower needs the employment and, hence, the grape sales and the grower is getting a fair portion of the rents” (118). Images of pesticide runoff into rivers are out of sight. We cannot name which water sources are contaminated. There is an unknowingness that surrounds the produce that we consume, the water sources that surround them, and the communities that make wages off their harvest. Princen argues, because of the invisibility of exploitation, businesses have, “no malicious intent or deliberate attempt to export costs” in the form of degradation (110). His claim supposes that silence is something that happens, and is not something that is intentionally delegated to silenced communities from an oppressive force. Not surveying the workers present in a mechanism is an act of violence through omission. As Karan Barad explains, when space is organized, “one can’t simply bracket (or ignore) certain issues without taking responsibility and being accountable for the constitutive effects of these exclusions” (58).

Coming from a radically different angle, groups of ecologically conscious activists carry still images (sustained images) displaying ecological suffering. Many of us are too familiar with the image of an autopsied dead bird filled with scrap metal, or generic images of rivers of garbage that were once filled with salmon. The images create a tormented viewer who can see, but cannot do anything. The bird is already dead, and salmon already gone. Eco-friendly, in this sense, comes with



baggage. It comes with the historical baggage of commodities that do not get lost overtime, but accumulate. It comes with the baggage of individual responsibility, and looks past the forces of mass, corporate power. The symbolic power of the images targets the wrong audience. The sustained images of degradation function quite differently from the sliced up and contained images held by maps, both of which fail to mobilize ecological change partly because they play into the neoliberal rhetoric of an external (and in this case unreachable through the image) environment, and the power-wielding individual human actor.

In *Regarding the Pain of Others*, Susan Sontag analyzes cultural emotive responses to images of war. The destruction and loss of vitality can be transposed as an analog for ecological degeneration's effects on communities and the environment. She states that footage does not tell its viewer anything other than what s/he has been primed to see (10). Both the map and the photograph claim to reflect and provide evidence for something "real." Yet, as Sontag states, "images offering evidence that contradicts cherished pieties are invariably dismissed as having been staged for the camera" (10). What is it about the map that announces itself as real, and about the image that stirs skepticism? Sontag mentions that the standard response to a horrifying image is the assertion that such atrocities never actually happened, that they are fiction (10). Asking the individual should change in order to change the whole is too daunting and impossible of a task. EPA commercials creating guilty and patronized viewers (Cortez 227).

Ecological images are at odds with neoliberalism's authority and the American cultural consciousness. As Sontag states, "Memory has altered the image, according

to memory's needs" (30). The neoliberal consciousness alters the image to sustain its prosperity. Excuses are built around images of pollution: the photograph is cherry picking, or was taken at a bad angle. But the image's ineptitude in this mode of communication does not mean that the image is not a useful way of accessing an understanding of something that is too big. Morton suggests for us to begin to fathom ecological degradation, we must slowly build our understanding instead of reeling in the suddenness of a disturbing image that demands us to let go of the peaceful illusions of slow violence. Reframing our relationship with the environment to reproduce space requires a discourse that cultivates an authority that can speak to not just individuals, but businesses. Linguistic capital is dealt in favor of the neoliberal map, and such is the reason an atlas of other river formations (rocks, oil, coal droppings) is not popularized. Capital flows alongside waterway exploitation, circling the globe in the international market. Submersing ourselves in this flow in order to reorganize it requires dramatically different approaches than horrifying images and plastered signs. Reorganizing ecology to discourage neoliberal affect means recreating our perceptions of space. This next Chapter looks at how space can be collapsed to create politics that are inclusive of human and nonhuman entities, and respect nonhuman entities as essential for human vitality.

### Chapter III: A Politics of Inclusion

In popular thought water has often been critiqued from *the surface*. Our curiosities and our sentiments of water have perched themselves on ledges, looking into a rippled reflection. I use italics as a reminder that through our eco-critical lens,

we must look at the concept of the surface as a rhetorical strategy for organizing space according to a binary that facilitates the expansion of neoliberal capitalism. The surface is both a visual and mental barrier that separates the subterranean secrets of water from land, and consequently our feelings of –connectedness with the vital materials that circulate in water. Our human-ness seems to be disconnected from this unknown, alien environment. Water becomes difficult to imagine.

Why should we imagine water? If we are to better understand what any matter means as a political actor within an ecology of vibrant materiality we must extend our empathy to it. Empathy reveals our own connections with water, and we can cultivate a personal relationship with water that is built on an exchange of ideas that ebb and flow, circulate, and degrade organically over time. This requires listening to water’s babbly language. Discourse about the critical reformation of our relationship with water has settled in isolated pockets of speakers and thinkers. This has created fractured ideas and discontinuous efforts. Rita Wong is critical of this when she states that notions of reformative relationships with water have eclipsed the voices of indigenous people despite that water is a global attachment. Even movements towards creating a new, healthy relationship with water have silenced communities. A long historical precedence ties water to power. Chen et al. state, “the achievement of domination over watercourses (however temporary) coincides with an intensification of social domination” (6). As Nixon points out, slow violence is tethered to the environmentalism of the poor, or “disposable people” (4-5). Water is an absolute necessity for life, so dumping toxic waste into water is an assault on inhabitants.

To remedy assault we need to develop a holistic approach to water that embraces diverse thinkers, imagination, and tangibility. Scholars like Bryant and Morton pay close attention to ecology's relationships, but their approaches are selective. They demand their readers to have an imagination built upon a foundation of materialist thinking. In *Thinking with Water*, Cecilia Chen, Astrida Neimanis, and Janine MacLeod take a multi-angled approach to exploring water by looking at water through diverse and experimental lenses. They pose literary works beside poetry, which then stands beside pictures of watery installation art. Their book marks a different tradition to supplement standard academic approaches to speaking about water and its power relationships. However, *Thinking's* approaches, while innovative, point to an issue of our cultural relationship with water: it is real when it is on land. *Thinking's* pictures of underwater vegetation are adjacent to more familiar land plants that have similar structures like a sea anemone next to cactus. Water's descriptions are supplemented through sensuous poetry that, while nearing its readers to water through imagination, also distances readers from water by masking water's babbling language in exchange for our human one. So, how can we come to understand water's vitality?

Rita Wong argues that extraordinary measures are required for creating a conversation around environmental degradation (7). She suggests *replacing* the conventions of academic discourse for they have created a culture of exclusion around a material that connects communities alike (7). "Water babble" is tossed around as a melodic term insinuating the behaviors of water, but I want to explore "water babble" as a language people can engage within regardless of their

background. Water's babble is mutually alien to human speakers. Regardless of our position to water, whether our involvement with water never goes beyond the running water of a faucet, or if we sail across waves in a boat, water's language remains foreign. Water's form is fleeting. Each ripple is replaced. Developing empathy is knowing we do not know something, and cannot know it, but still extend ourselves out to it. Empathy tunes us into the liveliness of objects withdrawing. While we do not know water, it does not recess into a darkness of the unknown. Instead, its withdraw draws us closer to water's ledge. Chen et al. state, "beneath the glinting and restless surface of water, we sense unseen movements" (15). Its mystery inspires a language of feelings: curiosity, desire, intrigue, or even terror.

But, what are the extraordinary lengths we must go? Listening to babbling language suggests using a tactile approach. A kinesthetic relationship with water seems to resist abstraction. The approach we choose must also dismantle the binaries of neoliberalism. One way to develop a kinesthetic relationship with water that defies the limits of the surface is through submersion, which offers a unique perspective by denaturalizing our surroundings and our bodies. At the cross-section of vibrant materialism and submersion lay unexplored perceptions of water and transformative encounters that challenge neoliberal structures.

Though submersion can mean many things: hopping into a lake, viewing a video on a computer screen, or even plunging to depths in a submarine, this Chapter is interested in SCUBA and how examining water through SCUBA is a way for us to discover what some of these "unseen movements" of water are in both a theoretical and literal sense. This Chapter has a special interest in freshwater. Freshwater and

its relations to life and land are, for the most part, left out of eco-critical pursuits in favor of freshwater's bigger, more captivating cousin: saltwater. Rob Nixon's *Slow Violence and the Environmentalism of the Poor* spends time with freshwater, but it does not tell us what being *placed* in water may mean for ecology, for communities, or for you or I.

Throughout this Chapter I hope to make the strangeness of experiencing water through SCUBA even stranger by referring to Sir Walter Raleigh, an early modern British writer and explorer of rivers, as a guide for these discoveries. In exchange of specialized academic texts discussing what is universal to us all, water, Raleigh speaks to submersion because his voice puts aside abstract, academic argument in exchange for bodily knowledge and phantasmal, denaturalizing descriptions of river voyages that excite the imagination and draw us into its vital current. His writing challenges what Yaeger states is, "literary artifacts' complicity in such acts of sabotage and embrace ecocriticism\$ as a tactic for recognizing that sea trash also flows from novels and poetry" (537), through the queered perspective he presents us. Raleigh's texts chase desired materiality, gold, that is always differed. Gold is always everywhere, but unreachable, and he is drawn into the Deleuzian map of dynamic, vibrant materiality.

Water spills across space and time, and encourages relational thinking across borders whether these borders are the past and the present, or communities that are fractured by drawn lines. Raleigh describes water in his journeys. He explores, "The great river of Orenoque or Baraquan hath nine branches which fall out on the north side of his own main mouth. On the south side it hath seven other fallings into

the sea, so it disemboweth by sixteen arms in all" (26). From this image we see each limb, interconnected and sprawling between the islands and furthermore around the planet as it enters the ocean and circulates around the globe.

Bachelard argues in "Water and Dreams: An Essay on the Imagination of Matter" that ideas cannot be truly felt or understood in the abstract. For a discourse around water degradation to be created, ideas must be animated by materiality. In this case, the materiality will be animated with the help of SCUBA embodiment. Leaving behind land and submersing our bodies in water queers our conception of space as we enter an alien, aquatic world. Just a couple inches deep, the sky becomes foggy from the river's particulates. At this point one were to look up at the land s/he would see a warped articulation of what was once familiar. Trees are disjointed as their trunks twist away from their branches. Looking at leaves is like looking through a kaleidoscope. Examining the ground we stepped off of reveals not a green landscape, but instead a wall of rigid dirt and the roots of plants. Eight feet bellow the surface light begins to fade as the cloud of particulates shield the sun. One can no longer look up and see the ripples of the surface. At 20 feet a diver cannot orient oneself spatially without the help of a compass and pressure gauge. Yet within the strangeness of water our bodies react as though it is in a familiar place. Water is heavy, but our bodies seamlessly adjust to ambient pressure. Just 33 feet of water adds one full atmosphere of pressure.

The shift from land to water still imposes a dissociation of what it means to be human. The tottering currents that flicker from particulates shake our expectations for slow change. Notions for sustainability are undone. We realize we rely on the

nonhuman as we rely on hoses, rubber, and steel to breathe. A translucent green, brown, or blue screen veils familiarity. Liquidity distorts an object's shape depending on our angle facing it. This is a tactile metaphor reminding us that objects do not have an essential form. Replacing color is a dislocating experience. Kids are often familiar with the optical illusion of attempting to read color words that are printed in different colors than what they read as. So, the word "green," might be shaded red. Color compels us. Morton states that upon entering an all yellow room its powerful coloring would instantly transpose itself upon us and direct our attention to the walls. Unexpected, strange color provokes us to think in non-normative ways. As Catronia Mortimer-Sandilands and Bruce Erickson argue, space and location has been used to impose normative thought and behavior. We need a queered underwater SCUBA perspective to add narrative voice to water ecology because the prevailing normative voice has led us to the geo-political denial that fuels degradation.

Images present us with a way of seeing and grappling with a notion of the objects in water. However, images create a different emotional relationship between the viewer and the trash than submersion offers. Susan Sontag argues that our desire to interfere with the trauma an image presents us fades after we become frustrated with feelings of powerlessness (10). She states, "The question is what to do with the feelings that have been aroused, the knowledge that has been communicated. If one feels that there is nothing "we" can do - but who is that "we"? - and nothing "they" can do either - and who are "they" (10)? Sontag's description articulates the abstraction that images can provoke. Instead of cultivating a personal



relationship and investment in water, such an abstraction distances us. It (water) can be used for them (industrialists) and don't have to wrap our minds around it. From this point, one starts to get bored, cynical, and apathetic and with this apathy comes a disregard for objects and making them passive.

Submersion opens up a tactile relationship with ecological degradation. Lakes and rivers around the nation hold annual "clean-up" days where SCUBA diving volunteers land on the subterranean to gather trash, the excrement of neoliberalism's economy. Floating just above trash we can see the contour it makes in the basin. Reaching out to touch trash creates a literal bond with trash. As we float (balance) underwater, touching any object with our hands bounces us backwards from the force of our contact. Bobbing back and forth is an exchange of momentum, of agency, that we can instantly recognize as the affect of objects on ourselves. We cannot mistake an object as passive when we feel it, even the smallest, lightest object like a soda can, pushing us back. While seeing that trash is vital matter with a force, we also develop a sense of power amidst systemic degradation.

However, this found human agency and power might (and perhaps should) provoke skepticism and critical questioning. The description of a personal relationship with water that involves manipulating the river likely provokes an image of the human protagonist, or the US Army Corps of Engineers trying to tame the vitality of the Mississippi River. Removing garbage from a lake fosters a sense of idealism provoking mythical notions of sustainability. Moving a crushed can touches, changes, and manipulates the environment in a way that feels like gaining

control over something spiraling. The dream of reverting a river to its “natural,” or “original” condition inspires a diver to remove trash. But, underwater trash picking offers a more involved message than sustainability. The alien environment, where familiar physical laws no longer apply, asks us to reevaluate any presuppositions of an object and its potential. When we think of trash dumped into a body of water on land we may see images of sea critters caught in the plastic of six-pack sodas.

However, underwater trash becomes complex underwater. Removing a tire from the basin can mean uprooting the home of a fish. What, then, is trash? Answering this requires that we slow our perceptions down and question objects’ potentials. In the silt a pair of Ray Ban glasses loses their capital worth and presents themselves as forgotten trash. As Elizabeth Mazzolini and Stephanie Foote explain garbage is not an object, but a category for objects (6). Underwater environments make a spectacle out of the play between these two categories as we are beckoned to develop a relationship a more critical, inquisitive relationship with objects that includes their agency in our actions.

Alternatively, Cortez suggests we make a living space among waste that does not cause us to cringe or feel negatively towards its unnerving presence. This would mean making amends with neoliberal waste sinks, but it would also mean curbing the controversial suggestions of those who want to fight the contamination of resources with more radical interference, like the sulfur droplets dispersed in the Ozone. Cortez suggests we extract notions of morality from our relationship with trash. She explains doing so can be more environmentally conscious because then

we will not close objects off due to overwhelming amounts of fear for our future or guilt for the actions of others and ourselves. She states:

waste either disappears from consciousness altogether, or where it appears, evokes such intense negativity that it also disappears from consideration the historical and social forces that have shaped how we relate to it, and hence the question of whether other, or less ecologically destructive relations might exist (Cortez 227).

Cortez's comment is convincing, but I fear it echoes the apathy Bogost's and Bryant's 000 encourages that perpetuates neoliberal violence. Although, Cortez's suggestion gives us a way to see neoliberalism as an ecological system. By making amends with trash, and creating a dwelling amongst it, the binary between Nature (with a capital "N") and neoliberalism is collapsed, as neoliberalism's influences are evidently a force within ecology. neoliberalism is simultaneously a provider of fish real estate and Plastic Island.

A critical and careful response to trash that observes it as an uncertain object that we must play with is the relationship I hope to impart through SCUBA. *In Thinking with Water* Cecilia Chen et al. place a sea plant next to a familiar looking land plant (a grassy looking fern) (36-37). In attempts to connect us with water, Chen et al. is amongst many scholars who characterize ecology in a more land-centric fashion to better imagine the places where neoliberalism disappears within dark pools. Moore describes capitalism like a living animal. He states:

by seeing it [capitalism] as a metabolism we see that it needs to eat cheap labor to sustain itself, and that it produces waist in the most cost-effective locations

(at the time), like a field. It has a “dystopian drive towards temporal instantaneity” that manifests by finding short cuts – it will take the way of least resistance. While capitalism needs to expand and produce to sustain itself, it makes heaps (trash) and excess that nobody wants (78)

The economy becomes a draconian mammal with legs and a heart that pumps blood.

Mielle Chandler and Astria Neimanis describe the melding of human bodies with water’s liquid body as a gestational orientation, reminding us human life originates from a liquid body. Chandler and Neimanis argue a gestational orientation causes us to think about what is present as well as, “that which is not yet” (62). Perceiving our present selves as gestational enables a sense of growth into the future while we maintain our present and are formed by our past. Perched precariously between moments in time suggests, “one can be bounded, intentional, and animated while at the same time partially dissolving oneself and being oriented in one’s capacity as milieu for an other” (Chandler and Neimanis 76). A gestational orientation is another metaphor we can connect with to link the alien-like nonhuman stakeholders within ecology to us and the extent to which we know to empathize.

Unlike seeing the workings of a metabolism or thinking through a gestational orientation, SCUBA brings us insight through emphasizing the queerness of objects within ecology. Bringing objects into the realm of anthropocentric familiarity can cause us to miss angles. Foreign relationships cannot be forged if we relate back to what we know. Amidst dark and foggy water, devoid of sunlight, breathing from a hose, one does find him/herself in an embryonic position, but an embryonic position

within strange territory. Floating above silt and stones, looking in all directions at the fibrous water that fades into an ambiguous darkness, we see a physical metaphor for how the lake withdraws from us. Our bodies can realize, but not comprehend objects that are larger than us, incalculable. The river radiates as a hyper object, and while we can begin to feel its massive existence, we cannot speak it, or point fingers at what a river consists of. How do we explore something that is larger than we can imagine, a hyper object, without reducing it to familiarity? The mysterious withdraw of a river, its rippling and fleeting body, beckons us to chase the vitality of the river, desiring to know more but always deferred. Raleigh gives language to this desire in his chase for river gold. Raleigh sees the gold, the desired materiality, everywhere: “most of the gold which they [the natives] made in plates and images was not severed from the stone, but that on the lake of Manoa, and in a multitude of other rivers” where “they gathered it in grains of perfect gold and in pieces as big as small stones” (43). But, the gold is always deferred. Raleigh is told, “Upon this onen river one Capitan George . . . told me there was a great silver mine, and that it was near the banks of the said river. But by this time as well . . . all the rest of the rivers were risen four or five feet in height so as it was not possible [to reach]” (37). His desires are always in motion, always sweeping in the currents of another river like the Deleuzian map.

To embrace the fluidity of water is to embrace the circulation of vibrant matter that is ever present but unreachable. Extending empathy to water (or any object) is not claiming the capacity to feel what it does, or know what it knows. Instead, empathy is acknowledging that we cannot understand water (or any other object). It

is impossible to understand as objects withdraw. Yet, despite not understanding, we care for water and objects anyway. To extend empathy like this we must use a less familiar route to perceiving water.

Wearing SCUBA gear deprives us from our anthro-senses. Donning a suit begins a humanist, post-humanist reformation. Sight becomes limited and distorted. In fresh water, hearing is limited to water's response (bubbles) to Vader-like breathing. Even something so quintessential to being human, breathing, becomes a hybrid of human and nonhuman actors. The muting of our senses spurs a hyperawareness of our presence in water and our hyperawareness extends beyond us. Cognition is displaced amongst the SCUBA gear as the gear translates the strangeness of water for us, and is influenced by water's language. Having water translated to us does not cause us to be nearer or farther from it. We cannot be closer to understanding water because it withdraws from us. Submersion gives us a different angle to cultivate more curiosities, questions, and a heightened sense of concern. As Barad argues, "concepts are defined by the circumstances required for their measurement," and therefore SCUBA opens us to watery concepts otherwise unappreciable. Barad explains, "theoretical concepts are not ideational in character; they are specific physical arrangements" (109).

Another piece of SCUBA gear, the wetsuit, is a tactile metaphor for the paradox between seeing ourselves as individual human entities, and seeing ourselves as a mesh of many nonhuman things. When we don a wetsuit, we become aware of our distinct selves. The wetsuit "simulates one's body boundaries" through "constant stimulating touch" (406). The material wetsuits are made from, neoprene, clings to

the body from neck to ankle as our first skin is made aware of our second skin as having a definitive boundary. Our deliberate movements, like a bend of the arm, that blend into our unconscious because of their regularity are now revealed to us as we feel the space that we inhabit and the effort that we extort during movement. The physicality of our bodies that recedes from our awareness is brought to the forefront of our attention. However, not long after we are made aware of our distinct bodies we encounter water, which queers our individuality because of it being a timeless enmeshment. As according to Chen, “Waters literally flow between and within bodies . . . in a planetary circulation system that challenges pretensions to discrete individuality” (12). About half of the diver’s neoprene skin is composed of hydrogen atoms (“neoprene”). When the diver is immersed, s/he is a part of water. The SCUBA suit gives us the tool to rethink the orientation of our bodies with the environment, or in Raleigh’s case, to desire a watery, immersed self.

From fall 2016 to spring 2017 I sank to the floor of the Monongahela River near Morgantown in hopes of bringing light to dark ground. Coal and a surprisingly large number of padlocks have sunk to its bottom. My descent was hours away from Decker’s Creek by car, yet I spotted fragments of acid stained rocks that had migrated from the creek. As Lindberg et al. state, “mines reclaimed nearly two decades ago continue to contribute significantly to water quality degradation” (20929). The florescent rocks are symptomatic of slow violence. The florescence of the rocks make an argument for adopting Princen’s political economy of degradation which accounts not only for a full range of costs but also the sources of those costs. The rocks show not an isolated event, but a historical trauma that

reaches across time. Princen argues that a political economy of degradation “must consider how the pursuit of wealth can, deliberately or not, lead to uncounted costs unaccountable actors” (103). The unaccountable can only be considered if we accept that objects have histories and trajectories that drift beyond what we can fathom.

The scene of sprinkled neon rocks along the basin of the Monongahela River is unimaginable for a person driving a car over the bridge that arches over the river from Morgantown to Westover. They look like small explosions in a basin of brown and grey stones. Who else knows florescent orange rocks lie at the bottom of the river? When I was diving I ran into an EPA officer who was testing the water. I asked about the water’s quality, and he assured me it was good. He told me when waste is dumped, in a few days “mother nature takes care of it,” a platitude for approving neoliberalism’s effects.

The spot of the Monongahela River I dived in, hours away from mining sites, became the unaccounted for waste sink of the mining frontier. The current state of Deckers Creek is better described by a fantastical observation from Raleigh. When exploring the province of Amapaia, Raleigh observes toxic water that “by reason of the red water which issueth out in small branches through the fenny and boggy ground, there breed divers poisonous worms and serpents” (19). Raleigh relays the anxiety of poisonous water. What mutinous creatures can live in the water (if anything at all)? Can the Monongahela River become a ground not for fish, or kayakers, but for serpents?

While still watching the river in Amapaia, Raleigh describes a culmination of anxiety, a moment when a group of travelers who have normalized the toxic water



drinks from it. He states, “not suspecting, nor in any sort foreknowing the danger, were infected with a grievous kind of flux by drinking thereof” (19). Rivers, although ebbing and flowing, appear like steady entities. Toxic waste dumps exploit their steady appearance. Rivers are hyper-objects, so massively distributed that distinctly looking for qualities causes them to swirl in an eddy. Quite a few freshwater rivers are green inside. Why green? The particles floating in the water are not green. The rocks are not green. The lighting is not green, nor is the green saturation from underwater vegetation. Multiple variables combine and a greenness emerges.

Raleigh counters what Yaeger describes as “literary artifacts’ complicity in such acts of sabotage” (537). As Yaeger explains, if we are to embrace ecocriticism\$, we must “recognize that sea trash [or freshwater trash] also flows from novels and poetry” (537). Raleigh’s watery accounts swelled in the midst of capitalism’s rise. His sojourns were alongside a frenzy of boatbuilding and sailors who dreamed of conquering the new world for gold (183). Moore explains, “The rise of capitalism after 1450 was made possible by an epochal shift in the scale, speed, and scope of landscape transformation in the Atlantic world and beyond” (182). Where does Raleigh and his literature sit within this surge? Should his literature be an appropriate text for ecocriticism\$? Moore continues, “Early modern’s epoch-making abstractions were registered through the era’s new cartographies, new temporalities, new forms of surveying” (207). However, through endless deferral of desirable materiality, Raleigh’s accounts provide us with fleeting images that disagree with notions of sustainability, or ecological balance. While Raleigh looks for gold his journeys take place in not an external environment, but in an environment

that usurps him, compels him, and leads him along. He explains that at times, “it is impossible to navigate any of those rivers; for such is the fury of the current” (6). Raleigh’s chase confuses linear, exploitative progression and shows us the vitality of materiality.

#### Chapter IV: Creating a Map of Acid Stained Rocks

I want to return to the idea of an ontologically flat waterway map and experiment with how, like Raleigh, I can posit what a waterway map might look like that stirs our imaginations and causes us to reevaluate our relationship with water as a dynamic, vital entity. While water cannot be contained of a map, a map can be a fleeting biography of water, illustrating water’s narrative as a vital source that connects our humanness to life through the nonhuman world, while also being the watery frontier and waste pit of neoliberal expansion. Applying flat ontology to the Monongahela River brings the acid stained rocks to the forefront of human-water interconnectivity. We can see the rocks producing space, and from this observation we can challenge neoliberalism’s promises of endless capital flow. The basin of the Monongahela River is littered with dozens of small, florescent orange rocks (some the size of pebbles, others the size of half a fist). When “mother nature washes away” the spillage, as the EPA officer describes it, the temporal awareness submersion in the Monongahela River creates bridges the past with the present to understand that the toxicity did not disappear. Acid rocks are the slow violence that is too deep for a map to show. The alarming shades are symptoms of neoliberalism’s

quick and indiscriminate thrashing through the mining frontier. The rocks are bright orange stains of liquid capital.

The Monongahela River is a main water source that runs through northern West Virginia and southern Pennsylvania. Since 2010 the Monongahela River has remained in the top 20 most polluted rivers, averaging around 2,200,000 tons of toxic chemicals released into it a year (Inglis et al. 47). The acid stained rocks speak to this, and foreshadow an acidic future. Cortez notes that our relationships with consumer commodities break free of time. Unlike encountering acid stained rocks, a commodity's pristine condition and mass production causes an object to appear without an origin. Our knowledge of an object's history often does not transcend past a shop's shelf, and thus objects appear within a perpetually present moment. The appearance of a uniform history becomes an expected part of market places. Uniformity harkens to standardization, efficiency, quick profit, and is also a metaphor reinsuring the timelessness and replenishment of resources. There is no wonder it is easy to forego thinking ecologically when consumers, producers, and businesses are distanced through space, time, and even education or knowledge of what is happening where. Considering time reorganizes space in a way that gives people, including businesses, a tool to rationalize ecological destruction while defying the quick, draconian movements of neoliberalism. Princen argues, "analysis of the distribution of short-term costs, along with many long-term impacts, will generate a better explanation [for how we can recreate business]" (103). During the temporal disconnect between costs and benefits stakeholders lose track of costs and often become convinced of the productivity of a thing because benefits often

come before costs, especially in the case of slow violence (110). Without tracing time the negative feedback loop between reaping objects and selling to consumers breaks and, as Princen states, “users misperceive scarcity and irreversibility and tend to act as if resources are infinite or infinitely substitutable” (128).

A map that asks us to imagine an object’s trajectory or history can assist with closing the negative feedback loop that breaks during neoliberal business exploits. Rarely do we trace the intricacies between capital profit and environmental demise. Often, the communities who could share this with us, who Nixon explains are framed as “disposable people” in the eyes of capitalist expansion (4), suffer intimately from ecological trauma. They are not delegated an authoritative voice to share their material observations and be taken seriously. Only when bounds have been far overstepped does voice begin to arise. Yaeger quotes Bruno Latour stating: “[T]he concern for the environment begins at the moment when there is *no more environment*, no zone of reality in which we could casually rid ourselves of the consequence of human political, industrial, and economic life.” When voices of those who are immediately implicated by degradation do emerge, the voices are usually mediated, and the distance that neoliberalism thrives off of (the distance causing one to believe that purchasing grapes *must* be good for workers because it stimulates their economy, without considering the social and environmental issues that purchase may have provoked) continues to be churned as voices remain silenced. Reporters and journalists who visit sites of degradation create more still (sustained) images, and they write not only on the behalf of the silenced, but also for communities that might block the images that position them as producers of a

destruction that is not frozen. Or, viewers that might see the images and determine that Nature balances out the specific disaster being observed, or, viewers that might see a spectacle that is so naturalized the impression of the destruction does not go beyond accepting that these things happen.

Closing the negative feedback loop requires creating a discourse between producers and consumers. Forming a social bond between these two dynamics can flatten the hierarchy of exploiter/subjugated that is likely constructed when a consumer is separated from the producer. A map that is not distanced by time, location, and language can interrupt the feedback loop's circuit. However, this map is but a speculation. We can muse about what properties this map would have: a Deleuzian quality with fleeting boundaries that is always remaking itself, maybe rivers that spill over the edges. Or, we can offer possible solutions through populist map-making tools. The Google Map API allows anyone with Internet connection to self-report locations that then are constructed onto Google Maps. Perhaps this is just one way to allow more people to speak first hand about their ecological positioning. Maybe this is one way to look at an ever-recreating map that shows not just hot consumer spots (stores, corporations, etc.), but also labor exploitation through the form of marking degradation. Acid stained rocks can be marked on the Monongahela River, causing the river to be more ontologically flat.

Bringing acid stained rocks to the surface demonstrates that, despite the wording of the US Army Corps of Engineers text, a river cannot be segmented with locks. Water's fluidity defies containment. Through examining rocks and thinking of them as a part of an ecological web, space can also be organized by acid mine. The

rocks are equally both. For the rocks to be separate would imply a binary. Decker's Creek is not a singular isolated area, but winding, enmeshed area touching other rocks, other rivers, and capitalism, all which flow in the Monongahela.

Conclusion: How Do We Destabilize and Restabilize From Here?

An object belongs to an ecology of systems that create space in a transactional enmeshment of all things. How we organize space influences where we go from our current entanglement of capital expansion, social justice, and environmental degradation. As all objects have histories and trajectories, we do too. The controversy over how materialism is adopted and used should not ignore how capital responds, and how social structures have real, material and arguably ontological affects. Organizing space through materialist theories can mean creating more foundation for neoliberal business ideals because of the complacency materialisms can foster after anthropocentric morals are subtracted. By selectively using materialism that builds our perceptions of objects as vital mater and as not binary, externalized things that can be conquered. In OOO terminology, humans can only human, thus anthropocentrism is inevitable. Instead of negating humanitarian concerns from materialist theories to try and create a more level ground we can lean into our anthropocentrism and reframe it to include the vitality of nonhuman beings within anthropocentrism. Human actors are always implicated in the lives of materials. To remove trash from a river is to exert human agency, but in turn be molded by the can that causes our hands to bend. To refrain from doing anything at all (like Pickering suggests in *The Mangle*) is to *still* exert human agency by choosing

not to reform, or be reformed by, the trash. The exchange between human and nonhuman entities is entangled.

Rhetoric as an ontological emergence from human actors is a driving system for the production of ecology. Unevenly dealt linguistic capital places a veil over neoliberalism-as-ecology, which facilitates the creation of objects that produce neoliberalism, and are produced by neoliberalism. Rhetoric positions people to set their gaze on “the individual” who is paradoxically given the role of capital procuring dominator with an extensive will that can cultivate the frontier of endless resources, and also the role of unempowered guardian of the environment who, no matter how many plastic bags s/he saves at the grocery store, will not be able to do anything about the degradation s/he witnesses.

Submersion through SCUBA offers one way of dismantling the notion of the individual and its subsequent binaries (internal/external, surface/depth). A queered SCUBA perspective brings us back to asking: how can we use materialism to recreate our relationships with objects, to recreate space in a way that recognizes neoliberalism as embedded within objects, and then challenges neoliberalism as an authoritative, subsuming force? When wearing SCUBA gear we displace *ourselves* by entering water. By displacing ourselves we can feel what Raleigh shows us is the vitality of objects as currents (water, monetary) move us. The degradation we find in water when the surface and the depth are compressed reframes our relationship with objects. The a-historical persona of the common storefront commodity we are familiar with is replaced by a look at objects with trajectories. Likewise, we can extend out empathy to objects not as “more human” things, but as nonhuman things

and by doing so, we create a respectful relationship with ourselves as objects with trajectories that can and will form the materiality of communities, degradation, and the economy through a web of ecological affect.



Works Cited

- Anderson, Benedict. *Imagined Communities*. Verso, 2006.
- Bachelard, Gaston. *Water and Dreams: An Essay on the Imagination of Matter*. Dallas Institute of Humanities and Culture, 1994.
- Barad, Karen. *Meeting the Universe Halfway*. Duke University Press, 2007.
- Bennett, Jane. *Vibrant Matter*. Duke University Press, 2010.
- Bogost, Ian. *Alien Phenomenology, or What It's Like to Be a Thing*. University of Minnesota Press, 2012.
- . "I Know! Let's Talk about Politics and Ontology Again! Some responses to some responses to some responses." *Bogost*, <http://bogost.com/writing/blog/i-know-lets-talk-about-politic/>. 10 Nov. 2016.
- Bourdieu, Pierre. *Language and Symbolic Power*. Blackwell Publishing, 1992.
- Bryant, Levi. "On Ontology." *Larvalsubjects*, <https://larvalsubjects.wordpress.com/2012/09/15/on-ontology/> 10 Nov. 2016.
- Chandler, Mielle and Astrida Neimanis. "Water and Gestationality: What Flows beneath Ethics." *Thinking with Water*, edited by Cecilia Chen, Janine MacLeod, and Astrida Neimanis, McGill-Queen's University Press, 2013, 61-83.
- Chen, Cecilia. "Introduction: Towards a Hydraulic Turn?" *Thinking with Water*, edited by Cecilia Chen, Janine MacLeod, and Astrida Neimanis, McGill-Queen's University Press, 2013, 3-22
- Clark, Christopher W., William T. Eillison, Brandon L. Southall, Leila Hatch, Sofie M.

- Van Parijs, Adam Frankel, Dimitri Ponirakis. "Acoustic masking in marine ecosystems: intuitions, analysis, and implication." *Marine Ecology Progress Series*, 395, 1, 2009, 201-222.
- Cortez, Marisol. "Time Out of Mind: The Animation of Obsolescence in *The Brave Little Toaster*." *Histories of the Dustheap: Waste, Material Cultures, Social Justice*, edited by Elizabeth Mazzolini and Stephanie Foote, MIT Press, 2011, pp. 227-251.
- Deleuze, Gilles and Félix Guattari. *A Thousand Plateaus*. University of Minnesota Press, 1987.
- Fisk, Harold. *Geological Investigation of the Alluvial Valley of the Lower Mississippi River*. War Department Corps of Engineers, US Army, 1944.
- Foote, Stephanie. "Enviroblogging: Clearing Green Space in a Virtual World." *Histories of the Dustheap: Waste, Material Cultures, Social Justice*, edited by Elizabeth Mazzolini and Stephanie Foote, MIT Press, 2011, pp. 73-94.
- Giroux, Henry A. "Neoliberalism, Youth, and the Leasing of Higher Education." *Global Neoliberalism and Education and its Consequences*, edited by David Hill, Routledge, 2009, pp. 30-53.
- Goodney, Philip P., MD, MS, Nino Dzebisashvili, PhD, David C. Goodman, MD, MS, and Kristen K. Bronner, MA, editors. *Variation in the Care of Surgical Conditions: Diabetes and Peripheral Arterial Disease*. A Dartmouth Atlas of Health Care Series.
- Harman, Graham. *Tool-Being*. Carus Publishing Company, 2006.
- Hayles, N. Katherine. *How We Became Post Human*. The University of Chicago Press,

1999.

Inglis, Jeff, Tony Dutzik and John Rumpler. "Wasting Our Waterways: Toxic Industrial Pollution and Restoring the Promise of the Clean Water Act." *Environment America Research and Policy Center*, 2014, [http://www.environmentvirginia.org/sites/environment/files/reports/VA\\_wastingwaterways\\_scrn\\_061814.pdf](http://www.environmentvirginia.org/sites/environment/files/reports/VA_wastingwaterways_scrn_061814.pdf)

Lindberg, T. Ty, Emily S. Bernhardt, Raven Bier, A. M. Helton, R. Brittany Merola, Avner Vengosh, Richard T. Di Giulio. "Cumulative impacts of mountaintop mining on an Appalachian watershed." *Proceedings of the National Academy of Sciences*, vol. 108, no. 52, 2011, pp. 20929-20934.

MacLeod, Janine. "Water and The Material Imagination: Reading the Sea of Memory against the Flows of Capital." *Thinking with Water*, edited by Cecilia Chen, Janine MacLeod, and Astrida Neimanis, McGill-Queen's University Press, 2013, pp. 61-83.

Mazzolini, Elizabeth and Stephanie Foote. "Introduction: Histories of the Dustheap." *Histories of the Dustheap: Waste, Material Cultures, Social Justice*, edited by Elizabeth Mazzolini and Stephanie Foote, MIT Press, 2011, pp. 227-251.

Mortimer-Sandilands, Catriona and Bruce Erickson. "A Genealogy of Queer Ecologies." *Queer Ecologies*, edited by Catriona Mortimer-Sandilands and Bruce Erickson, Indiana University Press, 2010, 1-47.

Moore, Thomas. *Capitalism in the Web of Life*. Verso, 2015.

Morton, Timothy. *Dark Ecology*. Columbia University Press, 2016.

---. *Ecology Without Nature*. Harvard University Press, 2007.

---. *Ecology Without Nature*. Blogger, n.d.,

<http://ecologywithoutnature.blogspot.com/>. Accessed 1 Jan. 2017.

---. *Hyper Objects*. University of Minnesota Press, 2013.

---. "There Must Be Some Kind of Way Out of Here." *Attempt Magazine*, Summer 2015, pp. 8 – 13.

"Neoprene: The First Synthetic Rubber." *American Chemistry Council*. The American Chemistry Council Inc., n.d. Web. 14 December 2015.

Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. Harvard University Press, 2011.

Pickering, Andrew. *The Mangle in Practice*. eDuke Books, Duke Education Press, 2008.

Princen, Thomas. "Distancing: Consumption and the Severing of Feedback." *Confronting Consumption*, edited by Thomas Princen, Michael Maniates, and Conca Ken, MIT Press, 2002, pp. 103-131.

Raleigh, Walter. *The Discovery of Guiana*. General Books, 2010.

Ravi, Kumar and Dave Hill. "Introduction: Neoliberal Capitalism and Education" *Global Neoliberalism and Education and its Consequences*, edited by David Hill, Routledge, 2009, pp. 1-29.

Rotman, David. "A Cheap and Easy Plan to Stop Global Warming." *MIT Technology Review*, 8 Feb. 2013, <https://www.technologyreview.com/s/511016/a-cheap-and-easy-plan-to-stop-global-warming/>.

Smith, Neil. *Uneven Development*. The Georgia University Press, 2008.

Sontag, Susan. *Regarding the Pain of Others*. Picador, 2003.

Spiegel, Jennifer Beth. "Subterranean Flows: Water Contamination and the Politics of Visibility after the Bhopal Disaster." *Thinking with Water*, edited by Cecilia Chen, Janine MacLeod, and Astrida Neimanis, McGill-Queen's University Press, 2013, pp. 84-103.

Stauss, Renate. "The Wetsuit is not Fashion." *Women in Clothes*. Ed. Mary Mann. New York: Blue Rider Press, 2014. 405-406. Print.

US Army Corps of Engineers. *Monongahela River Navigation Charts: Pittsburgh, Pennsylvania to Fairmont, West Virginia*. US Army Engineer District, Pittsburgh, 2004.

Yaeger, Patricia. "Sea Trash, Dark Pools, and the Tragedy of the Commons." *PMLA*, vol. 125, no. 3, 2010, pp. 523 – 545.