

## Muddy Foil

Let us chart the unbroken connection between Extractive Thinking and the historically racialized project of eradicating swamps, wetlands, and mud. While the Mississippi River enjoys a rich lexicon of cultural signification, its mud indexes a very different legacy. Newspaper articles, technical reports, and other accounts document attitudes of fear about and aversion to the undeveloped swampland that surrounded New Orleans. Dark, muddy forests and wetlands were considered sites of miasmatic disease, lawlessness, and a hindrance to moral conduct.

These accounts eerily paralleled attitudes toward the nonwhite human individuals who filled such spaces. Mud was disqualified. It was used in metaphors for racial miscegenation. Mud was a protean material in the act of becoming something else: not quite water, not quite land; anathema to the modern project of categorization and enclosure. In his exploration of power, Michel Foucault challenges us to analyze bourgeois power by the way in which it was applied through tools and tactics of domination. What if we applied those concerns to the way in which the landscape itself was reshaped to reproduce racial formations?<sup>1</sup> For example, the forces of Extractive Thinking embedded in the built environment of dams, levees, and spillways that sealed the river from its adjacent marshes are bound up in an older, more troubling legacy. Plantation capitalism drove demands for enslaved labor to build the very levees that drained the swamps for the fields themselves. The plantation economy generated further demand for enslaved bodies, who built levees up and down the Mississippi River.

Waterways were also dredged with enslaved labor, which allowed for the transportation of cotton and sugar produced on former wetlands to markets in New Orleans. The river created the delta. But it was white supremacy that brought enslaved Africans and Americans to the delta to “clear it and tame it and transform it into an empire.”<sup>2</sup> When levees broke during the eighteenth and nineteenth centuries, their repairs were often made by the enslaved and, in the early twentieth century, by conscripted Black laborers, who at times were forced to use their own

bodies to plug crevices. During the flood of 1912, the *New York Times* reported from Greenville, Mississippi, at Miller's Bend that authorities had exhausted all their sandbags and instead used bodies: "A young engineer in charge had a brilliant idea and proceeded to put it in execution. Calling to several hundred negroes, who were standing idle, he ordered them to lie down on top of the levee and as close together as possible. The young men obeyed, and although spray frequently dashed over them, they prevented the overflow that might have developed into an ugly crevasse. For an hour and a half this lasted, the negroes uncomplainingly sticking to their posts until the additional sandbags arrived."<sup>3</sup>

Slavery and racial power are not only embedded in the levees, plantation fields, and layout of the Mississippi River but also in the urban centers that it financed, like New Orleans. "The echo of enslavement is everywhere," writes Clint Smith. "It is in the detailed architecture of some of the city's oldest buildings, sculpted by enslaved hands. It is in the levees, originally built by enslaved labor."<sup>4</sup>

#### ÎLE D'ORLÉANS

New Orleans has little reason to exist but for the river and the political economy it supported. Its mushy topsoil and stagnant rain pools helped characterize the city as floating land: shaking prairie, or "la prairie tremblant," by the French.<sup>5</sup> Its paludal, or marshy, environment is "half-land and half water" composed of organic to highly organic sediments deposited there.<sup>6</sup>

Early settlement patterns snaked along the alluvial ridges created by the river, while areas in the soggy "back of town" were sparsely populated.<sup>7</sup> From its very beginnings, the city's mud shocked arriving travelers, who were described as unanimous in their condemnation of the unpaved streets, which, though well laid out, were little more than muddy canals.<sup>8</sup> The streets were 37 feet wide and lined with ditches to carry off seepage from the river levee. Open, crisscrossed ditches, when flooded, functioned by the "curious" phenomenon of draining water and refuse of the city away from the river toward the lower-lying "back-a-town" cypress swamps. These back swamps were described as a muddy "gruel" of water and organic matter. "Slop and garbage thrown in the gutters" created a stench that could only be expelled by flushing rains. "The blocks after a hard rain were completely surrounded by water, and as a consequence, came to be called islets."<sup>9</sup> Drainage alleviated flooding in the highest areas, which were along the river and canals. A visiting Captain Hamilton wrote in 1833 that after a rain, the center of the street was at least a foot thick in mud. "The only sewers," he reported, "were open drains clogged with garbage, refuse and human waste, euphemistically termed night soils."<sup>10</sup>

In correspondence during the early settlement period, the local Bishop de Luxembourg's requests for supplies to the New Orleans Mission illuminated the

muddy reality of making a go in the delta. He describes the inadequate supplies to the friars and “a diet of a little boar, a half-pound of bread and a quarter liter of wine” after supplying for mass. “The fatigue we endure running night and day to visit the sick and carry the sacraments to them, generally in mud knee deep, does not accord with such scanty nourishment,” the bishop wrote.<sup>11</sup>

In what contemporary geographers have framed as either New Orleans’s “inevitable”<sup>12</sup> founding or “Bienville’s dilemma,”<sup>13</sup> the colonists were plagued by the very mud and water on which the city’s strategic value depended. The first levee around New Orleans was ordered by Governor Bienville in 1719, the year after the settlement was founded. Well before Louisiana and New Orleans’s purchase by the United States, the French engineer Vitrac de La Tour had understood that the new settlement was prone to periodic flooding, and he opposed the chosen location. Bienville, however, overruled La Tour’s objection and had the engineer design a 5,400-foot-long and 18-foot-wide earthen embankment along the Mississippi, completed in 1727, to protect the city from seasonal floods. The levee stood 3 feet high and doubled as a roadway. Three years later, New Orleans was flattened by a hurricane.<sup>14</sup>

While historical accounts overtly document the story in terms of a struggle against water, the story of mud haunts them. The river seemed to beckon settlement as the mud foiled it. Mud stymied efforts to govern a rational landscape and harvest the bounty that the river promised. Muddy streets. Muddy clothes. Surrounding swamps blamed for diseases. New Orleans’s infamous mud motivated massive drainage programs to develop land more suitable for cypress tupelo than concert halls. Persistently muddy roads and dank puddles exasperated ordinary folks and building experts alike, among them Benjamin Latrobe, the first formally trained American architect and designer of the US Capitol. “Mud, mud, mud,” Latrobe sighed in 1819. “This is a floating city, floating below the surface of the water on a bed of mud.”<sup>15</sup> Western anthropogenic practices treated mud as a nuisance to be removed from the river channel, stacked along the banks in levees, and drained from behind the levees for plantation and urban development. Mud was the unwelcome interloper in the modern imaginary to stabilize the land from the river.

While the river made the city famous, the mud gave New Orleans its sense of fecundity. Backwater swamps behind the French Quarter attracted gatherings of enslaved Africans, African Americans, enslaved people from the Caribbean, free people of color, and even Native Americans. The sensual entanglement of New World colonization at sites like Bayou St. John and Congo Square through rhythmic calls, songs, dances, and orchestration helped create the art forms jazz and blues. “African-derived habanera rhythm and its derivatives, found in the most popular Creole slave songs and the correlating dances of Congo Square, are also found at the core of early New Orleans jazz compositions, second line

or parade beat, jazz funeral music, and Mardi Gras Indians chants and rhythms,” writes Freddi Williams Evans.<sup>16</sup> It is also where the distasteful caricatures of the blackface minstrel were popularized.<sup>17</sup>

Some archaeologists theorize that vessel fragments unearthed at St. Anthony’s Garden behind the St. Louis Cathedral in the French Quarter were used to add traction to the muddy streets, since there was no natural gravel source. Early nineteenth-century New Orleans was a place of intersecting bayous and rivulets that flowed to and from the river and adjacent lakes, depending on seasonal levels. Today most are filled. Richard Campanella, a New Orleans geographer, writes that many of the so-called lost bayous of New Orleans provided natural ridges that were used as thoroughfares. There was Petit Bayou, renamed Pequeño Bayou de la Cruz by the Spanish. There was Bayou Gueno and Bayou Au Lavoir, which was used for washing clothes. There were main thoroughways known by natives as Bayou Coupicatcha or by French settlers as Bayou Métairie for its small tenant farms. Nearby Bayou Chantilly (later Gentilly) was named for an estate outside of Paris. It discharged into the wild marshes of Bayou Sauvage, which today is part of a drainage system on the city’s eastern flank. These waterways and their haunted connections to the Mississippi were responsible for the stitched alluvial ridges and sinks of New Orleans. “Because distributaries deposited river-borne sediment, they built up ridges, or natural levees, along their banks, which were used as roads by early inhabitants.”<sup>18</sup>

The Bayou Metairie/Gentilly ridge often impounded watery tributaries behind them, which drained into the midcity lowlands between the bayous and the river’s uptown alluvial ridge. Various other small rivulets were interlaced throughout New Orleans. As the city developed, early French settlers regarded the wetlands of willow trees and cypress swamps as malaria-prone thickets to be transformed for settlement and economic viability.<sup>19</sup> Early houses were set on pillars with ground-floor cellars. Sidewalks were elevated and wooden. Called banquettes, they were often uneven and beset by detours around standing water. “Walking was an adventure. On more than one occasion high-born ladies went to balls with their skirts lifted high and their party shoes and stockings in their hands.”<sup>20</sup> Alexis de Tocqueville noted the ubiquity of mud: “Fine houses, huts; streets muddy and unpaved.”<sup>21</sup> The *New Orleans City Guide* produced by the WPA in the 1930s stated that it was a wonder New Orleans existed at all, with the “soggy nature of the subsoil, the low elevation of the city, climatic conditions favorable to malignant diseases, and danger of Mississippi River flood waters.”<sup>22</sup> The city’s unkempt conditions were attributed to everything from open sewers to the indolence of European creoles. The word *creole* itself is a slippery registry of in-betweenness. The *City Guide*’s opening pages cite a cautionary nineteenth-century minstrel.

HAVE you ever been in New Orleans? If not, you’d better go. It’s a nation of a queer place; day and night a show! Frenchmen, Spaniards, West Indians, Creoles, Mustees,

Yankees, Kentuckians, Tennesseans, lawyers and trustees, Negroes in purple and fine linen, and slaves in rags and chains. Ships, arks, steamboats, robbers, pirates, alligators, Assassins, gamblers, drunkards, and cotton speculators; Sailors, soldiers, pretty girls, and ugly fortune-tellers; Pimps, imps, shrimps, and all sorts of dirty fellows; A progeny of all colors, an infernal motley crew; Yellow fever in February, muddy streets all the year; Many things to hope for, and a devilish sight to fear!<sup>23</sup>

These words, attributed to a Colonel Creecy in the 1830s, reflected a prevailing trope of the city as not only a place of filth, but also disrepute. New Orleans was considered a risky locale of unsavory characters and pestilence—a reputation that preoccupied authorities worried about investment and commerce. Cleaning up the sources of disrepute and disease became a perennial vocation. To authorities, the problem originated from the land itself. Urban improvement focused on conquering the swamps through drainage, circulation, and enclosure. Calls for drainage were laced with public health imperatives, particularly concerns with regular summer bouts of yellow fever, among other scourges. Perennial outbreaks of disease in the eighteenth and nineteenth centuries plagued New Orleans at a level that was said to be twice that of other large urban areas.<sup>24</sup>

#### THREATENING PRESENCE

Aversion to mud has a long history in Western sensibility. Muddy wetlands with their stench, heat, and lack of solidity challenged the very foundation of Western Enlightenment and earlier logics of pre-Christian Hellenic society. As early as the fifth century BCE, we find recorded abjection to mud that disparages terrains that are uncultivated, difficult to pass, full of malaria and death and a certain ambiguity. Hippocratic writings described unhealthy waters as still and bilious. “Turbid stagnant water in marshes and swamps are hot, thick and evil smelling in summer because of their stagnation and failure to flow.”<sup>25</sup> Pliny the Elder in the first century condemned stagnant, sluggish waters that he contrasts with beneficial running water cleansed by the “agitation” of the current. “Wholesome waters should also be without taste or smell.”<sup>26</sup> Wetlands in their oozy, liminal materiality challenged rationalized configurations of the world because they were neither land nor water. Such mud resisted categories. It was a material in process of becoming the other. This protean threat, which was thought to house sickness and the monstrous, was later mapped onto discourses that reflected the slippery abyss of the human unconscious—a trope that emerged during the 1850s.<sup>27</sup>

In the colonial imagination, mud was often gendered as the feminized body or racialized in the dark jungles of Africa. In E. M. Forster’s *African Queen*, the swamps are described as a dreary, marshy amphibious country, “half black mud and half water,” neither solid nor liquid, not light or dark. “Undoubtedly the worst feature of the swamp was the awful smell of rotting vegetation that hung about it, which

was at times positively overpowering, and the malarious exhalations that accompanied it, which we were of course blighted to breath.”<sup>28</sup> According to Rodney Giblett, the slimy composition of the swamp is what makes it an object of horror that won’t “sit still as some sort of fixed and static mediator.”<sup>29</sup> It lurks in the “murky” edges between water and land.<sup>30</sup> It is at this juncture where utopian imaginaries battled folklore using the tools of technology and science. Wetlands were home to Western literature’s famous ogres. Grendel, along with his mother, lived in a perilous marsh where the mountain stream goes underneath the mists of the cliff. A wanderer of the marsh, Grendel was guardian to Moors and alien spirits. In *Paradise Lost*, Milton’s Satan is a swamp serpent and marsh monster. The swamp, like Satan, trespasses on every domain. In Dante’s fifth circle of hell, the ‘sullen souls’ are stuck in the slime.<sup>31</sup> It is into the primeval darkness of the swamps that Marlow must venture to rescue the dissembling Colonel Kurtz. He describes his journey inland where “the savagery, the utter savagery,” had closed around him.<sup>32</sup> One is never alone in the swamps; the foreboding of otherness watches from the impenetrable thicket. Swamps and wetlands buzz with nonhuman life. Louisiana’s Honey Island Swamp Monster as well as the Loup Garou werewolf, supposedly inherited from France, found their way into local folklore and popular music. The “rugarou,” a variation of the Cajun French version, were known as skin-walking, shape-shifting, half-humans that haunted Louisiana swamps.<sup>33</sup>

Conquest of wetlands by drainage was consequently framed in terms of security—if not imperial conquest. Benito Mussolini, who drained the “never-ending fen” of the malarial marshes, later bragged that his two main achievements were that he made the trains run on time and drained the Pontine Marshes.<sup>34</sup> Drainage, likewise, rendered land profitable for monocultivation. John Locke argued that uncultivated lands should be available for seizure, which was a rationale used by American colonists to dispossess Indigenous peoples from their ancestral lands in the seventeenth through nineteenth centuries.<sup>35</sup> “Some have argued that the book of Genesis still persuades many, convincing Americans that God has given them domination over nature, empowering Americans to lay waste to nature to transform resources into consumer goods.”<sup>36</sup> We see such justification in the words of then-President Donald Trump channeling the nineteenth-century discourse of “Manifest Destiny” when speaking at a 2018 Naval Academy commencement: “Our ancestors tamed a continent. We are not going to apologize for America.”<sup>37</sup>

Historically, wetlands were also beneficial to localized resistance, which used the shadowy thicket to stage ambushes. Guerrillas during the Revolutionary War were called Swamp Foxes. The muddy swamps of the Chalmette battlefield just downriver from New Orleans aided Andrew Jackson’s forces against the British landing in the 1815 Battle of New Orleans. In the Seminole Wars, the Florida swamps were described as taking the sunshine from a man’s life: “Cypress knees, mangrove roots, and saw grass tortured the foot soldier. Too much water, and the

lack of water, made his life a torment. There was marching in water from ankle to armpit deep, hour after hours, with no chance to dry off, not even light.”<sup>38</sup>

#### THE UNFOLDING HISTORY OF MARRONAGE

William Styron’s fictional confessions of Nat Turner muse about the stronghold of the swamps, which were “profusely supplied with game and fish and springs of sweet water—all in all hospitable enough a place for a group of adventurous, hardy runaways to live there indefinitely, walled up in its green luxuriant fastness beyond the pursuit of white men.”<sup>39</sup> Harriet Beecher Stowe’s runaway slave, Dred, takes refuge in the Great Dismal Swamp, which becomes a symbol for madness. She describes its “goblin growth[;] . . . all sorts of vegetable monsters stretch their weird, fantastic forms along its shadows.”<sup>40</sup> Archaeologists have unearthed evidence that self-liberated enslaved people persevered for generations in the Great Dismal Swamp, evading capture by slavers and allying with Native Americans, themselves fleeing the colonial frontier and forced resettlement, from at least 1680 to the Civil War nearly two centuries later.<sup>41</sup> Similarly, the protective geography of Louisiana allowed those wishing to avoid authorities to move freely among interconnected waterways and forests. The lands behind wealthy manors and plantations transitioned into cypress swamps, known as *la cipièrè*, where much activity was unsupervised. “The lands on and behind the estates afforded excellent, nearby refuge to runaway slaves,” writes Gwendolyn Midlo Hall. “Neither master nor overseer was eager to venture into the swamps.”<sup>42</sup>

These marginal, untamed spaces and their shadowy inhabitants posed a direct challenge to planters and overseers, who attempted to impose a hard line of separation between their sphere of control and wilderness. Despite laws to keep enslaved people from interacting with other households, those who had escaped the plantation, known as maroons, regularly met with enslaved people from different plantations and maintained secret networks along rivers and bayous. Maroons also married people who were enslaved on plantations. They might return to the cabin of a loved one for food, putting bay leaves on their shoes or tracking through fresh manure to throw off the scent of dogs.<sup>43</sup>

Such liminal spaces between water and land were home to a still-unfolding history of Black residents in what might otherwise appear as unremarkable territory of mud and marsh. By coexisting with these ecologies, they were able to use the wilderness as a defense. “Each time a maroon community claimed space in a landscape under the nominal control of an early modern state, it established a geographical ‘maroon landscape,’” writes the historian Marcus Nevius.<sup>44</sup> A maroon landscape ranged from borderlands proximate to plantation societies to remote hinterlands to which rebels escaped to fully repudiate enslavement. By the American Revolution in 1775, maroons of Louisiana occupied the areas between the mouth of the Mississippi River and New Orleans, known as the Bas du Fleuve.<sup>45</sup>

They subsisted in the tidal wetlands near the Gulf of Mexico, rich in fish, shellfish, and game.<sup>46</sup> Eventually, maroon territory stretched up and down the Mississippi River—from St. John the Baptist and St. Charles Parishes immediately upriver from New Orleans to downriver from the English Turn through Lake Borgne—where the swamps were nearly impenetrable. Until the Civil War, there were thousands of people who joined maroon encampments in the vicinity around New Orleans from as far north as Pointe Coupee Parish north of Baton Rouge.<sup>47</sup>

Spanish authorities of late eighteenth-century Louisiana were deeply concerned by the military strength of maroon settlements, particularly the bands of resistance in “Gaillardeland,” which were uncharted swamps in present-day St. Bernard Parish downriver from New Orleans.<sup>48</sup> These territories were home to the so-called San Malo Maroons. Largely self-sufficient, they cut and delivered cypress logs to mill owners for cash. They fished and hunted. They grew beans, corn, and herbs that were sold in street markets in New Orleans. They were armed with muskets whose shot and powder were purchased in New Orleans. But they were also fluid communities that had to navigate deep waterways that were home to alligators, snakes, mosquitoes, and other dangerous wildlife. Challenging as they were, the wetlands along Lake Borgne provided a natural barrier of protection, away from colonial authorities and the grip of racial slavery.

The language of early modern observers, particularly in North America, overemphasized the perceived threat posed by maroons. Maroon settlements were depicted in New Orleans newspapers as sources of danger and ambush.<sup>49</sup> “Slave hunters and other pursuers were slain during small-scale raids; but large anti-maroon operations were noticeably one-sided when it came to the loss of human life.” Despite the fear they provoked, maroons did not inflict much bodily harm on the white population. Within 250 years, probably fewer than 150 whites were slain during revolts.<sup>50</sup> Newspaper accounts describe efforts by authorities to suppress maroon activity well into the nineteenth century. The largest maroon communities attracted the most attention and generated the most pervasive fears among colonials. Accordingly, scholars, seeking to explain maroon community formation, regularly studied the largest maroon communities as evidence of grand marronage, or permanent removal from plantations to settlements. By contrast, short-term flight undertaken by enslaved individuals or small groups came to be known as petit marronage. Nevius writes, “As Thompson observed in his 2006 book, *Flight to Freedom*, these studies have generally turned earlier readings of slave resistance on their head to reveal that, by comparison with the outbreak of outright rebellion, arson, poisoning, and other forms of resistance, marronage was the most pervasive action that enslaved people undertook to be free.”<sup>51</sup>

Punishment for leaving the plantation without a transit pass could be severe. An extended grand marronage was determined by duration, distance traveled, and the number of prior offenses.<sup>52</sup> According to the French Code Noir of 1724, which regulated interaction between whites (*blancs*) and blacks (*noirs*), sentences



FIGURE 3. Marronage. A drawing of an imagined self-liberated maroon encampment in Louisiana published in 1878 in *Harper's Weekly*. Muddy swamps and thick forests provided natural refuge to self-liberated individuals throughout the southern United States. Image courtesy of the Historic New Orleans Collection, 1982.54.1.

for a one-month marronage included cutting ears off and brandings of fleurs-de-lis on the shoulder for a first offense, hamstringing and fleurs-de-lis brands on the other shoulder for a second offense, and death for a third offense. Penalties for free people of color who harbored runaways ranged from paying masters of the runaways “30 libbers” for each day they were gone or, if they could not afford that, indentured servitude.<sup>53</sup>

Recorded accounts of marronage come through the colonial and plantation state, court minutes, letters, jail notices, and runaway slave advertisements: framed as the outlawed, the insurgent, the unruly, and the runaway who steals from the plantation.<sup>54</sup> This archival perspective defines marronage in the context of futility and illegality rather than Black resistance.<sup>55</sup> Maroons found refuge with Indigenous peoples, some of whom had themselves been enslaved. However, relatively little is known directly about North American marronage and independent Native American groups, who eluded observers and left few written records.<sup>56</sup> Histories of maroon activities in North America face “archival silences.” Maroons in North

America did not engage with military forces as they did in Latin America and the Caribbean, writes Nevius. “It logically follows, then, that North American maroons did not pen voluminous accounts to leave evidence of hideaways’ exact locations.”<sup>57</sup>

Maroons were opportunistically leveraged by authorities to tame what was otherwise considered wild. Such representations of unruly maroons intersected with the forbidding swamp itself. The lower swamps of the Mississippi River Delta also provided protection for the Houma and Chitimacha and other first peoples during pressures of settler colonialism. Yet it should also not be lost that the Barataria Swamps served as a protective enclave for piracy and illegal smuggling. The French privateer Jean Lafitte was a prodigious smuggler of West Indian African slaves after the United States banned imported slaves in 1808.

#### MISCEGENATION AND ERASURE

The intersection of swamps and their inhabitants not only provoked concerns of ambush and resistance to colonial authorities; they also represented a challenge to racial hierarchy that was established and crystallized by the Enlightenment. With the ascendance of the idea of the sovereign human, the Enlightenment also gave us the concept of the *subhuman*—races “trapped” in timeless cycles of nature—as opposed to the Western white rational thinker on a teleological march of progress. Thomas Chatterton Williams says racial identification functions as a veritable prisoner’s dilemma. “The idea of distinct human races, as we understand it today, only stretches back to Enlightenment Europe, which is to say to the 18th century,” he writes. “I have stayed in inns in Germany and eaten at taverns in Spain that have been continuously operating longer than this calamitous thought.”<sup>58</sup> Nowhere was race more important than in the New World, where racial definitions “emerged from a fundamental imbalance in power among social groups.” On slave ships transporting men, women, and children to the New World, European captors became white, and their African captives became Black.<sup>59</sup> The establishment of a white European identity in the New World required the existence of subhuman racialized categories. This justified plantations’ practice of using enslaved Africans, a practice that intensified after the ban on imported slaves in 1808 and the rise of domestic slavery.

With New Orleans’s emergence as the slave capital of the New World in the nineteenth century, domestic slavery required the reproduction of enslaved labor, which turned plantations into breeding grounds through the sexual assault by plantation owners of enslaved women and the separation of families. As Smith writes, “Sexual violence was ubiquitous throughout slavery, and it followed enslaved women wherever they went.”<sup>60</sup> The enslaved individual was not only up against the physical power of the assailant, but the power of the state, the power of patriarchy, and the power of society. “These acts were not only permissible but legally encouraged.”<sup>61</sup> The coup de grâce was that racial designation was

dependent on the mother, which allowed plantation masters to sire as many offspring as possible—thereby increasing the number of enslaved people and the masters' wealth rather than diluting it by producing legal heirs. This required that mixed-race people—whose skin tone was lightened by miscegenation between owner and property—be legally classified as nonwhite chattel. “The social and political, as opposed to scientific, significance of the binary is obvious in the maddeningly whimsical nature of one colonial law, which first declared the legal—and therefore racial—status of mixed-race children to be transmitted via the father, only to be subsequently reversed to the mother.” This potential liability becomes profitable where the mixed-race offspring are a source of more wealth instead of a drain on it.<sup>62</sup> The children could then be sold off. It is estimated that about one million enslaved people were separated from their families.<sup>63</sup> Smith says, “In *Soul by Soul*, the historian Walter Johnson writes, ‘Of the two-thirds of a million interstate sales made by traders in the decades before the Civil War, 25 percent involved the destruction of a first marriage and 50 percent destroyed a nuclear family—many of these separating children under the age of thirteen from their parents.’”<sup>64</sup>

There is currently only one plantation in Louisiana that narrates the antebellum period from the point of view of the enslaved. The narrative position is stunning. The owner of the Whitney Plantation, a white southern lawyer, John Cummings, decided to dedicate an archive that interrogates the pastoral antebellum luxury that River Road tourism has been known for promoting. Cummings reports to the journalist Clint Smith that his research revealed the banal brutality of it all. In oral histories of former slaves conducted by the WPA, Cummings said he found one account after another of forcible rape and quotidian brutality wreaked on regular people. “I kept looking for an account that did not involve it,” Cummings said. “But I never found one.”<sup>65</sup> Writing in 1897, W. E. B. Du Bois argued that the science of race did not add up: “When we thus come to inquire into the essential difference of races, we find it hard to come at once to any definite conclusion. Physical characteristics are inconsistent. Color does not match texture of hair, nor size of head, nor tone of skin. Unfortunately for scientists, however, these criteria of race are most exasperatingly intermingled.” The differences of men, he wrote, does not explain all the differences of their history.<sup>66</sup>

#### THE SLIPPERY CLASSIFICATION

One is racially classified differently by different laws, customs, and countries. The term “black” as it was used by British in the nineteenth century applied to anyone from Africa, the West Indies, India, Pakistan, Bangladesh, Sri Lanka, and even Latin America.<sup>67</sup> The one-drop rule in America said that with a drop of nonwhite blood, one was considered *not white*; in Brazil, a drop of white blood classified one as *not Black*. Irish, Italians, and Jews were all, at one time during their American immigration, considered to be colored. “In color theory there is no such thing as

White—it exists solely in our perception of the world, not as a color per se but as the absence of such,” writes Chatterton Williams. In real life, too, the lived experience of ‘Whiteness’ is often construed as the absence of racial identity.”<sup>68</sup> It is the neutral point from which all else deviates, which is a move to reinforce or justify uneven power relations. Legal pressures to racially categorize Native Americans, for example, as either “Native” or “Black” nearly wiped them from the historical record in many places. In Louisiana, if one was of mixed race, one was termed a “Mulatto,” a slippery classification created in the eighteenth century that gained so much currency that by the twentieth century it could be applied to anyone with a portion of nonwhite lineage.

Chatterton Williams, who is biracial and self-identified as Black growing up in Texas, writes about his own racial dysphoria after siring a child in France with blond hair and blue eyes. His own father, who is African American with a light complexion, said the child was “high yellow,” which is one of many terms baked into the American racial psyche. Such terms are familiar to anyone from New Orleans—which was more inventive than most American cities in racially classifying people based on skin tone, eye color, and cultural and linguistic heritage. Among such striations were Octoroon, Quadroon, Creole, Mulatto, and Red. In New Orleans, free people of color sometimes owned enslaved people.

Racial categories—before and after Emancipation—also wedged internal differences between Black Americans and Amerindian peoples. During Jim Crow, the “one-drop rule” that marked nonwhite blood as “colored” forced Indigenous people to identify as white or Black, further erasing Indigenous identity between 1920 and 1964. Intermarrying or partnering by Native Amerindians with nonwhites largely erased their indigeneity in the eyes of the state. Therefore, knowledge of nonwhite people when it consisted of African, African American, and Amerindian lineage was lost within the structures of white supremacy. Indigenous families likely also subdivided among themselves to differentiate between those who—based on outside association of race to location—may have disassociated themselves from other Indigenous families who were identified as having mixed heritage. European chroniclers left a trail of terms such as “mestizo,” “zambo,” “metis,” and “half-breed” to describe individuals who had either African or Amerindian parentage.<sup>69</sup> “Many part-American, part-African persons (with no European ancestry) could easily be subsumed under a racial term applicable to ‘pure-blood’ Africans, and would not in any case be especially recognizable to most observers as being part Native American,” writes Jack Forbes.<sup>70</sup>

The archival record itself was narrated by white authorities, which further complicated racial and Indigenous tribal tension that was often exploited by colonial powers. By 1915, census takers and lawmakers did not distinguish indigeneity among nonwhite groups, eventually conflating the many lineages of nonwhite Native Americans as either Creole or Mulatto. The law did not distinguish between African Americans and Creoles with Indian lineage, which “has implications for the study of the diffusion of cultural traits in areas as diverse as folktales, music,

social structure, folk language, and religion.<sup>71</sup> Cultural adaptation by Africans, Caribbeans, Indigenous, and Europeans created the “creolized” culture of New Orleans food, festivals, music, and street culture. In one unique New Orleans tradition, for example, the Mardi Gras Indians, also known as black masking Indians, performatively honor the memory of the city’s earliest inhabitants every year with hand-sewn and intricately beaded outfits representing different “tribes,” or neighborhoods, of the city.<sup>72</sup>

The Mardi Gras Indians also recount collaboration with Native Americans as well as Black Americans who identify as having Native American ancestry. The performances themselves are oral traditions that operate independently of official archives. “Constructive African and Native American exchanges and merging traditions are absent from most standard narratives about colonialism in the Americas. African and Native American peoples have met in a diverse set of circumstances during the last several centuries.” On battlefields they were sometimes allies and sometimes enemies. “Both endured the harsh work and punishment of forced labor systems, but when opportunities for rebellion or escape arose, they formed alliances.”<sup>73</sup> The identity of “Black Indians,” as the Native scholar William Katz called the people of the African Diaspora who intermarried or were formerly enslaved by Indigenous Nations, is still a relatively unarticulated, and thorny, cultural lineage.<sup>74</sup> Black citizens of the Muskogee Creek Nation, once known as Creek Freedman, continue to struggle for federal recognition and benefits that federally recognized members of the Creek Nation receive. “They were among the thousands of African Americans who were once enslaved by tribal members in the South and who migrated to Oklahoma when the tribes were forced off their homelands and marched west in the 1830s.”<sup>75</sup> Freedmen descended from emancipated slaves who were owned or intermarried with the Five Tribes—Cherokee, Choctaw, Chickasaw, Muscogee (Creek), and Seminole—whose societies included enslaved and freed African Americans. Some of the descendants have won lawsuits seeking inclusion in the Cherokee Nation.<sup>76</sup>

The existence of a large group of “Red-Black People,” who are part Amerindian and part African, has largely been overlooked until recently. They were usually classified as “Black” by scholars and legal statutes. Some notable figures in this group are Paul Robeson, Josephine Baker, Bunk Johnson, Lena Horne, Pearl Bailey, Leadbelly, and Tina Turner, who in memoirs, biographies, and autobiographies make specific reference to Native American ancestry. Jack Forbes, writing in 1984, using somewhat archaic language, nonetheless describes today’s African American population as a composite of African, white, and Amerindian elements: “Considerable controversy has developed at times among white writers as to how much American ancestry Afroamericans actually possess. This controversy is apparently not found among Afroamericans, many of whom have told this writer of their Indian ancestry,” Forbes explains.<sup>77</sup> Many Seminole Indians and Black Seminole descendants likewise do not share strong, joint cultural or political activity, despite

centuries of close interaction. Those identified as “Black Seminole” have been defined by various titles: “Afro-Seminole,” “Freedmen,” “Negro Seminole.” Their ancestors were African maroons who found freedom on the Florida frontier in alliance with Seminole Indians during the eighteenth century.

When the influential, and controversial, anthropologist John Swinton performed his limited fieldwork in Louisiana, he failed to identify Indigenous people with African descent. “In the 20th century, John Swinton—the world’s worst anthropologist—said in 1911 there were few Atakapas,” remarked Jeffery Darenbourg, a member of the Atakapa-Ishak Nation, speaking at the Tulane Gulf South Indigenous Studies Symposium in March 2022. “I happen to know there were several thousand left. What kept him from identifying them as us, is they all had African ancestry.”<sup>78</sup> This amounts to dispossession by refusal of recognition, which hinges on a lack of research, and decontextualizes contemporary inequalities and efforts for justice from historical dispossession.<sup>79</sup>

Another Indigenous population began to develop in southwestern Louisiana in the mid-nineteenth century among people who had emigrated from the Carolinas and Georgia. They sought areas that were Indian or mixed-Indian and Black and white families. They came to be identified, pejoratively, as “Red Bone,” which comes from the West Indies, where “Red Ibo” (pronounced Reddy Bone) was a label for mixtures of races and was likely pronounced Red Bone in Louisiana and the Carolinas. Dispersed groups of Indigenous people in Louisiana, including the Biloxi, Choctaw, and Pacana, were sometimes called “Seminole” in error and included those of white and African ancestry and culture. “Among the Houma, referred to by local whites as the Sabine from the Spanish word for cypress tree, or ‘red and white spotted,’ French admixture was common. Like the Red Bones, they were suspected of absorbing blacks and once were rigidly segregated by white power structure.”<sup>80</sup> This impetus to delineate whiteness from everything else is part of a modern impetus to control or “purify” the seepage of nature from contaminating authority.

The scholar Bruno Latour has argued that one of the driving impulses of modern man has been a persistent aspiration toward “purification,” despite our lived experience of hybridization. In other words, he says, we have never been modern because such purification is impossible to achieve despite our best efforts.<sup>81</sup> “Purification involves the clean construction of a nature (and science) separated off from society and the self, while hybridization involves mixtures of nature and culture.” The resulting myth is that the realms of the real, the discursive, and the social are believed to be separate. “That’s what moderns pretend to do at least, though in practice they produce all sorts of nature-culture hybrids.”<sup>82</sup> We see these impulses not only in the classification of and separation between human and non-human worlds but also within these subworlds: the separation of water from land, the dead from the living, and Black and brown bodies from white ones. In coastal Louisiana, people might be racialized based on which bayou they lived on. “It

should be noted also that from at least 1741, the term mulatto is used to designate a certain type of land or soil, sometimes described as a ‘black mould and red earth’ (1789) or ‘the red and mulatto lands’ (1883),” writes Forbes.<sup>83</sup> The land becomes imbued with characteristics of the people associated with it, and vice versa.

#### MIASMIC THREATS

Discourses that disparaged and rationalized draining and conquering swamps that offered protection to maroons and self-liberated enslaved people were also driven by a companion movement within the Enlightenment: the mid-nineteenth century’s Sanitary Movement. It postulated that good drainage promoted upstanding morals. The Sanitary Movement rationalized the improvement of public health through the management of space and principles of economic circulation. Scholars point to the movement’s emergence with Chadwick’s report, *Sanitary Condition of the Labouring Population of Great Britain*, in 1842. The industries of medicine and agriculture stood the most to gain from the Sanitary Movement as fallow and otherwise unregulated lands came under enclosure and surveillance by the state. Chadwick, London’s main demographer, blamed typhus as well as cholera on miasmatic fumes rising from unenclosed fens or marshes.<sup>84</sup> “Miasmas” were considered vaporous swamp fumes that were assumed to be endemic to place rather than spread by organism. Such fumes were attributed to having both gas and liquid—air plus water. Wetlands were believed to be laden with infectious air that emanated from decaying matter.<sup>85</sup> Chadwick was a former literary assistant to Jeremy Bentham, who is known as the progenitor of the panopticon theory that so affected Foucault. Bentham was an advocate of the upright morals of spatial circulation and discipline. In the nineteenth century, Foucault argues, the state began regulating the well-being of its citizens through statistical demographics and the management of space. This “conduct of conduct” is the foundation for modern government. “A good street is one in which there is, of course, a circulation of what are called miasmas, and so diseases, and the street will have to be managed.”<sup>86</sup> This space or milieu was a tableau of uncertainty and possibility. “The milieu needs to be managed because overcrowding or congestion leads to poor circulation which leads to increased miasmas and disease.”<sup>87</sup> Circulation was paramount.

New Orleans stood at the nexus of this problematic relationship in the eighteenth and nineteenth centuries. Throughout most of the nineteenth century, drainage projects were ad hoc and privately funded. The city’s average rainfall of 60 inches a year ended up turning these private canals into “beds of garbage and excrement, fit only to generate fever and breed mosquitoes,” according to an 1880 Louisiana Board of Health report.<sup>88</sup> Fires were particularly dangerous due to the inability of fire protection teams to navigate effectively through the mud. Victims of fire include the original church sited at the St. Louis Cathedral and most of the early French colonial structures of the French Quarter. An ordinance was passed

in 1788 forbidding the buildings financed by the “King’s loan” to be constructed with cypress wood.<sup>89</sup> As the city grew, the complexity of levee and drainage designs increased. Levees spread up and down the river and its connecting bayous. Eventually, authorities eyed the back-of-town swamps. They called for a functional drainage system to enable more people to live in “reclaimed” areas that were once uninhabitable and consequently more exposed to infrastructural disruptions during major storms and floods. Before 1835, the city had invested nearly \$5 million in streets, drains, and elevated banquettes. But gutters and canals clogged with subsurface seepage from backyard privies and mud, which made cleaning and clearing them a never-ending task.<sup>90</sup> In 1835, the city awarded the New Orleans Drainage Company a twenty-year charter to drain the cypress swamps between the riverbank and Lake Pontchartrain. Between 1833 and 1878, more than 35 miles of drainage canals were dug across the natural levee back slope and through the lower-lying swamps.<sup>91</sup>

Diseases were thought to be endemic to the surrounding swamps of New Orleans, so it was important for the city to “domesticate” its landscapes to protect itself from its surroundings.<sup>92</sup> Such measures included not only drainage, but shooting cannons to dispel vaporous air. Officials also speculated that contagion of diseases spread from the cemeteries. The city council carried on a prolonged controversy with the wardens of the Cathedral to move St. Louis Cemetery to some other location as cholera, malaria, dengue, and yellow fever claimed the lives of thousands of citizens.<sup>93</sup> Yellow fever was by far the deadliest. Over 100,000 Louisianans, including nearly 40,000 New Orleanians, died from yellow fever between 1796 and 1905. The worst outbreaks occurred during the late 1840s to late 1850s when at least 22,500 residents perished. The so-called Yellow Jack seemed to be a chronic, albeit cyclical, part of life in the city. It tended to arrive in the summer and fall and dissipate as the months cooled. It was a visible and horrible disease. In mild cases, infected persons would feel muscular pain, probably vomit for several days, and swing from intense chills to intense fevers. In severe cases, the skin would turn yellow as the disease incapacitated the liver, kidneys, and heart. The infected victims would then vomit digested blood that had turned black. New Orleans experienced twelve yellow fever epidemics in thirty-five years.<sup>94</sup> As late as 1887, with rival cities such as Memphis, Tennessee, embracing sanitary reform, Charles Dudley Warner visited New Orleans on assignment for *Harper’s*. He was stunned by “gutters green with slime[,] . . . canals in which the cat became the companion of the crawfish, and the vegetable in decay sought in vain a current to oblivion.”<sup>95</sup> Perennial outbreaks threatened not only residents but also financial development and investment in a port city that counted on regular visits of people and shipments of goods. Foreign businesses often shunned New Orleans as too great a health risk for commercial investment.

The dreaded “late-summer plague” forced public quarantines of riverboats. Costs of disrupted trade were continually weighed against the social cost of

outbreaks. Some outbreaks were exacerbated by the suppression of public information. There are numerous cases of yellow fever epidemics that for weeks went unreported by newspapers and authorities concerned about hurting business at the docks. This led to more deaths of workers, visitors, and city residents.<sup>96</sup> Those with resources fled north across Lake Pontchartrain to the piney woods of what is now Mandeville or east to the Mississippi Gulf Coast. As a result, poor whites and African Americans bore the brunt of the scourges. As is true today, the poor of New Orleans suffered more than the rich because of inequitable residential geographies, where the poorer sections of town lie in the lower topographies and lack resources to evacuate.<sup>97</sup>

The longest and most fatal US yellow fever outbreak started in New Orleans with the arrival of an infected sailor in May 1878. Some historians have speculated that it arrived from Havana. It continued to take victims through June and July and travel from city to city along the disease vector of the Mississippi River. New Orleans lost 4,600 lives. Memphis lost 5,000, which was 20 percent of its 40,000 residents. By December, yellow fever had struck parts of Mississippi, Louisiana, Tennessee, Kentucky, Georgia, Ohio, and Missouri. After traveling from New York City to New Orleans in September 1878, one dry goods merchant expressed astonishment at the extensive reach of the fever: "The country between Louisville, Kentucky and New Orleans is one entire scene of desolation and woe."<sup>98</sup> Amid the terror, residents of Jackson, Tennessee, placed armed guards on incoming roads to turn away anyone attempting to enter. Towns in Texas refused trains, mail, and people from New Orleans for fear that they would be infected. "Shot-gun quarantines," the editor of the *Memphis Appeal* reported later, "were by this time (the 26th of August) established at nearly all points" in the Mississippi Valley. The *Washington Post* noted "a first-class panic in . . . small towns and villages" surrounding New Orleans.<sup>99</sup>

Seeking to quell public hysteria, a consortium of New Orleans physicians in 1878 issued a public treatise stating that yellow fever was a specific disease "that had once been exotic but was now domesticated or endemic." Since quarantine had never prevented the occurrence of either isolated cases or epidemics, the physicians protested it. They blamed yellow fever on the city's unsanitary conditions but could not explain why the pestilence prevailed only in the summer. They issued calls for urban improvement and a comprehensive program of sanitary reform in keeping with late nineteenth-century discourses of the reform movement. They called for paving and cleaning of city streets together with efficient disposal of garbage in the Mississippi River. And they called for a safe and adequate municipal water supply.<sup>100</sup> "As absolutely necessary" preventive measures, the New Orleans Medical and Surgical Association recommended proper drainage of the city, including an underground sewer system and abolition of the backyard privy, or outhouse. The physicians' report calculated that residents deposited over two million pounds of human excreta into the soil annually, which was "the most difficult

problem connected with the sanitation of New Orleans.” New Orleans had forty-four thousand privies. Of these, inspectors declared that over half were “foul” or “defective.” These devices introduced sewage into an already saturated ground.<sup>101</sup> The physicians outlined a comprehensive program of sanitary reform.

Ironically, it was an aversion to mud that may have aided the spread of yellow fever in New Orleans. To avoid drinking muddy river water, residents relied on backyard cisterns, which were breeding grounds for the chief disease vector, the *Aedes aegypti* mosquito (which also carries the zika virus). The mosquito breeds almost exclusively in and around houses—in containers such as drinking cisterns, tanks, buckets, roof gutters, and bottles filled with rainwater. It also breeds in flower vases and icebox drainage pans. While the Pasteur Institute had by 1880 exonerated vaporous swamp fumes, or “bad air,” a term that stems from the Italian *mal'aria*, the miasmatic theory persisted for years. It was largely due to the persuasive link between the revulsive sight and smell of fecund spaces with sickness.<sup>102</sup> In the case of yellow fever, a causal viral organism was suspected but not actually isolated until 1928. “It has practically never been found breeding in swamps, rivers, lakes, or other places where malaria mosquitoes usually breed.”<sup>103</sup>

After half a century of marginally successful privately financed public works projects, the city embarked on a major improvement program in the 1890s to relieve the soil of its “soggy conditions,” writes Craig Colten.<sup>104</sup> The Drainage Commission of New Orleans was formed in 1896 and developed a \$27 million drainage plan. “By 1905, workers completed 40 miles of open and underground canals, hundreds of miles of drains and pipes, and six pumps draining 22,000 acres at 5,000 cubic feet per second. The work was not yet half done, but the effects were already apparent.”<sup>105</sup> Muddy streets began to dry. Swamp water disappeared. Soils were able to be paved. California-style bungalows started appearing on streets designed for automobiles in areas that were previously marsh. Even the acerbic New Orleans-born author George Washington Cable marveled, “The curtains of swamp forest are totally gone. Their sites are drained dry and covered with miles of gardened homes.”<sup>106</sup>

#### A CENTURY OF LAND RECLAMATION

The inventor largely credited with “conquering the swamp” was Albert Baldwin Wood, a local resident who designed the Wood screw pump, which was shaped like a corkscrew and could pull 10 million cubic feet of water out of the “soup bowl” of New Orleans. Wood’s system drained the “floating land” of its excess sub-surface moisture. The famous Baldwin screw pump was patented in 1912—it was still being used by the city when Katrina struck in 2005—moved water through the drainage canals and up and out of the city. The Baldwin pump is credited with expanding New Orleans’s urban footprint to its existing scope. More pumps, canals, and levees were built. By 2005, there were twenty-two drainage-pumping stations in New Orleans with the pumping capacity to empty a 10-square-mile

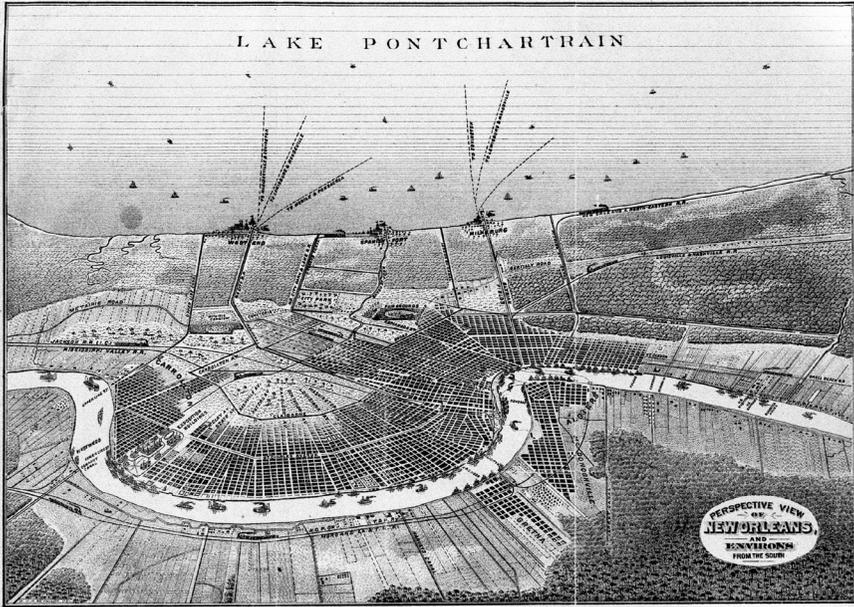


FIGURE 4. Perspective 1884. A modern city emerges on the crescent bend in the Mississippi River as urban development rises on former swampland methodically drained by outfall canals. Image courtesy of the Historic New Orleans Collection, 1974.25.18.125.

lake, 13.5 feet deep, every twenty-four hours.<sup>107</sup> These same canals would later give Katrina's floodwaters access to the heart of the city.

The new sewerage system approved by voters would use “the diluting power of the Mississippi River” and replace old drainage canals with pumps that force effluent through closed pipes up the natural levee and into the river at a discharge point below the city.<sup>108</sup> But not everyone was served equally, of course. The city's Black population typically occupied the swampy back-of-town areas toward Lake Pontchartrain. While the Drainage Commission had undertaken an ambitious Progressive Era citywide drainage program of pumping stations and canals, the coinciding Jim Crow policies challenged principles of social equity by denying services to nonwhite neighborhoods and prohibiting African Americans from leaving them. City ordinances and later deed restrictions legally obstructed desegregation. Gaps in the system became apparent in the 1920s. Vast tracts of lakefront property drained after 1920 became entirely new subdivisions, and ordinances and racially restrictive deeds effectively closed them to African Americans. It wasn't until the 1930s that engineering concerns seemed to overcome the prevalent racism of the day when the sewerage system reached previously unserved areas. But this also meant that even when black New Orleanians received drainage and sewerage services in the 1930s, they were limited to the lowest sections of the city.<sup>109</sup>

Draining the old swamps triggered an early twentieth-century real estate boom that saw a 700 percent increase in the city's urban acreage and an 80 percent increase in assessed valuations during the same period.<sup>110</sup> Most of these lowland lots were not developed until after World War I. Meanwhile, the disappearance of the cypress swamps behind the city through drainage and land reclamation led to tree root die-offs and ground subsidence.<sup>111</sup> In fits and starts, the practice of draining uninhabited swamplands for neighborhood development continued through the late 1980s and not only expanded the city footprint of New Orleans, but opened new areas for development in neighboring parishes.

As the city footprint expanded to the edges of Lake Pontchartrain to the north and to the wetlands of New Orleans to the east, developers used suction dredges to build levees, allowing them to fill in local sands and clay material from below the water bottom. The dredged materials were piped as slurry over varying distances and discharged at the point of levee construction. But these last developed neighborhoods in the city are today more difficult to maintain. While natural levee ridges are easily protected from both river floods and storm-induced tides, the level of river floods may stand as much as 20 feet above the drained flood basin surfaces. Storm-generated tides may be even higher. Hurricanes Betsy in 1965 and Camille in 1969 inundated large areas of the drained flood basin of New Orleans, providing ample proof of the undesirable nature of developing reclaimed marsh and swampland for urban use. Yet developed they were. As Richard Campanella explains, "Modern drainage thus enabled the crescent-shaped city of the 1800s to expand into the spread-eagle-shaped metropolis it is today."<sup>112</sup> But it came at a cost. The drainage system was so successful in removing water from the soil that it opened air cavities where organic matter decomposes, shrinks, and creates more cavities. Fine sediment particles collect and consolidate. Campanella continues, "Half of greater New Orleans would subside below the level of the sea, into a series of bowls—even as they were paved, further reducing the soil's absorption capacity and increasing runoff. Each paved bowl required that the pumps do more and more lifting of more and more water."<sup>113</sup>

Meanwhile, more than 120 miles of subterranean canals underlaced the city. Pumps located in the interior of the city required that the lifting of water be done at the pumping station well before it reached its discharge point, which raised water levels in the outfall canals rather than at the end of the canal just before being pumped into Lake Pontchartrain. "All that stood between high water and low neighborhoods were thin floodwalls." Pumps originally located behind populated areas were now surrounded by these areas. "Unbeknownst to new residents, their exposure to hazard grew with every centimeter that neighborhoods sank, as did their dependence on pumps and barriers to prevent rainwater or seawater from pouring in."<sup>114</sup> A now-fateful decision in 1895 to expel runoff east into Lake Borgne rather than north into Lake Pontchartrain changed the positioning of the pumps. Had they looked to Lake Pontchartrain, the pumps likely would have

been positioned along the lakeshore—which would have added protection against incoming storms. “The pump themselves would have acted as gates.”<sup>115</sup> In other words, Katrina’s damage throughout the interior of the city of New Orleans may have been avoided.

The built environment of canals, levees, and seawalls created the fiction of a dry city, though it had sunk by 3 meters in some areas. This would force a greater reliance on levees and floodwalls, which perpetuated a devastating cycle of groundwater removal, flooding, and vulnerability. This is compounded by the long-term problem of coastal erosion in South Louisiana. The surrounding salt water of the Gulf of Mexico creeps ever closer to a dense urban population that is living below sea level.<sup>116</sup>

This positive feedback loop is one paradox of Extractive Thinking, which I argue throughout this book stems from a philosophy that traces its origins to modernity itself. “Construction interferes with the land-building process: levees contain the silt needed to replenish the lowlands, dredging loosens the land by killing freshwater plants, floodgates and reservoirs further aggravate marsh subsidence.” To abandon these projects invites economic disaster. But to continue as before is to invite a worse catastrophe. The system that offers prosperity and security is also consuming the earth beneath our feet.<sup>117</sup>

#### SUSTAINABLE DEVELOPMENT DISCOURSE

Local observations toward the last quarter of the twentieth century began to note the disappearance of fields and marshes behind the levees and along the Louisiana coast. Around the same time, new schools of thought emerged that began to change the political landscape regarding natural resources. In 1962, Rachel Carson’s *Silent Spring* was published, pointing to the damage inflicted by pesticides on bird and aquatic species in California’s Central Valley. And then, after being polluted for decades by industrial waste, an oil slick on the Cuyahoga River at Cleveland caught fire in June 1969. The public spectacle is often cited as the catalyst for the creation of the Environmental Protection Agency in 1970, which began reformulating what had otherwise been thought of as untamed wilderness. Environmentalism coincided with legislative developments that included the federal Clean Water Act, first passed in 1960 and amended (generally in a more stringent direction) five times over the next twenty years; the Endangered Species Act of 1966 (updated in 1969 and again in 1973); and the National Wild and Scenic Rivers Act of 1968, which barred or severely restricted new project development on listed rivers throughout the country. At the same time, an important judicial development was the granting of “legal standing” rights to environmental groups, allowing them to bring suit before courts and administrative agencies on the grounds of the public interest.<sup>118</sup> The Santa Barbara oil spill in 1969 and Earth Day in 1970 cemented what became the modern environmental movement.

In late 1969, Congress passed the Environmental Policy Act, which requires federal agencies, including the Army Corps of Engineers, to assess the environmental damage of proposed projects. The following year, Ralph Nader published his book *Water Wasteland* about the destruction of the Chesapeake Bay habitat, and Congress subsequently rewrote the Water Pollution Control Act. It is hard to refute a turning point in the 1970s toward a new environmental ethic.<sup>119</sup> This new age of environmental sensitivity would also affect Louisiana. In 1971, the state legislature established the Louisiana Advisory Commission on Coastal and Marine Resources, which provided a foundation for the establishment of Louisiana's Coastal Zone Management (CZM) Program in 1978. By the end of the decade, the state of Louisiana officially recognized that its wetlands were eroding.

A new rhetoric transformed swamps and marshes, which for almost three centuries were generally repelled by the urban inhabitants in New Orleans, into something that environmentalists and biologists called "wetlands." Lynn A. Greenwalt, director of the US Fish and Wildlife Service (FWS), issued a comprehensive report in 1977 on the classification of wetlands, officially acknowledging that wetlands and deepwater habitats are essential breeding, rearing, and feeding grounds for many species of fish and wildlife. This report expanded an initial inventory conducted by the USFWS in 1954—which at the time was to assess "valuable waterfowl habitat." That report described twenty wetland types. Greenwalt's report was more comprehensive and has been called "one of the most common and most influential documents used in the continuous battle to preserve a valuable but rapidly diminishing National Resource."<sup>120</sup> The Fish and Wildlife Service adopted the new wetland classification system while acknowledging there is no single, ecologically sound definition for *wetlands*, "primarily because of the diversity of wetlands and because the demarcation between dry and wet environments lies along a continuum." Under the heading, "Wetlands and Deepwater Habitats," the report reads, "Marshes, swamps, and bogs have been well-known terms for centuries, but only relatively recently have attempts been made to group these landscape units under the single term 'wetlands.' This general term has grown out of a need to understand and describe the characteristics and values of all types of land, and to wisely and effectively manage wetland ecosystems."<sup>121</sup>

In his foreword, Greenwalt pointed to other uses of wetlands: "[They] perform important flood protection and pollution control functions. Increasing National and international recognition of these values has intensified the need for reliable information on the status and extent of wetland resources."<sup>122</sup> As such, it appears that wetlands emerged from a government inventory motivated by perceived scarcity and anthropogenic value. Wetlands also became commodified as eco-services for recreational and taxable hunting and fishing that brought tourists and vacationers into forested areas. Arguably along this fracture, Louisiana's swamps and marshlands finally emerged as something other than "wasteland" and therefore worth protecting. But this occurred, not through ethical stewardship, but through

a value system that prized their utility in providing a protective buffer for oil and gas infrastructure from storms and for commercial services like tourism, fish hatcheries, and waterfowl flyways.

This representation conjures both mud's and wetlands' role in a complex ecosystem of nonhuman actors, as well as their vulnerability that should be protected for capital extraction. It emerged around the same time as discourses on sustainable development, which governs the context under which wetlands are viewed today. The political ecologist Arturo Escobar tracks sustainable development discourse to a 1987 report of the World Commission on Environment and Development convened by the United Nations under the leadership of Norway's former prime minister, Gro Harlem Brundtland. The impetus was fostered by Club of Rome reports of the 1970s, which provided a distinctive vision of the world as a global system where all parts are interrelated, thus demanding management of planetary proportions. The Club of Rome reports argued that nature can be managed scientifically—much like the scientific management of labor—and thus reframed nature as commodity. Escobar argues that this reframing is an attempt by sustainable development discourse to reconcile two old enemies—economic growth and the preservation of the environment—without any significant adjustments in the market system: “This reconciliation is the result of complex discursive operations of capital, representations of nature, management, and science. In the sustainable development discourse, nature is reinvented as environment so that capital, not nature and culture, may be sustained.”<sup>123</sup> As wetlands entered the nomenclature, its discursive function and vulnerability to industrial and commercial threats accompanied it.

#### WHOSE WETLANDS?

Wetlands coexist discursively with an entire apparatus of value and scarcity that is inimically threatening these same wetlands. What were referred to as swamps in the nineteenth century—with their noxious fumes and miasmas—were replaced by capitalist, neoliberal systems of valuation, which focus on the amount of money the wetland commodity could generate in terms of ecotourist dollars, valuable estuaries for seafood and fish hatcheries, protection of infrastructural pipelines from storms, and habitat for waterfowl migratory flyways that are important to hunters. In Louisiana, the perceived value of coastal wetlands is tied to their value to industry along the coast.<sup>124</sup> Today this discursive stamp runs throughout the Louisiana Master Plan for a Sustainable Coast, as its authors point specifically to the financial importance of wetlands to the area's economy in order to justify investments to protect them: “Experts have tried various ways to put a value on the coast's abundance, more in the spirit of highlighting the incredible gifts of our landscape than out of certainty that these gifts can be perfectly captured in numbers. One of the ways researchers assign value to natural systems is by considering

what are known as ecosystem services, meaning the benefits that the environment provides to people. In Louisiana, these benefits range from oyster and shrimp fisheries to flood reduction, to nature-based tourism.”<sup>125</sup>

And according to the master plan, these benefits have a dollar value. This reconciliation between nature and capital allows the state to move forward with mitigation plans that place eco-services within the same capital calculus of valuation as all other surplus value commodities. Of course, those that are most lucrative, such as oil and gas infrastructure, stand at the front of the line for coastal restoration protection.

The three-hundred-year effort to separate water from land tends to map onto a project of modernity to not only finish God’s second Eden by making “fallow land” productive but also separate humans from nature. Today, contemporary schools of environmental science recognize the efficacy of sustainable practice in one form or another to sustain human communities and/or capitalist systems operating under scarce resources. But we might also ask what politics are foregrounded by positioning marsh and mud as commodities and protectors of cities and infrastructure? How does this arrangement naturalize the infrastructures and cities—and perhaps modernity itself—and frame marshlands and mud as almost a fungible utility? Their associated value lies in how they are used and manipulated, which continues to place them within a constrained value system. An alternative is nearly impossible to imagine if we continue to use the same canvas from which these questions themselves are drawn. To conjure New Orleans or Louisiana risks reproducing a discourse about land that is predicated on extraction.