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Mythologies in Plastic, Concrete, and Wood: a Material Practice of Non-Duality

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by

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To the loving presence of this campus in the spring
and the many people who cultivate it.

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Authors Note:

Last semester, my professor Masha told our class that papers don't need to be fundamentally argument driven. She encouraged us to write about our topics in a multidimensional way – moving around, above, and beneath them; letting our gaze touch upon their angled manifestations. That methodological approach has proven invaluable in my writing for this piece, particularly because its content is premised upon relationality as a vital structure of thought and ensuingly the impossibility of single truths.

Keeping with those ideas, I have avoided distancing myself and my voice from this work as my personal relationships with the following topics are integral to the ways I approach them. For the last four years I have also been especially drawn to texts that bridge the translucent gap between the academic and the personal. In them, I found a being to relate to; a way of knowing that matched my own. As I set about beginning this project, I knew for certain that I hoped to emulate them, and could only say what I want to by doing that. So, you will hear 'me' often in the coming pages.

Introduction:

If you look up synonyms of the word "material," you will receive a lengthy list of nouns and adjectives, all of which have something in common. The nouns include: matter, substance, information, evidence, and statistics. The adjectives include: tangible, nonspiritual, mundane, earthly, real, significant, and meaningful. I've always liked thesauruses, as coming to a definition through their mappings shows a word's position in a fairly broad context. Some synonyms don't seem like synonyms to me at all, but their very existence within these databases signals a diversity of worldviews hidden beneath our supposedly common language.

So, the synonyms for "material" from a quick google search say quite a lot to me (it is noteworthy to say, here, that I am not separating the two supposedly separate definitions of 'material' in this search). First and foremost, they tell me that the word 'material' is associated with a physical reality that is perceived to be both a well of information and a nonspiritual and earthly realm. As a well of information, materiality is taken to be significant and meaningful. As an earthly realm it is the opposite. There is, then, an inherent tension between the meanings 'material' itself signals.

The tension implicit in the word 'material' itself, between the mundane and the meaningful, is the starting point for this piece. It encapsulates a host of other tensions, contradictions, and paradoxes embodied in the more specific materials I have chosen as the subject matter for this work: plastic, concrete, and wood. These materials are some of the most common structures we encounter in our daily lives, and deserve an acknowledgement longer than the passing of a gaze. The coming chapters will analyze their physical and social co-constitution, drawing from Roland Barthes semiotic theory and the general framework of material semiotics.

Barthes' semiotic theory, and particularly his descriptions of where mythologies fit into it, is integral in the structuring of this paper and so deserves a brief overview. At the first level in his theory is the notion of the signifier and the signified which together constitute the sign itself. The signifier is any thing that signifies, and the signified is the idea that the signifier refers to. At the second level, the sign can become myth when an additional signified concept is added onto the original signifier and signed. Most importantly, Barthes argues that signs at the level of myth imbue intentional, albeit subliminal, messages when they are used (107-130). Accordingly, he writes that the principle of myth is to transform "history into nature" (128).

Put more simply, things that represent concepts are signs, and those signs become myths when additional concepts are layered upon them in such a way that the thing is subliminally associated with further abstracted conceptions. This project is to some degree named according to that structure, as my academic goal is to parse out the abstract conceptions mythologized into plastic, wood, and concrete.

This work joins Barthes' semiotic approach with the broader practice of material semiotics. I will take material semiotics extremely literally, using its framework on the barest bones of strictly defined materials themselves. Material semiotics as a practice is difficult to define because as a tradition it fulfills its own meaning. Regardless of that John Law manages to provide a useful working definition:

> Material semiotics is a set of tools and sensibilities for exploring how practices in the social world are woven out of threads to form weaves that are simultaneously semiotic (because they are relational, and/or they carry meanings) and material (because they are about the physical stuff caught up and shaped in those relations.) It assumes that there is

> no single social structure or form of patterning because these material and social webs and weaves come in different forms and styles"(Law, 1).

In applying this lens to plastic, concrete, and wood, it is my hope to encourage alternative approaches for imagining our built environment and to undermine any conceptions which imagine our current and future being as an inevitable and natural occurrence. For me, writing this is a practice more than anything else, imperfect and perfect at once, that I conduct in order to see my own connections to our built environments more clearly.

Any analysis under the framework of material semiotics fundamentally hopes to wring out dualisms that imagine a separation between human thought/action and nonhuman actors – as well as to draw out what such dualisms function to obscure. I believe this process of discernment to be a kind of spiritual process. My parents are practitioners of the Nyingma school of Buddhism, one of four Buddhist lineages in Tibet. Practicing and embodying nondualism is a tenet of this spiritual path, as well as many others, and it is deeply related to realizing reality as a web of interconnection. Being raised by their embodiments of those beliefs puts me into a position where my academic work can't be separate from the spirit of the world I reside in. Perhaps this is why the theory of material semiotics feels intuitively true to me, and why I have chosen to focus on it in this culminating work especially. This feels particularly important to mention precisely because "material" is colloquially taken to be nonspiritual, and the effects of that bring suffering to our beings and the beings of others.

Overview of Chapter 1, "Material Entwinements: Weaving Plastic Bodies"

The first chapter, focused on plastic, is the broadest of the three. It serves, in addition to providing an analysis of plastic itself, as an introduction to how we might approach the

connections and contradictions between a material's physical and mythological manifestations. At the forefront of the chapter's reflections is the question of artificiality, and more specifically how plastic's supposed artificial qualities result in the creation of plastic objects built for disposability. From there, clear contradictions emerge: while plastic is often destined for the landfill, it is a material that cannot degrade; while plastic objects are cheap and tacky, creating plastic is enormously expensive; while plastic is used to create protective protective barriers not limited to foodstuff, it acts as an attritional poison in human and nonhuman bodies. Those and other contradictions are finally taken as a whole and come to exemplify the importance of unwinding the threads of dualistic opposition and making kin with the materials and objects that we interact with daily.

Overview of Chapter 2, "Material Monocropping: Living in Concrete Realities"

The second chapter primarily looks at the relationships between concrete's materiality, uses, and manifestations of permanence. Drawing from Vine Deloria Jrs descriptions of linear temporal worldviews, the section begins by looking at narratives of Western progress and how they are specifically mythologized through concrete, making concrete an apparatus for its naturalization in past and present. Universalization as a tenet of progress and as an inseparable part of concrete realities emerges recurrently throughout the chapters sections.

Overview of Chapter 3, "Material Aspirations: Wooden Histories"

Where plastic and concrete are explicitly man made materials fraught with social and environmental complications, wood seems markedly different because it is foremost a symbol of the 'natural'. It is not 'modern' in the same sense. It is imagined as simple and rustic, less removed from its original form, the tree, than plastic is from oil and dead dinosaur bodies, or

concrete from limestone quarries and extractive mining projects. My relationship with wood, too, is relatively different from my relationships with plastic and concrete. I relish, like others, in hardwood floors and mid-century furniture. My father is also a carpenter, and through him I have been more viscerally exposed to the inner workings of wooden infrastructures and cultures. In light of these factors, I will treat wood somewhat differently in the way I write about it and the lens I look at it through.

The final chapter on wood will analyze the semiotic dimensions of the material itself, but it will position them more acutely in my own personal history and particularly the relationships which make up the place where I grew up. Connecting these two scales is the overarching association between wood and memory. I will examine idealized collective memories of wilderness and the American frontier alongside memories of my life on Martha's Vineyard, an island off of Massachusetts.

My memories of home have been formed in many ways by the class divisions central in the local community and politics. The vast wealth gap between summer and year round residents is most apparent in housing, either the lack or abundance of. As a displaced member of the community due to the extreme housing crisis, and particularly as the child of a carpenter who helped build the very homes which displaced us, wood is a material that cannot be separated from money. The chapter, accordingly, traces some of wood's history in America and how it came to be a symbol of wealth through cultural conceptions of wilderness and nature.

Togetherness:

What follows is a rather open ended meditation on materials as myths, signs, and actors. It is my hope that the contradictions and tensions that emerge from this meditation generate a kind of embodied knowledge which experiences dualisms as signals in and of themselves.

Chapter 1

Material Entwinements: Weaving Plastic Bodies

To be plastic is to be changeable and moldable. Simultaneously, plastic is used to prevent cellular exchange and leakage. To live in the plastic age, where barriers are extended to not only the fragmentation of a chicken into its isolate breast [in the aisle of a grocery store under fluorescent lights], but also to the breast itself held by four plastic walls, is to live in a fundamental contradiction.

Introduction:

Following traditions of posthuman and material studies, I will look at plastic as a site where cultural myth is manifested as a literal material with which we build our lives and the world around us, intentionally or unintentionally. I urge for an engagement with plastic as something more than a material, something to be used in production processes and thrown away, or something to be feared. We live with plastic and will continue to do so for as long as our species survives. It is then necessary to root out plastic narratives to learn how we can holistically cultivate our future relationships with it.

Stacy Alaimo highlights the necessity of looking at the complex interplay between human and nonhuman nature through an invocation of trans-corporeality, writing that "the movement across human corporeality and nonhuman nature necessitates rich, complex modes of analysis that travel through the entangled territories of material and discursive, natural and cultural, biological and textual" (238). Plastic, in its inherent transgression of theoretical and physical boundaries between the territories Alaimo names, occupies and creates its own trans-corporeality. It is a material of contradiction, a "boundary project" that threatens dominant value systems (Haraway, 595). The following sections will explore the varying contradictions of plastic, drawing out how plastic functions to uphold norms and how it acts to undermine them.

Plastic Values:

I type on a plastic computer, nearly ten years old, who I sing to and caress when she overheats. In my first draft of this, I wrote about imagining my plastic things sitting in a landfill 1000 years after my death. A Kinder egg toy I've kept with me since I was seven, my shower caddy. I imagined them living a happy life with me: having someone to care for them, use them,

dust them, and admire them. Then, I imagined them broken, uneaten, and uncomposed in a landfill. My first thought in my writing process was that to reckon with plastic sufficiently, you first need to reckon with your death and realize your things will not have the same conclusion. While most of my body will return to the earth, the microplastics in my lungs will likely remain stagnant and of their original form.

After more thought, however, I realized that nearly all of the objects that mean something to me are, in fact, not made of plastic. The plastic in my room occupies a very particular space of disposability: vitamin bottles, a lotion jug, food containers, and moving bins. My discussion on plastic requires me to consider the values associated with its identity as a material—its cheapness, gaudy colors, and associations with poverty that grow with time. Wealth whispers and plastic invades everything it touches. Plastic is, more than anything, accessible. It represents falsehoods, wearing the disguise of more glamorous materials: silk, glass, and crystal; it is an emblem of tacky, poor attempts to replicate wealth. My Kinder egg toy is, in all likelihood, the cheapest thing I own.

Dualistic Opposition:

The history and effects of plastic have received considerable attention in recent years, due most obviously to plastic's seemingly unbounded occupation of life forms, ecosystems, and the daily activities of beings engaged in global networks of production, consumption and distribution. As material and agent, plastic is composed of various significant dualisms influencing its many positions throughout the physical, spiritual, and cultural realms. Frequently, plastic's environmentally driven historical and cultural narratives become problematized through distinctions between plastic's artificiality and the naturalness of other materials like wood, glass,

metals, or fabrics. Simultaneously, plastic materializes metaphorical and actual borders, exemplifying the physical actualization of seemingly dual or opposing identities and myths.

Why is it that one of the least valued materials of our daily lives is the foundation of the objects we own that will outlive us by thousands if not millions of years? The tension between these plastic qualities, its cheapness and longevity, opens a space for reflection. It represents an almost tangible boundary between how we perceive something and how it manifests in the physical world. The contradictions implicit here will, I hope, undermine other mirror borders and render separation as a constituted process rather than a natural occurrence.

A few years ago, a photo of a peeled and plastic-wrapped banana circulated through the internet, traversing the Facebook walls of flag-holding uncles. As I remember, the public was humorously outraged: why wrap a banana when it already comes with a natural case? A line was drawn, then, between what is and is not acceptable to suction cling petroleum isolate. But what about a bag of tomatoes? The little cucumbers you buy wrapped 5 or 10 at a time?

Across disciplines, the present ontology of duality is identified as foundational in creating and maintaining the various harmful hierarchies humans reside within and outside of. This is because various dualisms designate what superficially seem to be insurmountable differences between and within humans, nonhumans, and landscapes. Those differences are forced into two exclusive and opposing categories, including subordinate or dominant, right or wrong, and good or bad (Lorde, 114).

In choosing and adapting the stories of plastic we pass down, we are determining our future relationships with it, its histories that will pass down whole, and those that will fragment

and degrade as time progresses. It must be a careful and holistic process, and in doing so, one that does not further encourage dualistic opposition but instead renders it as conception.

Artificial vs. Natural in Plastic's Case:

Roland Barthes' oft-referenced 1972 essay "Plastic" is one especially notable instance where the essence of plastics definition is in explicit opposition to natural materials. He first qualifies plastic by naming it "a disgraced material" because it "embodies none of the genuine produce of the mineral world" (111). Omnipresent in his line of thought is the presence of a distinct hierarchy organized by a substance's proximity to the natural, where what is natural is inherently good. Plastic, although composed of petroleum which is easily arguable as a natural material, is distinctly bad in light of this.

Barthes expands upon this through the identification of more specific qualities which distinguish plastic from nature. He writes that it is 'artificial Matter' because it is "wholly swallowed up in the fact of being used," while objects made from other materials recall their "mineral or animal origin" (111). This is because plastic is ultimately "more than a substance," being a symbol for "the very idea of its infinite transformation" (110). Barthes thus connects plastic's continued proliferation to its expansive use-value which is the result of its physical qualities.

Norman Mailer additionally situates plastic at the bottom of a material hierarchy, disdaining the material for its complete removal from "raw material's earthiness" and, most importantly, for its "hygienic odor" which Mailer says suggests a "fundamentally nonhuman artificial reality" (Meikle, 281). The operation of a strict dualism in these and other cases, between "natural" and "artificial," represents a founding myth of Western civilization, that there

is a hierarchical line that delineates the natural from unnatural. This myth, we will see, actually encourages the intensive production of plastic. Accordingly, there is a need to further dissect the consequences of this ideology to understand plastic's current position throughout life webs and to question how we might relate to it as time and space progress.

History of the "Natural:"

Raymond Williams questions the distinctions between the natural and unnatural by drawing out the linguistic history of Nature. His conclusion from this is that "a singular name for the real multiplicity of things and living processes may be held, with an effort, to be neutral, but I am sure it is very often the case that it offers, from the beginning, a dominant kind of interpretation: idealist, metaphysical, or religious" (Williams, 69). The supposedly 'natural' is thus a shaky concept, articulated within specific contexts and plastic in its meaning across time and location. Throughout most of its use, however, Williams identifies an "underlying assumption that in the course of the physical inquiries one was discovering the essential, inherent and indeed immutable laws of the world" (68). 'Natural' is thus a rhetoric of universalism, where the designation of something as natural implies that it is always, and would always have been, the way that it is. The 'unnatural' is thus an antagonist to a supposedly correct and ultimate version of the world.

<u>Plastic Garbage:</u>

Like that which is 'natural' or not, Scanlan argues that garbage emerges from value judgments that separate "the desirable from the unwanted; the valuable from the worthless, and indeed, the worthy or cultured from the cheap or meaningless" (Scanlan, 15). Plastic, in its repeated proximity to the cheap and meaningless, has thus come to occupy a large portion of

industrial and municipal waste. It is the dominating material used in producing single-use objects destined to enter landfills, oceans, and other waste landscapes. Its 'artificial' qualities enforce this, as they encourage its occupation at the bottom of a dual hierarchy of materials. To be artificial is to be cheap.

Additionally, following Barthes, who identifies plastic with the 'bad' because of its 'infinite capacity for transformation,' plastic also seems destined for the landfill because garbage is also "where one thing becomes another, where the once known or admitted (objects of belief or faith, markers of certainty) unfold into a mess of incompatible parts" (Scanlan, 15). Plastic is disposable, then, because it threatens the norms that allow for certainty as much as it embodies the 'bad.' Its ability for transformation positions it as a material that can only be wasted, as its identity is not allowed to stand on its own. In building a plastic future, it seems that taking into account these contradictory qualities of plastic as a material will be necessary for any attempts to form positive relationships with it. It must be allowed to exist in its wholeness.

Plastic Wealth:

At the same time that plastic is devalued in society, it also reflects a vast economy of petrochemicals. While plastic itself appears cheaply, it produces profound monetary wealth for a distinct few. This contradiction is made possible by what Jason Moore, drawing from Marx's conception of the metabolic rift, calls "cheap nature." He writes that capitalism rests upon the law of cheap nature, where capital, empire, and science are deployed to "appropriate the unpaid work/energy of global natures within reach of capitalist power" (Moore, 89). Vital to this argument is Moore's assertion that cheap and appropriated human labor exists under the umbrella of 'global natures.'

This can be applied to the petroleum and plastic industry in multiple ways. First, the low valuation of plastic goods is only possible because the raw materials and labor needed to produce it are artificially deflated from their actual worth, resulting in lower operating costs for the corporations who produce plastics. Accordingly, the true ecological and social value needed for the production of plastic is transferred from those 'natures' to the corporations in charge of them. The plastic industry is, in reality, extremely expensive.

This is exemplified at another level by the reliance of petroleum companies on subsidies and loans granted by the U.S. government. Direct subsidies include the Intangible Drilling Costs Deduction, reducing corporate drilling costs by 1.59 billion in 2017 and Percentage Depletion, which drastically reduces taxes for corporate profits by allowing deductions higher than corporations capital costs. Loans from the government include those offered by the Overseas Private Investment Corporation (OPIC) and the United States Export-Import Bank (EXIM), which are conservatively estimated at 23 billion between 2001 and 2019. In addition to those programs, numerous other indirect subsidies and tax breaks reduce petroleum companies and plastics manufacturers operating risks and maximize their profitability to the tune of hundreds billions of dollars (Coleman and Dietz).

The ecological costs to the human and nonhuman alike are even greater. While economic analysis can attempt to quantify such costs with numbers, inevitably in the trillions range, there is no true cost to the lives of billions that are or will be drastically affected by climate change and widespread air, water, and earth pollution resulting from oil drilling and use; plastic production and waste.

Plastic Speed:

The costs of oil extraction for plastic goods are additionally transferred from the present to the future. Plastic's effects on the biosphere are distinctly "slow" and "attritional." Davis writes that plastic pollution enacts violence in a way that "is not concentrated in a spectacular mediatized image, but rather distends over the surface of the planet, slowly accumulating" (234). Plastic's cheapness and landfill destination is additionally counterintuitive because it is fundamentally composed of a nonrenewable material.

Contradicting that slow speed, however, Davis also identifies plastic as a "time eating" material, "one that consumes the compressed bodies of ancient plants and animals, a process that took thousands of years, only to be transformed into a single-use take-out container" (234). In other words, plastic exemplifies a process of simplification. Condensation creates plastic's raw form, but its final form relies on exponential fragmentation. This results in a gap between the process and the product. The overwhelming growth mindset and its entwined production cycle necessitate plastics' thin identity because "a market would otherwise fail when it reached saturation point" (Scanlan, 38). Industry thus shortened "the natural "lifespan" of "durable" products, so that people would buy them not once but several times, thereby stabilizing the production cycle" (Scanlan, 38).

Plastic additionally warps the time of manufacturing processes, as production speed increases when plastic is used, its flexible body dispensed and cooled into uniform molds. Injection molding, the most common manufacturing technique used to manufacture plastic goods, can take as little as two seconds to be completed. Plastic objects, or non-plastic objects containing plastic parts, additionally speed up cycles of consumption as the cost of replacement

is minimal compared to the cost of repairs. As labor is integrated, this speeding up bears its first implications on the humans performing productive labor in manufacturing plastic's various forms. Plastic thus represents a specific set of economic norms, where objects are simplified so that monetary wealth increases. Entwined with capital from birth to death, its physical manifestations cannot be disentangled from its cultural ones.

Time, in the plastisphere, is thus complicated and made into a situational process. It cannot be a singular and isolated law but can only exist as a relational being. Plastic cannot exist simultaneously without fast time and slow time; its identity depends on the interplay of both.

Plastic Permeability:

Landscapes:

Additional contradictions exist in plastics uses and its dissemination in ecological landscapes and human bodies. Plastic tangibly fractures the earlier mentioned supposed divisions between nature and culture as it accumulates in landscapes and simultaneously transforms them. Davis identifies this by looking at plastics manufacture and waste cycles that merge plastic particulates with soil, air, water, and rock. Here, plastic is a product and byproduct, new and old, influenced and influencing. Davis additionally locates plastic ecologies in the ocean, where microplastics exist as "rafts of biodiverse ecologies for bacteria and viruses." The communities on these rafts are functioning to 'radically reshape' other ecological communities within the ocean, which is likely to influence the earth sphere as a whole. The implication of this, she argues, is that plastic has become part of the earth itself. It is trans corporeal in this way and is thus "emblematic of an era in which it is impossible to disentangle the "natural" from

sociopolitical and economic formations." Plastic ensuingly challenges notions of a distinct and separate 'Nature' (235).

Plastics are toxic in their isolated molecular structure, and that structure also allows for the absorption of additional chemicals. This leads to innumerable toxic compounds in plastic's base structure, which inevitably are carried into the lifeways various organisms inhabit and contain. Every singular piece of plastic thus carries a relevant history with it, tailored by the locations it has emerged from and traveled through. Assigning a singular identity to plastic in all of its forms is impossible without a severe simplification process, as it matters where plastics are located in past, present, and future landscapes (Liborion, 87-110).

Bodies:

Plastic, most famously, is often made with BPAs. When BPA's are present, its dispersion threatens the reproductive functions of various life forms. This is because BPA's, as well as other phthalates, block "the human ability to reproduce, both through an overexposure to the hormone estrogen and by way of endocrine disruptors that mimic hormones in the body and replace their functioning, sometimes queering the gender of the body in which [they] reside" (Davis, 236). Additionally, "as plastic enters directly into the water stream, there is an inadvertent allegiance between certain forms of queerness and the petrochemical industry. Plastics contribute to queerness, causing mutations and inhibiting sexual reproduction" (237). In its journey into living bodies, plastic alters reproductive norms and forces us to question the importance of reproduction in life and its relations. It manifests the inherent permeability of skin and flesh, revealing "the ways in which we are multiply composed—of plastic, of toxins, of queer morphologies" (244).

Davis writes about the effects this might have on social norms by first identifying a "reliance upon the figure of the child as the symbolic capacity to project a future, not only of biological reproduction but a certain kind of social reproduction" (238). The 'normal' future, then, is threatened by plastic because plastic is associated with infertility. Plastic's movement, then, forces a reassessment of what a future might mean for human culture at large. Davis sees potential here for a new narration that is "less focused on individual reproductive capacity and the love and care that may accompany that, toward a love and care that extends outward, beyond one's immediate biological family" (239). The following section will elaborate on this idea, connecting it to yet another contradiction of the material.

Plastic Promises:

Davis describes the enactment of inverted quarantines as they relate to plastic's toxicity, saying that "for those who can afford it, this knowledge of the permeability of the body, and particularly to toxins, often results in the attempt to barricade bodies off from their surrounds." Humans, then, attempt to filter plastic out, remove it from their vision, and isolate themselves from its deleterious effects. Ironically, however, Davis writes that "barricading is precisely what underpins the logic of the emergence of plastics in the world to begin with" (244). This is because, as Davis explains in a separate piece:

> Plastic represents the promises of modernity: the promise of sealed, perfected, clean, smooth abundance. It encapsulates the fantasy of ridding ourselves of the dirt of the world, of decay, of malfeasance…Plastic represents a shiny new world, one that removes people from the cycles of life and death, one that supersedes the troublesome, leaky, amorphous, and porous demands of our ancestors, our bodies,

> and the earth. Ridding ourselves of the demands of the earth seemed to promise a world of prosperity through scientific control (Davis, 349-350, Life and Death in the Anthropocene).

Plastic's location in the enactment of inverted quarantines thus brings out two more tensions: it promises modernity and cleanliness, yet it occupies 'waste space.' Plastic is 'cheap,' but the population who are able to quarantine and shelter from toxicity occupy a privileged position in society and the world. Most importantly, however, plastic's cultural function carries a mythos of modernity while its physical function threatens that very same idea.

Queer Futures:

The majority of Americans' relationships with plastic are characterized at present by neglect or shame. In the first instance, the life of a plastic piece is overlooked and absorbed into consumption habits rooted in the needs and desires of an individual. This obscures any conscious relationality between a plastic entity and the human engaging with it. In the second instance, relationality is at the forefront, as consumption of plastic products are either directly avoided due to the harmful effects plastic production and existence bears upon human and nonhuman, or else it is accompanied by feelings of individual shame.

Plastic Spirituality:

Zoe Todd, exploring her relationship with petroleum, writes that "it is not this material drawn from deep in the earth that is violent. It is the machinations of human political-ideological entanglements that deem it appropriate to carry this oil through pipelines running along vital waterways, that make this oily progeny a weapon against fish, humans, water and more-than-human worlds" (Todd, 107). The same line of thought extends to plastic, a petroleum

product and a material that is not inherently violent or harmful. Todd asks, according to this idea, what it might mean to approach "carbon and fossil beings," like those who make up petroleum and plastic, "as agential more-than-human beings in their own right?" (104). Ensuingly, she questions "what responsibilities we might owe "to 'inert' or polluting materials?" (106). In thinking about plastics' particular relationships with waste, this question can be narrowed, and we might ask how the disposable can be made kin. Or, how do you begin to look at something that is made to be disposable as something which is not?

Each of the described contradictions here is representative of the same difficult question. On the one hand, plastic's physical makeup signals permanence and uncountable sufferings resulting from it, a turtle eating a grocery bag thinking it is a jellyfish. On the other hand, plastic represents the intangible and elusive. Plastic is composed of tensions between its conceptual identity and its physical form. Efforts to bring the two together require the enactment of the trans-corporeal and a close look at the dualistic oppositions that have produced plastic and that plastic threatens to collapse in its final existence.

Chapter 2

Material Monocropping: Living in Concrete Realities

I am riding a humpback whale through concrete. The thick of his flesh breaks open fire hydrants and water spews, people squish their faces to the windows and water rises. Story by story color and light begin to contract on themselves. The whale's body is absorbing mine. I look at the pale of my arm and watch it turn gray. Garbage clings, barnacles on my back. Around each corner, my weight is heavier and heavier.

Introduction:

The relationship between place and person has become a popular topic across academic disciplines, particularly in studies of the anthropocene. It is not a new idea that humans are reciprocally shaped by and shaping their environments in a mutually causal process. Regardless of these two facts, however, the overwhelming paradigm of the West has ignored the delicacy of that relationship to the detriment of human and nonhuman beings. The reason for this, across time, has been the encouragement of 'progress.'

Progress is a vague and remote idea in many of our realities. Progress for who and what, progress how, progress in what way? While I cannot hope to adequately cover those questions in the coming chapter, I will explore how some narratives of progress are spatially manifested and how those manifestations influence us in turn. Concrete, cement, and their various applications in the United States are the ground of this analysis as they are the ground we tread on. In connecting concrete space to larger ideologies, the distinct separation between place and person in the Western world will hopefully emerge as a willfully false imagination and mythology.

I am naming the contents of this chapter, in part, as 'material monocropping.' Monocropping, referring to single-crop agricultural practices, is an emblem to me of an attempted universalization of life. Monocropping practices decimate biodiversity with the goal of producing vast quantities of a single food, a single means of nourishment, a single way of growing profits and bodies. Concrete, a substance that is seemingly opposite to foodstuff, is disseminated through a monocropping process although it is not edible, or even considered to be alive.

Concrete is the physical backbone for the 'modern' world and life, especially in the United States. It is the foundation of pathways we traverse and which define our movement. It reaches into the sky and thickly coats the ground, it houses mass consumption and cheap nature. Concrete, that ubiquitous form rigid in the infrastructure of cities, littering the suburban landscape with parking lots, shopping centers, and six lane roads. Across such forms, this inflexible and gray entity not only symbolizes progress but is also used as a primary apparatus of it.

Getting to Know Concrete:

I first began thinking about concrete in high school, where for a period of time I went barefoot in an attempt to be less depressed. It is more obvious without shoes that asphalt roads are painful to walk on. Even the smooth flatness of sidewalks hurt more than a grassy strip. Sometimes I would seek out the cracks in those otherwise uniform surfaces, places where soil would conglomerate and sprouts would grow. In the heat, those fractures were cooler too. My callouses could linger on them before moving forward to the hot future.

It was also in high school that I gained the ability to articulate my discomfort with the main ways concrete was used in the places I visited. For most of my life, I lived on an island without freeways, corporate storefronts, large parking lots, or buildings taller than a few stories. I would take the ferry to the mainland occasionally, and embark onto 28, 495, and finally the MassTurnpike. Enclosed in the cab of my father's speeding truck, the freeway terrified me – cars weaving in and out, semi trucks with bright slogans, big box stores sheltered by a thin line of sickly trees. It was dystopian, coming from a sheltered place, realizing this was normal and my home was not.

Why did these transitory spaces defined by concrete make me so uncomfortable? I love the smell of rain falling on asphalt, the warmth on my back when I lay out on outdoor basketball courts. Concrete is a highly adaptable technology in many ways, too. Engineers have found remarkable ways to make and use it while promoting sustainability and multispecies thriving.

My discomfort with it, in its main uses, results from the fact that its frightening uses signal a worldview of control. By looking at it in those shapes, I hope to invoke a practice of reconnecting the material makeup of places to some of the social, spiritual, and political attitudes promoted by Western ideology.

Concrete Realities:

The word concrete is made of the Latin root, "con," and the Proto-Indo-European root, "ker." Alone, "con" signals togetherness and "ker" means "to grow." Concrete's first literal meaning, then, is for something to grow together. By the 14th century, however, concrete as an adjective began to be used to describe that which is "actual, solid; particular [and] individual." By the 16th century, it became a noun used specifically for "that which is material and not abstract" (Etymonline). It wasn't until the mid 19th century that the term became a name for the building material we know today, although varying types of material concrete had been used for hundreds of years by that time. Within the context of this linguistic history, concrete as a concept is inseparable from concrete as a material.

The most important aspect of concrete's conceptual history is its repeated association with a reality that is tangible and objective; tangible because it is material and solid, and objective because it is defined in opposition to the abstract. Recall, here, material's similar associations. Concrete, as a synonym for that which is objective, reflects a lineage of Western

thought that holds ‘objective’ knowledge and experience as the pinnacle of human achievement and that undermines subjective and intuitive ways of knowing and being. This Western notion of objectivity is also used to strictly delineate right from wrong (as we saw in the previous chapter). The ultimate effect of this is that knowledge and worldviews deemed objectively true are extended beyond their place of origin and are forcefully imposed as unilaterally correct in their encounters with alternative modes of existence.

For something to be concrete, then, it is inarguable, determined, and rational. This conception of the concrete ensuingly acts as a force of universalization, being built on such notions of strict logic and correctness. It refuses alternative truths and bodies, seeking to melt them into a limited definition. After all, ideas and symbols are said to be ‘concrete’ when they are supposed to prove true across time and space. The following sections will explore this connection more specifically and how it is manifested in concretes material uses.

The Temporal Worldview:

Progress is inherently related to the universal, rational, and objective. Wagar, in attempting to identify progress in its many conceptions, writes that while progress can mean a wide range of things “at the heart of every theory of progress lies a conception of the ultimate good, and progress is thought to occur in proportion as the ultimate good triumphs in history” (Wagar, 56). Vine Deloria, in his book “God is Red", contrasts the spatial (Native) worldview with the temporal (Western European) worldview that is inherent to Wagar’s identification. The primary characteristic of the temporal worldview he identifies is linearity, where society is always supposed to be moving forward towards an ultimate end point. Gilio-Whitaker summarizes Deloria’s thoughts, noting that “time, as the primary organizing intellectual principle

to which a spatial orientation is secondary, creates a linear and unidimensional world in which human existence is perceived as motion through space" so that the "world is perceived in terms of progress based on forward motion" (139).

This ideology of progress "naturally results in systems of hierarchy" because it supposes that there is a single trajectory for the world/humanity, and ultimately one 'world' rather than many (Gilio-Whitaker, 139). That results in the Western assertion that any alternative or differing modes of being are incorrect. In contrast, Native perspectives can hold many modes of being as true because they are taken in the context of location and do not need to prove universally true across time.

The notion of the concrete is distinctly located within the linear temporal worldview because it asserts the existence of universal truths. V.F. Cordova makes this clear through a specific analysis of relative vs. absolute truth. In line with Deloria's thought, she writes that the Euro-American sees truth as universal not only across space but also across time, so that if something is true for a moment it is always true, and vice versa. There is thus a search to attain a state of static truth and "lock in something that is unchanging," or, to concretize something (70). This reflects the perception of moving towards an ultimate end point because concretizing something rests on the assumption that its universal application will provide the conditions for reaching that point. This stands in contrast to "the goal of persons who envision themselves in a world of motion, change, and complexity" which "is to create and work on maintaining stability in the face of all that" (70). Importantly, she writes that stability for the Native American denotes "numerous and diverse balancing acts" that require action, not inaction (71).

The search for the static which Cordova describes bridges the conceptual aspects of concrete to its physical materiality. While the longevity of plastic's lifespan is ironic considering the nature of the use-values we have imposed onto it, single use takeout containers and children's toys, concretes uses are entwined with intentional permanence. As a building material it is used to encourage the various socio-political projects of the West and their structures to last across time.

Concrete Empire:

I am thinking of initials and names in sidewalk blocks, like carvings into trees. Hopeful attempts to signify our presence in this space as time meanders. I am thinking of the first grade art project, where little hands are pressed into concrete circles alongside marbles and plastic gems, so that parents in their gardens might remember the little person who once walked there. In one sense, these instances show our desire to mark the future with our present, to extend the life of a moment through inevitable change. Is this an enactment of the temporal, or the spatial, or both – can you ever separate the two in actuality?

Concrete and the varying structures it produces, ranging from asphalt roads to towering skyscrapers, are economic projects as much as they are symbols. The notion of concrete as a marker of permanence is especially notable here, as it clearly connects physical concrete structures and their economic values with the West's more abstract attempts to defy degradation at the social, political, and economic levels. The coming section looking at concrete's specific infrastructural uses will show how they manifest and support varying sociopolitical systems by articulating their permanence and universal nature through physical structures.

Concrete Cleanliness:

Like plastic, concrete structures are used to provide a layer of protection. Concrete's function as a protective barrier is a particularly useful point to begin from as it brings out the intricacies of a worldview which only respects and recognizes existences validated by the West's ideology. Cordova writes that for the Euroamerican, "more concrete, more asphalt, means progress. This covering of the Earth provides a guarded path on which the European may tread without fear of the wildness and vagaries of the hostile planet. What natural vegetation is allowed is trimmed, controlled, subjected to man's whims" (Cordova, 124). In this passage Cordova not only points out the intimate relationship between Western notions of progress and the widespread use of concrete, but additionally ties both to her identification of a specific worldview that experiences the natural world as a threat needing to be subdued or else avoided.

The origins of the West's fear of the so-called 'natural world' are notably complex as they are inextricably bound with the fuzzy origins of deeply dualistic thinking canonized by Descartes. Regardless of whether that beginning is attributed to any of the three C's (capitalism, colonialism, or christianity) or even as one of the conditions of Samsara, it is most simple to say that this fear reflects an experience of the nonhuman world as other. That which is 'other' is perceived as an inherent threat by those ingrained in dual thought patterning because of the previously mentioned logic that pits different existences against each other because only one can be truthful and moral.

David Harvey writes that a tenet of modernism is the notion that "the space of the body, of consciousness, of the psyche" can only be liberated "through the rational organization of exterior space and time" (Harvey, 270). In the context of concrete space, this can be considered

by imagining sidewalks, roads, and parking lots as an extension of the indoor to the outdoor. Indoor space is, predominantly, experienced as a zone of safety (from temperature, pollution, criminals, judgment, wild animals, etc). Concrete infrastructure allows this safety to extend beyond interior spaces. This is apparent in the case of sidewalks, whose thick slabs are supposed to protect the human not only from the earth and its dust and mud, but also from the grunts of trucks and cars. Some sidewalks protect private property by managing pedestrian traffic into a distinctly defined area.

The City:

As asphalt, concrete expands the territory through which cars can prudently move through. Notably, a car's function is not only efficient movement, but also the allowance of individually managed space to exist in public areas. Additionally, trucks and cars form their own protective bubbles around their inhabitants - sealing them off from atmospheric contaminants coming from their own exhaust pipes. Beneath their heavy wheels, asphalt concrete distinguishes the world of civilized movement from the ground.

Movement through space, especially in the United States, is largely dictated by concrete/asphalt infrastructure. Clifford Winston writes that public roads are the “arterial network of the United States,” as “75 percent of goods are transported by truck, and 90 percent of commutes to work are made in private automobiles and public buses” (Winston, 38). In dystopian imaginations, roads are some of the only infrastructure serving their intended purpose after a collapse.

Roads, structuring how and where we move, function to control what we see, where we go for a weekend trip, and even where we end up living. Accordingly, their presence functions as

a sign of civilization and their absence represents a lack thereof. Dilip da Cunha argues that the most significant marker of civilization today is the city, and that the city functions to set "the civilized apart from the savage" (218-219). This is because the city is constructed in such a way that it can be easily mapped onto a cartesian grid and show "lines of property, land use, jurisdictions, and above all limits of the city" (219). Modern cities are defined by their concrete infrastructure. Concrete, at present, is central in the construction which lends itself to this mapping because the geodetic map demands "things that hold their form, things that are more rather than less settled. It is why surveyors prefer an asphalt road and a brick-and-concrete house to a dirt track and a mud-and-thatch home" (220).

Concrete, then, is an emblem of permanence in cities firstly because of its lasting form. As much as that form is important, however, concrete is equally used to signify permanence because it is laid out in such a way that allows mapping to occur. Maps, particularly those plotted onto a cartesian grid, anchor points "on the earth's surface to global coordinates rather than local landmarks, making it possible to hold lines to a position even after events transform this surface beyond recognition" (da Cunha, 219). Concrete and maps are thus coactant forces with each other, where maps are produced through concrete and concrete is laid out for mapping.

The Skyscraper:

Zoomed in, skyscrapers are an additional means through which the temporal worldview is manifested as they are tightly associated with American capitalism and its pursuit of endless economic growth. At first glance, it seems like the endless pursuit of growth which characterizes the economic, social, and political spheres in the United States negates Cordova's observation of the Euro-Americans' attempt to attain static truth. Instead, however, it illustrates a fundamental

contradiction inherent in capitalist philosophy, being the idea that endless growth is desirable, and paradoxically that it will also eventually lead to a utopic and supremely developed society.

Skyscrapers emerged in city skylines not only because of new technology that allowed for their construction, but also because the nature of work changed and bureaucratic enterprises emerged as some of the primary employers. The first skyscrapers, in Chicago and New York, thus served a functional purpose by providing the newly necessary space for "the expression of a social and intellectual revolution" (Gottman, 199-204). Employment of this kind is bureaucratic in that it is not considered a production job, ie, workers are not physically involved in agricultural production, the manufacture of goods, or their transportation. Instead, the activities within skyscrapers are "the brain and nerve centers of the corporations" (Gottman, 206).

Skyscrapers also serve as an additional emblem of how a fear of the other is manifested through concrete structures. As much as a skyscraper reaches for the sun it also attempts to escape the soil. *While I dream, I imagine Icarus at the top of a building and in a penthouse suite. He gorges himself on endives filled with peppered mascarpone, clouds, ground, and people beneath him. He doesn't take the subway to work (low class), and if he can he'll take a helicopter.* Powerful because his feet do not touch the earth - powerful because he is removed.

Concrete Monocultures:

Concrete's enactments of a fear of the other, and additionally its existence as a manifestation of Western progress, deserve to be further connected with its physical manifestations of universality. In perhaps the simplest current example of this, think of those relatively identical strip malls located in most every town in the United States. The most important features of these centers are their self-similarity across space, defined by sweeping

parking lots, low concrete buildings, and corporate storefronts whose layout and products are almost exclusively the same in Kentucky as they are in Washington. As of 2017, there were close to 70,000 strip malls and only some 20,000 towns and cities in the country (ICSC, 2017; Statista, 2020). Strip malls, then, outnumber cities and towns three times over, even if you exclude the 40,000 shopping centers designated according to slight differences.

Alongside the physically apparent universality wrought by this use of concrete, the construction of many strip malls allows the development of big box stores. This acts to reduce the diversity of products available to the average American consumer by undermining local business networks. Such locations also lack pedestrian infrastructure and are almost totally unwalkable. While you might be able to walk linearly between stores, crossing the street or entering a nearby parking lot is discouraged through the absence of crosswalks, roadside sidewalks, and shaded areas. This not only promotes driving as a primary means of local transportation, but also limits non drivers access to sometimes necessary goods and services. Combined with the ecological barrenness of these sites, strip malls deplete communities of purchasing power, biological, and social diversity.

Strip malls, and other self similar concrete spaces, represent a desire for safety and a fear of the other precisely because of their universalizing aspects. A consumer at their local Target, for example, is familiar with the range and location of products within the store as well as its general atmosphere. This comfort propels them to seek out another Target if they move or visit another area because they already know what they are going to get from the experience, even if it’s taking place across the country. Fast food is another example of this, albeit one that is more connected to a universality of the product rather than the space the product is sold in. While it is

difficult to parse out how much of comfort-driven behavior is intrinsically tied to a fear of the other/the different, particularly at the individual level, there is no doubt that the marketers in charge of the corporate stores in strip malls are aware of a relationship between the two and make use of it in order to promote more consumption.

It is the specificity of a place which allows us to connect with it over time, and in intimately knowing a place we begin also to understand changes within it. By engaging with place in this way, change enters the habits of our perception and narrative of the world. The proliferation of concrete as a means of universalization rebels against change as the state of the being. When concrete makes places self similar, undermining diversity, it makes the possibility of that form of connection more remote. Additionally, a concrete environment refuses diverse signs of change that can be found in the habits of nonhuman life forms. Aside from temperature and the lone deciduous tree, seasons and their patterns are obscured from the concrete inhabitant. Only changes in the human created environment, new storefronts opened and old ones closed, signal to them the movement of their surroundings.

Concrete Connection/Alienation:

An additional tension inherent in the dispersion of concrete structures is their tendency to both alienate humans from each other and the nonhuman world and to enable connection through their role in the movements and conglomerations of human bodies. Are there specific factors which make concrete perform one function or the other, or do both exist simultaneously? Deloria succinctly points out that "[t]oday the land is dotted with towns, cities, suburbs, and the like. Yet very few of these political subdivisions are in fact communities. They are rather transitory locations for the temporary existence of wage earners" (213). To return to the skyscraper, most

office workers within them embark on long commutes to and from work across highways and roads. Concrete, here, allows urban sprawl and the heightened development of 'transitory spaces' which sever the human from their environment. Skyscrapers also emerged, however, to encourage condensed bureaucracy that facilitates communication (Gottman, 209). Roads are full at Thanksgiving as families gather together, and sidewalks are places for chalk drawings and meet-cutes, people watching and informal gatherings.

Concrete Environments:

An examination of concrete finally necessitates a brief analysis of its physical role in various ecologies and especially its relationship with climate change and environmental degradation. This begins before concrete is even produced, when minerals are extracted from the earth to create concrete's binding agent, cement. Limestone is the primary raw material used in cement, and mining projects to extract it are associated with a broad range of harmful environmental impacts including habitat destruction, air and groundwater pollution, changes in water flow, and the creation of sinkholes (Ganapathi and Phukan).

Concrete, as an aggregate of cement, requires the extraction of additional huge quantities of raw materials such as sand and gravel. Gravel mining carries similar environmental impacts as limestone mining, while sand extraction has perhaps even more harmful consequences to various ecologies and general biodiversity across the globe. Sand is paramount in regulating the movement of wind and water across the globe, thereby protecting biodiversity and acting as flood and drought control for various communities. Its removal, then, has drastic consequences for aquatic ecosystems and their numerous ecosystem services (Padmalal and Maya, 2-21). At

the basest level, then, the creation of concrete is dependent on ecological universalization, where biodiverse systems are dramatically altered and become dominated by a single or a few species.

In addition to these localized consequences inherent to the concrete industry, carbon dioxide is released into the atmosphere throughout the stages of cement and concrete production. Conservative estimates attribute 8 percent of global co2 emissions to concrete production (Ellis et. al).

Laid out:

Alongside concrete's infrastructural uses that dictate human traffic through space, concrete is also widely used to manipulate the flow of waterways for the benefit of humans. Water is unique as an aspect of nonhuman nature in that it is clearly identifiable as a necessity of human life, and our relationship with it is paramount to the entirety of our species history. Cross-culturally, water has been made into a symbol and carries with it mythological importance. The most important aspect of water in this piece, however, is its perpetual embodiment of change. Water is defined by its capacities for boundless movement. This is present in the water cycle and its endless transformations between solid, liquid, and gas. It is equally present in the ever changing nature of a stream, the onset of flooding or drought, and waters role in various ecological processes.

Water's occupation as movement makes it a vital teacher to humanity as it shows us the importance of adapting to circumstances. It is fundamentally unattached to a stagnant way of being and relating to ecologies. As we have seen already, sand dredging and general mining has the side effect of dramatically altering water ways. Concrete, in its final form, carries this further when it is used for the primary purpose of changing water flows.

I was fortunate to have a conversation recently with Dilip da Cunha, an architect and planner, about his recent book “The Invention of Rivers.” Here, he is particularly concerned with the historical processes that lead to the delineations between water and land required for the entities we generally conceive of as rivers. The river, he says, is fundamentally the assertion of a drawn line, “it isn't that the river isn't real, it's that it's designed with the line as a design device. A line is a geometric thing, a surface is a geometric thing. A line is applied metaphorically to the river.” Accordingly, he says the river is a “pure idea that we have made real.”

Da Cunha ensuingly argues that the superimposition of a line onto our ideas and experiences of river’s has profound implications for the kinds of infrastructure in use to control rivers, and particularly how the built environment deals with flooding. Instead of building around flooding and using its beneficial properties, planners see flood as a problem to be avoided. This is because flood, in essence, collapses the bounded and linear idea of a river which is held to be correct and true (Shwaller, 291).

Concrete enters into this equation because it is one of the primary materials used in river infrastructures, such as dykes, dams, and levees. Used in those ways, concrete becomes the physical support for the delineation of a river, translating our conceptual understanding of them into a spatial enactment. This, in turn, transforms how places react to water, the paths water takes, and the ecologies of waterways. Central to concretes role, and the concept of a river as a line, is the underlying goal of controlling water in such a way that prevents its adaptation to changing environmental conditions. For example, dams function to alter the flow of a river so that its stream is steady across time, thereby preventing fluctuations in water level and strength downstream.

The earlier cited quote from Cordova, where she observes that the Euroamerican attempts to "lock in something that is unchanging," is relevant again here (70). Rather than working with water's changing nature, we instead seek to make it as stable as it can possibly be by reducing its capacities for interaction with its environmental conditions. Shwaller summarizes da Cunha's thoughts about this, writing that his book suggests that "we should adjust our development practices to allow for change in the world around us…This could allow for natural shifts in the landscape at the gradient between water and land, while limiting destruction to human settlements by creating development that allows for rather than constrains flooding" (Shwaller, 291-292). Da Cunha's work thus points out that attempts to create static infrastructure, necessarily based on conceptions of a static world, are destined to fall short of their desired goals.

Conclusion:

"Each year the United States alone lays 500 million tons of concrete" (Goho, 8). There is no question that concrete, in multiple senses, constitutes the physical infrastructure of American cities, suburbs and roads. Like plastic, concrete cannot be essentialized to its ecological consequences and reflections of harmful worldviews. Its enactment of the static, however, is worthy of particular attention as it opens the space for a reflection on our own implicit beliefs and the ways in which our environment has influenced and been influenced by them.

In turn, the contradictory relationship in concrete's manifestations, between the static/universal and its mythological enactment of a progress based mindset, has the effect of undermining both as systems through which the world should be built. Deloria writes that a progress based mindset, and particularly the experience of moving towards an ultimate point of

completion, has the consequence of preventing investments in the reality of the present, “space and the Planet Earth” (74). The importance of encouraging investments in the present can’t be overstated. It is my hope that these reflections will act in that manner through their identifications of the holes, shortcomings, and potential alternatives in concrete’s subliminal expressions.

Chapter 3

Material Aspirations: Wooden Histories

What is left to be said about wealth
Other than, boiled potatoes.
Cat piss. Mold.
What is left to live in
Other than, the dank, the humid –

I went to a movie screening at a mansion
I dressed up in a silk gown (lended)
I drank a bottle of thousand dollar wine
(it was the best I've had)

Their cabinets were remote controlled,
Olympic sized pools: 2
I took pictures in a bathroom

What is left to be said about two worlds
Moving through them, or not
A trust, or not
My father digs through the disposal bins
A door: 10k, Window frames: 30k

I dig through the bins at the thrift store
Wealth by proxy, wealth secondhand,
The promised trickle down,
When there isn't a place to live
I get to wear Brunello Cucinelli

Introduction:

Roland Barthes, whose thoughts on plastic we have looked at already, also writes about wood in the context of children's toys. His observations, although under that relatively specific header, are taken here to describe wood more broadly:

> Wood removes, from all the forms which it supports, the wounding quality of angles which are too sharp, the chemical coldness of metal…It is a familiar and poetic substance, which does not sever the child from close contact with the tree, the table, the floor. Wood does not wound or break down; it does not shatter, it wears out, it can last a long time, live with the child, alter little by little the relations between the object and the hand… Wood makes essential objects, objects for all time (Barthes, 54).

Wood, especially in comparison with concrete and plastic, is denoted by Barthes and generally as a particularly 'natural' material. Somewhere (unknown), we can imagine that there is a forest and a plaid-clothed lumberjack whose steady hands fell an enormous tree; the tree is milled and wood emerges as its gift. While wood might be used in construction with modern chemicals and treatments, plastics, and fiberglass, it is, in its basic form, the product of a single plant.

The quality of naturalness inherent in wood's relationship with the human sets it in relative opposition to concrete and especially plastic. Where plastic is culturally and monetarily devalued for its artificiality, wood is highly valued for its naturalness. The valuation of wood according to this essential quality, and ensuingly how it reflects class distinctions, ground the coming chapter. As in the previous sections, I hope to unearth some of the worldviews, mythologies, and structures of power latent in this material and its uses.

Memory:

I am writing this section in a more personal way than the rest. It emerges from memories of childhood: my father with sawdust in his eyelashes and stuck onto his woolen socks; playing with drills and staple guns and sandpaper at his job sites; walking over countless wooden floors in the many homes I've resided in. When I began writing this chapter, I thought my association between wood and memory was relatively unique and formed mainly because my father is a carpenter. While this is true for my personal relationship with wood as a material, in writing it has also become clear that there are broader, recurring connections between wood and memory, human or not.

Memory is translated through woods being in many ways. At one scale, a tree displays events in time through the concentric growth rings making up its body. The tree's history is itself a material, where drought, fire, and abundance manifest in physical attributes. Wood, then, is a derivative of the living memories of the tree from which it came, and those memories' embodied physical qualities influence how it is used. It is also reasonable to say that those memories are not exclusive to the tree as a single entity. Really, they are a record of the life web the original tree participated in. A tree's wood can thus speak for an entire forest.

Wood and memory converge again in the relationship between a piece of wood, or a wooden object, and the actors who alter it. Following the previous example, the tree/forest's memories merge with other actors' memories through the process of creating objects out of wood or simply interacting with such objects. True to Barthes' observations, my father tells me about the wooden toolbox he made for himself twenty years ago. It has all these scars and splotches of paint, stain, and glue. The handle is the softest part, worn by his hands carrying it, and it is

beautiful. Wood, in being used, thus comes to physically link seemingly separate beings' histories through its changing form.

For the craftsman, wooden memories are also tied with learning and growth. My father says, “I ask myself sometimes, I’ve been doing this for 25 years, do I really have 25 years' worth of knowledge? And I realize it's in the little movements; if it’s a twisted piece of wood, it's how to straighten it out. There are so many ways to nail it, to screw it together.” Wood, unlike plastic and concrete, is rarely uniform. Its highly variant qualities require a relationship of continual adjustment between the human and wooden actors. This undermines control or domination-based approaches in its structuring because adaptation and an acknowledgment of wood’s changing characteristics are integral in successfully creating with wood.

And, when wood is abstracted from its variant pieces and bits, it calls to collective memory and embodies a specific nostalgia for a time in history of authenticity, simplicity, and a ‘natural’ human state. The relationship between abstract wood and what is really an abstract nostalgia is inseparable from the attribution of the ‘natural’ to wood. This results from the fact that wood is foremost a sign of nature, and wilderness is additionally signified by that sign. I will locate some aspects of how this came to be by looking at the progression of the American frontier as a semiotic landscape and by locating the various boundaries wood manifests at the present moment. Through tracing nostalgia for the frontier and wilderness, the means through which wood manifests class distinctions will become clear, as well as the role of wood in the class dynamics which I grew up in.

American Frontier:

In the United States, our current understanding of what is 'natural' is largely influenced by the history of wilderness as a cultural creation, and particularly how wilderness came to be the symbolic inverse of modernity. William Cronon's essay "The Trouble With Wilderness: Or, Getting Back to the Wrong Nature" identifies the contradictions of that nostalgic logic, beginning with an examination of how wilderness functions today:

> Wilderness is the natural, unfallen antithesis of an unnatural civilization that has lost its soul. It is a place of freedom in which we can recover the true selves we have lost to the corrupting influences of our artificial lives. Most of all, it is the landscape of authenticity. Combining the sacred grandeur of the sublime with the primitive simplicity of the frontier, it is the place where we can see the world as it really is, and so know ourselves as we really are – or ought to be (Cronon, 16).

Cronon points out, here, that wilderness is imagined as a place of redemption, honesty, and simplicity. It is the backdrop for human renewal, where proximity to it enables a temporary return to an idealized time where man was not trapped by modern ways of life. It is thus a landscape of nostalgia. Wood's mythological qualities reflect this conception, and so wood itself cannot be separated from the history of wilderness.

While Cronon first identifies the notion of the sublime as one factor in the way we currently understand wilderness, I am particularly interested in his identification of Western expansion and the frontier. During the height of the frontier times, wilderness had a negative connotation; synonymous with thorny vines and predators, darkness and insects. Cronon writes that "[w]ilderness, in short, was a place to which one came only against one's will, and always in

fear and trembling. Whatever value it might have arose solely from the possibility that it might be "reclaimed" and turned toward human ends — planted as a garden, say, or a city upon a hill" (9). Nature, here, is simultaneously a threatening force and a material to be transformed for the purposes of civilization.

By the time the frontier was dwindling, however, and such 'wild places' became harder to find, wilderness assumed a relatively new cultural definition and emerged as a space of godly significance, where the individual could reclaim their essential nature and return to an imagined state of true Americanism (Cronon, 13). How did the original hostile figure of the frontier's environment transform into something that is integral to the American identity, and ensuingly a sign of wilderness that should be protected and sought out?

The Frontier Hypothesis:

Frederick Turner's widely influential 1893 essay detailing his 'frontier hypothesis' mark the beginnings of that change. His hypothesis identifies the frontier as firstly a boundary separating civilization and the natural world, and secondly as the birthplace of American identity and democracy (Smith, 3). Civilization, in this context, is defined by agrarian ideals so that "the outer limit of agricultural settlement is the boundary of civilization" (4). The natural world, and specifically the wilderness beyond that point, is considered "the realm of savagery" (4). It is notable, here, that the 'natural' is figured as inherently opposite to the 'human.'

The frontier thus occupies the line between those two distinctions, representing a westward-moving force that works to transform the wilderness into civilization. It is the contact point between what is designated as the 'human' and the 'nonhuman.' More than a place, the

frontier is also a process representing a steady dwindling of ‘free land’ available to pioneers (4-5).

The American identity, according to Turner and his legacy, emerges from that contact point because the moving boundary provided a transitory place where individuals “shed the trappings of civilization, rediscovered their primitive racial energies, reinvented direct democratic institutions, and thereby reinfused themselves with a vigor, an independence, and a creativity that were the source of American democracy and national character” (Cronon, 13). Central to this reconstitution of an identity previously lost to time is the notion of encountering wilderness and transforming it, a process that relied upon the availability of ‘free’ land.

A central tenet of that process of transformation was the enactment of wide-scale deforestation that served to open lands up for development and agriculture and to extract wood as a necessary resource of the development of that land because of its uses in housing and fuel. The transformation of a tree into wood is thus emblematic of the experience of renewal that came from the frontier’s process of civilizing the wilderness.

The Lumberjack:

The importance of deforestation and particularly logging in the movement of the frontier is reiterated today through the continued dissemination of stories about the logging hero Paul Bunyan. Bunyan emerged as a logging hero during the late 19th century and entered the national consciousness at the start of the 20th, following the same general timeline as Turner's hypothesis. Folklore about him centers on his experience logging at the edge of the frontier, where he is confronted with wilderness but always manages to defeat and civilize it because he has mythical

strength, size, intelligence, and energy. He is all-powerful over the landscape and is completely separate from it (Hoffman, 302-305).

As a figure, Bunyon is emblematic of a specific conception of identity that is bound to wilderness as a space for proving oneself. He is the perfect example of what Cronon describes as the 'mythic frontier individualist'. As a lumberjack, Bunyan physically enacts the mythos of the frontier by dramatically altering the landscapes he moves through. He transforms the tree, wilderness, into its productive form, wood. The ongoing popularity of tales about him, where he is most importantly a hero, symbolizes the occurrence of frontier nostalgia even at the present moment and the continuing idolization of identities located within it. His specific occupation as a lumberjack imbues even the nameless and abstract lumberjack of today with the desirable attributes of the frontier, and in turn the products of their labor.

Wood and Class:

Due to the frontier myth and the new imagination of wilderness as a place of renewal, the end of western expansion was accompanied by a fear that without free and wild land an integral part of the American identity would be lost forever, alongside some primitive and essential nature of man. Cronon states that this fear is implicitly linked with the origins of conservation in the United States, writing that "if wild land had been so crucial in the making of the nation, then surely one must save its last remnants as monuments to the American past-and as an insurance policy to protect its future" (13).

It is from a nostalgia for the frontier that wealth and wilderness assumed new connections. Cronon writes that by the late 19th century "frontier nostalgia became an important vehicle for expressing a peculiarly bourgeois form of antimodernism," where those who "most

benefited from urban-industrial capitalism were among those who believed they must escape its debilitating effects" (14). The result of this was not only the creation of national parks, but also the demarcation of ‘enormous estates’ and ‘luxurious resort hotels’ where the elite could go to encounter a ‘wild’ nature. Cronon says that such visitors brought “strikingly urban ideas of the countryside” and engaged with their surroundings as consumers rather than producers (15). While nostalgia for the frontier has faded into the backdrop of American culture, it can still be felt in the romanticization of wilderness, the politics of conservation, and the consumption of nature by the upper class as a means of distancing themselves from their extractive entanglement with hypercapitalism.

Local Translation:

Cronon writes that “[t]hose who have celebrated the frontier have almost always looked backward as they did so, mourning an older, simpler, truer world that is about to disappear forever” (13). The idolization of an abstract historical moment free from the artifices of ‘modern’ society remains in full effect today. Wood as the foremost building material for rural vacation homes reflects this, as woods associations between integrity and naturalness position it as a means of signaling those values to rural communities and as a way of appropriating them through the development of comfortable places for regeneration. The coming section will look at how frontier nostalgia is translatable at the present moment on my home of Martha’s vineyard, and how Cronon’s idea of the wealthy traveler relies upon wood as a vehicle for fulfilling that nostalgia in my local context.

Conservation:

A primary reason for the popularity of Martha's Vineyard as a tourist destination and getaway for the uber wealthy is the notably large proportion of conserved land compared to land that is developed or developable. There are two kinds of conservation at play here. The first is of 'natural land', and the second is of buildings and zoning laws, particularly those related to aesthetics. In the first case, visitors or second home owners can find ecological solace walking on cool and sandy trails through meadows and the wooded areas of the island. Additionally, they can find easy tax breaks on the vast amounts of property that they own. I discovered this a few summers ago while I worked for one conservation organization helping to maintain some of their trails.

I learned that some tracts of land were supposedly under our care but were not public. Instead of crafting trails through such tracts, we left them 'wild.' At first glance, this doesn't seem like a necessarily bad or harmful thing. Perhaps those areas are necessary ecological bastions for endangered or keystone species. Such tracts often function, however, to provide additional barriers of privacy around the private land owned by the donors. The donors, gifting the land to conservation agencies, are able to legally prevent developments near them while also receiving tax cuts for the property that they do own. Conserved land is thus a vehicle of subtly materializing the boundaries of private property, and ensuingly class distinctions. More importantly, it also provides homeowners with the illusion of total immersion in a natural and wild landscape. The home owners are able to access modern comforts and amenities while reaping the culturally derived benefits of resting in an area that appears to be untarnished by history.

The Vineyard's conservation of historic buildings and zoning provides an additional layer of historical ‘accuracy’ to the visitors' vacations, with even its town centers harkening back to a time before ‘modernity.’ Local laws prevent traffic lights, chain stores, and multilevel businesses. Social expectations, in the year round and vacationer classes, discourage modern architecture based in minimalism through materials like concrete. The paving of driveways or roads is taboo. In some areas, laws exist which are similar to HOA requirements. Edgartown's downtown area, for example, regulates the colors of house and trim paints to keep with the towns whaling history.

Wood is utilized with extreme frequency in public and private developments precisely because it harkens to a simpler time. The vast popularity on the Vineyard of wooden floors, shingles, doors, sail and row boats, furniture, docks, and classic New England architecture is emblematic of the fact that the material is employed by the upper vacationing class of the Island as a means of integrating their private property into the Vineyard’s total aesthetic without breaking the illusion of a place otherwise lost to time.

Wood as Subject, Wood as Object:

In the context of the homes of the vacationing class of Martha’s Vineyard, wood is treated as an object that facilitates the ownership and control of natural beauty. This stands in contrast to the carpenter class of Martha’s Vineyard who engage with wood as a subject through the process of building with it. The owner experiences the material as a means of signaling their status and location; the carpenter experiences it as a variable substance whose ultimate form emerges from a combination of its essence and their labor. The labor of carpenters is invisible to the

homeowners in most cases, not only because of class blinders, but also because they schedule construction to occur in the off-season or the weeks that they won't visit.

I ask my father what his relationship is to his work. He tells me he is grateful for it because it facilitates connection; between his coworkers and the material. I ask him if it bothers him that the homes he built have encouraged our own displacement from the Island. He tells me that regardless of the project's effects or intent, its completion is still a source of pride because he can look back and say "I built that, I built that." His work is tangible.

A few years ago I heard about a house being sold for the highest price in Martha's Vineyard history. The house, under its original owner, was built over some ten years by local construction crews. In the early stages of the project their skin burned under the sun and turned blue in the winter – they picked up fallen nails from the ground and bent their backs into measurements. After the bones had been laid, they squatted on their knees and sanded cabinets, dustboards, and stairs.

As soon as construction was finished the owner decided to sell the house to his brother. The brother, in a move with unknown motives, immediately scheduled a demolition of the house in order to clear space for one of his own design. Coincidentally, he hired the same contractors who had built the previous project, who proceeded to watch the demolition take place while ordering materials for the next build.

When this story circulated throughout the local gossip networks, people were shocked in some ways but mostly thought it was a humorous anecdote that spoke to the unawareness and loftiness of many people in the pair of brothers' demographic. I did not hear about how the construction crew felt, but I can reasonably infer that the house's sale and ensuing demolition

were dependent on the owner's complete removal from the intense physical processes that go into building any house, let alone a house of that scale. A carpenter, I think, would not be able to disentangle their labor from the eventual product it created – the structure would be measured in memories, connection, and hard hours rather than a bank statement forwarded by an assistant.

Leftovers:

When a demolition takes place a profound amount of waste is created. At least on the Vineyard, this wasting is indiscriminate for the most part. In the case of the aforementioned house, at least, the workers were not paid to go into the house to pry nails from the cabinetry and flooring, to silently uninstall window frames, double doors, or silky countertops. Instead, after the demolition crew methodically drove machines, bulldozing and wrecking, lifting shattered glass and cotton candy insulation from the ground, the carpenters returned to an empty plot with tracks in the mud. What is the relationship of the builder to the wood and what is the relationship of the buyer? The craftsman with chisel, the buyer with wallet.

Working on the multimillion dollar homes of the Vineyard influences the craftsmens relationship with wood in an additional way, as it provides them access to wooden materials which would otherwise be too expensive for the working class. The previously described demolition is indicative of a larger pattern, where homes made with the highest quality of boards are broken apart to enter wooden graveyards. A culture has emerged, from this, where carpenters (my father included) redeem wasted wood by scavenging the leftovers of the visiting class.

This has the effect of enhancing the relationship between the craftsman, memory, and wood as a significant portion of scavenged materials are the products of carpenters and woodworkers of another era and are made from the wood of old growth trees. My father says that

the demolition owners fail to see the value of their houses' bones: “The doors of today aren't going to hold up as well. The craftsmanship isn’t as good. Cost cutting is in effect with all of the building materials. They're antiques in themselves, they're just more abundant now than antique furniture.” The only way of knowing these things, however, is from the cultivation of a relationship with wood. Wood’s value is contextual, then.

Conclusion:

My father says it is strange to be a carpenter right now; that on job sites all of his coworkers complain about the low quality of wood and its unwieldiness. The reason for this is that in the past, most of the wood came from old growth. The wood from older trees is of higher quality than the wood from younger trees. He says “on one hand, I miss the days of yore, when the wood was less tempestuous.” Wood, in the world of carpenters, manifests then another nostalgia, for its own previous iterations. It mirrors ‘wilderness’ in this way, where it’s value is proportional to its scarcity.

This year I entered a new relationship with wood after being given a set of carving tools and a block of cedar. Carving requires an attentiveness to an individual piece of wood's specific grain, hardness, knots, and attitude. Some pieces grant me more freedom than others, some flake and chip so that clean grooves are nearly impossible. Working with the wood has become a meditative process for me, one where I feel fulfilled by a collaboration between a material and me. Wood is, I think, the most complicated material I’ve looked at in this piece because of the variance in all of its forms.

Conclusion:

The reason I chose to look at plastic, concrete, and wood in this work is because they are, more than anything, mundane in our lives. The average American, and perhaps the average human, interacts with each of these three materials on a daily basis. Because of their normalcy, they are also taken for granted. When I walk to class, I don't question the pavement beneath my feet; when I sit at my desk, I don't wonder why it's plastic makeup is masked by wood grain and color; when I throw away my shampoo bottle, I quickly forget that at one point I touched it nearly every day. There is a profound importance of attending to the systems and materials we notice the least. They are not only points of academic exploration, but are also places that we might meditate on to increase our moment-to-moment presence in the world we exist within.

Through this exploration of each of those materials, an abundance of ways in which they articulate histories, worldviews, contradictions, and spaces have emerged. In turn, the fact that these materials are agential in their own right, shaping us as much as we shape them, has steadily come into focus. This was made most clear to me in writing about them, where I found myself structuring my chapters and writing in tones that are closely related to the qualities of the materials I looked at. I think that, in some way, I can only write about them like this. The chapter on plastic is fluid, dynamic, light, and oriented towards the future. The concrete chapter is the coldest of the three; dense and uniform. The wood chapter is personal and nostalgic for a time and place passed in my own life.

It is my hope that together the three chapters of this work will successfully stand alone and together. While I have avoided drawing many connections between the materials I have chosen to look at, each of them manifest boundaries in tangible and intangible ways, inscribing

the landscape with their presence and altering our relationships with it. Simultaneously, they each signal an inherently boundless reality through the contradictions implicit across their manifestations. Plastic is moldable and destined for landfills, yet it has a lifespan that we cannot begin to conceptualize. Concrete is used to enact permanence across time, yet those attempts at permanence are inseparable from a progress oriented mindset. Wood signals the natural world and wilderness, but it is bound to colonization and westward expansion which have severely limited what is generally understood as ‘natural’ and ‘wild’.

The tensions inherent in these fundamental materials of the present American lifestyle point to a fundamental shortcoming in imaginations of truths that are rational, universal, and stable across time. Additionally, such tensions point out the necessity of grounding understandings of our surroundings through an abundance of contexts; political, physical, social, spiritual, historical, and futuristic. Enacting this will not lead to any ultimate conclusions or truths, but it will steadily undermine our tendencies to think according to the shaky terms of dualistic opposition.

Each of these materials deserve additional attention to the ways in which they interact with the world and the nuances of the worldviews they manifest. It was impossible for me, in the scope of this paper, to contextualize the materials in all of their variant locations and iterations. Plastic water guns are located in a decidedly different context than surgical gloves, as parking lots are different from geothermal heating systems and wooden mansions are from a child's desk. While I have tried, to the best of my abilities, to locate the most prevalent aspects of plastic, concrete, and wood in the many contexts of the United States, there are inherently general claims in this work that can be altered in infinite variable ways. Keeping in mind the very premises

which this work is built upon, however, that is a given. To look upon anything through the lens of material semiotics is to acknowledge that it is impossible for something to manifest itself universally, it will always be altered by its relations.

Further explorations into the topics here could attend more thoroughly to the futures of these materials, as I only touched upon in the plastic chapter. Like plastic, there is a need to cultivate relationships of intentionality with each of them that are grounded in principles of compassion and adaptation.

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