

4-2022

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How Cypress Tress Become Mangroves: An Analysis of the Works of Amitav Ghosh and
Climate Change

by

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Undergraduate honors thesis under the direction of

Dr. Pallavi Rastogi

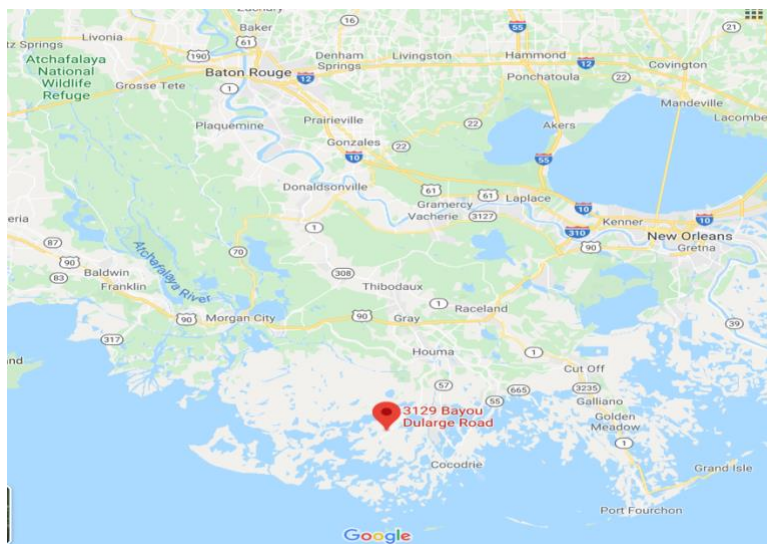
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Submitted to the LSU Roger Hadfield Ogden Honors College in partial fulfillment of
the Upper Division Honors Program.

April 2020

Louisiana State University
& Agricultural and Mechanical College
Baton Rouge, Louisiana

A tiny dot on a map—in an area where it is nearly impossible to discern land from water—this is where my house is found. The Gulf of Mexico is ready to swallow my home at any moment. I grew up where land and water are one. Water sustains life here in ways with which most people are not familiar; without water, my family would have no livelihood—no life even. It is impossible to separate not just land but also humans from the water here. Before attending college, I did not understand the gravity of the situation in my hometown of Dularge, Louisiana. In fact, my roots embarrassed me, made me feel bitter and trapped. People live simply in Dularge, and most of them are not very well-educated. I hated the twenty miles that I had to drive to reach “civilization” to do *anything*. Being outside meant smelling the potent marsh, iodine, and fresh catches of the day—anything from crabs to oysters to shrimp. Climbing the long flight of the decaying wooden steps in my house was treacherous because they were perpetually covered in green moss. Humidity penetrated everything living and non-living. I could not forget the constant cloud of bugs looming in the air throughout the entire year. I could not wait to leave.



This pin marks the location of the house, where I spent most of my childhood. There is less than a mile of road between my house and the end of the road, where the water begins.

That is because I did not realize what was happening in my hometown. I did not grasp the value of the lifestyle I had come to know so well. I had seen my home destroyed twice before:

when it was lifted on to pilings, flung fifteen feet in the air. I expected these events. I thought they were merely a part of life. I watched the bayou across my house grow wider, inching closer, and closer to the road each year. When too much freshwater invaded the oyster leases, my grandpa and my father struggled to bring home sufficient catches. Impacted by imbalances in the Gulf of Mexico, the shrimp were so small that buyers refused to purchase them. I noticed these alterations in the landscape, but it was only later that I learned that climate change played a significant role in the economic activity that sustained my family. Each hour, Louisiana loses approximately one football field of land; I learned this fact when I was in the 3rd grade, but I did not understand exactly what it meant. Now, I know that Louisiana is simultaneously sinking and eroding. Subsidence, a natural process in which soft marsh mud compacts, is altering the landscape for the worse. Due to Louisiana's unique terrain, and combined with erosion due to increased sea levels, the effect of climate change is shattering. Formed in recent geological history, the marshlands of the Gulf coast developed from sediment deposits from the Mississippi River. The relative newness of the land in the coast makes it especially vulnerable to changes in the environment because the soil has not compacted yet. Older soil is more stable than freshly deposited silt because soil compresses over time. Further, human influences, ranging from oil production to the control of the Mississippi River by restricting its water so that sediment no longer builds up in the fragile marshlands, accelerate the land loss even more. The changing weather conditions are battering the Louisiana coast brutally. Eventually, it will be destroyed.

I became very passionate about the coast after I discovered that the place where I grew up might disappear forever. I appreciated the vast knowledge of the land that many of the local fishermen possessed and the usefulness of hands and hard labor. I immersed myself in the richness of the culture and history that Dularge had to offer. I sought out literature that felt like

home. I wanted to see my traditions represented in all their glory. I wanted to see the stories and cultural impact of my family—and others like them—preserved. The deep well of cultural and colloquial knowledge to which my family added could not be forgotten. My quest to learn about my home proved to be difficult. I struggled to find work that represented my world, my reality. Numerous nonfiction and fiction works about Louisiana focus on New Orleans: Kate Chopin wrote *The Awakening* in 1889, and George Washington Cable published *The Grandissimes* in 1880. A large part of the action in these novels centers around New Orleans and city life near the coast but not *on* it. For Chopin, the coast was a vacation spot, and the characters always left this “pastoral setting” to return to the city; they never experienced what it was to like to actually live on the coast. In turn, I could not find a work of contemporary fiction capturing the essence of coastal lifestyle itself. In addition, this dead-end also meant that no works were noting the dangers coastal communities are facing. I read books such as *Bayou Farewell*, Mike Tidwell’s nonfiction work on coastal erosion published in 2003. He represents the bayou country well, but still, it was not the piece of literature I was looking to find. Tidwell’s book showcased the real hardships people experience with a changing coast, but *Bayou Farwell* felt much more like a documentary than a novel. The nonfiction work lacked the literary elements that make novels distinct and memorable, even though nonfiction, of course, has a power of its own. Disheartened, I turned to other novels, postponing my hunt for a suitable work of coastal literature—or as I even sometimes thought of actively ceasing my search. As an English literature major, I devoured books about topics and places that I had never visited, the experiences I never had. I read about the partition of India in *Cracking India* (1988) and glimpsed into the mind of a trans teenager in *The Member of the Wedding* (1946). Ordinarily, I would not have sought out nonfiction books about India or the trans lifestyle, simply because I had no prior emotional

knowledge of these topics and experiences. I thought that these novels were too foreign to be relatable and enriching. However, fiction has the capacity to draw diverse audiences and deeply move readers. Therefore, I found similarities across all experiences because of the universality of human suffering. Literature brings people together by depicting their struggles in relatable ways. Traumatic events are difficult to process, especially when they are as intimidating as climate change. Literary fiction renders these catastrophic events digestible. Furthermore, fiction does more than re-tell the story of an event; novels help others to learn too. In her book, *Postcolonial Disaster*, Pallavi Rastogi writes, "Yet the cultural invocations of disaster, including literary writing, local films, and art exhibitions, refuse to silence catastrophe. Literature, culture, and the arts can lodge crisis into the heart of political and public consciousness while soliciting new ways of negotiating with disaster" (Rastogi 3-4). In this sense, literature and other art forms open new avenues for discussing and working through catastrophic events such as climate change. Therefore, literature does not recognize disasters for their mere existence, stating the facts and figures; literature helps people to understand and process feelings about disasters. Humans must not only recognize climate change. They also need to act. The literature helps people work through difficult thoughts and emotions. After processing the internal matter, literary fiction can help readers to externalize their knowledge productively by inciting action. After finding no satisfying novels about climate change, I was in a state of distress. Not only was the land disappearing, but also nothing existed, in literature, my field of study, to memorialize the coast and its people as coastal Louisiana is at risk of total extinction now. Then, I wondered if I could use fiction from other parts of the world to find indirect connections to my coastal community. So, I started to look for pieces of my home in other novels, hoping that traces of the way of life on the coast would not vanish altogether; instead, they would reveal themselves in other forms in

other places. Literature opened the door to learning about other cultures. By reading novels set elsewhere, I found that Louisiana was not alone in its struggle with coastal issues. Even more, the coastal culture is a universal lifestyle, as there is something distinct about living in harmony with the water that fosters similar livelihoods for coastal residents all over the globe.

The works of the Indian writer, Amitav Ghosh, particularly resonated with me as his descriptions of the vegetation in coastal Bengal bore numerous resemblances to my hometown. In his novels, the cypress trees of the Louisiana coast morph into the mangrove trees of the Indian Sundarbans. People like my father and grandfather appear as characters in Ghosh's books, showcasing their vast knowledge of the waterways and nature. Climate change is impacting the Sundarbans in similar ways; the land is eroding, and animals are forced to adapt in their habitats. I was inspired by the way in which Ghosh dedicated himself to representing the problems of climate change in his homeland through fiction and non-fiction. While I could not find material about my own home, I grew attached to the writings of Ghosh, since he articulated many issues relevant to my world, my life, and my community. I thus decided to harness the immense power that literature has to change minds and hearts to examine his work in my honors thesis to make sense of the ecological crisis in my home state.

Amitav Ghosh and The Environment

Although he has written extensively about India, most of Amitav Ghosh's recent work focuses on the environment and how it shapes the lives of those living in the midst of climate change. *Sea of Poppies*, published in 2008, is a novel based in the Calcutta region, and describes Indian trade with China in the nineteenth century. The Ganges River is an essential motif in the novel. In *River of Smoke*, released in 2011, Ghosh continues to write about ecological issues and

their relationship to human migration. Ghosh's extensive body of work on the environment thus provides an excellent repertoire to study climate change and climate literature. Ghosh's writing strategies have morphed and adapted to respond to the status of the climate crisis at the time. In 2004, Ghosh published *The Hungry Tide*, a novel that takes place in the swampy forests of the Sundarbans in India. *The Hungry Tide* is a riveting story about climate change, describing ecological catastrophe in a muted—but effective—way. The novel is clearly about climate change but is not explicitly *trying* to be about climate change. *The Hungry Tide* “benefits,” in part, from the lack of access to climate change language as it exists today. Elizabeth DeLoughrey writes in *Allegories of the Anthropocene*, “As such, culture, climate, experience, knowledge, and the Anthropocene are all placed in disjunctive relation. Yet these ruptures and disjunctions in narrative and in knowledge do not collapse neatly into one another.” (DeLoughrey 4).

DeLoughrey highlights the disconnect between the elements that form climate language—culture, environment, experience, knowledge, and the Anthropocene. Without a clear way to piece these parts together, it is difficult to harness the language that encompasses them all. Climate language, the language that recognizes these elements as interdependent, did not yet exist when Ghosh was writing *The Hungry Tide*. The separation between literary language and ecological reality mimics the divide between the arts and science in the modern era; moreover, the division hinders Ghosh from employing the climate language of today. The language barrier is an advantage for *The Hungry Tide* in comparison to the more recent *Gun Island*, published in 2019, because Ghosh does not rely on climate language to do all the work that fiction must conduct organically. Instead, the theme arises naturally from the story in which the setting is so inextricably connected to the climate change phenomenon that it is difficult to avoid discussion of the subject—even indirectly.

Several years after publication of *The Hungry Tide*, Ghosh's *The Great Derangement* appeared in 2016. This work of nonfiction details the problems with climate change fiction. In this book, he laments the lack of serious literary fiction on climate change and offers suggestions on how to craft a compelling climate change novel. Many of the fundamental concepts in *The Great Derangement* are born out of the stylistic and thematic choices in *The Hungry Tide*. Continuing the scaffolding pattern of his work, Ghosh published *Gun Island* last year. *Gun Island*, once again, is partly set in the Sundarbans, along with several other locations throughout the world. Unfortunately, Ghosh forces the ideas presented in *The Great Derangement* onto *Gun Island* instead of allowing them to emerge organically from the novel. In the progressive development of Ghosh's work, the messages in each successive novel should ideally become more robust and more persuasive. However, in the case of the three books examined in this thesis, the trajectory is more of a devolution than an evolution, a regression not a progression, especially when considered as literary novels and not just as documentation of climate change.

In this thesis, I argue that *The Hungry Tide* is more effective than *Gun Island*, the two novels that Ghosh wrote on climate change. *The Great Derangement* connects the two novels by articulating as theory the literary fiction of *The Hungry Tide* and then using that theory as a template to write *Gun Island*. Unfortunately, *Gun Island* seems to be written as a box-checking exercise in which Ghosh seems determined to meet all the requirements he has established for a great climate change novel in *The Great Derangement*.

The Hungry Tide, however, is a compelling story, as every successful novel should be. It does not force its messages about climate change onto the reader in an aggressive, overt, documentary-like manner. It works as both fiction and as a powerful message about the crisis. Ghosh wrote *The Hungry Tide* without any influence from the climate debates of 2016 or 2019.

In 2004, the pressure to discuss the climate crisis was not as intense as it is today, as climate change becomes more of a pressing, visible concern in society. Also, Ghosh does not seek to deliver on his suggestions to improve literary climate-change fiction—an argument made in *The Great Derangement*—as the later book developed organically from *The Hungry Tide*.

Furthermore, *The Great Derangement*, on its own, is substantial work that makes a significant intervention in how we write about climate change. The book functions well because its concepts were derived from the project of *The Hungry Tide*. Many of the theories Ghosh discusses in *The Great Derangement* do, in fact, appear in his 2004 novel—despite his claims that these elements do not exist in literary climate fiction. With high expectations set, as a result of the publication of *The Great Derangement*, critics anticipated Ghosh's next novel to be "the great novel about climate change." Ironically, *Gun Island* falls short of these standards. With a combination of prescription, presumption, and projection, the novel feels forced and unnatural. A close examination of Ghosh's three works in this thesis reveals the strengths and weaknesses of each of the selections as well as establish them as a continuum of writing: a novel, theoretical concepts based on the aforementioned novel, and then those concepts dropped down, rather than evolving naturally, from a novel itself. A thorough assessment of literary climate fiction, inevitable and necessary, emerges from my exploration of these publications. The overarching goal of this thesis is to define climate literature through these three works by Ghosh and to understand why the specific strategies he uses are practical but also unsuccessful at different points in time. I also hope to offer occasional suggestions about what Ghosh could have done differently in *Gun Island* to make it seem less like a documentary and more like a novel. The documentaries about climate change are currently in circulation, meaning that the information, comprised of countless scientific reports and news articles, already exists. The facts about

climate change are accessible. However, these mediums alone do not help people to cope with the effects of climate change. In, *Postcolonial Disaster*, Rastogi writes about the wide-ranging power of novels to narrate crisis. She says:

Novels such as *The Hairdresser of Harare* and *We Need New Names* can teach us how to live with catastrophic systems, recognize their totalizing power—since they do have totalizing power over body, mind, and soul—and then how to recover agency within that mechanism. While they do not always address the question of how to eliminate fiscal disaster, in both its current and recurring forms, they offer vital templates for survival in the short and medium term. (Rastogi 91-2).

Literary fiction has the ability to capture the informational *and* emotional gravity of catastrophic situations. It can inculcate knowledge and inspire action in its readers, which is why it is necessary to have urgent issues integrated into creative works. More specifically, the language here roots itself in climate change language, even though the books referenced are not about climate change—they are about the AIDS crisis. Further, words like catastrophic and totalizing describe natural disasters, indicating the natural connection between crisis and climate change. This quote highlights the universality of suffering and crisis and how well these narratives translate into works of fiction. Rastogi suggests that although climate change does not show up as frequently in literature compared to older, more well-known types of suffering, literature is equipped to help readers navigate disaster of any kind.

The Hungry Tide: Narrating Climate Crisis with Novel Success

The Hungry Tide is a powerful novel about climate change. Therefore, it is important to discuss the element that unifies the novel—the setting. The Sundarbans ground the novel, creating remarkable consistencies that draw each narrative strand back to a clear center. First, the name of the swamp ties the physical into the literary. In Bengali, Ghosh’s native tongue, “sundar” means beautiful and “bans” translates to forest, demonstrating the inherent land and language association from the very beginning. Even more, the landscape of the Sundarbans anchors the themes of the novel to climate change, as most of the action is tied to the mangrove swamps in some form. Ghosh intentionally chooses the Sundarbans as he has personal connections to the land. More importantly, the Sundarbans face a slew of problems in their swamplands, making them a perfect location to discuss climate change. In discussing the geography of the Sundarbans and the ecological problems it faces, Girish Gopinath, when writing about Sagar island located in the Sundarbans, says, “[the Sundarbans] face coastal erosion and degradation of coastal vegetation and various natural hazards. Erosion is mainly due to clay mining, wave activities, and the impact of river and tidal currents of Muri Ganga and Hugly River.” (Gopinath 555). In addition to ecological modification, Gopinath notes that an increase in the human population is also adding to the degradation of the environment and habitat destruction (Gopinath 555). Aside from the real ecological reasons that provide the setting with life and credibility, Ghosh’s literary strategies further render the landscape vivid and real.

The Hungry Tide is set in the Sundarbans of India and is a captivating narrative that demonstrates the effects of climate change on a small community. Centered on two main characters, Piya and Kanai, Ghosh’s novel utilizes both of them to examine two separate aspects

of climate change. Piya's journey as a marine scientist allows for an in-depth analysis of the more concrete, physical representations of climate change concerning the ecosystem and its inhabitants. Kanai's story illuminates the human aspects of the climate crisis, discussing climate refugees and disputes over land use. Through a combination of setting, folklore, and character development, *The Hungry Tide* establishes itself as a compelling climate change novel, infused with a great literary appeal.

What characterizes a novel about climate change as a novel about climate change? A novel is successful as a climate change novel when it defines itself clearly and effectively as such. A climate change novel does not simply incorporate climate change into the plot; a climate change novel needs much more substance. Specific guidelines can help define literary fiction as climate change novels. The criteria used in this thesis comes from Ghosh's *The Great Derangement*, where he establishes three main characteristics of the literary novel on climate change. One, a novel must have a strong emphasis on setting with a meaningful execution. In this sense, the setting must drive the plot in some way; setting cannot exist as the background for the narrative. Climate change is inherently connected to the land; therefore, in discussing climate change, the setting plays a role in the narrative rather than merely exists as a setting. In Ghosh's novels, particularly, setting is tied to folklore—an important and related element in his works. Second, a novel must work with the idea of the uncanny that appears in *The Great Derangement*. Uncanniness as related to supernatural or unexpected events is an excellent way to describe climate change events. However, in literary fiction, the uncanny tends to manifest itself as speculative, unrealistic, or futuristic. When this happens, climate change novels fall into the category of science fiction, a dangerous classification as climate events are then projected as a future threat to the current human population rather than a present reality. Therefore, in a climate

change novel, an author must ground uncanny events in reality to capture the striking nature of climate disasters. Finally, the third element of a climate change novel is language. In *The Great Derangement*, Ghosh claims that there is no truly effective language to discuss climate change in a literary novel. Climate language is too scientific and inaccessible at this point in time to successfully synthesize into fiction. Words like petroleum, fracking, and carbon dioxide do not give way to beautiful, flowing language—the language that Ghosh suggests is fundamentally constitutive of a work of fiction. Authors must bridge the gap between readers and their knowledge of science in a graceful, stylistic way to avoid throwing in clunky climate jargon that does not translate well into literary language. The obstacles in language are a result of the history of division between science and literature at the end of the 19th century, Ghosh hopes to break the barrier between science and language, creating a new standard in which climate language fits seamlessly into both fields of study. To summarize then, the three most vital elements in a climate change novel are setting, the uncanny, and language. A clean, thorough execution of these creates a climate change novel.

Using the Sundarbans as the background for the plot produces striking visuals for readers. The landscape translates well as the rich, lush prose mirrors the environment of the Sundarbans itself. Ghosh harnesses language in a way that conveys the intrinsic beauty and eerie mystery of the swampland and the canopy mangrove trees: “A mangrove forest is a universe unto itself, utterly unlike. Other woodlands or jungles. There are no towering vine-looped trees, no ferns, no wildflowers...mangrove leaves are tough and leathery, the branches gnarled, and the foliage often impassably dense,” (*Hungry Tide* 19). Not only does Ghosh convey the landscape vividly, but he also situates the readers in a particular and real location. Focusing on a microscopic area (with respect to the vastness of exotic ecosystems on the planet) forges a deep connection to the

setting for both readers and the characters in the novel. Setting in literature about climate change must always have a strong presence, manifesting as almost a character of its own. Ghosh persistently reminds readers that the Sundarbans are, in fact, an active protagonist in the novel by frequently personifying nature. Again, he writes, “This is a land half-submerged at high tide: it is only in falling that the water gives birth to the forest” (*Hungry Tide* 20). Here, Ghosh emphasizes the power of water in the swamps by bestowing it with the ability to “give birth” to the forest. In the same section, Ghosh notes the hostile relationship between the terrain and human beings and strengthens his point about the relationship between landscape and characters in climate change novels. He cites the “cunning and resourcefulness” of the land and its skill in being able to determine whether or not humans can exist in the space (*Hungry Tide* 19). His deft use of setting suggests two crucial aspects of the climate change novel and of its precursor: One, the setting is critical, in writing a novel about climate change, in which nature plays a huge role in driving the plot. Readers are undoubtedly aware that the story takes place in the Sundarbans, an actual location. Therefore, the events that transpire over the course of the novel are framed as realistic possibilities because the setting itself originates in truth. Second, audiences must recognize the gravity of the ecological processes occurring in coastal communities like the Sundarbans. By portraying nature as a powerful agent and character, Ghosh forces his readers to understand that nature has unique abilities to transform and impact, both in the novel and in real life.

Continuing with establishing the setting, Ghosh draws on India, especially Bengali folklore, to construct, manipulate, and confine the geography of the novel within the realm of reality. Novels that focus on climate change often tend to teeter on the edge of science fiction and climate fiction. Moira Crone’s novel *The Not Yet* (2012), as well as *American War* (2017) by Omar El Akkad details the prospective future of coastal Louisiana. Set in the year 2121, much of

the novel feels foreign and unimaginable—even to a Louisiana native like myself. With no real connections to experiences of the present day, it is difficult to situate the novel as a possible reality. When novels cross into science fiction territory, readers may dismiss the themes of the novel as supernatural and, typically, futuristic. A vital feature of a novel about climate change is its capacity to merge reality with fiction, in which the events of the novel are rooted in truth, having the potential to exist outside of the world of fantasy. When an event in the novel seems to be *too* coincidental or magical, instead of seeking to explain these events with science alone, Ghosh looks to folklore rather than apocalyptic futuristic events. In this sense, Ghosh looks back and not ahead, as many science fiction novels do. This strategy does not make magical events less supernatural; however, it does tie these events to the “truth.” The reality here lies in the spiritual beliefs of the Indian people. For the local inhabitants of the Sundarbans, folklore helps to explain real-life events that do not have a sound scientific explanation. The explanations in folklore translate more fluidly to reality than other reasons for mysterious, mystical occurrences because folklore—for many Indian people and people all over their world—is their truth. Folklore is a foundational belief that links the realms of the supernatural and reality in inseparable ways.

The line between the mythical world and the real-world blurs when discussing tigers. Tigers exist in both realms in India, with each domain holding its own esteemed significance. Therefore, they are most prevalent examples of lore interwoven into the novel. A particularly fearsome beast in the Sundarbans, *The Hungry Tide* emphasizes the ever-present danger that the people of the Sundarbans face from the tiger. The depiction of the tiger is thus entangled in both reality and lore. At times discerning the difference between the two is difficult. These tigers kill many people each year, in the novel and in real life. Tiger-related deaths happen so frequently

that they are a part of life for the people of the swampland and are presented in a matter-of-fact way in the novel. Despite their destructive impact on humans, tigers also have an alluring, ghastly presence in the novel. Tigers never appear directly in front of humans, traces of their existence are left throughout the forest, with the occasional vocalization from the animals. Nilima, a resident of the Sundarbans, states she has lived in the swamps for fifty years but has never seen a live tiger (*Hungry Tide* 340). People do not even use the word tiger. Kusum, a villager in the novel, says, No, you can't use that word—to say it is to call it" (*Hungry Tide* 182). The obscure depiction of tigers throughout the novel is not merely a literary device used to convey the magical quality of tigers. Ghosh skillfully balances the notions of mysticism and reality to convey the gravity of folklore and real-life accurately.

The novel explains the legend behind the tale of the tiger through the story of the tiger-demon Dokkin Rai and Bon Bibi and Shah Jongoli. The residents of the forest worship Bon Bibi and her twin brother Shah Jongoli because they supposedly protect villagers from tiger attacks. In *The Hungry Tide*, Ghosh simply delivers the tale of Bon Bibi, with little outside analysis or interpretation. However, upon further exploration, the story blends seamlessly with the novel, especially with further contextualization. Dokkin Rai, the tiger demon, is greedy and resorts to claiming all of the forest resources for the ecological community—excluding humans from this group (Jalais 6). Pushing his reasoning to the extreme, Dokkin Rai justifies human massacres, stating that they must pay a “tax” with their lives for the usurpation of resources by the human population (Jalais 7). In this journey, Bon Bibi discovers that Dokkin Rai behaves the way he does because he fears “that if humans are given free rein, there will be no forest left,” (Jalais 7). Additional contextualization of the Bob Bibi myth strengthens the ties between folklore to the ecological issues in the novel. Tigers are more than a severe threat to villagers in the Sundarbans.

Analyzing the tiger's role in folklore peels back layers of metaphor to showcase the complex relationship between tigers, the environment, and people. In the novel, tiger attacks are much more than mere attacks. Tigers serve as an allegory for the environment and the perception of the symbol shifts, depending on the point of view utilized. The vibrant narrative of *The Hungry Tide* emerges with clarity and force when the deep connection between folklore and landscape of the novel is examined.

The tale of Bon Bibi speaks volumes for climate change on its own, with all of the essential details laid out. However, Ghosh does not give readers the full story in *The Hungry Tide*. Therefore, the purpose of the myth in the novel is not simply to relay its environmental messages; Ghosh is attempting to do more than pair real environmental crisis with the corresponding folklore. He provides multiple but not full levels of explanation for the folklore. First, folklore is deeply connected to the geographical area in which it occurs in. The tale of the Bon Bibi does not make as much sense outside of Indian context; it grounds readers in the setting, an important part of the climate change novel. Next, folklore also helps to remove perceptions of uncanniness. Any mystical presence of tigers in the novel, such as when Kanai thinks a tiger is attacking him while he is stuck in the mud or when Fokir does not see a tiger—do not seem especially unrealistic considering the ghastly character that tigers possess in Indian culture. In folklore, feeling the presence of mythical creatures is not unusual. Therefore, the “ghost” tiger is not considered supernatural. The involved nature of folklore connects the land to the mythical world and then back to the land. Moreover, folklore explains natural occurrences, transforming them into a fantastical story; however, the story always comes back to the land, appropriately *grounding* it in reality. Folklore is, therefore, especially useful in creating a climate change novel because it explains mythical events through a realistic lens.

With the mythical framework established, it is now time to discuss the science involved in myth-making. The tale of Bon Bibi explains why the Sundarbans tigers are attacking humans. Over a hundred people are killed by tigers each year (*Hungry Tide* 386). According to Bon Bibi, the balance amongst the human world and the environment is off-kilter. Tigers terrify the people of the Sundarbans, as they are attacking much more frequently than tigers usually do. However, scientific reasoning for the increase in the number of tiger attacks exists, as well, and is inserted in the novel. Curiously, tiger attacks are much rarer in the rest of the world; in the Sundarbans, tigers kill people at a much higher rate than expected. The explanation for the spike in killings in an isolated location lies in the ecological processes of the swamplands. As Ghosh writes in *The Hungry Tide*, “The theory [is that] this raised the animals' threshold of aggression by washing away their scent markings and confusing their territorial instincts” (388). Referring to the ebb and flow of the tides in the swamp, the theory explains the increasingly hostile nature of the tiger. According to PBS, the daily tide cycles erase natural territorial markings that tigers produce; when this happens, tigers are unsure of territorial boundaries, leading tigers to behave aggressively and dominantly all the time in order to secure their positions in the swamplands (“The Deadliest Tigers on Earth”). As a result, tigers attack any threat, including humans. A unique blend of folklore and science, rooted in the field of ecology, thus creates a powerful image of tigers in *The Hungry Tide*.

Tied to both myth and science, the tiger manifests itself as an exceptional representation of climate change itself. Scientists provide credible, but partial, explanations for the increase in aggressive behavior in tigers. As mentioned before, the rare tide patterns in the Sundarbans are said to erase the scent marking of tigers, causing territorial confusion. Without a way of knowing which areas belong to each tiger, the animals must always be on the offensive, causing a spike in

aggressive behaviors. Furthermore, people in the Sundarbans do not mention the tiger, out of fear. The combative behaviors of tigers, as well as the allusive reactions to tigers in the novel, play out in the real world, too. The silence around tigers in the Sundarbans is an allegory for the silence around climate change. The impact of climate change is slow-moving, and it is challenging to detect danger until it is almost too late. Land may erode by a small amount each year, but it is only when the water is about to enter homes that people notice the significant difference that several years of changes made. One of the reasons that climate change is often overlooked as a significant issue is because of the rate at which it destroys the earth. Apart from natural disasters, the effects of climate change are slow to appear and difficult to notice without careful observation. Rob Nixon, a renowned environmental scholar, points out this characteristic of climate change, a ground-breaking development in the field of climate literature. The tiger allegory embodies some of the key concepts in Nixon's *Slow Violence*, an essential climate change text. The tiger creeps throughout the forest, not garnering much attention until it strikes with force. Slow violence works in a comparable way. Nixon describes the phenomenon of slow violence as follows:

By slow violence, I mean a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all. Violence is customarily conceived as an event or action that is immediate in time, explosive and spectacular in space, and as erupting into instant sensational visibility. We need, I believe, to engage a different kind of violence, a violence that is neither spectacular nor instantaneous, but rather incremental and accretive, its calamitous repercussions playing out across a range of temporal scales. (Nixon 2).

It is crucial to understand how slow violence functions as the creeping movement of time is one of the most sinister aspects of climate change. Overlooking the gravity of slow violence is easy because it is such a gradual process. Like the tiger, climate change is an intimidating phenomenon because its effects seem to be invisible; yet, when its impacts are visible, they are fierce and overpowering. Therefore, discussing climate change is difficult because the challenges seem enormous and overwhelming. Nixon states, “The task of thinking on such a geographical scale—let alone a temporal one—can seem overwhelming,” (Nixon 38). Ghosh blends these fears about climate change with the symbol of the tiger. Therefore, the figure of the tiger plays a crucial role in categorizing *The Hungry Tide* as an iconic work of climate change fiction. The next component that works to ground the novel as strong piece of literature is role that the protagonists play.

The character development of both Piya Roy and Kanai Dutt demonstrates a vital theme in climate fiction. By incorporating fully fleshed out characters that change over the course of the novel, Ghosh roots Piya and Kanai in reality, with an interconnectedness to the world. The protagonists are not simply mouthpieces for his broader arguments; their thoughts and actions deliver the messages in a genuine manner. As stated earlier, this dispels any sense of uncanniness. These roles help Ghosh to distance his novel from science fiction because the characters behave like real human beings. Additionally, the parallels between the stories of the two leading protagonists work in tandem to build a holistic view of climate in the novel. Despite the fact that *The Hungry Tide* only has one primary setting, a worldview of the problem still surfaces. This broad perspective is a result of the style in which Ghosh crafts the work. Ghosh presents the challenges that lie on the environmental side of the climate debate, as well as its human impact. By intentionally integrating the elements of setting, folklore, and a worldly

perspective into *The Hungry Tide*, Ghosh thus crafts a powerful novel about climate change. The first place in which these principles shine is throughout characterization.

Piya, a cetologist (a scientist that specializes in the study of marine mammals), is the mouthpiece for the scientific community in the novel. Piya was born in Calcutta and has Bengali parents. However, she spent most of her life in the U.S. and does not feel particularly connected to her Indian heritage. Drawn to the Sundarbans for scientific research, Piya takes on the task of studying river dolphins. Combatting a language barrier, Piya meets a fisherman named Fokir and communicates with him through pictures and hand signals. Fokir's extensive knowledge of the waterways and animal behaviors in the Sundarbans proves to be very useful to Piya, possibly even more so than her expert scientific capacity. Piya notes, "I've worked with many experienced fishermen before, but I've never met anyone with such an incredible instinct" (*Hungry Tide* 429). Fokir is skilled in searching for the areas where dolphins appear. In her studies in the Tide Country, Piya learns about the migration patterns of the river dolphins in relation to the unique tide patterns of the forests. The Orcaella dolphins typically migrate twice a year. However, Piya notices that the river dolphins in the Sundarbans migrate with the tides (*Hungry Tide* 209). Presented with a once in a lifetime research opportunity, Piya is nonetheless overwhelmed by the vast amount of work ahead of her. Piya's work takes over her life as she develops a laser-like focus on research and conservation efforts. *The Hungry Tide* presents the scientific-minded Piya to readers early in the novel, ensuring respect for her profession and discoveries. However, Piya transforms into a much more well-rounded person as the novel progresses. Her narrow science-based worldview expands past her own self-interest. As she learns more about the Sundarbans and its people, she realizes that scientific endeavors affect

people too. The severe divide between ecological conservation and human impact raises essential questions for Piya—and the greater climate conversations taking place in the book.

Kanai's narrative encapsulates the human effects of climate change, and its repercussion on the villages in the Sundarbans provides another aspect of the climate crisis. Kanai is a translator from New Delhi. As an outsider and upper-class male, Kanai does not have the same relationship to the Sundarbans as many locals. The disconnect in his relationship to the land is apparent. Kanai visits the Sundarbans simply out of obligation. He was forced to live in the village with his aunt and uncle as a child and only returns to the town of Lusibari at his aunt's request. Nilima, his aunt, sends for Kanai after she discovers a packet left behind by her late husband Nirmal, who died twenty years ago. Nilima finds that the packet is addressed to Kanai, and although she is still haunted and heartbroken over her husband's death, she hopes that the letters will finally bring her peace. The packet holds interesting and unsettling information about the final days of Nirmal's life.

Kanai opens the packet to find a notebook, filled up in May of 1979, just days before Nirmal's unexpected death. The notebook outlines the events that transpired between native settlers and government agencies on the settlement of Morichjāphi. The inclusion of the notebook narrative is vital to the plot of *The Hungry Tide*. The battle between ecological conservation and human preservation in Morichjāphi adds suspense and tension to the novel. As a tiger conservation area, the island of Morichjāphi was not home to humans. However, many refugees found their way to the area after political tensions in other places became so dangerous that they had to relocate again. Many fled from India after Partition; also, others from Bangladesh sought freedom from oppression from Muslim communalists, and upper-class Hindu groups (*Hungry Tide* 198). Nirmal describes the conditions of the resettlement camps as follows: "They called it resettlement, but

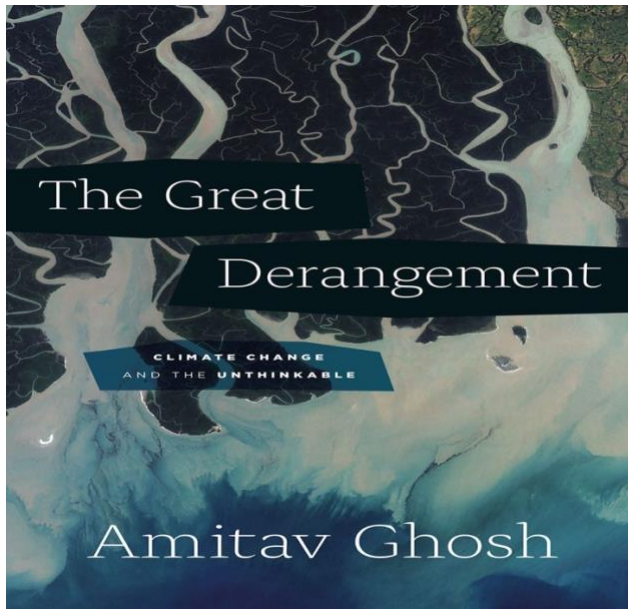
people say it was more like a concentration camp or prison. The refugees were surrounded by security forces and forbidden to leave. Those who tried to get away were hunted down” (*Hungry Tide* 199). The people seeking shelter in Morichjāphi had justified motivations in doing so as few alternatives existed. How do people in power choose between protecting and endangered species in nature and degrading human beings to the point where they receive malicious treatment and are “hunted down” like animals themselves? In asking this question, Ghosh opens his writing up to questions of environmental ethics, in deciding which objects have value and which do not. He also establishes a foundation for *Gun Island*, a novel which claims that climate change and the refugee crisis are the two most important catastrophes of our time.

Ghosh provides the audience with an ending that fosters respect for people and the environment—a progressive development in a climate change novel. Not only does Ghosh warn readers about the dangers of climate change, but also he provides realistic solutions to an immense problem. Piya, after learning about the horrors of Morichjāphi, shifts her thinking away from a hard conservationist view, taking on a more centrist ideology, in which wildlife preservation and human concerns have equal weight. In memory of Fokir, who dies protecting Piya from a terrible storm during their scientific expedition, Piya wants to create a conservation program that employs local Sundarbans fishers. If executed properly, a program of this sort would aid local fishers by providing additional income and simultaneously help to protect the vulnerable habit of the Sundarbans. These programs would most effectively tackle the challenges of climate change. Climate change is not an issue that can be addressed with science alone. A much more holistic view of climate change is necessary to foster sustainable, practical solutions. Therefore, a program such as Piya's in *The Hungry Tide* takes into account multiple perspectives and concerns as it is not a program strictly focused on the physical environment. Further, Piya's character is the ideal

mouthpiece for the program. Piya is a well-developed character, and the arrangement she creates is born out of true personal growth, making her program seem more genuine and viable. For readers, the progression—of both the program and Piya—documented in the novel is attainable, which makes the climate crisis seem like an issue that people can tackle through personalized, direct actions. Ghosh highlights these innovative efforts in *The Hungry Tide*, increasing the effectiveness of the novel, both as a work of fiction and as a document of social change. Thus, *The Hungry Tide* provides a substantial source of inspiration for the critical work of *The Great Derangement*.

The Great Derangement: Theoretical Frameworks from Ghosh

Years after *The Hungry Tide* was published, Ghosh wrote *The Great Derangement*, a nonfiction book on the climate crisis. *The Great Derangement* was written under entirely different circumstances than *The Hungry Tide*. In 2016, the attention to climate change and its dangers had increased manifold, accruing much more attention than it received in the past. Therefore, Ghosh, when was writing the book, he was under an increased amount of pressure from the media frenzy around him and also because of the perhaps self-inflicted pressure to write a literary novel on climate change. Due to the significant passage of time between *The Hungry Tide* and *The Great Derangement*, it does not seem likely that the two publications would be related. However, through careful consideration, the two are very much affiliated with each other. In fact, much of what seems to appear as fictionalization in *The Hungry Tide* emerges as theoretical arguments in *The Great Derangement*. Ghosh discusses *The Hungry Tide*, tigers, and the story of Bonbibibi in *The Great Derangement* (the cover itself is even a reference to the novel because it showcases the Sundarbans of India).



The cover of the Great Derangement., which depicts the Sundarbans. Ghosh never explicitly states that the cover showcases the Sundarbans, but the cover is immediately recognizable when looking at a map of the area. Note how similar this image is to that of my hometown.

I argue that *The Great Derangement* is a successful book in its own right because the conventions and discourse of climate change had been well-established by 2016 and already tested through the creative vessel of *The Hungry Tide*. Even so, *The Great Derangement* would be more powerful as a work bemoaning the absence of a literary novel about climate change had it acknowledged its antecedents in *The Hungry Tide*.

The Great Derangement stages inherently ironic and contradictory claims. The fundamental charge the book makes is that there are no high-brow or literary realist novels about climate change. Given the hypothesis of *The Great Derangement*, it seems counterintuitive to argue that *The Great Derangement* was inspired by *The Hungry Tide*, but that is precisely the argument I make here. Ghosh himself did not, deliberately or otherwise, see the ways in which his previous novel informed his theoretical concepts about climate change fiction. Therefore, the goal of the next portion of this thesis is to outline the ways that *The Hungry Tide* and *The Great Derangement* parallel each other, while simultaneously noting the main arguments of *The Great Derangement*: to argue for the urgent necessity for a literary novel about climate change without

recognizing, of course, that *The Hungry Tide* is already the great literary novel about climate change whose absence he bemoans.

Returning to the idea of a great climate fiction novel, Ghosh bases the entirety of the *Great Derangement* on one idea—that “high” literary fiction solely about climate change does not exist. After establishing his argument, Ghosh traces the flaws in climate-change literature, explaining why the genre is absent from the great works in the literary mainstream. *The Great Derangement* included three parts: *Stories, History, and Politics*. In the section titled *Stories*, Ghosh lays out his claims in more detail. Many of Ghosh's ideas come from the notion of the uncanny. Ghosh cites an excerpt from the Bonbibbi story—evoking *The Hungry Tide*—in which Duhkey see the tiger, to explain the feeling of the uncanny. Ghosh argues, “To look into the tiger's eyes is to recognize a presence of which you are already aware, and in that moment of contact you realize that this presence possesses a similar awareness of you, even though it is not human,” (*Derangement* 29). The uncanny relies on familiarity. Something is uncanny when a new element is added into an established thought process, action, or emotion. Climate change exemplifies this process perfectly because humans have been aware of perilous weather conditions and the evolution of ecosystems for ages; however, in the changing world, the circumstances are much more menacing than they have been in the past (*Derangement* 30). Ghosh states that the uncanny finds its home in literature, in which events have unexpected twists. However, in crafting climate fiction, maintaining a delicate balance between the uncanny and the supernatural is important. When the uncanny is pushed too far, it becomes mystical. This process occurs because, in the realm of the supernatural, the representation of uncanniness connects to nonhuman forces and beings, but in the environmental uncanny, the references are real manifestations (*Derangement* 32). The workings of the uncanny show how easily climate

fiction slips into the category of science fiction, where the supernatural uncanny thrives. Ghosh thus insists that a climate change literary novel must balance the uncanny and the real without slipping into the future as climate change fiction should be about the present.

Ghosh also claims that functional language lies at the heart of climate change novels. Language is the foundation of all novels. The stylistic choices that an author makes informs readers about the novel's thematic intentions and messages. Therefore, to create a climate change novel, literary language, and scientific jargon must work in tandem to seamlessly portray the connections between the two realms. Prior to the modern era, writers often linked sciences to creative endeavors, especially in the form of poetry. In the romantic period, pastoralism, transcendentalism, and other ideologies rooted in nature, inspired writers such as Henry Wordsworth Longfellow and Byron; in turn, naturalistic language found itself at the forefront of artistic works (*Derangement* 69). Furthermore, works such as *Moby Dick* and *War and Peace* showcase strong intellectual ties to marine biology and mathematics, respectively (*Derangement* 71). At the close of the 19th century, a shift occurred in the realm of literature, sorting works into genre. Science fiction needed to be separate from the literary mainstream, to reflect the historical patterns that saw culture and nature as distinct entities. The genre Ghosh discusses specifically is the literary realist novel, in which authors seek to represent circumstances as they actually are, avoiding elements of the supernatural and artistic embellishment. As a result, the disconnect between the two fields meant that each area became highly specialized; therefore, science and arts seem unmarriageable now after so many years of separation. Ghosh employs this rationale to explain why climate fiction has been primarily contained to the genre of science fiction for the past century. The question remaining, though, is: is science fiction best-equipped to capture a climate narrative? Ghosh answers no: science fiction

is still too prospective to detail the qualms and anxieties of the Anthropocene era, which encompasses the recent past and present. To draw the climate change novel back into the literary mainstream, Ghosh looks to the language that can be most effective in a climate-change novel.

Following years of confinement from the arts, the very language that constitutes climate jargon is scientific and clunky. Words like naphtha, bitumen, petroleum, tar, and fossil fuels do not have inherent poetic potential (*Derangement* 73). Including such terms in a novel steers the reader's focus away from the literary and into a scientific way of thinking. The goal of the climate change novel is to show how these two realms are interconnected rather than reveal a sharp contrast. A deep divide between literary language and scientific discourse creates a separation for readers, in which the two cannot coexist. Highlighting the two subjects in a complementary manner to show that climate change impacts all areas of life is important. According to Ghosh, language itself will emerge in hybrid forms, to reflect the current climate crisis, just as it had done in the past (*Derangement* 84). Ghosh, however, does not offer any explicit suggestions for how language will reflect these hybrid forms even though he repeatedly asserts the necessity to combine science and literature to create a new compound form that can articulate the looming calamity of climate change.

Yet, Ghosh underestimates the significance of the language he uses in *The Hungry Tide*. Ghosh weaves scientific language into the novel but not in particularly distinctive or innovative ways; instead, Ghosh chooses to implement scientific language at precisely the right moments, from the right characters. There is no hybrid language in the novel, but Ghosh includes climate science jargon so subtly that *The Hungry Tide* stands out as an effective climate change fiction novel. Ghosh *treats* climate language in a different way in *The Hungry Tide*—with great nuance and care— instead of crafting a new system of language. Ghosh may have found it

necessary to manipulate scientific discourse in *The Hungry Tide* because the language to discuss climate change—as it exists today—was not in common circulation in 2004, when the novel was first published. As a skilled novelist, Ghosh inserted pre-climate change discourse, making it an organic part of the text rather than an intrusion of the scientific into the literary—a strategy that worked well in *The Hungry Tide*. Piya notices that she sees fewer dolphins as the tides rise. Ghosh takes readers through Piya's thought process as she observes the dolphins; her thoughts range from specific scientific knowledge to the existential questions that the boundless study sparks in her mind. Piya wonders, “Had they (Orcaella dolphins) found a novel way of adapting their behavior to this tidal ecology? Could it be that they had compressed the annual seasonal rhythms of their Mekong relatives so as to fit them into the daily cycle of tides?” (*Hungry Tide* 208). Notably, Piya’s heavy, complicated scientific conversations take place in her own mind, and therefore, her incredibly detailed thoughts regarding her field of study do not seem out of place. Importantly, Piya does not force her knowledge upon other characters. It is not reasonable to expect a character like Fokir—without the proper scientific background—to understand Piya’s raw, unfiltered knowledge. Instead, Piya must find ways to communicate with Fokir in simpler terms. The novel strikes a proper balance between Piya’s thoughts and their outward expression, acknowledging her nuanced perceptions but not making them the sole manifestation of science in the book. In this way, Ghosh utilizes scientific language at the most advanced and the most basic levels, ensuring that the novel does not run the risk of its language being too complex or too elementary.

The best way to explain the exceptional use of language in *The Hungry Tide* is to continue exploring the characters of Piya and Fokir. Ghosh depicts the characters so skillfully that their responses to strange climate events seem natural in the context. The narrator is not

omniscient, which can veer toward science fiction territory, as the presence of an all-knowing force that gives the important messages about climate change. Instead, the characters themselves are the reasons why climate conversations appear. Piya, in her role as a scientist on a field-work mission, must discuss nature and weather patterns; in fact, it would be unnatural for Piya's character to avoid scientific discourse, especially in the Sundarbans, where climate change is radically impacting the landscape. Further, Fokir lives as one with the water. Much of his lifestyle as a fisherman depends on how well he evaluates and works with nature. Part of Fokir is his intrinsic desire to discuss such topics. Piya awakes in a panic because she hears dolphin sounds. When she expresses her surprise and excitement to Fokir, he does not react, as if he had expected to find the animals all along. Piya thinks, "How could he have known they would run into a group of Orcaella right then and right in that place? It was possible, of course, that dolphins frequented this stretch of water, but even so, how could he have known that they would be there on that day, at that time? Groups of migrating Orcaella were anything but predictable in their movement" (*Hungry Tide* 160). Ghosh expertly uses characterization in this novel. He crafts Piya and Fokir as foils of each other, and as a result, their characters often play off of each other. Piya's concrete, formal knowledge helps to put Fokir's "common" knowledge into perspective. Returning to the idea of folklore, Piya and Fokir's character represent the two aspects of myth-making, as well. Piya understands the scientific phenomenon; she knows the tides in the Sundarbans interfere with animal movement. Fokir, however, embodies the mythological knowledge of scientific processes. Their relationship shows how climate change appears in the most unexpected places. The highly specialized language of science does not bar others from knowing about scientific processes—even, like Fokir—they do not have the "correct" language to talk about their findings. This process shows readers that science is a part

of everyday life and reveals itself in several different forms. In other novels with climate change themes, the discourse is present in a clear and, sometimes, artificial manner. To illustrate, in *The Not Yet*, the discussion of climate change largely relies on the fact that the novel is set on the crumbling Louisiana coast, much of the action in the novel is not specific to the setting. Climate change does not drive the plot and affect the characters in a meaningful way. However, in *The Hungry Tide*, climate change is a real and present fear for the character and their actions and words show that they are actively thinking about the consequences of the climate crisis. The comparison between the two novels shows that to write about climate change does not mean having one large element, such as setting, speak for itself. However, the entire novel must inherently revolve around climate change in smaller ways that come together to create a larger message.

Many of the requirements Ghosh establishes in *The Great Derangement* are already present in *The Hungry Tide*. These elements do not come through very plainly, creating a powerful novel overall, although the idea appears counterintuitive. The distance between the 2004 novel and the more recent nonfiction work blinded Ghosh to the similarities between the two works. Another possibility is that Ghosh is simply unconscious of the parallels between his works. The formula here, in which the creative works inspire and support strong theoretical concepts, is sufficient to understand the relationship between *The Hungry Tide* and *The Great Derangement*. Good literary criticism uses the exact strategy that Ghosh employs here as the novel generates the theory. *The Hungry Tide* is a more successful novel than *Gun Island* because Ghosh, however unconsciously, followed a successful, established method of creating theory from fiction. When Ghosh tries to reverse the order, and write fiction based on theory, as he does in *Gun Island*, the novel fails.

Gun Island: A Formulaic Representation of Theory

Gun Island is too simple and straightforward to produce nuanced ideas about climate change. Ghosh's writing style is simple; however, he attempts to produce several bold claims, which run together. As a result, Ghosh fails to deliver clear connections between climate change and the human population—a vital element in the climate crisis. A clear disconnect between the human world and the physical components of climate change materializes. He makes these decisions in order to appeal to a popular audience. Ghosh assumes that these readers will not be interested in diving deep into the Sundarbans. Hoping to reach broad audiences, Ghosh chooses to incorporate several plot points, which include: the tale of the Gun Merchant, a love story between Deen and Piya, the effects of climate change, migration and refugees, and finally, the story of Cinta and the loss of her family. With all of these threads, readers have to absorb an excessive amount of material; loose ends are not tied up, and readers are left in a haze, not sure of what Ghosh intended to say in some sections in the novel. By the novel's end, the narratives run together, creating a muddling effect that leaves readers unsatisfied. Furthermore, trying to incorporate such a large volume of scientific information in the novel does not allow each plot strand to develop completely. Ghosh is unable to make heightened intellectual points and statements by not writing the plot in an in-depth manner. The plot stays surface level. A corresponding comparison lies in the inclusion of climate refugees in both of Ghosh's novels. In *The Hungry Tide*, the story of refugees is fully developed. The refugees show that there is a direct conflict between people and the environment. Piya's struggle to accept the human aspects of climate change alters her character radically and demonstrates that climate change is much more than a physical problem—it affects people too. The scene about climate refugees in *Gun Island* is a form of "box-checking," meaning that Ghosh included the moment to make sure he

hit all the major issues surrounding climate change. Without full development, the scene does not accomplish enough to make a profound statement about climate refugees and their role in the climate crisis. The author does not name the people aboard, and it is unclear exactly what situation they are fleeing from. Further, Tipu and Rafi, characters that helped Piya and Deen during their explorations in the Sundarbans, force attention on the refugee situation in the novel. Escaping from the crisis is not the focal point of the scene; the reason the scene garners attention is because the main characters have a personal connection to two people on the boat. In the end, Tipu and Rafi do not even speak about their experiences first-hand—others speak for them. In this way, Ghosh crafts the refugee narrative less skillfully in *Gun Island*, especially when compared to *The Hungry Tide*. When discussing refugees, the key is that people choose to proceed in a careful manner and include direct conversations and respect for the refugees, even though all but two refugees have no ties to the main characters. Ghosh approaches the refugee scenes in the novel with a western lens, meaning that much of the action in the novel is mere observation. The refugee situation unfolds in a passive manner, with the characters, as well as the reader, positioned outside of the heart of the problem. Further, the novel only offers one singular perspective—a perspective situated outside of the crisis itself. Therefore, readers only get a limited amount of information about the refugees, never knowing the thoughts and feelings of the people on the boat. It does not convey the gravity of the entire situation.

Overall, Ghosh fails to blend the human aspects of climate change with the physical ones. In comparison to *The Hungry Tide*, *Gun Island* focuses much more on nature. Ghosh chose to make land and geography more central in *Gun Island*, so the novel exists as a seamless integration of the human and the nonhuman instead of having climate change exist as the background for a human story. Humans and the environment exist in an inextricable bond; in

fact, it is vital to foreground the human components when talking about climate change. Without a personal interest in the environment, many people would not care about happens to the ecological world about them. Demonstrating the benefits of nature motivates people with no environmental regard to care about what happens to the planet. Especially in climate fiction, nonhuman forces are important and deserve significant consideration. I argue that Ghosh is *overcorrecting* for the vast lack of representation of nature in literary fiction, causing a detrimental lapse in the comprehensive climate narrative, which requires the representation of both human and nonhuman bodies. In *Gun Island*, humans are not driving the plot. The decisions that the characters make do not have a clear impact. Human decisions are a major factor in climate change; even small actions have consequences. To become more eco-conscious, a person must be aware of the results of their choices, no matter the significance of the decision. These choices can range from bringing a reusable mug to a coffee shop or buying an electric car. Nature seems to be moving and changing around the characters in *Gun Island*, giving them a much more passive role overall. In this regard, climate change is happening *to* them, removing any human responsibility from the picture. This style of writing does demonstrate how it feels for climate change to encroach on life. A sense of dread and powerlessness emerges. Deen Datta, the protagonist of the novel, experiences this type of “eco-anxiety” because the effects of climate change appear in all of the cities that he visits. Deen cannot escape the influence of the environment on his mind and body in any part of the world. No matter where he travels, there is a disaster, as well as threatening creatures such as snakes and spiders. An especially curious incident occurs on Deen’s flight to California: he sees a fire in mid-air. Through the flames outside his window, Deen watches a bird gripping a writhing snake in its talons. His reaction is unexpected, “As I watched the creature flying through the air, a sound burst from my throat—I

would later hear it described as a 'scream.'" (*Gun Island* 129). From this moment, clearly, climate change is affecting people in a painfully obvious way. Deen has an extreme reaction to what appears to be a non-threatening event, demonstrating the depth of his climate anxieties. Not only does this reassure readers that climate change is a global issue, but it also forms a feeling of inescapable anxiety that is comparable to how change threatens people today. When Deen finds a brown recluse in his apartment in Venice, his eco-anxiety soars because the spider represents the omnipresent threat of climate change. Deen discovers that these spiders are not common in Italy, adding an especially sinister overtone to the novel. Although this plot point helps to demonstrate the sense of doom frequently associated with climate change, it adds to the passive role that the characters play in response to climate change in the novel. Climate change certainly interferes with animal migration patterns; however, there is a *reason* why these changes occur. Ghosh ignores the human impacts on the environment here; it seems as if animals are intruding on the human world as opposed to humans intruding on the animal world. In crafting a novel that does not adequately demonstrate the links between the human and natural world, Ghosh runs the risk of his readers missing the ecological intervention that the novel makes. The uncanny, as it functions for Ghosh, is closely tied to setting.

Setting, with respect to both of Ghosh's novels, links to the folklore of the Sundarbans. To enhance the presence of the uncanny in Ghosh's novels, then, is to skillfully utilize setting and folklore. In *Gun Island*, Ghosh begins again in the Sundarbans of India, in the present day. The tone here echoes that of *The Hungry Tide*. As the novel progresses, readers journey through several locations, including Los Angeles, Venice, and more. Ghosh implements several scene changes throughout the novel in order to combat some of the problems in older environmental literature that he critiques in *The Great Derangement*. As Ghosh notes in his non-

fiction, climate literature has a tendency isolate the events of a story, narrowly confining them to the time and space of the novel. A restricted viewpoint is not conducive to the climate narrative today. The outlook on climate change has evolved to reflect a much broader worldview. In *The Great Derangement*, Ghosh notes, “No less than they mock the discontinuities and boundaries of the nation-state do these connections defy the boundaries of “place,” creating continuities of experience between Bengal and Louisiana, New York and Mumbai, Tibet and Alaska” (*Derangement* 62). The idea of global interconnectedness is brilliant and reflective of our times. However, *Gun Island* fails to effectively capture a globally connected eco-system as Ghosh attempts to force all his ideas from *The Great Derangement* into the novel. He reduces his nuanced theoretical conclusions to a simple formula and produces *Gun Island* in the exact image of his nonfictional treatise of climate change fiction. Ghosh understands the importance of the setting of a novel. In *Gun Island*, he takes great care to set up several diverse locations to undertake the actions of the novel. However, the execution of the vision he presents in *The Great Derangement* does not come through well in literary form. Throughout the novel, readers journey from the Sundarbans, to Los Angeles, and to Venice, with the mention of several other cities along the way. While Ghosh wants to show a global interconnectedness amongst climate issues and *Gun Island* adequately demonstrates how climate change impacts cities across the world; however, the movement from place to place is disorienting, and readers do not acquire a comprehensive sense of the effects in each city. In *The Hungry Tide*, a central location allows readers to deeply understand the environmental issues in the area; the disasters are not limited to large-scale, violent events—although a tornado does occur. The tornado, as a disaster, combined with the discussion of tide patterns, erosion, and how these processes impact the citizens in the area, create a complete picture of climate change. The climate disasters in *Gun Island*, however,

are sudden and powerful. Ghosh also does not include any examples of slow-acting climate change, like erosion. Based on Nixon's analysis, Ghosh succumbs to sensationalism, the way in which more visible disasters take precedence over slower-moving ones, reducing the overall visibility of climate change in the global consciousness. Nixon claims, "in the aftermath of 9/11, which reinforced a spectacular, immediately sensational, and instantly hyper-visible image of what constitutes a violent threat" (Nixon 13). In *Gun Island*, fires blaze in California, floods drown Venice, and tornadoes roll through the Sundarbans. Animal migration, in which species are found in places they typically do not reside, frequently appears in the novel. Returning to the idea of Western appeal, it seems as if Ghosh choose these respective cities to appeal to an international Anglophone audience to craft a mainstream novel. The transition outside of the Sundarbans does not significantly improve the novel. Ghosh may have intended for these transitions to show how climate events happen in each and every part of the world, but it is possible to convey these messages even with one setting. In *The Hungry Tide*, Piya references her studies to other parts of the world and how she sees similar patterns in the Sundarbans. The setting does not necessarily need to change in order to show a difference. Especially in the case of the Los Angeles divergence, it was not imperative to include Deen's trip there. The reason for his trip was to attend a conference where the California wildfires threaten the characters. No important plot developments happen here. Again, as with Piya's character, in *Gun Island* Ghosh distracts reading by trying to have *too* many distinct climate references in the novel. The use of multiple setting fails as a literary device in *Gun Island* because Ghosh does not smoothly integrate the setting into the plot of the novel. Ghosh successfully depicts how the earth itself is inter-connected through showing how the climate crisis progresses in several ways throughout the world. However, in his focus on the physical aspects of climate change, Ghosh fails to

connect the human side of climate change. Seeing physical patterns, represented by weather and natural disasters, is not the most difficult component of the climate crisis. The key to mobilizing people to act on these global climate changes is to show people how the impending changes will threaten their own lives. Flooding is increasing in both the Sundarbans and Venice, but the most vital part is recognizing and acknowledging how each location can learn from the problems of the other. In this way, the novel does not motivate people to seek international connections to combat climate change; instead, it merely points out similarities in weather patterns and animal behavior, which is not especially useful on its own. People are the solution to climate change. Like Piya in *The Hungry Tide* uses her knowledge of several different marine communities to create a program to improve the Sundarbans. Ghosh leaves out the personal connections that factor in the climate crisis. DeLoughrey says: “If we have learned anything from globalization studies, it is that a planetary scale needs to be placed in dialectical relation with the local to render their narratives meaningful” (DeLoughrey 9-10). Therefore, the local portions of universal narratives still need to be fully developed—in their physical and personal aspects—in order to produce a strong, viable message. Ghosh does not give proper attention to each locality; therefore, readers cannot grasp the depth and scope of the climate crisis. To add weight to each setting, Ghosh links folklore to place. Each location is more than a mere setting if the folklore makes the place significant. By implementing folklore, Ghosh attempts to tie the human and physical worlds together, but his efforts are not effective because they are lost in the tangle of plotlines in the novel.

The parts of the story set in Venice have more concrete reasoning for their existence; however, Ghosh does not follow through on the plotline that he sets up. Ghosh falls back onto Indian folklore once again in *Gun Island*. In *Gun Island*, however, the folklore does

not have strong roots in the plot. Instead, the story is placed at the beginning of the novel to draw Western audiences into the novel with hints of Eastern exoticism. *Gun Island*, like *The Hungry Tide*, also revolves around a legend: that of Mansa Devi, the goddess of snakes, and Bonduki Sadagar, the gun merchant. The gun merchant and the Mansa Devi quarrel with each other because the gun merchant does not have faith in the goddess. The goddess avenges herself by hunting down the gun merchant wherever he goes. Eventually, he finds refuge on Gun Island and becomes the Merchant of Venice. It appears the myth will have a major impact on the story, materializing in a more meaningful message or theme. Yet, Ghosh does not fully flesh out the connections that he wants to forge from the lore to the novel. Folk tales do not have the same significance as they do in *The Hungry Tide*, where myth and legend are clearly tied to tigers and their role in the novel. Here, though, the myth brings the story to Venice but without a straightforward purpose. Venice is, without a doubt, a city known for its struggle with impending tides and climate change damage. However, this fact alone is not enough to justify its place in the novel. Climate change fiction at its most successful should help readers process their emotions and produce useful knowledge that will help combat climate change in some way. The mere recognition of climate events is not nuanced enough for a work of literature. Many works of nonfiction help to explain the physical processes of climate change; the goal of literature is to expand on this information and highlight important distinctions. The flatness of the folklore combined with poor plot execution disappoints. It seems as though Ghosh is attempting to veil the weaknesses in the novel by deliberately making the tale difficult to piece together. Weaving the story of the Bon Bibi into the action of *The Hungry Tide* is one of the greatest strengths of the novel, but Ghosh does not deliver the same degree of excellence with the gun merchant tale. The myth is underwhelming and unsatisfactory because there is no true purpose behind its inclusion.

It causes Ghosh to succumb to forcing unnecessary elements into the novel that detract from its meaning. Returning to *The Great Derangement*, Ghosh says that the nonhuman is essential to the machinery of narration; nonhuman agents move the story along (*Derangement* 65). *The Hungry Tide*, including the Bon Bibi tale, produces an allegory that represents climate change, through the symbol of the tiger which is dispersed across the entirety of the novel. However, in *Gun Island*, the myth does not produce any easily identifiable allegory or equivalent with any literary significance. Like many other story-telling strategies in *Gun Island*, folklore had the potential to be a strengthening factor, but the delivery does not have enough nuance to render the novel a successful work of climate fiction, especially in the evaluative terms Ghosh himself uses in *The Great Derangement*. In similar terms, Ghosh uses setting and catastrophic climate events in a simplistic way too.

Although unexpected natural disasters are a part of the climate change phenomenon, they are not the only visible effect of climate change. In fact, a significant portion of climate change happens discreetly and slowly over time. Especially in coastal areas, which are the main places that Ghosh writes about in his novels, climate change has a more severe and sinister impact across the ages. An event like a tornado or a hurricane will not cause as much damage to a community as the slow erosion or subsidence eating away at the land. In this case, damage does not refer to the destruction of land or human lives; in this instance, the damage is much more considerable when the slow impacts of climate change go unnoticed. After a natural disaster, communities act rapidly to help life return to normal, but the same amount of urgency is absent in addressing potential long-term issues. In *Gun Island*, Ghosh relies on an overabundance of setting and dramatic disasters too much to tell the climate narrative. There are too many locations and disasters to focus on in the novel, leading to a diffusion of readerly sympathy

and attention. Elizabeth DeLoughrey argues against the use of multiple settings to demonstrate global connections. DeLoughrey says that all human activity is now global, making it impossible to separate the local from the global as a result of capitalism (DeLoughrey 28). In fact, “Third World” is a politically viable space for allegory because the part-for-whole relationship between the individual and the community was not shattered by bourgeois individualism” (DeLoughrey 17). Extrapolating from DeLoughrey, the use of the Sundarbans as a sole setting is effective in showing global relations because its community integrity is stable. In the case of *Gun Island*, the novel would have benefited from a single setting too, as its array of settings is simply too overpowering. Readers should not be inundated with too much information about climate change. People tend to feel overwhelmed or hopeless, which is why the discussion of the topic has been avoided for so long. On the one hand, Ghosh may have written the novel this way intentionally, as a metaphor for climate change and the tumultuous feelings it evokes. Climate change is an overwhelming subject that often leaves people feeling confused and unsure because there are no clear answers to the questions of how best to combat slow ecological damage. This strategy works *if* the intention to create this feeling is set concretely, with readers fully aware that they will experience these emotions. However, there are difficulties maintaining emotional stability in this case. Ghosh cannot strike a harmonious balance amongst all of his ideas.

The *Hungry Tide* and *Gun Island*: Characters and Characterization

In relation to *The Hungry Tide*, *Gun Island* does not feel natural and developed. A close examination of the characters in both novels illuminates the differences amongst the publications. Piya’s character creates a natural comparison between *Gun Island* and *The Hungry Tide*. The scientist appears in both novels; however, her character manifests in decidedly distinct

forms in each of the novels. Piya is two entirely different characters from one novel to the next. Piya's interest in science is consistent in each book. Ghosh utilizes this character trait in contrasting ways, in which the character is more successful in one novel than the other. Piya from *The Hungry Tide* is a more convincing character because she develops over time, which makes her character a clear asset to the text. Comparably, in *Gun Island*, Piya stands in as a representation of science itself. In this respect, her character does not have any other purpose in the novel, besides offering a scientific explanation for the natural phenomenon when it is convenient. Instead of building upon Piya's character from *The Hungry Tide*, Ghosh chooses to isolate one of her traits, simplifying her character by making scientific knowledge her dominating trait. Piya's commentary often feels forced in *Gun Island*. At one point, while out on the river in the Sundarbans, Piya initiates a conversation about the natural surroundings. Piya's discussion with Deen centers around the river and its usefulness in terms of ecology. Piya freely offers her thoughts about rivers and dead zones, without any prompting from other characters or physical indications of a dead zone in the river around them at that specific moment. When describing a dead zone Piya says,

They're these vast stretched of water that have very low oxygen content—too low for fish to survive. Those zones have been growing at a phenomenal pace, mostly because of residues from chemical fertilizers. When they're washed into the sea, they set off a chain reaction that leads to all the oxygen being sucked out of the water. Only a few highly specialized organisms can survive in those conditions—everything else dies... (*Gun Island* 104).

Here, Ghosh inscribes the very process that he cautioned against in *The Great Derangement*. Scientific language mainly focuses on visuals, while literary novels are rooted in the language

itself. While reading literature, switching interpretation modes is difficult; the skills people use to understand the scientific realm as opposed to the literary world can often be entirely different. Ghosh says, “...we are engaged continuously in patterns of communication that are not linguistic: as, for example, when we try to interpret the nuances of a dog’s bark,” (*Derangement* 82). The challenge for authors is to fuse science and the arts so seamlessly that both interpretive processes coincide. In *Gun Island*, however, Ghosh only uses highly specialized language, when trying to present the information in a clear, simple manner. The jargon Piya uses is still inaccessible to readers without any scientific background. Also, Piya’s explanation of ecological events through the lens of science nothing to advance the plot, especially because Ghosh does not return to dead zones again in the novel. Compared to the previous example from *The Hungry Tide*, in which Piya talks about the dolphins, the disparity between the two writing styles is clear. In *The Hungry Tide*, Piya looks at the dolphins and uses her scientific knowledge to decode the present situation. Therefore, it is necessary for her to employ scientific language to understand what it is going on, as scientific processes are best described in scientific terms. The use of scientific language has the potential to fit into the novel; however, Ghosh does not utilize the scene enough to warrant its place in the novel. In this case, Piya comments on dead zones solely for the sake of discussing a phenomenon related to climate change. This type of scene does not fit into a *literary* novel about climate change; instead, it distracts from the effectiveness of the novel in conveying the catastrophic consequences of climate change. When Ghosh focuses too much on the details or on facts, his message about a global climate crisis is ironically lost.

Piya's contrived comments in the novel create tension for the field of climate science, in addition to distracting from the novel’s literary goals. At every opportunity, Piya offers scientific reasoning for strange climate events. Near the end of the novel, a chain of

unexpected incidents occur simultaneously; a swarm of birds appears, along with a large group of dolphins and whales and bioluminescence in the ocean. Immediately following the spectacle, Piya tries to make sense of it all. She remarks, “there’s a scientific explanation for everything that’s happened here. It was just a series of migratory patterns interacting in an unusual way... animal migrations are being hugely impacted by climate change...” (*Gun Island* 309). The role Piya plays here is to dispel any notions of the supernatural, to remind readers that unusual events have ties to climate change. However, the repetition of this behavior in the novel paints her as an overbearing, tiresome scientist. Having Piya represent this type of character is stereotypical and dangerous because climate scientists today often face backlash for being too forceful or enthusiastic. Furthermore, Ghosh sets up Piya for a gendered critique, as women are often treated more harshly for acting decisively than men are. Even with sound data, people struggle to accept the truth about climate change. If scientists constantly shove material to the forefront of all conversations; the problem worsens as non-experts stop listening. Piya's character is a disadvantage to the novel above all other things. Her scientific comments do not contribute to plot development and instead risk generating a negative impression of the scientific community.

Therefore, when Ghosh attempts to write a great climate change novel derived from the guidelines in *The Great Derangement*, his efforts fall flat. *Gun Island* does not tell the same story about climate change as *The Hungry Tide*. The ideas in *The Great Derangement* do not translate well in *Gun Island*, for the most part, because they are merely projected onto a narrative rather than emerging organically from the novel itself. Ghosh does not gracefully weave the theme of climate change throughout the novel, instead *Gun Island*, ironically, feels much more like a tidal wave of information. The areas in which *Gun Island* falls short are the same places in

which *The Hungry Tide* succeeds in the realm of the uncanny and the use of language, both ideas that discussed in *The Great Derangement* as essential components of climate-change fiction.

The Hungry Tide, The Great Derangement, and, Gun Island act as a “trilogy”, working together to show what a climate change novel looks like and where its roots come from. Analyzing the three works confirms that the best way to develop theoretical frameworks is when creative works inspire the theory, as *The Hungry Tide* proves to act as a foundation for *The Great Derangement*. Above all, Ghosh’s publications reveal how climate change is a globally interconnected phenomenon. Starting in Bengal, Amitav Ghosh led readers into the watery forests of the Sundarbans. The forests that remind me of the cypress tree groves at home. Ghosh proves that literature has an unparalleled capacity to translate emotion, thoughts, and images across all cultures, even those oceans apart. As it turns out, water is water. It brings both vitality and destruction in all places that it touches. Even more, people live with water in similar ways, showing that the earth—and the way people interact with nature— transcends place as land and people share an inextricable tie. Literature captures these nuances of interaction between the land and humans, revealing how global interconnectedness fosters action and change—the key to resolving the climate change crisis. Although my hometown is not explicitly represented in novels, I know that its essence lives in the pages of novels, like the ones Ghosh crafted. There is hope that my community will be preserved—if not physically—figuratively through novels, and that their pages may stir others in such a way that they are driven to action. There is a chance that I, along with many others, will be able to watch the sunset beyond the levee for many years to come. Especially in light of the current global medical crisis, Ghosh’s focus on a collective international community is paramount. The spread of COVID-19 is eerily resembles the

progression of climate change. COVID-19 confirms that our world is deeply tied together; the events in other countries are destined to impact the rest of the world in time. Although the effects of climate change are not as visible as the result of a global pandemic (yet), the global collective must work together, recognizing slow violence, to prevent climate change from inundating and freezing the entire world like COVID-19 has. Unlike with the virus in which a return to normalcy is possible, the world may never fully recover from climate change if we do not act.

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