ENVIRONMENTAL INJUSTICE AND BLACK SENSE OF PLACE IN THE SOCIAL AND BIOPHYSICAL AFTERLIFE OF SLAVERY

by

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DISSERTATION ABSTRACT

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This dissertation chronicles both anti-Black environmental injustice and Black sense of place in uninhabitable spaces in the afterlife of slavery. The afterlife of slavery refers to the precarity and devaluation of Black life set in motion by chattel slavery (Hartman 2007; Sharpe 2016). In this research, I examine how the afterlife of slavery takes shape in environmental justice (EJ) communities within the U.S. South. Dialectically, I also examine how Black life, sense of place, and joy persist even within spaces of environmental degradation, high premature death rates, and long histories of anti-Black violence. I conduct this research through a case study of Port Arthur, Texas, a historically Black community nestled in what the US Environmental Protection Agency calls "the largest oil refining network in the world" (USEPA 2010). This project takes an interdisciplinary approach, combining Black geographies, critical physical geography, and EJ to make three critical interventions. First, I position environmental and climate injustice within an afterlife of slavery framework to bring to light the logics and structures that brought anti-Black environmental injustice into being. Secondly, heeding calls within critical physical geography to take seriously the biophysical and social co-constitution of landscapes, I integrate biophysical landscapes into the notion of the

afterlife of slavey. I examine the inter-relationship between devaluation and precarity of Black life and the contamination, degradation, and climate vulnerability of the biophysical landscapes in which these lives exist. Lastly, this project promises a key intervention by foregrounding Black relationship to place and sense of place within EJ focused research, which has long emphasized death and degradation to the neglect of Black life and relationship to place. I draw on the afterlife of slavery to highlight the relationship to place and land particularly for Black populations whose ancestors labored in this region that now holds clusters of EJ communities. This project aims to shed new light on the complexity of place within spaces of racial violence by dialectically bringing the precarity of EJ communities into conversation with the life and joy that simultaneously occurs in such spaces.

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Dedicated to my mom, dad, sister, brothers, and all my kin and ancestors in Port Arthur

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I. INTRODUCTION

1. Introduction

Black environmental justice (EJ) communities along the U.S. Gulf Coast are very complex places. These communities exist within a dominating system of racial capitalism, particularly surrounding the oil and gas industry. Environmental injustice refers to the uneven distribution of environmental benefits and burdens based primarily on race, but also class, gender, and other marginalizing factors. Environmental burdens include facilities such as refineries, waste sites, or extractive sites, such as mines. There has been research highlighting the existence of this phenomenon for decades, largely since the 1980s (UCC 1987; Bullard 1990a; Cole and Foster 2001; Martinez-Alier 2003; Taylor 2014). Climate justice, on the other hand, refers to the uneven experience of climate change impacts, largely stemming from the actions of affluent nations and corporations, that disproportionately impact marginalized communities, such as low-income, Black, Indigenous, and communities of color in the U.S., as well as, across the global South (Pulido 2016b; Sen Roy 2018; Baldwin and Erickson 2020; Gonzalez 2020; Marino 2015, 2018).

In the case of the U.S. Gulf Coast, these two factors of environmental justice and climate justice converge where Black communities are more proximate to oil and gas facilities, whose production and refining processes create toxic atmospheres in which these communities live. Additionally, these coastal communities face sea level rise and intense hurricanes linked to climate change (Martinich et al. 2013; Blake and Zelinsky 2017; National Hurricane Center 2021). However, it is not simply the existence of the hazard that devastates these communities, rather there are many social factors, such as

poverty and inadequate infrastructure, that leave these communities vulnerable to devastation from flooding and struggling to bounce back or recover (Martinich et al. 2013; Hendricks and Van Zandt 2021; Bullard and Wright 2009). In this dissertation, I highlight the factors that qualify such communities as "environmental justice" or "climate justice" communities as I delineate variables of contamination, flooding, and dispossession experienced here. However, my aim it to draw from various fields, particularly Black geographies, to complicate the distillation of these communities to death, devastation, and degradation.

The people in these communities and the places they inhabit and relate to are a form of collateral damage within the systems of racial capitalism flowing on regional, national, and global scales. Yet, these communities are much more than simply dying people and places within a broken political economic system. There is life in these spaces. There are rich environmental relationships that abound beyond contamination and pollution. There are strong relationships to place. Importantly, these processes, both the death dealing reality of racial capitalism, but also the relationships to place and environment, the life, the joy, are all informed historically. Scholars in Black studies have long positioned the present-day precarity of Black life as a legacy or afterlife of slavery. Saidiya Hartman (2007) defines the afterlife of slavery as "black lives still imperiled and devalued by a racial calculus and a political arithmetic that were entrenched centuries ago. This is the afterlife of slavery--skewed life chances, limited access to health and education, premature death, incarceration, and impoverishment" (6). Christina Sharpe (2016) expands on this notion to consider the complexity of Black life, even if in proximity to death, within the afterlife or in the wake of slavery, to use her terms. The

work of these two Black feminist scholars provides the building blocks of the theoretical framework that shapes my synthesis of EJ studies, Black geographies, and critical physical geography (CPG) in this dissertation.

This dissertation presented in the form of articles makes three critical interventions. The first article, entitled *More than just dying: Black Life and Futurity in the Face of State-Sanctioned Environmental Racism*, makes a theoretical intervention in the field of EJ by addressing the field's fixation on Black death to the neglect of Black life. I argue that Black living in EJ has been restricted to Black living as dying and Black living as spectacular activism with little attention given to the possibilities of the many modalities of Black life that exist between these registers, such as care, Black intellectual life, and refusal.

The second article, titled *Ecological Memory and the Biophysical Afterlife of Slavery*, focuses on drawing the natural environment into afterlife of slavery discourse to conceptualize the biophysical afterlife of slavery. The biophysical afterlife of slavery describes how the precarity and devaluation of Black life has impacted the biophysical environments in which these Black lives exist. In this article, I argue that complex entanglements of social and biophysical processes taking place in Black EJ communities are, too, the afterlife of slavery. This article stands as an intervention in both Black studies and CPG to begin to understand how Black ecologies, too, are shaped by the afterlife of slavery as much as Black life and death are and the methodologies necessary to analyze the biophysical afterlife of slavery. I provide a conceptual explanation of my application of dendrology to examine one manifestation of the biophysical afterlife of

slavery, contamination, in a Black EJ community along the U.S. Gulf Coast, Port Arthur, Texas.

The third article, *Black Inheritance of Place in Uninhabitable Spaces*, brings empirical analysis and example to the theoretical interventions in the prior articles. It lays out how Black life, joy, and relationship to place and environment co-exist with the death dealing reality of the oil and gas industry in a Black EJ community. Furthermore, I describe the nexus of social and biophysical processes shaping the present and future landscape hosting this complex intermingling of Black life and death. This article focuses on the case study of Port Arthur, Texas, which is the study site for this dissertation project.

2. Study Site

The case of Port Arthur, Texas epitomizes environmental injustice in many ways. Port Arthur is a predominantly Black community (See Figure 2) at the edge of the Texas Gulf Coast located within what the U.S. Environmental Protection Agency (EPA) called the "largest oil refining network in the world" (EPA 2010, 1). Port Arthur has been a key node within U.S. oil production since 1901 when oil was discovered in the region. The largest refinery in the country, Motiva, sits in Westside Port Arthur (See Figure 1). Several of the petrochemical facilities have violated EPA regulations (Bruno and Jepson 2018). EJ organizations have long advocated for increased regulation and monitoring in Port Arthur (Lerner 2010). McCoy, Fischbeck, and Gerard (2010) find that enough emissions from industrial upsets, which are unregulated accidental emissions, occur in

Port Arthur to equate to the amount of emissions of an entire separate refinery in the area. In 2009, Port Arthur was named the Environmental Justice Showcase Community (EJSC) in the EPA's Region 6, which stretches from New Mexico to Louisiana. The EJSC project was an EPA initiative that selected ten EJ communities around the U.S. in which to roll out projects meant to address environmental justice challenges. However, Port Arthur saw no regulation changes, despite this being a key desire from organizers in the area (Bruno and Jepson 2018). These factors position Port Arthur as an ideal site to analyze processes related to environmental and climate injustice.

Prior to the oil industry's arrival, Port Arthur's plantations and ranches exported agricultural products. Port Arthur is located in Jefferson County in the far west corner of the U.S. Black Belt. Jefferson County is on the border of Texas near Louisiana. Because of its far east location in Texas, the region was some of the first ground in Texas, which was a part of Mexico until 1836, to be colonized by white American settlers who brought enslaved peoples over from southeastern states, such as Georgia or Alabama (Jefferson County 2015). These white settlers were, in fact, guaranteed land based on the number of slaves they brought over (Bugbee 1898b; Campbell, Pugsley, and Duncan 2010; Campbell 2017). Although Mexico had outlawed slavery, the Mexican government made an exception in Texas, in order to draw settlers in (Campbell, Pugsley, and Duncan 2010; Jefferson County 2015; Campbell 2017). Thus, this region became one of the first areas in what became the state of Texas to practice slavery. Moreover, the port was used for illicit trafficking of enslaved peoples after the slave trade had ended (Block 1976; Cate 1997). The struggle over Mexican territory, then, was also a struggle over slavery in Texas (Bugbee 1898a; Jefferson County 2015). Soon after the Mexican American War

(1846-1848), Port Arthur, as well as the rest of Texas, was a stronghold for the Confederacy during the U.S. Civil War (1861-1865). Jefferson County has various historical markers celebrating its role in the Confederacy to this day.

In between the time of enslavement and the present conditions of environmental injustice in Port Arthur, many social, political, and ecological processes have occurred in the Black community in Port Arthur. According to research by a local archivist, Westside Port Arthur, the historically Black side of town, began as a site where the first refinery in Port Arthur, Guffey Refinery, housed its Black laborers who were not allowed to live amongst the white community in Port Arthur (Bellian 2020). Over time as the Black population grew, they became officially segregated to the Westside, not allowed to live beyond Houston Ave (See Figure 2 and 5). That is to say, segregation, and its white supremacist logic rooted stemming from the plantation's dehumanizing of Black people, played a major role in shaping the present landscape of environmental injustice in Port Arthur. As I explain in more detail in Article 3, once segregation ended and Black people began to move further east, the white population gradually migrated further away and the economic vitality of Port Arthur followed, creating a wave of poverty, unemployment, and disinvestment in the city. Over this same time, the oil industry has changed with the times, shifting from mainly oil extraction to oil and gas refining. Then, the rise of tar sands, fracking, and biodiesel have all seen manifestations in Port Arthur. Much has happened over the period between slavery and the present, however there are clear continuities, then and now, of Black necropolitical labor, extraction from the surrounding environment for capital accumulation, and also Black survival, life, and relationship to the environment are what I explore in this dissertation. Port Arthur is unique in many

ways, but these continuities are seen throughout the U.S. Gulf Coast and the Black diaspora.

City Limits of Port Arthur, Texas and Extraterritorial Jurisdiction

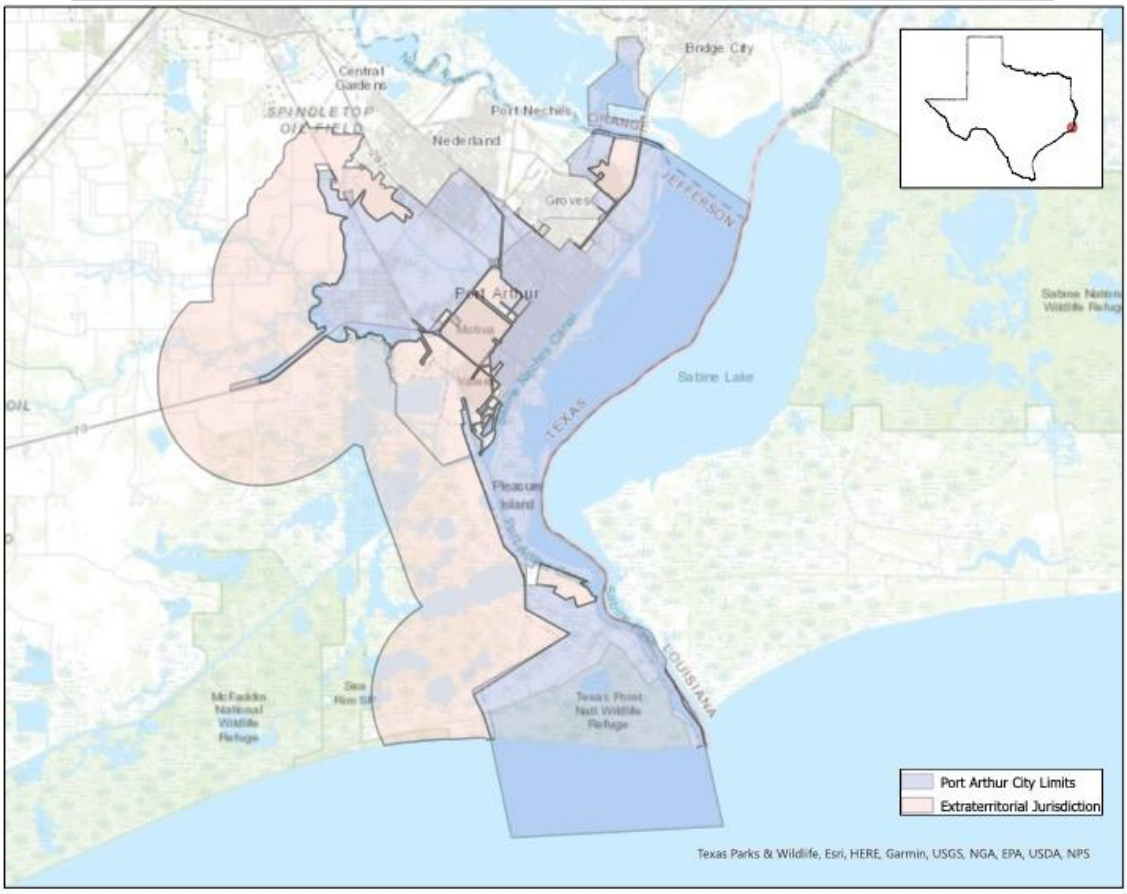

Figure 1: Map of Port Arthur, Texas city limits and extraterritorial jurisdiction

Map of Racial Demographics in Port Arthur, Texas

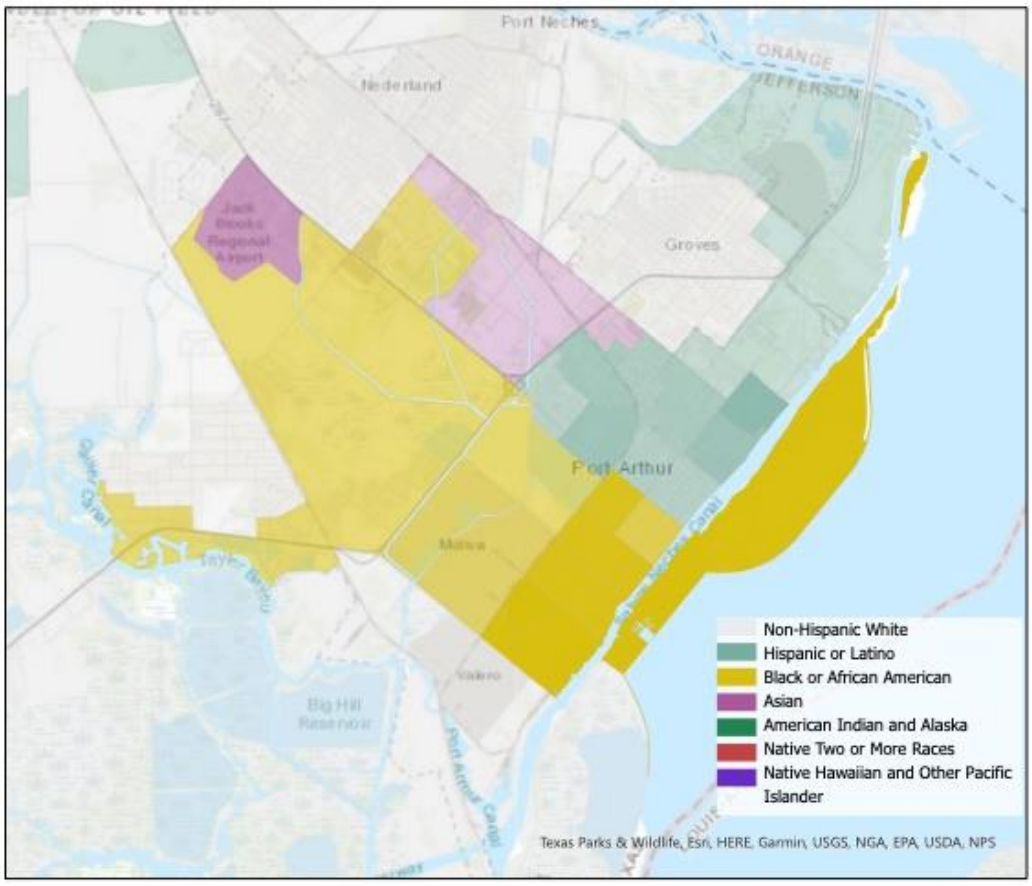

Figure 2: Map of Port Arthur, Texas with racial demographics based on 2019 American Community Survey

3. Methodology

The methodology in this dissertation mostly consisted of interviews, close reading of oral histories, archival analysis, and tree coring.

3.1 Interviews/ Oral Histories

Interviews are a structured or semi-structured set of open-ended questions which allow participants to give their own narration of their experiences by describing and explaining their lives in their own words (Valentine 1997). I administered semi-structured interviews with ten Black Port Arthur residents. Interviews covered the following themes: (1) what community members value about Port Arthur and its environment, (2) what community members are concerned about, (3) other themes that emerge regarding sense of place, environment, and race in Port Arthur. I asked questions, such as: What makes you stay in Port Arthur? Are there recreational practices, outdoor activities, spiritual practices, or environmental scenes you hope your children, and their children, will enjoy? If so, what are they and why? If not, what do you hope will live on? Regarding environmental degradation and climatic projections, what concerns you about the future of Port Arthur?

My approach to this interview included an oral history approach to get an understanding of Black life in Port Arthur, over the decades of the lives of my participants. Oral histories have long been used to capture histories and ontologies often excluded from conventional archives (Scott 2019). I conducted 10 interviews via phone and zoom (video-conference), in adherence to research protocols during the Covid-19 Pandemic. I also did a close reading of five oral histories made publicly available online

through the "Civil Rights in Black and Brown Oral Histories Project", which is based at Texas Christian University Libraries. I listened to these oral histories not only for Black history in Port Arthur, but also to get an understanding of how Black relationships to the environment and sense of place are represented. Guest et al. (2006) found that saturation regarding information and themes from interviews occurs at 12 interviews. Therefore, 15 oral histories total was an adequate set for this research. More oral histories would have been ideal, but were not feasible given the Covid-19 Pandemic.

Participant Recruitment: I recruited through a snowball method, beginning with community activists and former city officials who were also longtime (at least 20 years) residents of Port Arthur. All participants were longtime residents of Port Arthur who have lived or live in Westside Port Arthur or Vista Village. Westside Port Arthur is the historically Black side of town in Port Arthur. Vista Village, is not only a historically Black neighborhood in Port Arthur, also, but it was a key site that suffered severe flooding and population loss during Hurricane Harvey.

Oral History Analysis: Oral histories were transcribed and coded for themes that emerged throughout the oral history collection. The primary codes included: reason for staying in Port Arthur, community bonds, outdoors experiences, and hope or concern for the future of Port Arthur. Sub-codes were included within these primary themes. For example, within “Concern for future of Port Arthur”, sub-codes included: concern for economy, concern for physical space, and concern for community decline.

3.2 Archival Analysis

Archival analysis has long been employed in historical geography projects and Black geographies projects to understand the processes that produced the landscapes of today (Woods 2017, 1998; Boone and Buckley 2017; Arefin et al. 2018). For this project, archival data provides historical information that reveals what has happened in and around Port Arthur in its transition from a site of subjugation of Black people through enslavement to a site of subjugation of Black people through environmental and climate injustice. Stoler (2010) argues that the archive reveals the "colonial common sense." This notion guides my analysis of archives for hegemonic racial ideologies. Critical geographers, such as Katherine McKittrick and Tariq Jazeel, have argued for caution when working with archives, as many subaltern perspectives have been left out of the archive (Jazeel 2014; McKittrick 2014). For this reason, I aimed to address gaps in the archival data with oral history data.

I collected and read archives from several local collections from repositories in and around Port Arthur and digital archives (listed below). These archives were closely read for oil and gas industry history, environmental regulation, and evidence of histories of Black life in Port Arthur. After extensive archival analysis, it was apparent that Black history in Port Arthur has not been cataloged, even in local archives. Two archivists attested to this gap in the archives. However, during archival collection, I was connected with a former curator at the Museum of the Gulf Coast who had begun a project on the history of Black Port Arthur. The former curator provided an interview that furnished many details on the Black history of Port Arthur that were unavailable elsewhere. She

also provided me with her working papers for publication on this topic that she began some time ago while working in Port Arthur.

Archival Repositories and Collection:

- African American Library at the Gregory School, Texas Slave Narrative Collection
- Mary and John Gray at Lamar University, Wanda A. Landrey Collection
- Port Arthur Public Library, History and Genealogy Collection
- Museum of the Gulf Coast, Floor Display (No collection made available)
- Sam Houston Regional Library and Research Center, Jefferson County Environmental Collection and Black History Collection

3.3 Tree Coring:

Tree core samples have been used gather information on histories of contamination (Balouet and Oudijk 2005; Saint-Laurent et al. 2011, 2010; Rodríguez Martin et al. 2018; Muñoz et al. 2019). In this project, I incorporated dendrochronology to gather an environmental history of Port Arthur. I juxtapose this environmental history with social and racial history to analyze for a relationship between the histories.

Tree Core Sampling: With permission and assistance from the Port Arthur Parks and Recreation Department, I collected five tree core samples throughout Port Arthur (See Figure 5). Using a 12'' Two Thread Borer, I collected five tree cores. I employed targeted sampling for tree selection (Speer 2010). I selected sites, with the guidance of Port Arthur Parks and Recreation Department, based on tree maturity and proximity to

industrial facilities (Muñoz et al. 2019). These sites include the West Port Arthur area, which an EPA report acknowledges has contaminated groundwater from over a century of industrial activity (EPA 2010) and the Vista Village neighborhood, which is another historically Black area of Port Arthur that is also proximate to industrial facilities that have been fined by the EPA for regulatory violations. Additional areas included: Downtown Port Arthur, Gillum Circle Park, and Thomas Boulevard. Sample size of five was chosen based on sampling practices in previous studies dendrochemistry studies seeking to reconstruct histories of contamination. Several studies have sampled within a range of less than ten trees (Saint-Laurent et al. 2011, 2010; Märten et al. 2015; Rodríguez Martin et al. 2018; Balouet and Oudijk 2005). The samples containing the greatest number of years and most precise dating will be prioritized for chemical analysis.

Tree Core Analysis: These cores have been mounted, sanded, scanned, and dated in collaboration with the Soil, Plant, and Atmosphere Lab at the University of Oregon. Next steps include chemical analysis of these samples. The samples will be sent to the UC Davis Interdisciplinary Center for Inductively-Coupled Plasma Mass Spectrometry for heavy metal analysis. This analysis of oak trees cores was proven viable in previous dendrochemical analyses (Märten et al. 2015; Monticelli et al. 2009) The analysis will delineate contaminants found in the tree ring tissue. Results of the heavy metal content analysis will, also, be analyzed in collaboration with the Soil, Plant, Atmosphere lab at the University of Oregon.

Limitations: Accessing the center of the tree is conducive to more precise dating of the trees. The 12" Borer used during data collection did not reach the center of any of the trees sampled. A longer borer is needed to access the center of the trees previously

cored, as well as larger trees in Port Arthur that are known to be older, and would thus provide a longer environmental history.

II. ARTICLE 1: MORE THAN JUST DYING: BLACK LIFE AND FUTURITY IN THE FACE OF STATE-SANCTIONED ENVIRONMENTAL RACISM

1. Introduction

"In the midst of so much death and the fact of Black life as proximate to death, how do we attend to physical, social, and figurative death and also to the largeness that is Black life, Black life insisted from death?" Christina Sharpe, 2016, 18

"Prevailing geographic systems prop up this logic: there is a reason a certain analytics of flesh (rather than humanity) is academic currency…I want to know black life differently." Katherine McKittrick, 2017, 99

There are two registers of Black living that are encapsulated in environmental justice (EJ) scholarship to date: Black living as dying and Black living as activism. EJ scholarship has proved time and again that to live and love in a community facing environmental racism is to face loss, suffering, and death. Loss of hope in state protection (Wright 2018; Pulido, Kohl, and Cotton 2016; Pellow 2017). Loss of loved ones (Kohl 2015). Loss of land and sense of place (Barron 2017; L. Dillon 2014; Vasudevan and Kearney 2016). Loss of life (Morello-Frosch and Jesdale 2005; Kohl 2015; Davies 2018; Landrigan et al. 2018; Shultz et al. 2018; Opperman 2019; Vasudevan 2019, among others). Life in EJ communities is undeniably very familiar with death. In fact, many of my childhood memories in Port Arthur, Texas, a small Black community in Southeast Texas nestled in the world's largest oil refining network, are in funeral homes or church reception halls for celebrations of life. High respiratory disease rates, high cancer rates,

and many other indicators of premature Black death have been well documented in Port Arthur (JD Prochaska et al. 2014; John Prochaska et al. 2012; Lerner 2010; Dement et al. 1998; Thomas et al. 1982). The same is true of nearby Cancer Alley, found along the Gulf Coast of Louisiana, less than 200 miles east of Port Arthur, a region whose nickname comes from the high rates of premature Black death due to anti-Black environmental injustice (T. Davies 2018; Lerner 2006).

Disease rates, cancer rates, and death rates are all too familiar for those of us writing on environmental racism. These rates are continually referenced and recited to prove disproportionate exposure to premature death in an effort to affirm their status as a community experiencing environmental injustice. The field of EJ continues to emphasize and re-emphasize the dead and dying Black bodies. The primary output of the field is the many instantiations, formations, and rates of dead and dying Black bodies. For example, in the most recent volume of the *Environmental Justice Journal* sixteen out of thirty three of the articles focused on deaths and disease in EJ communities, particularly in the U.S. Gulf Coast region (see also: Thomas et al. 1982; Dement et al. 1998; Lerner 2006, 2010; Singer 2011; Davies 2018). I am not writing this to deter EJ scholars from exposing the innumerable instantiations of environmental injustice in the world, nor to undermine the deadly realities of EJ communities. Rather, I am urging those within the field of EJ to become aware of and question our own role in shaping notions of and discourses around EJ communities. EJ literature has discursively collapsed other possibilities of life, dignity, and futurity within these spaces due to the field's constant re-emphasis on the death and dying within EJ communities without attention to life, sense of place or futurity. That is to say, we have essentialized these spaces to those dead and dying

bodies. What else are these spaces and the people that inhabit them other than containers of pollution, death, and decay?

The second mode of Black living in EJ is living as activism, particularly spectacular activism. I use the term spectacular activism in this paper to highlight the sensational register of activism that has been the focus of EJ scholarship. It has been particular to protests, litigation, and grassroots movement building. More subtle, quiet, or everyday practices of resistance, acts of community care, or insistence on futurity have yet to be incorporated into EJ's understanding of Black life. There is a lot of living, loving, caring, and life that occurs between spectacular activism and dying.

This article pushes EJ scholars to not end with the reification of inevitable and imminent Black death or to essentialize Black life to spectacular activism. I aim to push EJ scholars to behold Black life and futurity experienced in close proximity to death in EJ communities. Drawing from the work of Katherine McKittrick and Black studies scholars, I problematize EJ scholarship's essentialization of EJ communities and people in them to dying bodies and death rates. I challenge EJ scholars to attend to and illuminate what Christina Sharpe (2016) calls the "modalities of Black life lived in, as, under, despite Black death" within EJ communities (17). In the final section of this paper, I evoke the theory of Black feminist scholars to think and imagine EJ work that incorporates Black life, dignity, and futurity in the face of state-sanctioned racial violence made possible through neoliberal EJ policy.

Scholars have called for EJ researchers to develop a more profound understanding and engagement with critical ethnic and race studies (Pulido 2017a; Wright 2018; Vasudevan 2019; Kohl 2015). Deeper integration of these fields of study is imperative as

EJ has long written on communities of color, but as of yet, has had little engagement with areas of intellectual practice that are built off of the life experience and ontologies of these communities. In what follows, I review EJ literature through Black geographies and Black studies lens to highlight the limitations of the binary modes of living as dying or living as activism. I argue that EJ scholarship has discursively limited the possibilities of Black life and dignity and discuss how it can attend to such matters by incorporating the theory and practice of Black geographies scholarship.

2. The Black Body in EJ Scholarship

I want to interrogate the knowledge produced on Blackness and Black geographies within EJ literature. If we are to question what we know or learn about Blackness and Black geographies based on what is produced within EJ scholarship, what more is there then the fact of Black death, the locations and tolls of Black death, the ways in which environmental toxins modify and mutilate Black flesh across generations? While EJ scholars have long written on Black communities facing environmental injustice, the knowledge produced about Blackness and Black geographies has been limited to disease, death tolls, and decay, with the exception of activism, which I explore in the next section. EJ scholarship often emphasizes the death and degradation occurring in EJ communities to highlight the dangerous conditions in which EJ community members live. This is a noble task, yet the emphasis on Black death with little attention to Black life has led to a largely biocentric conception of Black people. That is an understanding of Black people as bodies that are repositories of contamination and then dying bodies. There is an evacuation of humanity and a reduction to flesh.

Black studies scholars have argued that a strict analytic of the flesh, in fact, does a disservice to Black people and Black struggles by unintentionally dehumanizing Black people. An analytic of flesh foregrounds and emphasizes the biological manifestations and impacts of racial violence, such as asthma rates or congenital disabilities. It fixes Black people as flesh that is acted upon. Kelley (2016) states that "increasingly Black bodies stand in for actual people with names, experiences, dreams, and desires" (8). Black studies scholars have problematized the reduction of discourse on Black people to a biocentric or biological one (McKittrick 2014, 2016; Kelley 2016; Musser 2014; Sharpe 2016). McKittrick (2014, 2016) tells us that this sort of discourse excludes the possibilities of Black life and undermines the workings of Black intellectual life. McKittrick (2016), furthermore, argues that discourse which reifies Blackness to only the flesh and forces acting upon that flesh leaves Black people still dehumanized. The processes and systems that set environmental and racial injustices in motion, that EJ scholars hope to write against, are still intact. "No one moves" (McKittrick 2016, 16). On the same accord, Musser (2014) suggests that isolating our discursive and analytical focus to damaged and dying Black bodies may elicit sympathy or empathy from the onlooker or reader, but at what benefit to Black subjects? Consider Figure 3 of what is presumably a sick child in Flint, Michigan, representing the harm of the Flint Water Crisis.

Figure 3: *Time Magazine* Flint Water Crisis Cover, Source: Time Magazine

This image epitomized the labor of sick and dying Black bodies in EJ communities. Furthermore, the child's abraded skin and somber look reduces them to a container of contamination and impacted flesh. Such approaches extract labor from suffering Black bodies as they perform as a specter for emotional ploys (Musser 2014) and 'discursively overtax the suffering black body" (McKittrick 2011, 948), all the while leaving the circumstances of anti-Black violence intact (Sharpe 2016).

Black studies and Black geographies scholars have argued for shifting beyond this biocentric perspective fixed on the Black suffering body toward an emphasis on Black life (McKittrick 2016). Black geographies argues against geographic discourse that categorizes and essentializes subaltern peoples and spaces as simplified, homogenous spaces of blight, death, and decay, and without knowledge production (Woods 2002; McKittrick 2006, 2011, 2013, 2014; Finney 2014; Leu 2016). These scholars want to interject within this discourse that, within the space lived in close proximity to death, there is struggle, new world-making, and a Black sense of place that must be acknowledged and brought to light. These facets coexist, and we should not behold one without the other. These scholars have urged researchers, writers, thinkers to move beyond framing the Black body as the only source of Black knowledge towards an understanding that knowledge comes from Black art, Black intellectual life, Black quotidian life which exists even within the structures extracting and demanding Black death (Campt 2017; McKittrick 2017; Sharpe 2016). If we are to incorporate this call into environmental justice, then we must attend to experiences of life, joy, and Black sense of place within EJ communities. I urge EJ scholars to not end with the reification of inevitable and imminent Black death, but to push EJ scholars to behold Black life and futurity experienced in close proximity to death in EJ communities. I evoke the theory of Black feminist studies scholars to think and imagine EJ work that incorporates Black life, dignity, and futurity in the face of state-sanctioned racial violence made possible through neoliberal EJ policy.

3. Black Life Beyond Activism

The activism and grassroots organizing of Black communities, particularly under the leadership of Black women, has long been a focus of EJ literature. This spectacular activism has been the main resonance of Black life in EJ scholarship. For example, in the most recent volume of the *Environmental Justice Journal*, also, had sixteen out of thirty three entries that focused on activism and policy reform, particularly along the Gulf Coast. Academics coverage of EJ activism dates back to the early 1990s (Bullard 1990, 1993; Foster 1993; Taylor 1997, among others). Particularly, the case of Warren County is often cited as a beginning of grassroots protests against the siting of environmental burdens in communities of color. For decades since, many EJ scholars have highlighted many stories of Black grassroots organizing and protest to siting and zoning of environmental burdens in their community, particularly under the leadership and conviction of Black women (Bullard 1993; Rainey and Johnson 2009; Gomez, Shafiei, and Johnson 2011; DiChiro 1992; Yen-Kohl and The Newtown Florist Writing Collective 2016). Often these cases entail a Black community coming together to protest and litigate against corporations and local governments to some, but not substantial, avail (Cole and Foster 2001). Many scholars stress community members' frustration when met with the limitation of litigation and the favor provided to industry involved in these cases (Checker 2005; Cole and Foster 2001). Legal cases for environmental justice have often been unsuccessful largely because a community must prove intent or racial animus from a group or individual and prove that particular environmental or health outcomes are linked to a specific industrial facility (Essoka 2010; Pulido 2017b, 2000). Such tasks are almost impossible in communities with multiple sources of pollution and little material

evidence to prove intent (Pulido 2000, Checker 2005). But, Black communities have not only pursued legal pathways for justice. From the beginning with the case of Warren County in 1982, Black communities have used various tactics of protest, gleaning methods from the preceding Civil Rights Movement (Checker 2005). One example that Cole and Foster (2001) highlight was the case of Chester, PA. Fed up with industrial pollution, expansion, and state disregard of community complaints, community members formed a protest to shut down the roads, blocking corporate trucks and stalling production. The efforts resulted in the corporation agreeing to move the road, but ultimately still acquiring all the permits and permissions needed to continue expanding (Cole and Foster 2001). These sensational and persistent protests and litigation by Black communities facing environmental justice are noted throughout decades of EJ scholarship (Bullard 1993, 1990a; Cole and Foster 2001; Checker 2005; Kohl 2015; Walker 2012). Figure 4, below, is of the Warren County protest that is known as the beginning of the U.S. environmental justice movement. Black community members protested the dumping of toxic waste in their community, lying the street to prevent more dumping. This image represents the spectacular nature of the activism that has been the focus of EJ scholarship.

Figure 4: Warren County Protest, Photo Credit: BFA Environmental Consultants

EJ activism itself is undoubtedly notable and admirable as Black communities extend the Black radical tradition by drawing on tactics from the Civil Rights movement to resist their oppression and demise in the face of racial capitalism and state-sanctioned environmental racism. Yet, I argue that EJ scholarship has limited the discursive scope of Black life in EJ spaces by only noting spectacular activism as the only register of Black life in these spaces. I suggest that there are three limitations to EJ scholarship's essentializing Black life to spectacular activism. First, the focus on spectacular activism as the only evidence of Black life is limited because it has restricted acts for and of Black living and resistance to litigation and reliance on the state for justice. Second, the focus

on spectacular activism excludes Black intellectual life. Lastly, I argue that the fixation on spectacular activism and dying has occluded the myriad of modalities of Black life and living that occur between spectacular activism and dying. I contrast spectacular activism with quotidian, everyday acts for Black life and futurity in EJ communities. In the final section of this paper, I draw from the work of Black studies scholars, Christina Sharpe and Tina Campt, to suggest ways that EJ scholarship could expand and nuance the notions of Black life, particularly by heeding acts of care and futurity taking place in EJ communities.

3.1 State-Centric Solutions

EJ's preoccupation with spectacular activism as the only evidence of Black life has fixed acts for and of Black life in EJ communities to litigious and other legal processes that rely heavily on state protection and intervention for justice. Yet, EJ and critical race scholars have long critiqued the state's complicity in anti-Black violence throughout the history of the U.S., from policies of segregations to present-day neoliberal forms of state abandonment and pro-capital environmental regulation (Wright 2018; Pulido 2016a; Ranganathan 2016; C. Harris 1993; Bruno and Jepson 2018; Bledsoe and Wright 2019; Pulido 2017a). EJ work and activism have often positioned industry as the culprit and the state as the neutral protector, mediator, and convener. Recently, several scholars have made powerful arguments for conceptualizing environmental racism as state-sanctioned racial violence and cautioning both scholars and activists to question their framing of the state as a protector, or even an ally (Pulido 2016, Pellow 2017, Wright 2018).

Pulido (2017), particularly, urges us to think about the intimate entanglement between the state and racial capitalism. Pulido (2017) asserts that persistently inadequate state responses to environmental injustice are not about "a lack of knowledge or skill [on behalf of the state], but a lack of political will that must be attributed to racial capitalism" (529). Scholars within the field of EJ have worked and written extensively proving disproportionate burden, high disease rates, and high death rates in EJ communities. EJ scholars have emphasized death and disease rates as a plea for assistance and protection, hoping that the state surely will rescue us with the knowledge of the deadly reality in EJ spaces. As Pulido (2017) has stated, the knowledge of environmental racism is not the issue preventing meaningful action from the state. Rather, the issue is the state's imperative to protect and facilitate flows of capital, even at the cost of Black life, which is cloaked in notions of neutrality (Bledsoe and Wright 2019). Even regulatory agency projects labeled for environmental justice have facilitated coopted notions of environmental justice that rarely increase or enforce regulation (Holifield 2004; Harrison 2014).

Ideologies and institutions which have devalued and dehumanized people of color have long been a part of state functioning in the U.S. (C. Harris 1993; Pellow 2017), thus this outcome of a policy, even if labeled for EJ, is not wildly unexpected. Critical race theorists, such as Cheryl Harris, have shown that the United States, since its inception, has created policies that establish, uphold, and reinforce white supremacy. From the outset of this country, we see the state legitimating and being implicit in the domination and oppression of people of color. The forceful acts of conquest and slavery: taking land from Native Americans and extracting value from land by enslaving Africans predate

their legal legitimacy. The force occurred then the law legitimated. Thus, since the United States came to be, protecting the privilege of whiteness and the violence of white supremacy has become the backdrop of legal cases and political action in the United States (Harris 1993).

Harris (1993) argues that the construction of race morphed into privilege or the right to claim property and not be considered as property. Possessing whiteness is the only aspect that afforded a person this privilege. In other words, whiteness itself became the right to not only have access to material property, but also the right to be a free human being and have legal rights in the first place. The protections of white privilege and supremacy, and with it capital, persist in today's legal system, protections not equally afforded to people of color (Harris 1993). Sharpe (2016) declares, "Black peoples in the wake [of slavery have] no state or nation to protect us, with no citizenship bound to be respected" (38). The state has consistently created policies that reinforce racial inequality and uphold white privilege and white supremacy. This is apparent with state-sanctioned segregation implemented until the 1960s. But the state did not move beyond racism with the end of slavery and segregation. Instead, there is an evolution to more coded and colorblind forms of racial violence, which is widely discussed in fields outside of geography (Melamed 2006; Roberts and Mahtani 2010; Davis 2007).

Echoing the sentiments of Sharpe's declaration, EJ scholars have pointed out the inherent anti-Blackness in the very state that EJ scholarship and activism have long petitioned for protection (Pellow 2017; Pulido 2016a; Pulido, Kohl, and Cotton 2016; Wright 2018). With the case of Flint, MI, for example, there is glaring evidence of state awareness of the endangering of Black peoples' lives (Pulido 2016). Moreover, the state,

on several levels, approved cost-saving measures knowing that these steps would risk the lives of those in a largely Black city (Pulido 2016a; Ranganathan 2016). City and state officials changed the City of Flint water source from the Detroit River to the Flint River to cut costs, with awareness not only that the water in the Flint River was dangerously polluted, but also that the pipes delivering was were corroded, leading to lead leaching into the water (Pulido 2016, Ranganathan 2016). The case of Flint makes plain the disposability of Black spaces and Black people in neoliberal state decision-making.

Moreover, scholars have found that even EJ state projects prioritize facilitating the flows of capital over the necessary steps to protect EJ communities. For example, in Port Arthur, an EPA project labeled for "environmental justice" focused on teaching community members to properly clean their homes to mitigate indoor air pollution, while not implementing greater regulation on the massive neighboring refinery. This enclosure of mediation to individual community member homes rather than large industrial polluting facilities perpetuate discursive and material processes of racialization (Bruno and Jepson 2018, Bruno forthcoming).

The state has long demonstrated through inaction and inadequate regulation that industry takes priority over the lives of those in environmental justice communities. Pulido (2017) suggests that EJ scholars and activists take a two-prong approach that confronts the state in a similar manner that industry has been confronted. Pulido et al. (2016) contend, "The EJ movement should take a page from Black Lives Matter. *It's not about being respectable, acknowledged, and included. It's about raising hell for both polluters and the agencies that protect them*" (16, emphasis in original). If we in EJ are to take the calls from these scholars seriously, we must not only find new

ways to struggle against environmental racism beyond the state (Pellow 2017), but also shed light on the ways that Black and other subaltern peoples have always *lived* and struggled within and against state-sanctioned oppression.

3.2 Community-Based Research and Black Intellectual Life

A second area of spectacular activism in EJ discourse is community-based research and citizen science in EJ communities (Corburn 2005; Sze 2006; Ottinger 2010a, 2010b, 2009). The focus of this literature is to highlight the creative means that EJ communities have employed to collect data on contamination, pollution, and the health impacts of their toxic environments. These studies find that community members have been excluded both from environmental decision-making processes as well as knowledge production on their own communities. "Science" and "experts" take precedent in producing knowledge on communities, while community members and the knowledge of their lived experiences are sidelined.

The act of community members interjecting themselves into the data collection and decision-making process could also be interpreted as a site of Black life as it is an action for justice and validates community concerns. Yet, the aim of this research is often to provide data to the state to then take action to protect communities, leading back to the limitation of state-centric solutions discussed in the previous section. Furthermore, scholars have suggested that even under these processes that facilitate community participation, community knowledge is far from equal in value to "experts" (Yen-Kohl and the Newtown Florist Club 2016). The knowledge of a community is limited to data or evidence for regulatory agencies, but Black geographies scholars have called for

understanding and valuing Black intellectual life, knowledge on new world-building and non-dominant ways of knowing and relating to space and place, in ways that move beyond a studying of or incorporation into status quo, state-centric systems of justice.

EJ scholars' depiction of Black living as sites of research activism or participation in the legal proceeding of environmental decision-making falls short of deep intellectual engagement with Black people in EJ communities. McKittrick (2016) argues that "the task is not to measure and assess the unfree – and seek consolation in naming violence – but rather posit that many divergent and different and relational voices of unfreedom are analytical and intellectual sites that can tell us something new about our academic concerns and our anti-colonial futures" (McKittrick 2016, 5). Black Geographies scholars insist that subaltern peoples have always produced and continue to produce knowledge on space, place, and struggle even as they are living within the realm of violence, oppression, and death (McKittrick 2006; Lipsitz 2011; Woods 2017, 1998). Yet, the intellectual life of Black geographies, that is understandings of life, place, and space that are produced within Black geographies, has been undervalued or sidelined as irrelevant to academic discussions of space and place. Academic disciplines, specifically Geography, have dismissed subaltern understandings of and relationships to space and place as "data for social scientists rather than being recognized as a form of conceptual understanding" (Sibley 1995), "rather than relevant geographic *subjects* (producing, critiquing, and writing human geographies)" (McKittrick 2006, 11, emphasis in original), and emotionally driven and incapable of producing a global ethics and forward-looking theories and forms of governance (Woods 2007).

Black Geographies scholars also insist that, in our academic inquiries, we must begin from the understanding that Black voices on space and place are more than oddities to be compared to a white norm, but rather they reveal new knowledge systems and Black epistemologies of space and place (McKittrick 2006, 2011). Knowledge gleaned from Black lived experience and collective memory has long been undermined, undervalued, and often disqualified by "expert" disciplinary accounts (Sharpe 2016). Yen-Kohl and the Newtown Florist Club (NFC) Writing Collective (2016) emphasize that the Black women who compose the NFC, living in an EJ community, are tired of being studied by outsiders only to have community claims and knowledge silenced or delegitimized. They hope that this reconfiguring of who and how EJ knowledge is produced will make room for meaningful integration of Black intellectual life into EJ knowledge production.

Black geographies posits that forms of Black cultural expression, such as novels, essays, songs, and poems, reveal "how black people represent the world around them, how they represent 'place' in a world that has profited from black dis-placement, and how black geographic representation is recast through a struggle, rather than a complacency, with space and place" or a Black sense of place (McKittrick 2006, 29). Not only is there another way of knowing space and place, but as the quote which began this article indicates, these spaces hold knowledge for our academic endeavors, but more importantly on new world-building. Moreover, Black intellectual life is in itself a negation of the discourse of totalized abjection and death in Black communities.

Wright (2018) draws from Black artists and intellectuals to highlight the aligned violence to Black bodies and the spaces and environment surrounding Black geographies. First, Wright (2018) analyzes the depiction of lynching trees in Billie Holiday's song

"Strange Fruit" and Robert Hayden's poem "Night, Death, Mississippi." This analysis highlights how the natural environment has been exploited in various ways to carry out the killing of Black peoples. Secondly, Wright (2018) evokes James Baldwin's work to further this understanding of the violence on Black environmental and Black bodies, yet, Wright (2018) pivots to highlight how Baldwin's conception of justice is a way for EJ to move forward to demands for justice that are beyond the state. Building on Baldwin's argument that white people must be willing to sacrifice their whiteness, particularly as a signifier of humanness, Wright (2018) states, "The death of whiteness as humanness and recognition of Black humanity…would set the stage for a repositioning of human-environmental relations (14). Wright's analysis and application of Black artists' and intellectuals' work exemplify the new, environmentally just world-building possibilities within Black intellectual life that have long been neglected within the field.

4. Analytics for Black Life and Futurity

In what follows, I draw on Black studies scholars to map out methods of analysis that make it possible to acknowledge and understand the Black living, resisting, and future building, particularly in a way that moves beyond petitions for state intervention. It is undeniable that both spectacular activism and dying are prominent in Black EJ communities, but Black life is much more than taking to the streets or dying. EJ scholarship has produced a notion of Blackness in these spaces that is collapsed to these two phenomena. There is an abundance of actions for Black life, relationship, and care that takes place in EJ spaces that we must attune our analytics to begin to behold these within EJ literature. Black studies lays a path for us.

Throughout *In the Wake: On Blackness and Being*, Christina Sharpe (2016) challenges Black scholars researching, writing, and teaching in the afterlife of slavery to move away from disciplinary expectations or standards to attend the dead and dying with care and with an acknowledgment and reverence to Black life which persists in spite of immanent and imminent Black death. She states, "I want In the Wake to declare that we are Black peoples in the wake [of slavery] with no state or nation to protect us, with no citizenship bound to be respected, and to position us in the modalities of Black life lived in, as, under, despite Black death: to think and be and act from there" (Sharpe 2016, 38). How can we, who struggle against environmental racism, too, think, be, act, and write from there?

While Black struggle can certainly be sensational and spectacular, such as with the activism, Black feminist scholars have argued for scholars to attune our listening to more quotidian forms of Black struggle (Campt 2017; Weheliye 2014; Sharpe 2016). They call for this attention to highlight the complexity, persistence, and everydayness of Black struggle that exists outside of traditional conceptions of resistance or activism. I posit that these quotidian forms of struggle are particularly outside the litigation and policy routes that have characterized EJ scholarship and activism.

In *Listening to Images*, Tina Campt (2017) describes a method that allows us to attune our analytic pick up on the quotidian and average practices of Black people that resonate as resistance through persistence in the quotidian. In particular, Campt highlights the subtle, yet powerful practices of refusal that can be captured when we listen closely for them. Campt states,

> "I theorize the practice of refusal as an extension of the range of creative responses black communities have marshaled in the face of racialized dispossession. In this context, refusal is not a response to a state of exception or extreme violence. I theorize it instead as practices honed in response to sustained, everyday encounters with exigency and duress that rupture a predictable trajectory of flight" (10).

The "predictable trajectory of flight" that's ruptured is the processes of racialized dispossession and capital accumulation. There is a refusal exerted even within the confines of oppression and limited resources to have a life without dignity and futurity. Campt conceptualizes a Black feminist approach to futurity, arguing that Black futurity is a "politics of pre-figuration that involves living the future *now* – as imperative rather than subjunctive – as a striving for the future you want to see, right now, in the present" (35, emphasis in original). She argues that Black struggles for possibilities of futurity involve confronting and coming face to face with the likelihood of one's own premature demise, yet "maintaining an active commitment to the very labor of creating an alternative future" (116). Campt argues for a method of analysis that requires us to adjust the way we see the world to then pick up on quotidian forms of Black refusal, acts of refusal that make way for Black futurity.

5. Black Life and Futurity in/against State Sanctioned Environmental Racism

Black feminist scholars, Tina Campt, Katherine McKittrick, and Christina Sharpe, make way for us, EJ scholars, to begin to see how we can think and write Black life and

Black struggle even as we acknowledge Black death and critique death-dealing state-capital processes. Sharpe (2016) calls for us to attend to the ways that Black people can and do care for the dead and dying in the afterlife of slavery. Campt (2017) focuses on subtle forms of Black refusal that make way for Black futurity. McKittrick teaches us to understand Black people as more than bodies, but also as peoples contributing to and making new forms of knowledge production. These scholars highlight what Sharpe calls the atmosphere of anti-Blackness and the reality of premature Black death, yet they interject Black struggle and Black life, in its modalities, exist and can be attended to even within this atmosphere and reality. I ask again, how can we who struggle against environmental racism think, be, act, and write from there? In this section, I discuss the work of scholars who have already begun foregrounding Black life in their EJ work, particularly in ways that align with the calls from Sharpe, McKittrick, and Campt.

5.1 Care

> What does it look like, entail, and mean to attend to, care for, comfort, and defend, those dead, those dying, and those living lives consigned to the possibility of always-imminent death, life lived in the presence of death…? (Sharpe 2016, 38)

To live in an environmental justice community is to be familiar with death. Growing up in a family with roots and kinship ties in a Black EJ community, I have long witnessed death visit families, such as my own. Blowing over us like a wind leaving us bent and altered, but not broken. The Black women in my family are continuously

caregiving and making funeral preparations. Caring in the face of state-sanctioned environmental racism.

In her work with the Newtown Florist Club, Kohl (Yen-Kohl and The Newtown Florist Writing Collective 2016; Kohl 2015) brings the care labor of Black women in EJ communities into EJ discourse. The Newtown Florist Club is an environmental and social justice organization composed of Black women in Gainsville, Georgia, a Black community that is surrounded by waste and industrial facilities. These women came together to provide flowers for funerals in their community. Kohl (2015) states, "When someone in the community died, club members served as flower bearers at the funeral, processing the flowers into the church dressed in black in the winter and white in the summer, with a red rose pinned to their lapels, to offer a sense of solidarity and support to the family that lost their loved one" (29). Donning white gloves, the Florist Club members *care*fully place the flowers on the caskets of community members who have passed away (Kohl 2015). The detail and care put into providing these flowers and adorning the caskets of community members demonstrate the determination of these women to ensure that these lives so devalued and disposable to the racial capitalist state and industrial partners find dignity and care. In this case, dignity and care are not only extended to the dead, but also to the family of those who have lost someone. As Kohl states, this is a demonstration of solidarity and support, reminding families that they are not alone in this loss and that it has been witnessed. Rather than a Black life routinely picked off as sacrifice for the benefit of capital, the actions of these women in their activism and caring practices declare that this life lost is not going unnoticed, and it matters.

Caring for community within the context of environmental injustice (i.e. racial capitalism) is complicated. While labor discourse in regard to EJ has mostly focused on predominantly male industrial laborers, Vasudevan (2019) highlights the precarity of the unacknowledged care labor in the home, where Black women are also exposed to toxins through washing clothes, highlighting one of the myriad of avenues that bring toxins into the home. Vasudevan (2019) insists that "Racial capitalism preys upon the very relations of care that people depend when their lives are devalued" (9). Yet, as we see with the Newtown Florist Club, relations of care in these places extend beyond kinship ties to cover communities with care. Vasudevan and Smith (2020) identify this as Black revolutionary mothering in spaces of bodily and environmental degradation and slow death. This encapsulates the drive to struggle for dignity, protection, and care for Black life in EJ communities.

5.2 Futurity and Refusal

> What if we understand it…not always intentional or liberatory, but often constituted by minuscule and even futile attempts to exploit extremely limited possibilities for self-expression and futurity in/as an effort to shift the grammar of black futurity to a temporality that both embraces and exceeds their present circumstances…? (Campt 2017, 59)

The processes of racial capitalism function on top of, around, and within the lives of Black people in EJ communities working toward the slow deaths of people, landscapes, and place (Vasudevan 2019). Wood (2017) writes about Black EJ

communities in the U.S. South, particularly Louisiana, that have "ceased to exist" (249). This phenomenon stems from residents dying out from chemical exposure and corporate buyout, resulting in an empty town to be rolled over for industrial expansion. Mossville, LA is an example of one such town where the industrial imprint, via construction and contamination, has expanded and slowly snuffed out the surrounding Black community. Moreover, coastal communities find themselves concurrently facing the impact of climate change, such as sea level rise, coastal subsidence, and more intense hurricanes. This simultaneous poisoning of environments and Black people in EJ communities is occurring across the U.S. South (T. Davies 2018; Hardy, Milligan, and Heynen 2017; Vasudevan 2019; Yen-Kohl and The Newtown Florist Writing Collective 2016).

These processes stifle, and perhaps limit, but not wholly erase possibilities for futures or taking action for an imagined future in such spaces across the region. EJ scholarship has yet to venture into analyses to understand how this insistence of Black futures takes place in EJ communities, particularly how communities are making room for Black futures within the confines of limited resources and while living in the deadly entanglement of state and racial capitalism. Moreover, as Campt (2017) asks, what if we refined our understanding of resistance and actions taken for Black futures to include quotidian, minuscule, and even futile?

I want to return to Campt's notion of refusal as a quotidian means for Black futurity, which entails coming face to face with the likelihood of one's own premature demise, yet "maintaining an active commitment to the very labor of creating an alternative future" (116). Specifically, I examine EJ communities through Lorraine Leu's politics of staying put and as defiant geographies. Through the case study of the Vila

Autodromo community, who refused to be displaced for some time as Rio tore down their community for the 2016 Olympics, Leu (2020) argues that this Black Brazilian community stayed put throughout demolition, shutting off city services, and ruination as a means of place-making, making themselves visible, and to defend their claim to their home. They remained to insist on a counter-narrative to the notion of Black placelessness and build toward their collectively imagined future.

In the face of constant chemical beratement, Black EJ communities across the US Black Belt have remained in place. One way to read this is that due to their objectification and dehumanization, they are relegated to the disposability of the state for the sake of protecting capital gain. This is certainly true. But is it also possible for us to understand that Black peoples in these communities, in some cases, refuse to be dispossessed from their land, place, and community? The Black Belt is "home to 46% of all African Americans, 83% of the non-metropolitan African American population and 90% of poor rural African Americans" (Harris and Hyden 2017, 53). The work of Clyde Woods (2007, 1998, 2017) highlights how the U.S. South is unique as a region of Black knowledge production and Black struggle.

I am not arguing that Black people peacefully and willfully remain in harm's way as a form of defiance. Rather, I am suggesting that if we reframe our understanding of "resistance" and "agency" within EJ to position the very act of building connection to a place, desiring for your family and future generations to inhabit and build their own connections to this place, and staying put because it's home—as acts of refusal to be denied such possibilities for yourself and for future generations. It is a form of resistance and agency in the name of environmental justice that is beyond the state. In refusing,

these communities are making a claim that they have a future and that this land/space has a future in their hand as an inheritance to future generations of Black people in this country. This daily life (that threatens a premature death through higher cancer rates, etc.) happens for the existence (future generations of descendants and the like) to continue. In this way, the existence of these communities in place is both a consequence of racial capitalism and a manifestation of the Black radical tradition, pushing for place and community survival. Their refusing to leave and be demolished as a community is a means of creating a future they want to see now, even within limited resources and with tremendous odds against them.

The film *Mossville: When Great Trees Fall* (2019) provides an excellent example of what I am gesturing toward. This film focuses on the progressive expansion of Sasol industrial facilities in historically Black, Mossville, Louisiana, and how community members were impacted by this expansion and resisted this expansion. Sasol is a South African based petroleum giant. *Mossville: When Great Trees Fall* particularly focuses on the story of Stacey Ryan. Ryan, who is a descendant of one of the founders of Mossville, is one of the only remaining residents in Mossville that has not been bought out by Sasol (Valtin 2015). Similar to the case of Vila Autodromo, throughout the film, we are shown scene and scene again of Ryan's defiance and determination to stay put as the very ground around his home is effaced and services cut. Ryan and other Mossville community members stress throughout the film that to be removed from this space is to lose a connection to ancestors, near and far. Mossville, the community and the place, are connections to family members who made life and lost life there for generations. Moreover, to be removed from this space, releases its further extraction, occupation, and

exploitation for industry. There is a pushing back against industry, but importantly, there is also a refusal to not have this space for future generations. Staying put maintains a connection to ancestors and makes way for those connections for future generations of Black people in this place. This is but one example of communities across the region and beyond. These sorts of insights into connection to place, resistance to environmental injustice outside of the state, and act for Black futurity are lost without a Black geographies approach to environmental justice that implores we attend to the complexity of place and foreground Black life.

6. Conclusion

This article intervenes in EJ's status quo of figuring Black living as dying or living as spectacular activism to stress the many modalities of Black life beyond the bounds of such registers. The field's fixation on Black death is understandable given the deadly reality of Black EJ communities, but to isolate our intellectual gaze on death limits the possibilities of knowing Black spaces. We begin to only know these as containers of death and toxicity to the neglect of all the living experienced and forged in these death dealing spaces. Spectacular activism has, too, restricted acts for and of Black life within state-centric solutions, which have long been unsuccessful for environmental justice (Pulido 2017b, 2000; Wright 2018). EJ scholars have documented community-based research and citizen science efforts of EJ communities within the spectacular activism framework. Yet, this approach is often still state-centric and rarely treats Black EJ community members as intellectual equals, building more justice worlds and ways of knowing and relating to space and place (Yen-Kohl and The Newtown Florist Writing

Collective 2016; McKittrick 2016). Contrasting with spectacular activism, I position more quotidian forms of living, resisting, and caring within an understanding of Black life in EJ. By integrating Black studies and Black geographies frameworks into EJ analysis, I have worked to interject the living, caring, and practices for futurity between these two dominant registers.

III. ARTICLE 2: ECOLOGICAL MEMORY AND THE BIOPHYSICAL AFTERLIFE OF SLAVERY

1. Introduction

Present day precarity of Black life has been linked to the logics and processes set in motion by chattel slavery. Black studies scholar, Saidiya Hartman, refers to this phenomenon as the "afterlife of slavery". Hartman describes the "afterlife of slavery" as "black lives still imperiled and devalued by a racial calculus and a political arithmetic that were entrenched centuries ago. This is the afterlife of slavery--skewed life chances, limited access to health and education, premature death, incarceration, and impoverishment" (2007, 6). In other words, the afterlife of slavery refers to the present-day precarity and devaluation of Black life that has stemmed from logics and structures set in motion under chattel slavery. Discourse on the afterlife of slavery has spread throughout Black studies and Black geographies (T. L. King 2016; Sharpe 2016; Stitt 2018).

Foundational Black geographies texts, such as that of Clyde Woods and Katherine McKittrick, position present-day racialized landscapes within the longue durée of slavery arguing that spatial relations, both those working toward Black placelessness/non-freedom and those working toward Black liberation have roots in plantation logics and processes. In recent years, various scholars in Black geographies have built on this to illuminate these linkages between present landscapes and histories of slavery around the world, but particularly in the U.S. (Bledsoe 2017; Williams 2018; Wright 2019; T. L. King 2019). Scholars, such as Adam Bledsoe (2017) and Brian Williams (2018), have described how histories of slavery and resistance to slavery have gone on to shape present

environmental governance and extractive land use practices. Wright (2018) highlights that Black studies texts have long identified ecological degradation as a characteristic of the colonial and racialized world order (see also: Wynter 1995; Alexander 2006; Gumbs 2018). Yet, few scholars have dug deep into how to theoretically and methodologically analyze biophysical processes within the afterlife of slavery.

In this paper, I consider how the afterlife of slavery has impacted both Black lives and the biophysical environments in which these lives exist, then I move to discuss how we can analytically and methodologically attend to the complexity of landscapes through this framework. I argue that the integration of theory and practice of Black geographies and critical physical geography (CPG) is necessary to attend to what I call the biophysical afterlife of slavery. The biophysical afterlife of slavery describes how the precarity and devaluation of Black life set in motion by plantation logics has impacted the biophysical environments in which these Black lives exist. I draw from critical race studies, specifically Black studies, and ecological research to describe and analyze the ways in which the precarity and devaluation of Black lives manifest in surrounding environments. I therefore ground the concept of the biophysical afterlife of slavery discourse through analyses of the material reality of ecological degradation, how the historical devaluation of Black lives enables such degradation, and how it shapes the present and future of Black ecologies.

CPG is a burgeoning subfield in the discipline of geography that advocates for critical attention to the social and historical factors that shape biophysical landscapes coupled with deep knowledge of a specific biophysical science or technology, especially those in physical geography. There is a myriad of methods used to reconstruct

environmental histories that, when brought together with a Black geographies lens, create for mechanisms to analyze the past, present, and future of the biophysical afterlife of slavery. One example is dendrochronology. This article concludes with a conceptual explanation of my application of dendrochronology to examine relationships between racial and environmental histories in Port Arthur, Texas, a site of anti-Black environmental injustice on the U.S. Gulf Coast. Through this work, I aim to position environmental racism within both the social and biophysical afterlives of slavery, highlighting that it is not only Black persons, bodies, and communities that are impacted and altered by racial ideologies and processes, but also the natural environments connected to and interweaving these lives and communities. That is to say the ideologies that Black studies has long clarified as legacies of slavery are bound up in and with the ecosystems that Black people have worked, lived on, cultivated, and love.

2. The Afterlife of Slavery

The concept of the "afterlife of slavery" has its roots in Black feminist literature, specifically Saidiya Hartman's book *Lose Your Mother: A Journey Along the Atlantic Slavery Route* (2007), a text where Hartman chronicles her journey to Ghana's slave routes as she encounters questions of slavery's past and how it lingers over and within the present, even through her own existence as an African-American, with only ambiguous ties to the continent outside of slavery, travelling throughout Ghana. The ambiguous and indistinct ties to a particular place in Africa is a commonality of many descendants of enslaved peoples. In this way, Hartman (2007) identifies herself also as the afterlife of slavery, highlighting the many scales of Black life that are altered and marked within the

afterlife of slavery. Hartman's mode of the autobiographical as a methodological approach to study the afterlife of slavery has been deployed by various scholars (Sharpe 2016; Campt 2017), yet, the primary takeaway of this particular text has been Hartman's conclusion that Black life today continues to be shaped by logics, structures, and processes set in motion centuries ago under chattel slavery. The concept of the afterlife of slavery has primarily registered with Black feminist scholarship thinking through Black being within the longue durée of slavery (Hartman 2007; Sharpe 2016; Campt 2017; Stitt 2018).

Christina Sharpe's *In the Wake: On Blackness and Being* is a recent text that focuses particularly on expanding on Hartman's notion of the afterlife of slavery by describing what she calls Black life "in the wake". The wake in Sharpe's text has many connotations relating to Blackness, including referring to the movement of water behind a ship, particularly a slave ship. She positions Blackness and Black being within the wake of the slave ship, detailing the conditions and modalities of Black life shaped by the afterlife of slavery, which is itself marked by "vulnerability to premature death and gratuitous acts of violence" (Hartman 2007, 4). That is, she describes Black life today, even as that life is marked by precarity and proximity to death and violence. Beyond this, Sharpe argues for scholars to practice and attend to "wake work", which are the ways in which Black people and communities resist and disrupt the flow of the afterlife of slavery.

The notion of the "afterlife of slavery" has spread across many fields of study intersecting with Black studies as well. This literature has highlighted the extent to which the afterlife of slavery is interwoven in many aspects and scales of life for Black and

other non-white populations, such as maternal health and reproduction (Weinbaum 2013; Davis 2019), prisons and incarceration rates (S. Dillon 2012; Guenther 2013), immigration (Willoughby-Herard 2014; Sharpe 2016), and education (Grant, Woodson, and Dumas 2020). This scholarship highlights the role all these factors play in producing and maintaining the precarity of Black life.

While various scholars in Black studies have positioned environmental degradation as integral to the colonial and racialized-gendered world order (Wynter 1995; Alexander 2005), few have integrated the notion of the afterlife of slavery into environmental research. For example, Sylvia Wynter highlights that the onset of colonialism and slavery brought a fundamental shift to the notion of who is “human” and the state of the social and ecological world (Wynter 1995). Much of the aim of this work has been to bring about a different understanding of the human, as the dehumanization and mutual exploitation of both racialized peoples and the environment makes cause for a new conception of what it was/is to be considered "human" (McKittrick 2015). This scholarship pulls the thread of ecological degradation into discourses on processes inherent to a patriarchal, white supremacist, capitalist world, but it does not foreground the environment. On the other hand, analyses on the present state of the planet, what some call the Anthropocene, has left out considerations of how the lasting effects of slavery have shaped and continue to shape the socio-environmental conditions of the planet (Leong 2016; Karera 2019; Yusoff 2018).

Recently, however, Black geographies scholars have worked to highlight how the legacies of slavery have manifested in present environmental politics, land use, and subaltern environmental relations. Clyde Woods (2017) lays out how the environmental

racism we see in the South today would not be possible without the institutions, structures, and political economies put in place during the plantation era in the region. In fact, Williams (2018) outlines that, in some cases, the very lands that various chemical companies hold in the South were once plantation, repeating centuries of the disposability of Black life and environmental well-being for white, capitalist profit (see also: Huber 2017; Davies 2018). Wright (2018) argues that this facet has largely been neglected in environmental justice research. He argues that the field of EJ should move beyond state-centric notions of EJ and reconceptualize environmental racism to take into account the role anti-Blackness plays in shaping environments. This mutual devaluation and degradation of Black people and the biophysical landscapes that interweave the lives and histories of Black people is what I argue is the biophysical afterlife of slavery.

3. Black Ecologies and the Biophysical Afterlife of Slavery

The afterlife of slavery refers to the present-day precarity and devaluation of Black life that has stemmed from logics and structures set in motion under chattel slavery, or as Hartman (2007) puts it "a racial calculus and a political arithmetic that were entrenched centuries ago" (7). Afterlife of slavery discourse has largely focused on present-day social, political, and economic processes as vestiges of slavery lingering still over Black lives. A biophysical afterlife of slavery framework grounds this discourse through analyses of the material ecological degradation and survival surrounding Black lives, then questions how this shapes the present and future of Black ecologies. In this article, Black ecologies refer, not only the natural environments that surround Black

communities, but also the myriad of Black relationships and connections with those environments, which exist at many scales.

Sites of environmental racism, in particular, epitomize the biophysical afterlife of slavery. Anti-Black social, political, and economic policies and processes, whose illogical roots emerge during slavery, not only impact the lives and futures of Black people in these spaces, but also those of the environment. I focus how this is manifest in the region of the U.S. South as a site where slavery's past and the present of environmental racism is rather apparent. The once-stronghold of U.S. slavery, currently not only holds the some of the highest concentrations of Black populations in the U.S., but also numerous Black environmental justice communities. The landscape of environmental injustice in the U.S. reveals large clusters of EJ communities across the U.S. South (McGlinn 2000; Wilson et al. 2010; Bullard 1990a, 1990b). This clustering coincides not only with the concentration of U.S. petrochemical activity, but also with the U.S. Black Belt. The Black Belt is "home to 46% of all African Americans, 83% of the non-metropolitan African American population and 90% of poor rural African Americans" (Harris and Hyden 2017, 53). Bullard (1993) declares that the petrochemical domination of the region resembles that of the plantation regime across the "Old South", referring to the slavery era of the U.S. (13). Many of those facing climate and environmental injustice are descendants of slaves living in the very spaces where their ancestors labored as chattel (Bullard 1993, 13).

As I have stated, research in Black geographies literature, such as the work of Clyde Woods (2017) and Brian Williams (2018) has shown that there are very material linkages between the plantations' past and environmental racism's present. But beyond

these material or chronological connections between slavery and EJ today, the racial calculus and political arithmetic that helped shape Blackness to what it is today, shapes the realities of communities facing environmental racism as much as these material linkages. The logics of disposability of Black life for profit and extraction and degradation of the natural environment for the capital accumulation were set in motion in this region and beyond long ago, during chattel slavery and the conquest that preceded it (McKittrick 2011). In this region where enslaved folks once labored in plantations and ranches, now their descendants too find their lives and the surrounding ecologies imperiled for the benefit of capital. The primitive taking of Black unfree labor and environmental resources for white capital accumulation set the stage for racial capitalism that continues to imperil Black lives and the environments in and with which these lives exists. The experience of Black slow death, that is the necropolitical labor in which one's death ensures the lives and economic gains of others (Young 2017; Berlant 2007; Mbembe 2019), has always been the prevailing logic in this region since conquest and slavery, and we cannot ignore those historical continuities and linkages if we want to understand how these circumstances come into being. Furthermore, the logics of this era naturalized land exploitation as accumulation, as we witness the slow death of the environment as well.

In this article, my argument is not only are these socio-environmental processes legacies of slavery have, but also, in some cases, they have left traces in the environment. Anti-Black violence has manifested in surrounding environments. These traces, only, have not been theorized as the biophysical legacy of slavery. Critical physical geographers stress that "socio-biophysical landscapes are as much the product of unequal

power relations, histories of colonialism, and racial and gender disparities as they are of hydrology, ecology, and climate change" (Lave et al. 2014, 2). I move to then understand how the legacies of slavery experienced by Black EJ communities have manifested biophysically. Particularly, I borrow Ann Stoler's conception of ruins and apply it to the biophysical environment. Stoler (2013) argues that ruins and ruination can be understood and analyzed as archives that reveal not only colonialism's marks left behind, but also the lives of those whose sensibilities – and I would add possibilities – have been marked. This is what I consider the biophysical afterlife of slavery. I frame the biophysical mark of contamination and degradation as the mark left and continually made in the afterlife of slavery, in the form of the legacies of contamination, increased flooding, intense weather events tied to climate change, and much more.

In what follows, I develop a methodological approach to analyze the biophysical afterlife of slavery. However, before moving forward, I want to interject here that contamination and degradation does not define the biophysical afterlife of slavery. Black relationships to the environment are overwhelmingly presented as strictly mediated by toxicity and degradation. There is no denying that Black communities more often experience toxic environments (UCC 1987; Taylor 2014). Decades of scholarship and activism on environmental justice has shown us this. But toxicity is not the totality of Black relationships to the environment (Finney 2014). There are liberatory, recreational, spiritual, livelihood, and so many other relationships to the environment for Black peoples. Scholars, particularly those working with Black food geographies, have highlighted these more-than-toxic relationships (Safransky 2017; McCutcheon 2019; Reese 2019). But also, Black geographies scholars have brought attention to the various

ways in which these relationships, too, are connected to slavery and the many forms of resistance to slavery practiced, even within spaces of subjugation and violence (Woods 1998, 2017; Bledsoe 2017; Wright 2018). Thusly, as Sharpe (2016) interjects that "the wake" or the afterlife of slavery is not without modalities of Black life despite the era being marked by global precarity of Black life, the biophysical afterlife of slavery, too, has many modes of resistances and survival within it.

4. Black Ecological Memory: A Methodology

Researching the biophysical afterlife of slavery demands interdisciplinarity. The concept of the biophysical afterlife of slavery cements how questions of race and racism are, and have always been, relevant to ecology and ecological research. Therefore, I posit that an integration of critical physical geography (CPG) and Black geographies is necessary in this work. I suggest this for two reasons. First, CPG is a burgeoning subfield in the discipline of geography that advocates for critical attention to the social and historical factors that shape biophysical landscapes coupled with deep knowledge of a natural science, especially physical geography. This approach provides the framing to bring together an understanding of ecological processes and their relationship to power-laden social processes. In other words, it is an ideal framing to analyze the dialectical relationship between biophysical processes and social processes. Second, Black geographies scholarship has long argued that there must be a meaningful engagement with Black studies theory and praxis in human geography to attend to complex entanglements of anti-Blackness, race, space. Furthermore, Black Geographies asserts that bringing human geography together with Black Studies makes room for the

unearthing and valuing of subaltern ways of knowing and producing space and moving away from white, patriarchal, and European conceptions of space (McKittrick 2006; McKittrick and Woods 2007). Understanding and analyzing the biophysical afterlife of slavery entails a deep engagement and understanding critical race epistemologies. Drawing the two together shapes a theoretical and methodological framework that covers the complex entanglement of social and ecological processes in the biophysical afterlife of slavery.

4.1 Interdisciplined and Undisciplined

While CPG and Black geographies have both advocated for interdisciplinarity, the two subfields have yet to speak to each other. Black geographies primarily advocates for bringing together human geography and Black Studies, aiming to highlight the relevance of the Black subject and Black communities to geographic knowledge production. CPG is more focused on bridging the fields of human geography and physical geography with the goal of policy relevancy and producing physical geography practices that are critically aware of the social and biophysical forces that co-produce landscapes.

However, scholars within Black Studies and Black Geographies call on those of us teaching, writing, and thinking about Blackness or race, particularly Black scholars, to become ‘undisciplined’. Sharpe (2016) contends that this does not necessarily mean abandoning training within a discipline, rather she urges us to honor the knowledge gained in other spaces, such as living and experiencing everyday life within Blackness. Black geographies scholars argue that to remain within the confines of disciplinary traditions reinforces the narrow conception that essentializes Blackness to condemned,

dead, and decaying (Woods 2007; McKittrick 2016). McKittrick (2016) states, "the act of *disciplining of thought* (the process of habitually delimiting what we know about blackness according to colonial perimeters) stabilizes race and perpetuates anti-blackness" (4, emphasis in original). Black geographies scholars posit that to not practice interdisciplinarity is to fragment and conceal subaltern ways of knowing (Woods 2007). Indeed, scholars in the subfield stress that Black geographies "demand an interdisciplinary understanding of space and place-making that enmeshes, rather than separates, different theoretical trajectories and spatial concerns" (McKittrick and Woods 2007, 7). Nevertheless, while Black geographies scholars have long presented powerful, groundbreaking, and path-making scholarship at the nexus of Black studies and geography, it has yet to produce much research with a deep engagement with physical geography or ecological research.

CPG, on the other hand, holds as its primary goal to have a deep engagement with ecology. This is what it argues distinguishes it from political ecology (Lave 2015). The goal of this interdisciplinarity is three-fold in CPG. First, CPG scholars want to bring the co-production (including both biophysical and social processes) of landscapes into discourse within physical geography (Lave et al. 2014; McClintock 2015; Holifield and Day 2017). Second, there is a desire to foster critical questioning of traditional scientific practices within the natural sciences (Lave 2015; Tadaki et al. 2015; Lane 2017). Finally, these scholars want to enhance critical human geographers' engagement with biophysical processes to help ground critical human work and increase the likelihood of policy relevance of critical human geographers' work (Engel-Di Mauro 2014, 2018; Lave 2014). However, critical human engagement in CPG has largely focused on political economy

and post-colonial theory, but, as of yet, there is little on race or racial capitalism (exceptions: McClintock 2015, 2018).

The first two goals of interdisciplinarity within CPG relate to the purposes of interdisciplinary work in Black Geographies. Unpacking the co-production of landscapes is in essence to unravel and reveal the nuance and possibly occluded processes at play within a landscape. This aligns with Black Geographies aim to reveal Black geographic knowledge production and sites of struggle that have gone largely unnoticed within broader Geography. Fostering critique and questioning traditional scientific practices is not only actually practiced in Black Geographies to illuminate the role that race has played in scientific analyses (see Da Silva 2015; McKittrick 2016; Sharpe 2016), but also, questioning methods and traditional practices is constitutive of being undisciplined. These subfields are compatible in their mutual aim to attend to the complexity of what is being studied one must move beyond the bounds of one discipline. Black geographies has drawn geographic thought and practice together with Black studies together, but it has yet to seriously incorporate physical geographic research. Conversely, CPG, a newer subfield, aims to conduct physical geography research through a critical human lens, but has yet to produce much work on with a critical race geographies lens.

The biophysical afterlife of slavery is a complex enmeshment of social, political economic, and ecological processes throughout time and space, requiring the strengths of both of these subfields. In practice, CPG calls for employing a particular biophysical science or technology. I suggest that methods used to reconstruct environmental histories, such analysis of tree cores, lake cores, or soil, when brought together with a Black geographies lens, create for mechanisms to analyze the past, present, and future of the

biophysical afterlife of slavery. In fact, there are many concepts and practices in various subdisciplines of physical geography that hold a lot of resemblance to arguments within Black studies, especially those theorizing the afterlife of slavery.

4.2 Black Ecological Memory

The notion of the past influencing the present and future is not far from ecological research. In fact, ecological memory is a concept that refers to "the capacity of past states or experiences to influence present or future responses of the community" (Padisak 1992, 225) or "the degree to which an ecological process is shaped by its past modifications of a landscape" (Peterson 2002, 329). In other words, it suggests that how the past shapes the present, ecologically. This is not the only ecological concept that suggests a relationship between the past and present. There is also legacy effects, referring to the impacts of past events and processes on present landscapes and biophysical processes (Roman et al. 2018), and legacy sediments, which refers to extensive anthropogenic sediment produced or deposited in a particular period of decades or centuries (James 2013). These concepts highlight the compatibility of ecological memory research and research on the afterlife of slavery as both look to the past to make sense of the present.

I propose that we apply what Tina Campt (2021) calls a Black gaze to these methodologies and modes of analysis of ecological work on the past, particularly in Black ecological spaces. Tina Campt (2021) describes the Black gaze, not only as a Black perspective, but also a call to shift your perspective to align with the experiences of Black precarity. She suggests that it allows one to empathize, to be implicated, and to witness. It is a witnessing of Black past, present, and future experiences. I suggest that applying a

Black geographies lens to research on ecologies of the past and present allows one to understand the biophysical environment as a witness and provides the framing to analyze data on past environment through a lens that seek to attend to experiences of Black precarity.

Understanding the biophysical environment as an archive or a witness is not new. Many in the natural sciences have long dug into trees, soils, lakes, ice sheets and more to uncover information about past environments. Even within Black studies, scholars have discussed understanding the surrounding natural environment as a witness to what has historically occurred to Black people. For example, one can think of Billie Holiday's blues song "Strange Fruit" as those trees witnessed the violence of lynching (Wright 2018). But also, Black feminist scholars such as Dionne Brand (2001), Saidiya Hartman (2007), and Christina Sharpe (2016; 2017) have discussed the materiality of what is left behind today of enslaved folks in holding cells, on the bottom of the oceans, and even in the soil at lynching sites. In *In the Wake*, Sharpe states,

> But even if those Africans who were in the holds, who left something of their prior selves in those rooms as a trace to be discovered, and who did not survive the holding and the sea, they, like us, are alive in hydrogen, in oxygen; in carbon, in phosphorus, and iron; in sodium and chlorine. This is what we know about those Africans thrown, jumped, dumped overboard in the Middle Passage; they are with us still, in the time of the wake, known as residence time (2016, 19).

This offers a reading of the natural environment as holding traces of the past, in particular relating to slavery and its afterlife. Sharpe (2016) positions these ions as representative of the effects of slavery and those who are enslaved still lingering with us. I draw this question of what the natural environment witnessed and what it remembers through trace elements left behind together to analyze the biophysical landscape as an archive of the biophysical afterlife of slavery.

Traces of the biophysical afterlife of slavery includes any material evidence of biophysical change stemming from anti-Blackness, particularly in and around Black ecologies. For example, Thom Davies' 2018 article *Toxic Space and Time: Slow Violence, Necropolitics, and Petrochemical Pollution* includes residents' descriptions of trees beginning to produce less fruit and leaves changing from a vibrant green to a "yellowish green" in a Black EJ community in Louisiana, specifically in Cancer Alley, a region riddled with numerous oil and gas facilities. This ecological change stemming from anti-Black environmental injustice is the biophysical afterlife of slavery. This is not only because the region was once dominated by plantations, but also because the logics of anti-Blackness that bring environmental racism into being are linked to plantation logics, including dehumanizing Black people, imperiling Black lives for the profit, and land exploitation. Moreover, there is an inherent temporality to the afterlife of slavery. It is not just the present moment that is the afterlife of slavery, but also the time in between the present and slavery. Therefore, I am interested in how environmental change tied to anti-Blackness can be traced over time. As residents stated in Davies's article "[Changes in the trees] probably wasn’t that noticeable back in the 80s, but [then] you started noticing, you know, a decrease in things” (quoted in Davies 2018, 1547). This

observation implies a change over time in the biophysical surroundings of this EJ community. Without samples of these trees, it is difficult to know definitively that contamination has accrued in the trees or soil in this area, even if we now the tree has come into contact with contamination. But it does lead to the question of what evidence does this biophysical landscape hold relating to histories of the entanglement of anti-Blackness and ecological degradation in the afterlife of slavery? What does this tree remember? This is the question central to research on the biophysical afterlife of slavery. What has the surrounding environment witnessed? What memories does it hold within it?

These, I suggest, are the questions that the research on the biophysical afterlife of slavery begins to unpack. My research provides an example of this work. Specifically, I use dendrochronology and dendrochemistry to examine the inter-relationship between devaluation and precarity of Black life and the contamination, degradation, and climate vulnerability of the biophysical landscapes in which these lives exist.

5. What Trees Remember: Dendrochronology in the Afterlife of Slavery

In this section, I will provide a description of my research aiming to position environmental racism along the U. S. Gulf Coast as an epitome of both the social and biophysical afterlife of slavery. I focus on tree cores as biophysical archives delineating contamination histories of a particular EJ community where my research is based. Specifically, I utilize heavy metal analysis of tree cores to find indicators of historical and contemporary contamination. As trace elements, these metals will linger in trees long after the event or process that created the contamination, providing markers in tree rings

of previous contamination and making a tree core an archive of that contamination history (A. Jonathan Shaw 1990; Kabata-Pendias 1984).

This research is based in Port Arthur, Texas. According to some Southeast Texas historians, Port Arthur was once the location of illicit trafficking of enslaved peoples after the slave trade had ended (Block 1976; Cate 1997). Today, Port Arthur is a predominantly Black community at the edge of the Texas Gulf Coast located within what the U.S. Environmental Protection Agency (EPA) called the "largest oil refining network in the world" (EPA 2010, 1). Port Arthur has been a key node within U.S. oil production since 1901 when oil was discovered in the region. The largest refinery in the country, Motiva, that sits in Westside Port Arthur, is only one of several petrochemical facilities in the area. Industrial facilities in Port Arthur have perpetually violated EPA emission regulations (Bruno and Jepson 2018). This aspect of my research juxtaposes contamination histories that are revealed through tree core analysis with racial histories to examine the inter-relationship between anti-Blackness and ecological processes. In particular, I am employing heavy metal analysis of tree cores to find indicators of historical and contemporary contamination, as fluctuations in concentrations of certain metal suggest spikes in contamination present in the local atmosphere over time.

There have been many studies within dendrochemistry, a dendrochronological science combined with chemistry, which have shown how trees provide evidence of histories of contamination within industrial areas (Saint-Laurent et al. 2010, 2011; Doucet et al. 2012; Rodríguez Martin et al. 2018; Austruy et al. 2019; Muñoz et al. 2019). Pollution is deposited from the air via precipitation or particles and gases in the air (Sullivan 2017). In addition to being a historical hub of oil production, Port Arthur's

geography also makes it susceptible to intense hurricane events. Most notably, Port Arthur was the location of the third landfall of the devastating Hurricane Harvey. Several studies have found that hurricane and tropical storm events can dislocate and spread contaminants stored in soil and industrial facilities to proximal communities (Reible et al. 2006; Santella, Steinberg, and Sengul 2010; Horney et al. 2018). Contaminants can travel in and out of plant life, such as trees, via soil or from the atmosphere (Kabata-Pendias 1984; A. Jonathan Shaw 1990; Engel-Di Mauro 2014; Sullivan 2017). Various dendrochemical studies have found that due to their ability to store contaminants within their rings, trees provide a natural archive of pollution history (Balouet and Oudijk 2005; Saint-Laurent et al. 2011; Doucet et al. 2012; Rodríguez Martin et al. 2018; Muñoz et al. 2019; Alterio et al. 2020). Notably, Munoz et al. (2019) and Alterio et al. (2020) find that these archives contain not only a deeper history than environmental agency contamination records, but also, these natural archives contain a more cumulative record of contamination due to various entry sites for contaminants, including both atmospheric deposition and absorption from soil. While the traditional archives reveal legal and extralegal actions taken against Black EJ communities, these tree ring archives highlight the biophysical manifestations of the disposability of Black life for profit in this place, an ideology set in motion under slavery.

I collected tree core samples across different areas of Port Arthur (See Figure 5 below). The Southeast Texas region, where Port Arthur is located, primarily contains varieties of Oak trees, particularly Live Oak, which can live on average for 200 years. Varieties of oak trees have shown to be viable proxies for histories of contamination. The trees that we cored range from at least 30 years to at least about 90 years, which my

oldest sample coming from a tree on Westside of Port Arthur, the historically Black side of Port Arthur. Westside Port Arthur is the area of town most proximate to refineries. Westside Port Arthur is where Black laborers were housed when they were brought as labor in early refineries. It has since been the Black side of town, with Black people segregated to that side of town until the 1960s. El Vista and Vista Village together are the other historically Black side of Port Arthur, although this area is not as old as the Westside. In the 1950s, Black families began to construct and move to this area, which also lies proximate to the refineries. My second oldest sample is from this neighborhood. The tree cored in this neighborhood was at least 65 years old.

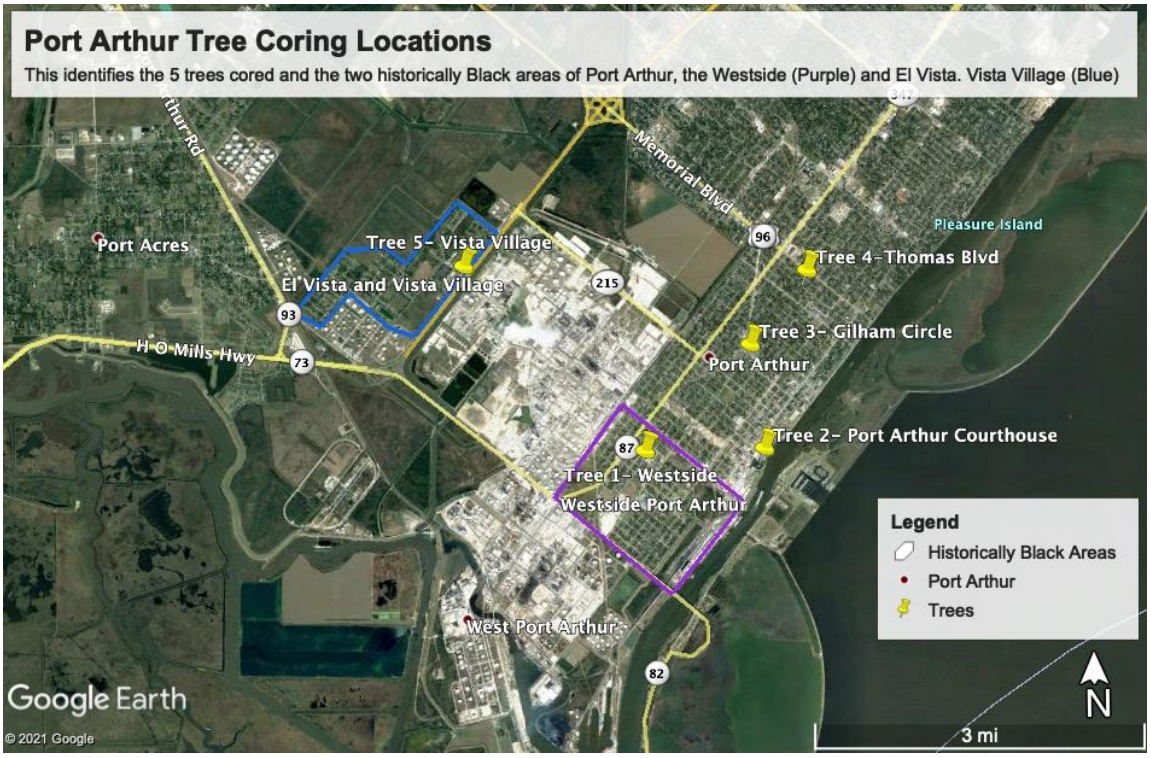

Figure 5: Map of trees cored in Port Arthur, Texas

My samples are currently being prepared to be sent to the lab for metal analysis, particularly Inductively Coupled Plasma Mass Spectrometry (ICP-MS), which is the most

common method for this sort of dendrochemical analysis (Balouet and Oudijk 2005; Saint-Laurent et al. 2010, 2011; Märten et al. 2015). First, I will divide my oldest sample into five-year segments. These segments will be analyzed for all metal elements available for testing through ICP-MS. The range of metal detection will be set by the metal most often used for oil and gas contamination history in trees, which is lead. However, I will also give attention to nickel, chromium, and cobalt as these are in the top ten toxins released in Port Arthur currently (EPA 2021). Based on existing literature, the range of detection for lead will be 0-25 parts per million (ppm) with a broad quantification of other trace elements (St. Laurent 2010, 2011). In other words, based on previous studies using this method of heavy metal analysis in tree cores, I expect to detect lead between the levels of 0 ppm and 25 ppm. The concentration of other metals detected will be in comparison to the lead range. The other four tree samples will have a more focused metal analysis, meaning the findings of the original sample (Westside) will inform which metals I give attention to in the following samples. For example, if the first sample indicates a high concentration of Nickel as well, that metal, along with lead and any other outliers will be given attention in the other samples. The results will demonstrate changes in concentrations of the metals over time, which will indicate changes in particular types and amount of contamination present in the environment over time. The type of contamination will likely correspond with industrial practices in the region at the time (McClintock 2012).

I will be giving particular attention to my samples from Westside Port Arthur and El Vista/Vista Village to analyze for changes in concentrations of contaminants that may correlate with changes in segregation regulation, economic transformation, and

environmental regulation in Port Arthur. To depict a relationship between the racial and environmental histories in Port Arthur, I will construct a timeline of social events in Port Arthur, such as the one provided below in Figure 6, that lays atop a time series of the concentration of contamination in Port Arthur.

6. Conclusion

Black ecologies are inherently imbued with the complex entanglement life and precarity of Black people. Black studies scholars have long expressed that there is a mutuality in oppression of the ecological world and Black populations. CPG, also, agrees there social and biophysical processes shapes the world around us. However, there has yet to be a methodology in Black studies or CPG that brings the two strengths of these subfields together to create ways to analyze this entanglement. This article clarifies how these fields are compatible and suggests a methodology, both methods and epistemology, to attend to this.

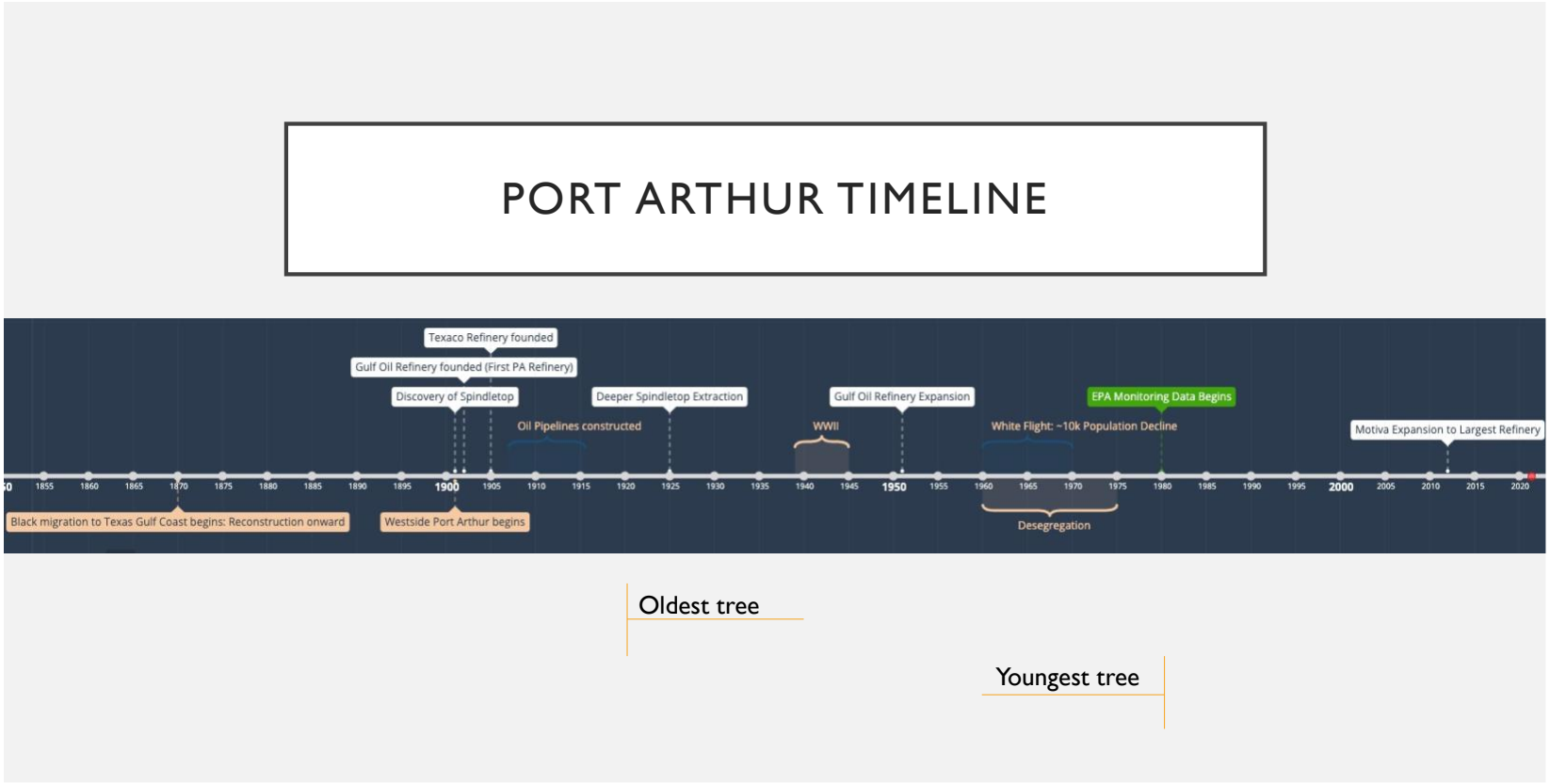

Figure 6: Port Arthur, Texas Racial and Industrial Timeline with Tree Range (See Appendix for timeline references)

IV. ARTICLE 3: BLACK INHERITANCE OF PLACE IN UNINHABITABLE SPACES

1. Introduction

"I don't think it's a good idea for us to just abandon the coastal areas. Where would we go? We own this land. Now they are telling us, 'well, its sinking over here [from climate change and sea level rise], y'all. Y'all need to get out of here'. Well you know what, it may be sinking but I'll be the last one leaving because I own something here! We have a culture here. We have a way of life here…"

Charlie, Black Port Arthur Resident and EJ Activist

It's my inheritance. Right? I am not going to abandon it.

Rukaiyah Adams in Future: Portland (2015)

Port Arthur, Texas is a small, coastal town on the border of Texas near Louisiana. It sits at the center of what the EPA called "the largest oil refinery network in the world" (EPA 2010), including the Motiva Refinery, which is the largest refinery in the Northern Hemisphere. However, interweaving these massive industrial facilities are beautiful landscapes teeming with life.

Port Arthur is a landscape of contradictions, and it is highly representative of Black communities across the U.S. Gulf Coast in many ways, particularly those facing environmental justice (EJ) issues. Environmental injustice refers to the uneven distribution of environmental benefits and burdens based primarily on race, but also class, gender, and other marginalizing factors. As I stood on a beach behind the refineries spotting dolphins, counting all the coastal birds I could see, watching two young Black

children carrying their bouncing buckets as they ran around catching crab in the mud, I was struck. As an EJ scholar, I have been well-rehearsed in many truths about Port Arthur. In addition to being the location of several major refineries, Port Arthur is the terminus of the Keystone Pipeline and has a history of state-facilitated unemployment of its Black population. Still more, it was the location of the third landfall of Hurricane Harvey, leaving unprecedented amount of rainfall. But, when I was at this scene, I was stumped. I was puzzled for two reasons. First, on the one hand, from an EJ perspective, I am able to discuss toxicity, death, and degradation, but theoretically and analytically, I could not explain the life and beauty that I was witnessing and had long experienced in this place. Intellectually, I could not explain how life and death were so proximate and intermingled.

I was struck by the juxtaposition of "natural" and industrial, but moreover I was captivated because this was all Black. Black people all around me and all around this community, marked by pollution, contamination, and climate precarity, participating in a variety of environmental activities and connections. What I was witnessing contrasts with the American environmental imaginary that positions Blackness as strictly urban or industrial (Finney 2014; Taylor 2016). The myriad of Black relationships with the environment burst so far beyond the bounds of toxicity and precarity that Black people are trapped in within EJ discourse. EJ scholarship has primarily focused on proving disproportionate environmental burden, litigation, and activism. These are important themes to cover in this literature. However, I argue that this is limited in the broad scope of life and connection to place in EJ communities. The phenomena I experience in Port Arthur are not rare, rather, EJ scholarship has had little coverage of the complex

experiences of Black sense of place and relationships to the environment in environmentally degraded and precarious spaces (exceptions: Checker 2005; Barron 2017). This article draws Black geographies theorizations of space and place into environmental justice to shed light on the complicated connection to place and environment in Black EJ communities across the U.S. Gulf Coast and throughout the Black diaspora through a case study on Port Arthur, Texas. Black geographies as a field has long worked to bring light to these sort of nondominant connections to and understandings of place and space (McKittrick 2006; Bledsoe and Wright 2019; Hawthorne 2019; McKittrick and Woods 2007; Woods 1998).

In this article, I explain Black sense of place in Port Arthur and how it makes way for Black futurity and possibilities of an inheritance of place for future generations. I use the term Black inheritance to gesture toward how the condition of Blackness, which is in itself inherited (Sharpe 2016), also shapes what material inheritances Black populations have been privy to, such as generational wealth. I argue that historical processes that have stunted Black access to spaces of their own, in combination with a Black feminist understanding of Black futurity, inform relationships to place in these precarious environments. That is to say that Black populations who have been dispossessed of the possibility of inheritance from their ancestors have cultivated and maintained relationships to place and environment, even in compromised spaces and situations, as a way to insert themselves into the position of geographic actors, but also to make place for their futurity. These arguments are not only based in Black geographies theories, but moreover, I conducted semi-structured interviews, oral histories, and participant

observation with Black community members in Port Arthur, Texas to demonstrate these notions.

2. Black Sense of Place and Environmental Precarity

Black feminist geographer Katherine McKittrick suggests that a plantation past not only shapes the present precarity of Black life, but it also has shaped the relationship between place and Blackness in many ways. She states, "[The plantation] fostered complex black and non-black geographies in the Americas and provided the blueprint for future sites of racial entanglement…The plantation anticipates—and empirically maps—the logic that some live, and some die, because this is what nature intended" (McKittrick 2011, 956). According to McKittrick, the plantation logic accomplished two geographic tasks. First, it initiates Black placelessness: "mark[ing] black working bodies as those 'without'—without legible-Eurocentric history narratives, without land or home, without ownership of self" (2011, 948). This is to say that slavery troubled the notion of Black people as geographic actors having and producing knowledge on place and space and being placeless, without sites of belonging through the Eurocentric gaze. These systems functioned on erasing a Black humanity and sense of place. Secondly, it naturalized land exploitation as accumulation and emancipations, as we witness the slow death of the environment as well.

However, a key tenet of Black geographies is that human geographies and landscapes do not exists as absolutes. Indeed, Katherine McKittrick (2006) defines Black geographies as "subaltern or alternative geographic patterns that work alongside and beyond traditional geographies and site a terrain of struggle" (7). Black geographies

highlights the possibilities of etching out belonging and place even within, along-side, and across spaces of domination and degradation. Black sense of place refers to a way of knowing and relating to place within the spatial realm where processes working towards Black displacement and Black placelessness are at work (McKittrick 2006, 2011). Scholars in Black studies and Black geographies make clear that this process, too, has roots in the plantation and beyond as enslaved people within a dominant system that erased Black place, forged sites of belonging, connection, survival, and relationships to the environment (Tinsley 2008). Building off the work of Sylvia Wynter (1971), McKittrick (2013), particularly, points out the plantation plot as one such site. She states, "the plot illustrates a social order that is developed within the context of a dehumanizing system as it spatializes what would be considered impossible under slavery: the actual growth of narratives, food, and cultural practices that materialize the deep connections between blackness and the earth and foster values that challenge systemic violence" (McKittrick 2013, 10).

The plantation informs Black relationship to place in two key ways. First, it sets in motion Black placelessness with the denial of Black humanity. McKittrick (2011) recognizes that, similarly, today there are various processes facilitating place annihilation in Black communities. Urban renewal and gentrification are well-known examples. But, importantly, the plantation also is an early site of Black place-making within landscapes of degradation, exploitation, and racial violence. I argue that these processes of place resemble the processes of place currently at work in Black EJ communities across the U.S. Gulf Coast today.

2.1: Black Placelessness in the Making along the U.S. Gulf Coast

The U.S. South is a space where a plantation past lingers in more overt ways than other spaces across the U.S. In fact, many of the lands that are now used for chemical processing and other industrial facilities were previously plantations (Huber 2017; T. Davies 2018; Williams 2018). In this region where enslaved folks once labored in plantations and ranches, now their descendants, too, find their lives and the surrounding ecologies imperiled for the benefit of capital (Woods 2017, 1998). Black places are not immune to the precarity that hovers over Black life. In this section, I want to delineate three socio-biophysical processes annihilating place in EJ communities across the U.S. Gulf Coast. Port Arthur provides an example of one such community.

There are two modes of place annihilation in this region, both bring together social and ecological processes. Those modes are displacing and the material erasing of place. That is to say, there are processes that push populations to other spaces and simultaneously, there are processes that make places unavailable to be returned to. Sea level rise or land with unsafe levels of contamination, for example, produce a place that is no longer inhabitable. At a certain point, the place will biophysically no longer be what it was, and in many ways, even if the desire exists, one cannot return to it. Driven by many political economic factors, the impacts of climate change, land subsidence, and contamination from a saturation of industry bring precarity to the very ground of many places across the U.S. South.

My research in Port Arthur provided many examples of how these socio-ecological processes of place annihilation are persistently at work along the U.S. Gulf Coast in Black EJ communities. The three main processes moving toward place

annihilation are hurricanes and flooding, chemical dispossession, and community dismantling through economic decline.

2.1.1: Hurricanes and Flooding

Hurricanes and flooding have long occurred in this region given it geography, but the intensity of these storms has increased in recent years. Port Arthur was the location of the third landfall of Hurricane Harvey and faced the highest rainfall during that storm event, which was unprecedented (Blake and Zelinsky 2017). The mayor sent alerts out via social media that the entire city was underwater. It's estimated that Harvey affected 80 percent of households in Port Arthur (Foxhall 2019). When I returned for fieldwork in January 2020, many homes were still recovering from the storm or had flat out been abandoned because the cost of repair was too high or simply too much to manage given the frequency of recurring intense storms. However, it is important to note that this process is not simply a result of a natural flow of events. Climate scientists have found that while climate change is not necessarily leading to more frequent hurricanes, it is causing more intense hurricane and storm events, meaning more events like Hurricane Harvey are likely to come (Kang and Elsner 2015; Knutson et al. 2021; NOAA 2021). Undoubtedly, the fossil fuel industry, which dominates Port Arthur, has been one of the primary contributors to the climate crisis (Grasso 2019; Pachauri et al. 2014). These same industrial actors, exacerbating the issue, are more protected with state provided infrastructure, such as levee reinforcements (Weissert 2018). In the case of Hurricane Harvey, these refineries and chemical plants were back up and running within weeks, yet the residents of Port Arthur have been often left behind in recovery efforts.

This stretches across the Gulf Coast region. Martinich et al. (2013) find that based on social and economic factors, the Texas and Louisiana areas of the Gulf Coast are some of the most vulnerable to increased sea level rise and flooding linked to climate change in the U.S. However, based on present adaptation policy, these same communities are the least likely to be protected by adaptation policy, and most likely to be abandoned by state entities (Martinich et al. 2013). The determination to abandon or protect is strictly an economic decision. Marino (2018) explains that this is due to property valuation metrics and processes, which privilege more affluent areas. Cost-benefit analysis is required of state entities that are in control of climate change adaptation (Martinich et al. 2013; Marino 2018). The U.S. Army Corps of Engineers is one of the primary agencies implementing state climate change adaptation, particularly infrastructure. When asked why protection afforded to industry is not extended to neighboring communities, an Army Corp of Engineers official responded, "…Not every property can be protected…Our regulations tell us what benefits we need to include, and they have to be national economic benefits" (Weissert 2018, 2). In this case, we can see that place is not only impacted by un-natural hazards enhanced by climate change, but also state abandonment in the midst of this.

2.1.2 Chemical Dispossession

The second process of Black place annihilation occurring across the region is what I call chemical dispossession. Clyde Woods' extensive work on Black geographies in the U.S. South describes Black EJ communities across Louisiana that have "ceased to exist" after community members began dying out from chemical exposure. Rather than

attending to the pollution, industrial corporations opted to buyout the community (2017). Thusly, the displacement is in part through increased contamination, but also corporate community buyout from chemical companies. Robert Bullard (1993) states, "Petrochemical colonialism mirrors the system of domination typical of the Old South. In addition to poisoning the people, this new master is robbing many of the local residents (many of whom are descendants of slaves) of their ancestral homes. Environmental racism is now turning century-old African American communities into ghost towns" (13). Mossville, LA is an example of one such town where the industrial imprint of Sasol Chemical Company, via construction and contamination, has expanded and slowly snuffed out the surrounding Black community, a community built and comprised of formerly enslaved and free people of color.

Industry in Port Arthur has been expanding for some time. Motiva, the largest refinery, conducted an expansion in 2012 that doubled its capacity of barrels of oil it refined per day to 605,000 bpd (Blewitt 2017; Blum 2018). Saudi Aramco, the Saudi Arabian nationalize oil corporation that owns Motiva, still plans more expansion for this facility in the future (Blewitt 2017; Seba 2019). Total, another refinery in Port Arthur, is the fourth-highest emitter of the carcinogen Benzene in the country (Dick 2021a; Collins 2020). It plans an expansion as well (Blewitt 2017). Recently, Valero, which is the oldest refinery in the city, has expanded its operations in Port Arthur as it begins construction on a renewable diesel refinery (Dick and Blum 2019; Dick 2021b). Valero has, also, recently begun buying properties in Port Arthur, particularly West Port Arthur, which is the historically Black side of town (Murrell 2020; Eslinger 2020). These processes have highlighted how complicated the process of corporate buyouts can be for EJ

communities. One might expect that a buyout may provide households with the opportunity to get funds to settle in a less toxic place, as some research has shown (Losey, Seong, and Van Zandt 2020). However, Port Arthurs environmental activists have stressed that residents in Port Arthur, especially on the Westside, have not been getting a fair price for their homes and properties as many of these are very devalued because of the refineries themselves. But regardless of their complicated nature, buyouts of this sort have resulted in the withering of historically Black communities across the Gulf Coast South.

More than shifting the landscape with buyouts, these facilities alter the very environment of these communities in ways that exceed environmental regulation, and thus even the expected or reported levels of toxicity. Industrial facilities in Port Arthur have long committed emission violations. Valero, in particular, has been fined multiple times by the Environmental Protection Agency and is currently facing a lawsuit from the Port Arthur Community Action Network and the Texas Sierra Club (EPA 2007; Luck 2019). Industrial upsets are also a source of emission that exceed environmental regulations. Industrial upsets are unregulated accidental emissions. One study found that enough industrial upsets occur in Port Arthur to equate to another refinery in the area (McCoy, Fischbeck, and Gerard 2010). Moreover, storm events like Hurricane Harvey exacerbate upset events. According to a local newspaper, "Hurricane Harvey spawned nearly 4,000 tons of unpermitted air pollution from 75 industrial sources in the Houston and Port Arthur areas and beyond…All those Harvey-related air pollution reports packed nearly a year’s worth of releases into a couple of stormy weeks" (Olsen 2018, 1). Furthermore, several studies have found that hurricane and tropical storm events dislocate

and spread contaminants stored in soil and industrial facilities to proximal communities. Thus, through means of buyouts and chemical emissions and permeations, place, community, and livability are disrupted by industrial processing.

2.1.3 Dismantling Community

Buyouts are not the only process that is impacting Port Arthur's vitality. Port Arthur's total population dropped by 4000 people between 2000 and 2010 (Foxhall 2019). City officials have concerns that this could be due to people not returning after major flood events. However, Port Arthur residents and city officials highlighted that economic decline and limited employment opportunities have also pushed some of the population out of the city. Port Arthur has faced a significant economic downfall for decades. After segregation ended in Port Arthur and Black people were able to move to other parts of the city, there was a progressive process of white flight, where the white populations of Port Arthur moved to further north and east cities. The economic vitality of Port Arthur largely followed. In 2010, the unemployment rate was 11.2% with some informal estimates as high as 25% for Westside Port Arthur (Bureau 2010; Personal Interview 2015). While Port Arthur is a major petrochemical hub, producing large amounts of wealth, the Black community in Port Arthur is not on the receiving end of this wealth. In fact, many of the workers in the refineries and plants in Port Arthur are bussed in or commute from other areas. There are many factors, largely based in structural racism, that disqualify the Port Arthur population from employment in the city. A local newspaper states, "By Motiva's count, more than 200 of its 1,550 full-time employees live in Port Arthur" (Foxhall 2019, 2). John Beard, a local environmental advocate,

stated, “If they are not going to put our people to work, what good are they to the community?” (Personal Interview 2021). The median household income for Port Arthur is $36, 557, which is almost half of what the state average is (ACS 2019). Furthermore, the poverty rate is double that of the state of Texas (ACS 2019). In contrast, Motiva Enterprises, who's key oil refining and chemical processing operations are located in Port Arthur, had an annual sales revenue of over $33 billion (Motiva Enterprises 2020).

When interviewing a local EJ activist, he told me "That’s Motiva. Motiva is the largest oil refinery in the Northern Hemisphere. But look at our downtown. Is it because we haven’t asked to be included in this wealth? We have to bear the brunt of them producing that much oil. But yet, how do we benefit from it? All we get is cancer. All we get is lung disease. All we get is bronchitis and asthma …". Figure 7 below depicts the current state of Downtown Port Arthur.

Because of these factors, many do leave Port Arthur for different opportunities. There have been many calls for people to come back to Port Arthur. In fact, the Houston Chronicle published an article in 2019 entitled "A plea from Port Arthur: 'Y'all come on home.'" In interviews, several Port Arthur residents and former city officials highlighted to me that they at one point also would heavily advocate for people, particularly young folks, to return to Port Arthur and make a living here, but some have changed their tune. They certainly still want young people to return to Port Arthur, but understand that the economic situation and limited employment opportunities in Port Arthur make it much harder to build a life and a high quality of living in the city, particularly for young Black

Figure 7: Downtown Port Arthur in July 2015, Photo credit: Tianna Bruno

people. However, they all suggested that there is still some degree of hope, even if that hope is slim. Port Arthur residents stated,

> I used to beg young people to come back to Port Arthur, but there's just not…you either work for the refinery or you are unemployed or you work for the city of Port Arthur. There's not a lot of diversity in our economic environment. So I don't really push it hard. Right now, I just don't see why young people would

want to come back to Port Arthur, even though we do have young people doing good things here, great things. I **hope** that the next generation, such as yourself, would take that and come back…but I just don't see any advancement. -Robert

I don't hold a lot of **hope** that my children or other people's children are going to stay here. We have already seen the drain and the loss of our youth…There's nothing for them to stay for. -John

I want to hold out **hope**, but realistically, it will be a lot of hard work. - Carolyn

It's pretty empty now, but there's still **hope**. - Charlie

I **hope** Port Arthur will clean itself up so young folks will come back. - Priscilla

These quotes stress the complication of living in Port Arthur at this time. There are several political economic factors that push community members to look elsewhere for making a living. However, community members still hold hope. In particular, they hope for a future Port Arthur that is livable for future generations in this place, a place that they hold strong connection to. Even with the socio-biophysical processes that impact place in this city, there are many who have returned to Port Arthur because of this connection, such as the former mayor of Port Arthur, Derrick Freeman, and the renown EJ activist, Hilton Kelley. They returned in efforts to revitalize and advocate for their community. Moreover, there are many who have stayed in Port Arthur for most of their life, staying simply because it's home and all that that sentiment holds or staying to do what they can for the future of Port Arthur. With all these processes of place annihilation that I have

laid out in this section, Port Arthur has yet to "cease to exist". In what follows, I explain Black sense of place and relationships to environment in Port Arthur and across the Gulf coast region. I position this temporally to capture how history informs these phenomena, then get a sense of how relationships to place and environment today shape Black futurity in environmentally precarious places.

2.2: Black Relationships to Place and Environment in the (Un)inhabitable

There are two important factors to note about McKittrick's definition of a Black sense of place in her essay "On plantations, prisons, and a black sense of place" (2011) that are relevant to my analysis of how it arises and manifests in this case study location and across the region of the U.S. South. First, a Black sense of place is informed historically. In this sense, it agrees with Doreen Massey's assertion that place is informed by connections, near and far; past and present (Massey 2008, 2012; Massey et al. 2009). Secondly, Black sense of place does not align with conventional ways of knowing and describing space and place as it overlaps, interweaves, and struggles against domination and dominant forms of knowing and relating to place. A Black sense of place exists within and against dominating and degrading processes. McKittrick (2011) describes this as, in part, a legacy of practices of survival and place-making even within the plantation regime. Integral to this process was care, struggle, and Black ecological relations (Tinsley 2008; McKittrick 2006; Woods 2017, 1998).

Environmental justice communities exist within a myriad of dominating and degrading political ecological processes, almost all linked to racial capitalism. In the previous section, I have delineated such processes moving toward place annihilation in

Port Arthur and stretching across the U.S. Gulf Coast. Nevertheless, lived experience, participant observation, and oral histories, both that I collected and those available through a collection titled, Civil Rights in Black and Brown Oral History Project (CRBB 2021), have stressed to me that Port Arthurians on the ground, and even for those who have moved away, certainly experience a Black sense of place and strong relationships to the environment. This relationship to place and environment may not make sense within traditional understanding of place, space, and environment as they are largely sites of degradation, decay, and death. However, they are also sites teeming with histories of Black survival and struggle and interwoven with spaces of Black joy, place, and relationship. In this section, I will describe connections to place for Black Port Arthur residents

2.2.1: Place, Home, and Memory

Relationship to place has had little coverage in environmental justice literature. As a field, it has mostly focused on naming and identifying places as contaminated (Lerner 2010), deadly (Sze 2006; Nagra et al. 2021), and without appropriate state protection (Pulido, Kohl, and Cotton 2016; Pellow 2017). Few have noted how community members relate to the places they live in (exceptions include Checker 2005; Barron 2018). Checker (2005), however, discusses the complexity of community members moving away from Hype Park, an EJ community in Georgia, even if it is contaminated, because one has to part with community, particularly kinship ties to place. Checker states, one "important reason for families choosing not to leave the Park was the

simple fact that they had grown up there, and their neighbors were kin--both literally and figuratively" (2005, 65).

Having "grown up here" was also a theme in my interviews in Port Arthur. Numerous stated phrases like "Port Arthur is my home", "This is where I grew up", “I raised my kids here” or "I just love it here". They noted that there is a way of life here that they do not find in other places. They talked about their family and friends there making life. There is familiarity, kinship and friendship ties with folks who live there, but importantly, Port Arthur is a place that holds memories and connections across generations. There are individual and community memories steeped in and around Port Arthur, particularly on the Westside for Black people in Port Arthur.

Black elders in the Port Arthur community shared memories of a self-sufficient Black community that provided and protected itself, even in the midst of segregation and anti-Black violence. Prior to desegregation, Black people were confined to the Westside, but many shared that this did not mean that Westside Port Arthur starved and dwindled as a community. On the contrary, it thrived. Black businesses provided most of the needs for the Black community. There were pharmacies, grocery stores, clothing stores, banks, and more. Several that I spoke with cited present-day lack of Black businesses as what they were most disappointed about or liked the least about present day Port Arthur. They talked about how Houston Ave, once the racial dividing line in Port Arthur, was bustling with Black owned businesses is now mostly abandoned buildings. However, one participant noted that this is also a site of hope, where some community members are coming together to reclaim and revitalize this stretch.

In the oral histories of Gabriel Hosea and Vernice Moore, they described the compromised and white supremacist nature of police in Port Arthur in the mid 1900s (Grevious et al. 2016). While there is little documentation of this in the archives, oral traditions in Port Arthur have long told stories of the police harassment of the Black community in the 1950s and 60s. Hosea and Moore tell that the police were not a key resource or a service for Black people in Port Arthur. Instead, community leaders, such as clergy and teachers, and civil rights organizers provided more service to the community than conventional notions of "community servants". Hosea and Moore describe a neighborhood watch that would check on folks, especially those involved in civil rights organizing, who were particular targets of police harassment. The Westside Port Arthur community, depicted in Figure 8, in the midst of perpetual chemical beratement and racial violence, once thrived based on a sense of community.

This sense of community still permeates Port Arthur in many ways, but participants suggested that much of this is being dismantled with the place itself. The economic status of Port Arthur, on all sides, has changed across the board. The political economic space of Port Arthur has shifted. Furthermore, we cannot forget the global stage of neoliberalism and neoliberal multiculturalism has shifted everyday life, politics, and economics at almost every scale (Bruno and Jepson 2018; Melamed 2006). Nevertheless, connection to community persists in Port Arthur, even for those who have moved away. In fact, when I asked participants what has kept them in Port Arthur all these years, or what brought them back to Port Arthur after having left for some time?, in addition to sensations of home, they stated phrases such as, "Someone has to stay and do the hard work…help make it better for us." There is a sense of dedication to the Port

Arthur they lived in as a child or the Port Arthur that their parents and elders made a life in, a dedication to make that possible for future generations.

Figure 8: Westside Port Arthur Sign in January 2020, Photo credit: Tianna Bruno

Lastly, a key aspect of place for Port Arthur was a connection to ancestors, through land, through houses, through environmental practices. Port Arthur is a site to convene and maintain a connection to ancestors. Properties and land have been passed down throughout generations in Port Arthur. One resident whose father had recently passed away from cancer stated that their childhood home was one of the few things he had as a connection to his father. I have found this to be true all throughout Port Arthur. It is important to position this within the context of what is typically available to Black populations in the U.S. Homeownership and inheritances has been limited for Black people (Horton 1992; Agyeman and Boone 2020; McCargo and Strochak 2018; Lipsitz 2011). This adds weight to significance of place and home as connection and relationship throughout generations. Environmental practices and relationships are also a part of this intergenerational connection. In what follows, I, first, explain Black relationships to the environment in Port Arthur, then I discuss place and environment as spaces and instantiations of Black intergenerational relationship and care.

2.2.2: Black Ecologies: Joy, Knowledge, and Healing

Inherent to environmental justice communities is a contaminated and degraded environment. However, this contamination and degradation does not preclude an array of relationships to the environment. In fact, in their oral histories, Port Arthur residents stressed that building a connection with their surrounding ecologies began very early in their lives. They all clarified that the existence of the refineries looming over them, the constant smells from the refinery, the dust and residue on homes and trees from industrial upsets and flaring have always been there, but this did not inhibit them from building

relationships to their surrounding environments in a variety of ways. In the midst of these environment circumstances, participants explained they have experienced joy in their experiences of the environment; they have learned from the environment and shared knowledge of environmental practices between generations; and, lastly, practices of healing and surviving based in the surrounding ecologies permeate throughout this area.

Joy: “That’s the beauty of living here. You have [heavy industry], but you also have the quality of life with fishing, boating, crabbing, some of the best seafood, access to Harris County, which is Houston."- Robert

Black joy and pleasure in itself has been theorized as revolutionary and resistance because of ways in which it contribute to quality of life. However, I, not only, understand Black joy as revolutionary in its life-giving aspect. But, in the vein of Black queer studies, I also understand Black joy and pleasure as subversive particularly in spaces where there are active processes working to devalue and endanger Black life and Black living (Baily and Shabazz 2014). Black residents in Port Arthur live not only with the concern for the present and future state of the social and ecological environment, but also the trauma of the past with constantly living the reality of Black premature death as Port Arthur has a 8% higher cancer rate than the rest of the state (Lerner 2010). Participants relayed several stories of family ill with kidney failure, an unexplained phenomenon across the city. To experience joy and pleasure within this space, a space that seemingly is not meant for living and certainly not joyful living, is ordinary resistance. From gardening to fishing to chasing snakes and frogs in the marsh, Black environmental joy is

plentiful across Port Arthur. Catching crab in the mud along the coast seemed to be a universal childhood experience for all my participants (See Figures 9 and 10). They also described fishing, gardening, and snake and frog hunting. However, one participant, Priscilla, did mention that she and her family would try to remain indoors a lot of the time due to the odors and air quality. Furthermore, many women seemed to have different experiences of the environment as more sheltered or given less privilege to roam and play outdoors in the same way that their male counterparts were afforded.

But these recreational and play practices are not the only sources of outdoor joy. When I asked of fond memories of the outdoors or to what extent has the outdoors been a part of their life in Port Arthur, participants, including the women who mentioned not having the same access to the outdoors, mentioned sporting and musical events in the outdoors. Many women participants, particularly, mentioned attending high school football games. Robert described his coaching experience at the high school, which lies only a few miles from the refinery, as some of his outdoor experience.

Many talked about Pleasure Island. Pleasure Island was once a popular theme park and beach front establishment. It also had an outdoor concert space. Port Arthur, as part of the "Chitlin circuit", once hosted many of the "Black greats" as Charlie called them, including Tina and Ike Turner, James Brown, Aretha Franklin, and many more. The Chitlin Circuit was the route through the U.S. South where Black performers were allowed to play (Lauterbach 2011). I remember hearing stories of the bridge to Pleasure Island from Port Arthur dipping due to the weight of people crossing and watching from the bridge as James Brown performed there. Hegemonic notions of outdoor recreation are

often limited to camping, hiking, and the like. But this research highlights how Black joyful and recreational environmental experiences include and exceed these bounds.

Figure 9: Black children crabbing in Port Arthur, Photo credit: Tianna Bruno

Figure 10: Port Arthur Coast, Photo credit: Tianna Bruno

Knowledge: “Nature was a big part of our upbringing. You can learn a lot by watching the worms and birds and snakes and turtles.”- Gabriel Hosea, Grevious et al. 2016

In addition to the joy that playing outside brought, it also brought knowledge and understanding of surrounding ecological processes. But more than learning by experiencing the environment, oral histories and lived experience highlighted that sharing

knowledge on environmental practices is common for Black EJ communities in the Gulf Coast, as it is across the diaspora. In "Development Drowned and Reborn", Clyde Woods describes a sustainability ethic that comes out of the Gulf Coast region: the Blues sustainability ethic. He describes three staples of this ethic: 1) interlocking relationships between nature, family, community, and ontology; 2) intense dedication of parents to passing local knowledge, traditions, and social surveillance; and 3) neighborhood social aid and pleasure clubs that provided health care, pension, funeral benefits, along with support for Black businesses (2017). All three of these aspects are present and strong in Port Arthur, but particularly relevant is the passing down of ecological knowledge and traditions, particularly for provision and healing.

Fishing, hunting, and gardening to provide for the family and community has long been common in Port Arthur. I always remember seeing recently hunted rabbits and duck hanging to dry as we walked up to my paternal grandparents home in Port Arthur, the okra recently harvested from my maternal grandfather's garden as we prepare to make gumbo, the fish from the Gulf lying in the buckets as my uncle prepared to scale and debone them for cooking. Black food geographies sweep across the U.S. South (Woods 1998; McCutcheon 2019), and EJ communities are no exception. My own lived experience and the oral histories from Port Arthur share stories of these practices as a way of life. A way of life passed down through generations and a way to live with the surrounding environments in a manner that meets needs. Vernice Moore shared, “Mother, her backyard was her garden. She raised chicken, ducks, and turkeys. We only went to the store, just for steak. And that was very seldom. Everything was out the garden, ya know? Eggs and things. It was just down to earth". This quote highlights how closed

relationships to the environment supplemented or outright provided sustenance for that family. Another participant, Carolyn, shared that her father would sell produce and other vegetation as to supplement income to help pay for her schooling and other economic needs of the family. She told of how her father would bring her brothers into such ventures to teach them an ethic of finding a myriad of ways to provide. Robert and other participants shared that many of the environmental practices that they enact today have been passes down from ancestors in Port Arthur and across the region of the U.S. South.

Healing: But, more than provision, elders have long shared ecological knowledge for healing. Access to health care for Black people in Port Arthur has been inadequate according to several oral histories. To begin, Black people were not afforded equal health care in Port Arthur as their white counterparts in the times of segregation, unless that care came from Black doctors and nurses. Many studies have shown how this differential treatment persists today. The Covid-19 pandemic has further revealed this disparity.

There are many studies that have shown that access to green spaces, in itself, provides healing (Maller et al. 2006; Thompson 2018; Giles-Corti et al. 2005; Chiesura 2004; Soga, Gaston, and Yamaura 2017). Thus, surrounding ecologies, practices of gardening, and the many joyful environmental practices can be understood as a form of healing even in the midst of environmental violence. However, this is not what I am focusing on here. Environmental healing practices have a long tradition in communities across the African diaspora. The plot, itself, was a site that supplemented provision of food, but also a place to grow herbs and other plants for healing wounds, sickness, and more. The onset of Covid-19 brought to my attention practices of growing, harvesting,

and sharing herbs and plants around the region that are known to promote good health and support your immune system. Priscilla, Robert, and Charlie all asserted that these practices and knowledge of these plants and teas have long existed for Black families in Port Arthur. They explained that these were practices that their parents and grandparents enacted and passed down to them. One elder, Horace, now in his eighties described that his grandmother was a healer and held a lot of the knowledge of ecological healing practice. While he knows people who harvest and sell some of the herbs, he said that he no longer knows anyone in the town who would identify themselves as a healer. Participants described those who they know that hold knowledge on particular areas to harvest certain plants, but not all participants know about these particular plants or where to find them. One participant stated that these practices were once very common, but have faded over time to some extent. The pandemic, and in one case, my interview, resurged memories and knowledge of these practices in Port Arthur.

3. Black Ecological Futurity and A Place to Inherit

The physical place of Port Arthur is in a precarious environmental position. I have discussed the present biophysical processes eroding place in Port Arthur, but many of those aspects are only expected to be exacerbated as the world continues to face the impacts of climate change. There are several biophysical processes changing the very land beneath Port Arthur and the region, of primary concern are flooding and pollution. It is anticipated that within the next 20 years the sea level in the region will rise 1-2 ft (Sweet et al. 2017; NOAA 2020), see images below. Port Arthur is in the region most vulnerable to abandonment in the face of sea level rise and flooding related to climate

change (See Figures 11, 12, and 13 below). Furthermore, land subsidence, which is enhanced by oil, gas, and groundwater extraction, is also expected to increase flooding risk in the Gulf Coast region (Liu et al. 2020; Wang and Loucks 2002; Tremblay and Calnan 2009). The third, and most sensational, factor likely to enhance flooding in the region is hurricanes, which are expected to become more intense with climate change (Kang and Elsner 2015; Knutson et al. 2021; NOAA 2021). The other main biophysical concern for the future of Port Arthur is the pollution. Studies have shown that contamination in the soils and water impacts many aspects of ecosystems (Marañón et al. 2020), and thus, many parts of the way of life in Port Arthur. For example, it was found to be unsafe to swim and fish in many bodies of water around Port Arthur due to contamination. Participants also shared stories of leaves on trees in backyards developing yellow spots or appearing to have ash on them after industrial upsets. This is the environmental setting that will be inherited by future generations of Port Arthur.

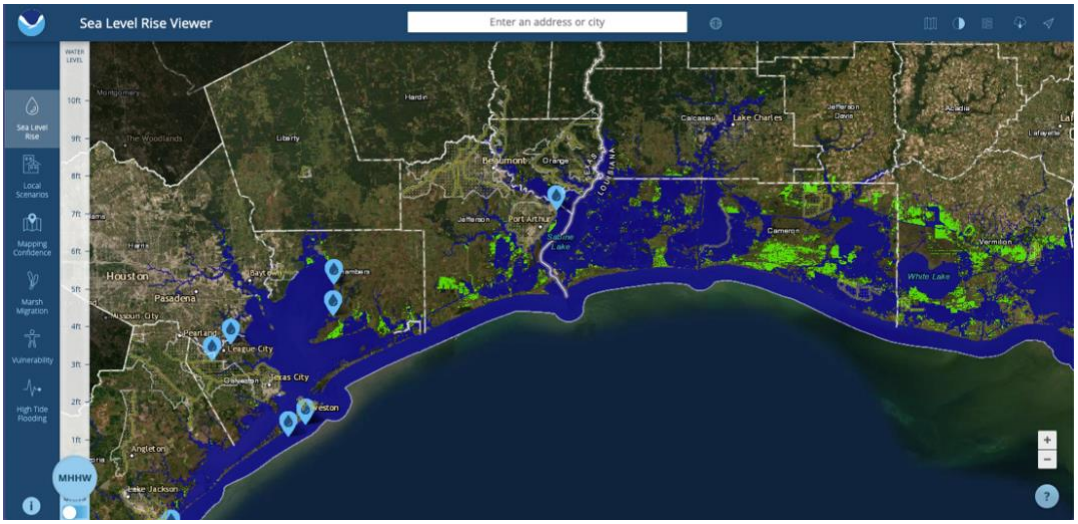

Figure 11: Current Sea Level of Texas and Louisiana Gulf Coast: 2020 (Source: NOAA 2020)

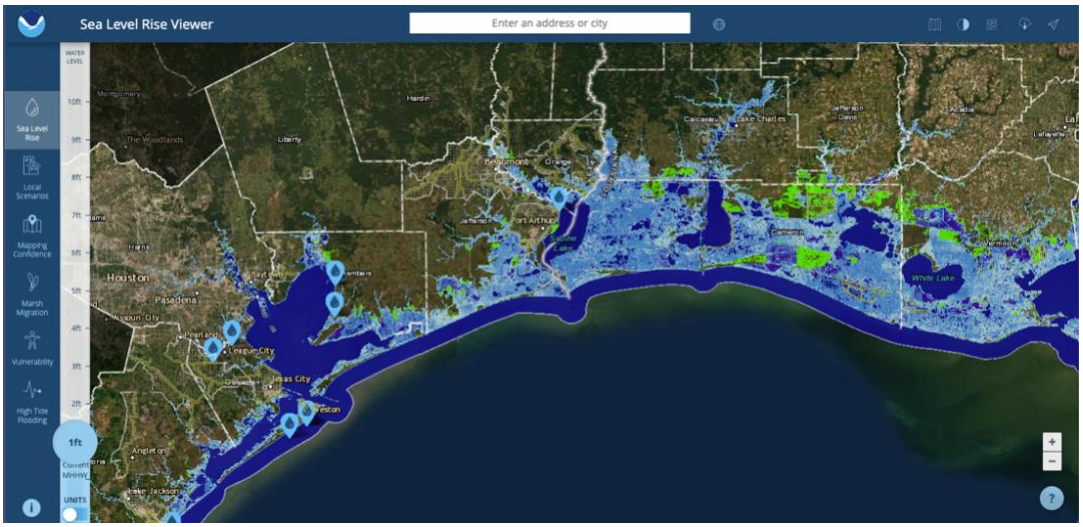

Figure 12: Low Sea Level Rise Scenario of the TX and LA Gulf Coast based on NOAA Projections (Source: NOAA 2020)

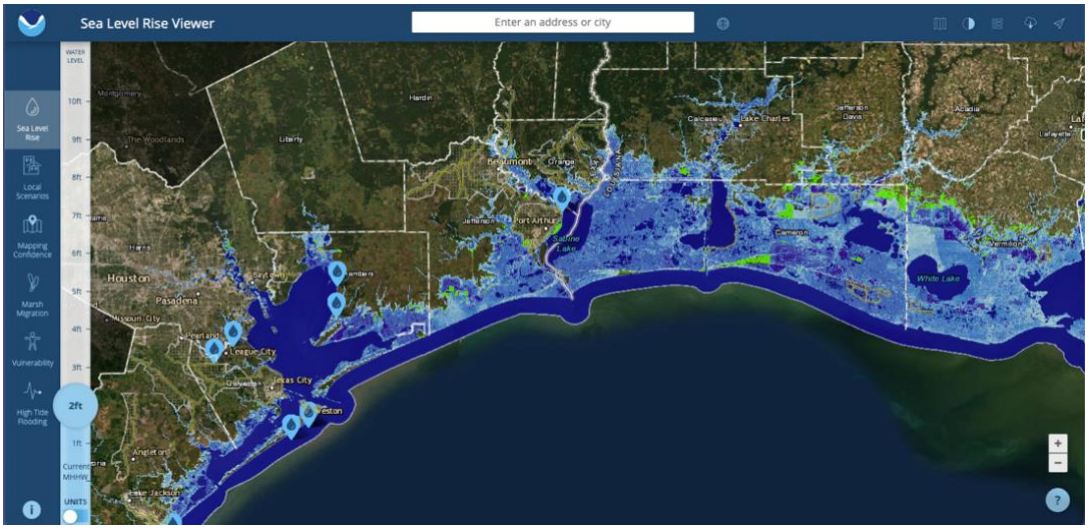

Figure 13: High Sea Level Rise Scenario of the TX and LA Gulf Coast based on NOAA Projections (Source: NOAA 2020)

Regarding the social, economic, and ecological future of Port Arthur, local environmental activists stated,

> Some of the [present-day local environmental practices] you are not going to be able to do because the contamination goes so deep and so far. You just simply are

> not going to be able to do it…The future is going to be what we make of it, whether we are capable or able to put more of our people to work and to put in the necessary changes so that they have a good quality of life and opportunity so you can build and rebuild this city. The problem we are going to have is going to be with climate change and actually making a fundamental change in the way we think and in the way industry thinks in terms of dealing with people of color and in cities predominantly made of people of color
>
> - John Beard

> "I think we have a chance to save our communities, but we have to get started like yesterday with fighting [climate change and sea level rise]. - Hilton Kelley

There is still hope and fight for Port Arthur. Moreover, Black life, joy, and sense of place are found throughout time in Port Arthur, even as the reality of premature death, constant pollution, and intense hurricanes looms over and within it all. Connection to place and the environment serves as a form of intergenerational care as community members stay and maintain environmental practices that allow them to remain connected to ancestors and to honor that which their ancestors left for them. But furthermore, I argue that staying, maintaining relationship to place, and holding on to environmental practices in this place also preserves a sense of place for future generations to inherit.

The U.S. Black Belt is somewhat of a unique space within the country. The land holds so much of Black history; the location hosts the highest percentage of Black populations in the U.S. (Wimberley 2008), and its complex landscape of Black new and

old, rural and urban, coastal and inland spaces leaves it open to hold a variety of Black ecological practices (K. Q. King et al. 2018; Woods 1998; Roane and Hosbey 2019). If we consider the history wrapped up in this land and place, and this land's connection to such communities, what does persistent environmental degradation and precarity mean here? Moreover, EJ communities along the Gulf Coast are simultaneously sites of slow death of both Black place and Black bodies and sites of refusal and practices making way for Black futurity. How can we work for futurity in the face of premature death?

Environmental justice communities knowing that premature death is potentially looming, these communities refuse to be moved and assert a belonging of their own and their descendants for whom they are securing an inheritance. Black people in the afterlife of slavery have a multifaceted relationship with inheritance. The passing down of property from one generation to another is likely the most conventional understanding of inheritance. George Lipsitz (2011) explains that inheritances, in this sense, have played a major role in building and maintaining white wealth. Black folks, through various processes and mandates, have been excluded from such a privilege. Sharpe (2016) and others argue that, contrary to having access to property, the devalued status of Black people that leaves them more prone to conditions like environmental racism is the condition of living the afterlife of property. Whiteness, on the other hand, means to have greater access to property ownership, but also to hold a status that is in itself property (C. Harris 1993). The history of the U.S. contains many examples of legal and extralegal measures to amass property for white settler populations, beginning with removing and dispossessing Native populations and the enslavement of African peoples to extract from those lands. As Saidiya Hartman (2007) describes in the prologue of *Lose Your Mother*,

even after slavery ended, possessing property was a fickle status for black people and could be easily changed as law has always functioned to protect whiteness to the detriment of others (Harris 1993). After emancipation, the settler nation state promised lands (which are not theirs to give) to Black populations. Black land and home ownerships was briefly a possibility. However, this was very short lived as not only were regulations passed to undo this promise, but also white supremacist mobs forced many Black people out of homes and lands across the U.S. South and beyond (Agyeman and Boone 2020). More recently, scholars have suggested that, instead of violent mobs coming and removing Black people from their homes and properties, the private property, title-based mode of individual ownership renders the method of passing down homes and lands often practiced by Black families in the South illegible to the state. This method is referred to as "heir properties", where homes and properties are passed down to belong collectively to many descendants, rather than titled properties (J. Dyer, Bailey, and Van Tran 2009; Presser 2019; Jackson 2020). Presser (2019) stresses that "[t]he practice began during Reconstruction, when many African Americans didn't have access to the legal system, and it continued through the Jim Crow era, when black communities were suspicious of white Southern courts" (2). Due to this illegibility to the state, these properties are often sent to auction by the court after the passing of an individual owner. Several scholars have highlighted this form of dispossession that is disproportionately affecting Black people, particularly across the U.S. Black Belt region, where lands and homes have passed down for many generations (J. Dyer, Bailey, and Van Tran 2009; J. F. Dyer and Bailey 2008; Presser 2019; Jackson 2020; Agyeman and Boone 2020). Black dispossession has taken many political and economic faces throughout the years of this

country's existence, thus access to spaces of belonging, even without notions of ownership are important.

In the case of Port Arthur, many participants mentioned a home or lands that had been passed down to them in the city. More than that, they stressed that there is a way of life in Port Arthur that they have access to, there is a strong community that they have access to in this place. Some participants mentioned that while they had moved away, there was still someone in their family living and maintaining the homes and lands that had been passed down. Given the fickle and rare prospects of homeownership and spaces of belonging where one can honor ancestors and live your way of life, letting go of this place, even with its environmental conditions, is very involved. A lot is at stake. One participant capture this when he stated,

> I don't think it's a good idea for us to just abandon the coastal areas. Where would we go? We own this land. So if we leave Port Arthur, Old man Johnson over there, Ms. Barbara that lives over here. Her grandmother gave her that house. Mr. Benson over here whose great-grandmother left that house to them. Now they got two acres and everything else. And now they telling us, 'well, its sinking over here, y'all [from sea level rise and increased flooding events]. Y'all need to get out of here'. Well you know what, it may be sinking, but I'll be the last one leaving because I own something here. We have a culture here. We have a way of life here that may not be the same as the people further north. -Charlie

This is the access to a space of belonging, a way of life, and access to intergenerational connection. I avoid suggesting that this is access to generational wealth because many

stressed that even with buyouts, they would not be able to afford or get equal to what they have in another place. Port Arthur environmental activist, John Beard, informed me that property in Port Arthur is a 40% devalued, largely due to the presence of the refineries. Moreover, regarding climate change impacts, Port Arthur residents have yet to be offered a state managed or planned retreat or relocation, such as those that have been implemented in cities across the globe that are facing increased flooding and sea level rise (Ajibade 2019). Even if they had, several scholars have pointed out how even those programs have perpetuated environmental injustices (Ajibade 2019; Lynn 2017; Marino 2012, 2015). Furthermore, in another coastal Texas city facing environmental injustice, Corpus Christi, a voluntary acquisition and relocation plan has been implemented to offer financial assistance and relocation counseling to those who chose to relocate, but also provide financial compensation for those who want to stay (Losey, Seong, and Van Zandt 2020). However, such programs have yet to reach Port Arthur.

It is not wealth that is being passed down. It is a place. Inheritance is not just the economics or the building of wealth. It is also validating your connections with your ancestors. The land remembers the blood and sweat of those brutalized under slavery, the tears of emancipation, and the many rounds of oppression and the Black radical tradition in the region. It witnessed the wrongs, and it witnessed and attests to our survival (Hartman 2007). This place is our archive.

These communities are securing a material space or geography where history, connection to place, and environmental relationships overlap. I read their remaining as aligning with the epigraph. This space is their inheritance and the inheritance of future black people that want to inhabit it, and they are not abandoning it.

In the face of persistent environmental degradation and precarity, these communities remain. One way to read this is that due to their objectification and dehumanization, they are relegated to the disposability of the state for the sake of protecting capital accumulation. This is not untrue. But what is simultaneously true is that in their maintaining and refusal to be dispossessed from their land and community, these communities are making a claim that they have a future and that this land/space has a future in their hands as an inheritance to future generations.

Tina Campt (2017) would describe this as 'reassemblage in dispossession', which refers to "quotidian practice through which the dispossessed reconfigure their status as subjects within a field of limited and often compromised resources…a refusal to capitulate to the status of outsider or to be made invisible…" (2017 60, 65). In remaining in the homes and spaces that have been passed down for generations, these communities are staring defiantly back at a system meant for their erasure and death through their environmental relations and place maintenance.

Refusing is more than staking a claim to belonging. It is a matter of maintaining an archive. The land filled with the material evidence as memory of their ancestors that worked this land in this region, were lynched in this region, faced the same contamination they do. The land remembers. Refusing to let the archive of that pain and the past that created you be completely removed from your memory. As black people, there are few other archives that attest to their past and persistence. Their quotidian form of remaining and living is a refusal to not exist in the past, present, and the future.

4. Conclusion

Relationship to place in Black EJ communities along the U.S. Gulf Coast is complex, but existent. It exists against so much that is mean to demolish it: social processes of public and private disinvestment, poverty, buyouts, high premature death rates, and ecological processes of intense hurricanes, sea level rise, and perpetual pollution. EJ scholarship has long worked to stress these processes working toward the degradation and death of these communities, but we have given little attention to Black life, sense of place, and the numerous environmental relationships that exceed those mediated by pollution.

The case of Port Arthur demonstrates the interlocked social and biophysical processes moving toward place annihilation, but also the sense of place present through notions of home, strength of community, connection to history, memory, and ancestors. Furthermore, Port Arthurians highlight the many ways in which people related to their environment within and beyond pollution in this site of environmental injustice.

Black futurity encapsulates that which is not expected to be. If Blackness is associated with such premature death and decay, how can we talk about or consider futurity? Yet, in Port Arthur, we can see the ways in which there is still hope, even if complicated hope, within a social and ecological atmosphere progressing toward the opposite. I have argued that the very act of building connection to a place, desiring for your family and future generations to inhabit and build their own connections to this place, and staying put because it's home—are acts of refusal. Refusing to be denied such possibilities for yourself and for future generations.

McKittrick's analysis of the plantation and the plot exemplify how this complex intermingling of processes creating Black placelessness and persistence of Black sense of place and survival are not isolated to this case with Port Arthur. The plantation logic imposed a notion of Blackness as without place and without humanity. The ramifications of this shook throughout the Black diaspora, but as manifestation of this rationale spread so, too, did the resistance to it. Port Arthur has many unique features that make it a place of its own, however, this is but one representation of how the Black radical tradition and Black livingness in all its modalities have persisted throughout time and space. There are many places throughout the region and the Black diaspora where sense of place and ecological relations thrive where they were never planned.

V. CODA: BLACK ECOLOGIES AND SENSE OF PLACE ACROSS THE DIASPORA

These articles collectively demonstrate the complex interplay between past--present; life -- death; biophysical -- social in Black spaces facing environmental and climate injustice. Black geographies as a field stresses that landscapes and geographies do not exist as absolutes, and Port Arthur has epitomized this in many ways in this dissertation project as a place where environmental precarity, contamination, and economic hardships co-exist with joy, life, healing, care, survival, and futurity. I have focused on Port Arthur, but this is only one instantiation of the broader trends of place, relationship to environment, and the interconnectedness of socio-biophysical temporalities across the Black diaspora.

Further research might expand my analysis of Black sense of place in (un)inhabitable environments across the diaspora, such as the Caribbean or Southern Africa. This work would highlight the interconnectedness of places throughout the diaspora. Connections that exist through forms of oppression within racial capitalism, but also connections in modes of the Black radical tradition, which has long resisted racial capitalism and its many manifestations. Furthermore, expanding throughout the diaspora also makes room to consider intersectional approaches that question how histories, struggles, and futures of so many intersect across even the stories that I have laid out in this dissertation, beginning with the removal and survival of Native populations and their environmental practices that have become bound up with Black stories across this region.

The land on which all the stories in this dissertation unfold is that of the Atakapa-Ishak and Karankawa peoples (See Figure 14 below). The racial and environmental violence exacted over centuries delineated in this dissertation simultaneously occur over

time to the Black populations and the Native peoples removed and still present in their land at this place. The notion of Black diasporic belonging is a troubled one (C. B. Davies and M'Bow 2007; Sharpe 2016; Hartman 2007; Rahier, Hintzen, and Smith 2010), however, Black relationship to place and land in settler colonial states across the Americas has been widely discussed in both Black and Native studies (Tuck et al. 2014; Goodling 2019; De la Torre 2018; Ng'weno 2007; Paperson 2014). King, Navarro, and Smith (2020) highlight that much of the discourse between these studies has suggested that the two, that is Black studies and Indigenous studies, are incommensurable, pitted against each other in liberal freedom projects that depend on the adjudication and recognition of the settler colonial state. However, many have pointed out that throughout history these peoples have suffered, struggled, and just lived together throughout many colonial projects as those whose humanity is denied because they do not align with the white, colonial conception of land as property and profit (Native peoples) and those whose humanity is denied on the basis that they are property within these on-going colonial projects (Black peoples) (T. L. King 2019; Tuck et al. 2014; T. L. King, Navarro, and Smith 2020). Moreover, King (2019) highlights that the radical projects of abolition and decolonization converge in new reality building and acting together for each other's futures.

The colonial projects and logics of white supremacy and racial capitalism have produced many (un)inhabitable environments, nevertheless, examples of the complex and stubborn intermingling of life, sense of place, and relationships to environment abound in this world. This dissertation aims to push all those interested in Black life, climate and environmental injustice, and the future biophysical state of this world to behold it, not

only to understand what's at stake if environment degradation progresses, but also understand subaltern and unconventional ways of knowing and relating to place and listen for ways of new world building as communities make ways for their futurities that were never meant to be.

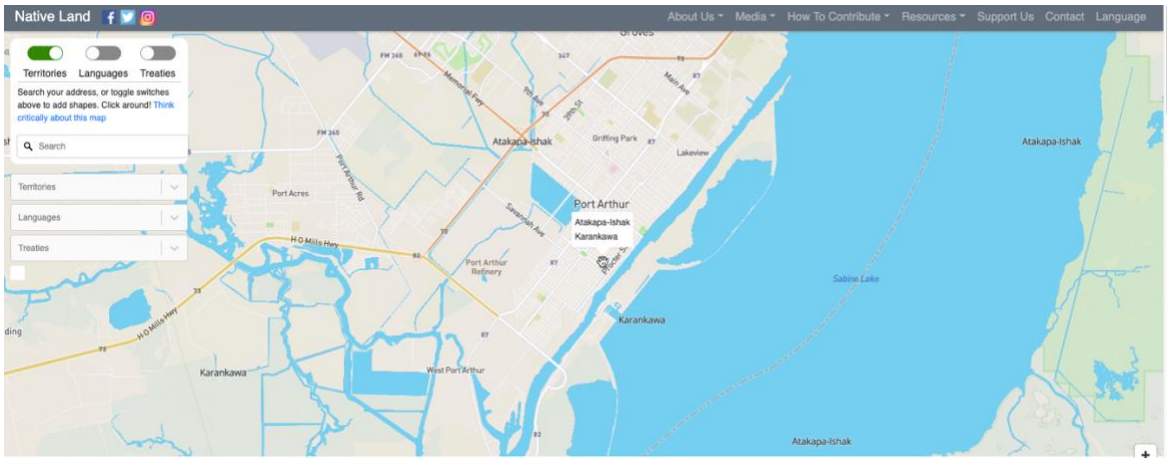

Figure 14: Map of Port Arthur area in Atakapa-Ishak and Karankawa Lands, Source: Native Land Digital (2021)

APPENDIX

Port Arthur Timeline References

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