Disaster Recovery and
Reconstruction on
the Gulf Coast

Mississippi
after Katrina

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For Amish

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Introduction

Hurricane Katrina, Biloxi, and the Past

When Hurricane Katrina made landfall on the Gulf Coast of the United States, media attention swirled around the storm and its impact. As it moved further inland and began to dissipate, focus narrowed to the city of New Orleans, Louisiana, its crumbling levees, flooding streets, and thousands trapped in their homes and in the Super Dome. This focus was not without reason: the situation cast a light on a long and complex history of race, class, and status in the United States and the American South, forcing the larger public into a conversation about racial inequality as tied to class status more broadly, but also to specific issues like police and military responses to Black communities in emergencies and disasters, the value Americans placed on predominantly Black cities and cultures, and the history of racial injustice in the South and America as a whole.

Katrina's effects also pushed forward a larger discussion of vulnerability, risk, and disasters, offering up a brutally clear example of how "natural disasters" were often not entirely natural, how even natural hazards like hurricanes were not solely responsible for the destruction they caused and how all too often human-made infrastructure and human decisions shaped how an event like a hurricane could cause death, disruption, and devastation in areas not in the direct impact of the hazard. The impact of Katrina on New Orleans could not be simply written off as a random and rarely powerful hurricane, but instead forced a conversation on the stability of infrastructure, emergency planning, and its accessibility to people outside of an idealized image of mainstream middle-class America, like people who lacked reliable transportation, who distrusted officials, whose perception of risk was different than emergency managers, who could not always afford to put gas in their car, who were seen by some as "other."

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While disaster researchers and activists had long been having this conversation, looking at the disproportionate effects of disasters on specific populations, within Katrina and New Orleans, this conversation shifted quickly and sharply into public discourse. Katrina's landfall forced public attention onto how social, cultural, political, economic, and historical factors shaped disasters, helped determine who might be affected and how, and unveiled the problems with considering disasters with natural hazards like hurricanes to be entirely "natural disasters." Katrina focused attention onto the inequalities and vulnerabilities that existed in New Orleans in particular.

But this book is not the story of New Orleans and Katrina.

While the levees were breaking and New Orleans was flooding, a large stretch of the Gulf Coast was reeling from Katrina's landfall. Towns throughout Louisiana, Mississippi, and Alabama were devastated by the storm surge and the wind. Homes were destroyed, leaving nothing but the so-called stairs to nowhere, concrete stairs that had been left by the storm when the home they led into was entirely destroyed. Businesses were flooded. People were injured. Lives were lost. While there was some national discussion of the larger destruction, it was largely overshadowed by the chilling images emerging from New Orleans.

This book is one piece of that larger story.

I wanted to know more of what recovery looked like for Biloxi. I wanted to know how power mattered before and after the storm. How inequality was made manifest not only in the path of the storm's destruction but also in the regrowth that emerged afterward. How pre-Katrina Biloxi shaped post-Katrina Biloxi.

This book is the story of Katrina's effects on Biloxi, of the city's history with hurricane strikes and recoveries, of the Biloxi that existed before, during, and after Katrina. Katrina did not affect all Biloxians in the same way, a situation rooted in histories of inequality, location, power, and work. Local Biloxians formed groups to support others through disaster recovery and the conflicts that arose between different populations in recovery. What such issues reveal to us is the importance of understanding and contextualizing not only disasters but also response, decision making, and long-term recovery processes in local history, culture, politics, and economics. Researchers have found similar issues elsewhere—in other areas affected by Katrina like New Orleans and in areas affected by other disasters around the world. Disaster research sits on the border of two broader sets of issues—how disasters are local and must be contextualized and how there are lessons to be drawn from them to apply to other disasters elsewhere and to broader questions about inequality, injustice, and contemporary problems.

Biloxi is both of these: an example of issues to learn from and apply elsewhere and also a uniquely local story. It is neither one of the small towns

devastated by Katrina nor the large city of New Orleans. The damage and recovery there were not only the product of the hazard of Katrina or the human-made decisions from the earlier decades. Biloxi is an important case study to better understand these complexities. It is a unique story in Katrina and disaster recovery, clearly rooted in a history of hazards, economics, and culture. It is a multifaceted story of different racial and ethnic groups, classes, genders, and identities. It is a story of how the decisions made in the aftermath of and recovery from one disaster shape the city that the next disaster hits. Ultimately this book clearly reveals how disasters are not isolated events, but processes rooted deep in the past and branching far into the future.

In this book I explore not only the impact of Katrina but also how pre-Katrina geography, culture, politics, and economics directly influenced the shape of the city of Biloxi that was hit by the storm, Biloxian's preparedness for Katrina, the effects of the hurricane, and recovery from the storm, including experience with a shared cultural knowledge of the history of hurricanes in the area, like Hurricane Camille (1969) and Hurricane Georges (1998). This book reveals more of the story of Biloxi, how hurricanes have shaped it, and the impact of Hurricane Katrina. Hurricanes like the Fort Lauderdale hurricane, Hurricane Betsy, and Hurricane Camille critically shape Biloxians' understandings of worst-case disaster scenarios, often pushing resident's actions in later storms in two directions—for some, it reinforces the idea that the next hurricane could not be as bad as these historic events and that they will be safe staying, while for others, it reinforces the idea that the next hurricane might be quite severe, encouraging them to evacuate, even if it is just an evacuation of their waterfront home to an area slightly more inland. On the other hand, milder hurricanes like Hurricane Georges can simultaneously reinforce ideas and understandings of what people and the city can withstand—for Georges specifically, reinforcing the idea that the coastal casinos are resistant to hurricanes. But more broadly this book also reveals the complexities of long-term disaster recovery, how recovery often takes years or decades, and how it shapes the impact of and recovery from the next disaster. This book is an effort to better understand long-term recovery, what shapes it, and how it is connected to people's and group's behaviors and actions that begin long before a hazard triggers a disaster.

To better understand these characteristics, I also explore how pre- and post-Katrina power differentials between different local residents and relevant non-residents, such as government officials and aid organizations, influenced recovery. In particular, I investigate how people and groups with more power were able to recover more easily from Katrina and how these more powerful individuals and groups determined recovery processes for the city as a whole, often prioritizing areas and residents that were less affected by the storm over neighborhoods inhabited by less powerful people and groups. Finally, I

examine how Biloxians engaged with different people, groups, and authorities to expand the purpose of preexisting organizations or form new organizations in an effort to influence the recovery process, share knowledge about Katrina and its effects, and initiate preparedness and mitigation efforts for future disasters. While having existing structures or access to power before Katrina was beneficial for people's recovery, in the absence of these for all Biloxians, some locals worked together to make their own recovery easier, as well as to help other residents around them. Such efforts were important for individuals and the larger groups and communities they were connected to, but also demonstrate a clear aspect of agency and the ways in which people work within the larger social, cultural, political, and economic power structures and inequalities that may affect themselves and others.

BILOXI AND KATRINA

The small coastal city of Biloxi is encircled by water and linked to its access to it. The city sits on the Mississippi Sound of the Gulf of Mexico and is divided by a range of other waterways like Back Bay, Mullet Lake, Big Lake, the Tchoutacabouffa River, and others. Not only do these waterways shape the city's topography, but they are interwoven with the city's people, their sense of identity, the economy, and the culture. Biloxians rely on the Gulf for both recreation and job opportunities, particularly in the long-standing seafood and tourism industries. Local residents themselves often spend significant amounts of time near or on the water, spending weekends and holidays on boats fishing or relaxing on the beach. People still fish not only for work or for fun but for food. Scattered piers are filled with recreational and work boats. While the seafood industry has changed over time, it is still very present culturally and economically in the town. Casinos now dot the shoreline where seafood processing plants once stood. Before Katrina these casinos were technically on water, legally kept to large shoreline barges that linked to parking, hotels, restaurants, and other non-gambling spaces on land. Within this complex history, many Biloxians still proudly identify with the city's coastal location, neighborhoods they were raised in or lived in before Katrina, and their own and their ancestor's racial, ethnic, national, socioeconomic, and other identities.

However, Biloxi's waterfront location also puts the city at risk from potential hurricane strikes. Historic storms like Hurricane Camille in 1969 and the Fort Lauderdale hurricane in 1947 have affected the city's development and influenced residents' beliefs and behaviors over time, including in Katrina. When Katrina itself made landfall on the American Gulf Coast on August 29, 2005, it caused serious destruction in Biloxi—residents lost

homes, schools, businesses, and friends and family members (to death and relocation). Biloxians were aware of Katrina's predicted landfall in the days and hours before the storm to varying degrees, but this history of hurricanes influenced some residents' decisions to remain in the city for the storm. For some residents, their own survival in previous hurricanes or their knowledge of the survival and safety of other people and spaces lead them to believe they would be safe to shelter in place for Hurricane Katrina, a theme I will explore later in this book. Beyond this, other pre-Katrina history, policies, and inequalities also influenced Biloxians' preparations for, coping with, and response to the disaster, a pattern that researchers expect when looking through the lens of vulnerability theory. Poorer and working-class residents were less able to prepare for or evacuate before the storm, if they chose to do so. Residents in higher risk neighborhoods like areas of East Biloxi found themselves affected more severely by the storm. Biloxians with less political and economic power struggled to keep their voices heard as city and other government officials laid the framework for recovery.

Much of this work describes the activities of people from Biloxi—the place most affected by the storm—such as residents of geographically high-risk areas and working-class people with limited funds and sociopolitical resources, residents who were less affected by the storm or more easily able to recover quickly from it, and residents who played a vital role in the city's recovery process. Building on this work, I systematically investigate how pre-Katrina geography, culture, politics, and economics directly influenced Biloxi and Biloxians' preparedness for, experiences in, and recovery from Katrina as revealed in interviews, participant observation, media coverage, and historical and government documents that demonstrate a shared cultural knowledge of a history of hurricanes in the area, not beginning or ending with Katrina.

Even in moments where larger systems are at work, where people's lives and experiences are influenced by power structures, inequalities, and their heightened risks, people still have some capacity to make their own decisions in disasters. These decisions are shaped by a range of factors in people's own lives, such as the larger culture and society they live in and the ongoing disaster. They often face limitations in their choices, but they do retain some agency and it is critical to acknowledge and understand that. Thus, throughout this work, I refer to people as "people affected by disasters" or "affectees" whenever possible rather than "victims" in an effort to include their agency. This agency may be overlooked or denied when the term "victim" is used, as "victim" can imply that a person was unable to make any decisions related to their preparedness for, experience during, or recovery process from a disaster. Looking at agency includes considering how pre-Katrina characteristics (e.g., socioeconomic class status, geographic location, race, and ethnicity) of

Biloxians shaped varying vulnerability, risks, and uncertainties related to the storm itself, as well as the recovery process, by affecting residents' available knowledge, resources, and social, cultural, political, and economic power. While some anthropological research has been done examining long-term recovery processes, particularly since Hurricane Katrina, long-term recovery is still largely an area lacking in data and analysis.[1]

TIME AND PERCEPTION

In examining the effects of Katrina, understanding how Biloxians perceived the storm, made decisions related to preparedness, response, and recovery, and, ultimately, took action is a critical component to better knowing what they thought and did. It is also a critical component in understanding what influenced Biloxians' decisions and actions, such as existing inequalities, access to power and resources, and the larger history of the city, it's residents, and the hurricanes that have affected Biloxi like the Fort Lauderdale hurricane (1947), Hurricane Betsy (1965), Hurricane Camille (1969), and Hurricane Georges (1998). I examine how the Fort Lauderdale hurricane, Hurricane Betsy, and Hurricane Camille stand out in the memories of many locals as worst-case scenarios. These severe storms remind residents of just how bad hurricane damage can be while simultaneously encouraging some residents to dismiss future storms, arguing that they could not possibly be as devastating as storms like Camille. I discuss how Hurricane Georges' mild effects on the city and its new barge-based casinos lent credence to the idea that these casinos were "hurricane-proof."

   Before a disaster, people must understand and believe warnings and, relatedly, must personalize it. In other words, they must believe the subject of the warning will happen and that it will happen *to them*.[2] People then must make a decision on how to act and respond to the warning. This response may not be the one that emergency managers or officials want them to make but may still seem reasonable and safe to the person making the decision.[3] This perception and internalization influenced people's beliefs and behaviors before, during, and after Katrina. Biloxi's hurricane history is a critical piece to the cultural-historical context of Hurricane Katrina. Anthropologists' use of ethnographic methods have enabled researchers to contextualize hazards and disasters as part of the larger historical, cultural, political, economic, and natural processes.[4] Disaster anthropologists have used discussions with local populations, participant observation in disasters and recovery processes, and surveys and interviews focused on disaster-related experiences to gather data on what beliefs, behaviors, structures, and processes determine the effects of and recovery from disasters. This work builds on that history and pushes it

into a long-term view, tying history long before Hurricane Katrina and recovery well after into part of the same narrative as Katrina itself.

Disasters, like Katrina, and recovery from them are more long-term processes than brief and isolated events. People's individual and shared memories of these hurricanes play an active role in choices they make about preparedness, response, recovery, and mitigation for future storms. The processes of disasters and recovery from them include both the positive memories Biloxi residents have regarding immediate aid received from individuals, churches, and private organizations and specific characteristics of the local culture, which emphasizes personal responsibility, religion, and private enterprise over government intervention. These characteristics shape Biloxians' beliefs, behaviors, and memories of disaster preparedness and recovery, leading to more positive memories of personal or private group aid over government aid. All of these memories, processes, and characteristics also connect to larger social, cultural, political, and economic issues—people's perceptions of, beliefs around, and behaviors in daily life are part of the history of the city, its people, and its hurricanes. These beliefs and behaviors tie into pre-Katrina vulnerability and political economy issues, as well as necessary recovery efforts like resuming children's schooling, re-establishing religious and social organizations, and transitioning from temporary to semi-permanent housing options. For example, residents who were poor or working class, who belonged to racial and ethnic minorities, who rented their homes, and who lived in poorer and more geographically at-risk neighborhoods suffered more during the storm and struggled more during recovery than other Biloxians. This disparity can be linked to several factors, including their vulnerability, location, lack of resources, and lack of political and economic power.

Variation in risk, vulnerability, and political and economic disparities in both pre- and post-Katrina emerged as the source for many problems related to long-term recovery post-Katrina. Each of these issues complicates discussions about the transformation of semi-permanent housing options into permanent housing. The desire of some more vulnerable residents to move away from higher risk areas that were more likely to be destroyed by future storms—and thus would be more difficult to insure—often conflicted with the agenda of more politically and economically powerful individuals and groups, some of whom wanted to exclude people from access to these more inland spaces for a variety of reasons ranging from wanting to maintain a lower population density in their areas, to maintain neighborhood identities as they existed before the storm or even, in some cases, to exclude specific types of people based on class, race, ethnicity, or occupation. Less powerful Biloxians also expressed frustrations with what they viewed as more powerful residents prioritizing recovery efforts in less affected but wealthier neighborhoods. These less powerful residents sometimes saw the recovery process as

ignoring or not listening to poorer, working, and lower-middle-class residents and racial and ethnic minorities. Residents' discussions of these non-housing recovery efforts reveal not only their frustrations with the recovery process but also their awareness of the role of pre-Katrina conflicts and disparities. Residents described how racism and classism affected recovery and rebuilding after Katrina. Examples included closing a historically Black school and priorities given to repairing roads in wealthy areas and rebuilding casinos instead of homes.

In addition to ongoing Katrina recovery, Biloxians found themselves dealing with the ongoing effects of the economic recession from 2007 to 2009 and the BP Deepwater Horizon Oil Spill in April 2010. While these events were quite different from hurricanes and their impacts, they nevertheless compounded the complications people were facing. The economic recession resulted in empty homes which were in a range of risk areas. These became both a potential solution to people looking for housing and a potential problem if they wanted to move into areas further inland than the empty homes. The recession also added economic strain to people who might be still dealing with both the costs of daily life and the costs of recovery. The BP Deepwater Horizon Oil Spill added further complications and costs, including confusion over the safety of seafood to eat, costs with lost work if tourism declined, and questions of how potential access to funding for the costs of the oil spill might overlap with needed costs for ongoing Katrina recovery. These complications echo other work on such overlapping events. Work like Zaman's on the 1991 cyclone in Bangladesh reveals how people are made vulnerable not only in the moment of disaster, but long before as wider influences push them into these high-risk areas.[5]

What then follows is a transition into long-term recovery since 2011, including the city's efforts to further develop and diversify its economy and discussions about these efforts taking place in the community and the media. There have also been campaigns designed to improve disaster preparedness and recovery led by grassroots and outside aid organizations. Even in 2019, physical recovery has remained an ongoing issue as road repair work in the hardest hit neighborhoods continue.

Vulnerability

Modern disaster social science research typically depicts disasters as the intersection of a vulnerable population and a hazard, which may be naturally occurring, artificial, or some combination of the two. In this perspective, disasters are no longer simply hazards that exist in the world but must instead involve vulnerable populations. This adds an element of social construction to all disasters, regardless of whether it is widely considered natural or

artificial.[6] Hilhorst and Bankoff argue that understanding vulnerability allows for "an appreciation of the ways in which human systems place people at risk in relation to each other and to their environment," while Steinberg suggests that "one must make a distinction between the risk of earthquakes and the risk of disaster."[7] The potential for vulnerability exists before disasters occur, arising out of pre-disaster characteristics.[8]

Vulnerability emerged as a rejection of dominant ideas that constructed natural disasters as random, unpredictable, and isolated entirely natural events that could be avoided or reduced using science and technology.[9] This vulnerability approach requires an investigation of broader social, cultural, historical, political, and economic processes and makes research into long-term pre- and post-disaster processes and local variation critical.[10] Disasters are multidimensional and come "into existence in both the material and the social worlds and, perhaps, in some hybrid space between them," developing as "longitudinal processes with diverse causes and consequences."[11] As cultural change alters people's conception of what the word disaster means, their understanding of what events and processes constitute disasters, appropriate preparations for and responses to disasters, and the best way to share information about disasters also changes.

Vulnerability theory allows researchers to examine the divergent effects of disasters on people with differential access to power, knowledge, and resources both before and after a disaster. As Bolin and Stanford posit, researchers must consider what social, political, and economic resources and power people can access and the larger context people, resources, and power exist in.[12] Within an anthropological approach, vulnerability is entrenched cultural, social, ideological, political, economic, and environmental systems. Disasters only emerge where hazards intersect with vulnerability in this context.[13] Many anthropologists and social scientists have examined the vulnerability of less powerful groups as they have explored how vulnerability is tied to a range of other groups and identities and how that vulnerability impacts how people are affected by disasters, how they recover from them, and how officials and people plan for disaster, including through categories like: gender;[14] sexual orientation and identity;[15] age;[16] location and housing type;[17] education;[18] ability, disability, and health issues;[19] socioeconomic class status;[20] race and ethnicity;[21] and through complex relationships between these identities and factors.[22] Knowing about this range of potential forms of vulnerability is crucial to understanding just how diversified studies of vulnerability and disasters can be, but also points to potential intersections across various areas that may exist, including the approach taken in this book.

While this book focuses more on issues related to socioeconomic class status than those other categories of consideration, that status intersects in complex ways with other issues like race, ethnicity, and gender. These

intersections are reflected throughout this story. It is also important to note that even those categories listed here are not the only opportunities for examining varied vulnerability, power, and inequality in disasters, nor should they be assumed to equate to identical forms of vulnerability across areas, time, and cultures. Although researchers may see particular groups as more likely to be vulnerable than others, often but not always groups who lack power and resources.[23] In addition, it is worth considering the nuances and variability of different populations and types of vulnerability within a larger community rather than assuming everyone involved is experiencing vulnerability in the same ways and contexts.[24] Even heeding these warnings, much of the research on vulnerability in the social sciences builds from initial definitions of the terms like that conceived by Wisner et al.: "The characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard" in the context of a combination of factors.[25]

In their study on the Northridge Earthquake, Bolin and Stanford note that "race/ethnicity may be linked to differences in losses experienced and the ability to acquire resources after disaster," at least in part due to how these characteristics are "associated with marginalization processes in specific contexts."[26] They describe how areas with dense populations of Latinos and African Americans were devastated by the earthquake, suffering some of the worst physical destruction with extensive building damage and subsequent housing losses.[27] These residents also faced problems because of their lack of power and resources, in part tied to how existence in multiple groups, as when Latino and African American areas of South Central Los Angeles were also populated by higher levels of poor and working-class residents, raised additional problems and complexities.[28] For such groups, these combined characteristics reinforce the lack of power and resources that contribute to their vulnerability, especially during disasters. Such research illustrates the need for researchers to consider a broader context and intersections of different identities. While being poor or working class is one characteristic some Biloxians faced before, during, and after Katrina, it is not the sum of their identity. Their race or ethnicity or their gender might intersect with that status to change their access to power and resources—for better or worse. But moreover, they each have other characteristics that make them real and complex people. Despite increased vulnerability in such situations, they also maintained their own ideas and behaviors in recovering from Katrina in a particular set of circumstances, culture, and history that must be looked at as a complex whole. As Fjord argues, "what anthropology brings to the study of disasters is a long tradition of denaturalizing these categories of personhood and their ramifications in social inequalities of all kinds."[29] Part of anthropology's success in studying vulnerability is the field's ability to examine

such classifications as distinct, fluid, and relative to local culture and society, rather than as naturally pre-determined universals.[30]

Lower socioeconomic class status may leave people unable to adequately prepare for or recover from disasters due to a lack of power and resources. This pre-disaster class status often results in poor and working-class residents, who have not stockpiled resources, being unable to cope with short-term post-disaster needs such as obtaining adequate food and water, finding temporary places to live, and gaining access to financial aid. Moreover, it also frequently leaves these residents unable to deal with long-term issues like home reconstruction, finding new jobs, or preparing themselves for secondary or future disasters (such as affording higher insurance rates in affected areas). Despite this, many people within lower socioeconomic class populations make use of the power and resources they do have to push back against their vulnerability, to help themselves and others, and to recover from disasters. It is not acceptable to simply assume that everyone who can be identified as having a lower socioeconomic class status is a passive agent who is always vulnerable in identical ways. This book, in part, works to navigate this complexity and demonstrate what steps people take to help themselves and others when excluded from access to other forms of power and resources.

The exclusion of specific people and groups associated with particular classes, races, ethnicities, genders, abilities, etc. is not acceptable simply because those people find ways to work with what they have. People who find themselves excluded from the power to transform legal codes tied to reconstruction, lacking the resources to rebuild and recover more easily, or lacking the voice to share their disaster story and its complex context to history and culture must be included in larger decisions; actions; and social, cultural, political, and economic processes both in disaster recovery and in daily life. Their efforts do not absolve the people who are excluding the less powerful from conversations and spaces. This book attempts to illustrate some of what people who may feel or be seen as less powerful do to help themselves and others. It does not attempt to excuse their exclusion from power and resources, nor does it attempt to offer up a reason for denying them access to even limited resources.

Research into vulnerability demonstrates the complexities to consider when looking at a case like post-Katrina Biloxi. Due to the important role of risks, uncertainties, political power, economic power, and related conflicts within particular cultural-historical contexts, vulnerability must be examined in situ, rather than assumed as a universal constant. As Hewitt notes, "vulnerability [describes] a *potential* state of affairs" (emphasis added).[31] Biloxi's circumstances as a city with a complex interweaving of people of different socioeconomic class statuses, occupations, races and ethnicities, and access to power and resources must be understood in this idea of a particular

cultural-historical context and the potential state of affairs. Examining this situation in the long term, both before and after the disaster, allows for us to better understand the realities of this potential. This book's exploration of Biloxi long before and well after Katrina allows for a better understanding of how that potential plays out in vulnerability in understanding the effects of pre-disaster status, identity, and power, where people were in the moments of the disaster, and how these issues shaped their recovery process.

Resilience

The idea of resilience came into disaster anthropological research from economics and ecology.[32] In disaster anthropology and social science research resilience has largely functioned as a reciprocal concept to vulnerability. Resilience itself is also ingrained in social and cultural systems.[33] Within these structures, vulnerability and resilience are inversely related, but increasing resilience is more complicated than simply decreasing vulnerability. Resilience depends on pre-disaster social, economic, and political conditions; post-disaster relief work; and long-term mitigation and recovery programs.[34] Thus, resilience can only be increased through a holistic consideration of local culture, history, politics, and economics.[35] And so to understand potential resilience, as with vulnerability, the larger and more complex picture in places like Biloxi must be examined.

Resilience, like vulnerability, focuses on capacity, but in this case the capacity of a person, group, or community to remain relatively intact in the face of disasters and disruptions, essentially to "bounce back," along with questions of how and why groups do or do not bounce back.[36] However, resilience does not always mean an exact return to a pre-disaster state as both locals and outsiders may use disasters and recovery processes as an opportunity to transform an area's pre-disaster state.[37] Resilience is also a complex process, with multiple people and groups interacting with each other, facing different issues, often with different levels of vulnerability or resilience.[38] Perhaps unsurprisingly, this is the case in Biloxi.

In Biloxi after Hurricane Katrina "resilience" meant different things to different people. Some residents found themselves returning, relatively undisrupted, to their pre-Katrina lives. Others found themselves facing more destruction, loss, and disruption, leaving them facing more extensive and longer recovery processes. Despite this, many of these residents used a variety of approaches to try to recover or "bounce back." They reached out to and worked with local pre-Katrina organizations, formed new organizations to meet their community's needs, reached out to external organizations for personal and group support, lived with and shared housing with friends and family members, went back to work, spoke out at public meetings and asked

direct questions, moved to other neighborhoods or cities, borrowed money from friends and family, built or rebuilt their own homes, and cooperated with others affected by the hurricane for support. All of these are steps that are, at least to some extent, only needed because of, or forced on people by, pre-Katrina identity, power, and resources, the storm itself, and the recovery process. However, all of these are also steps that reveal the adaptive capacity of local residents and their own forms of resilience.[39]

It is also important to remember that not all situations work out this way. A more holistic approach to these questions reveals the variations in power and varying political and economic conflicts that ultimately prove difficult to cope with pre-, peri-, and post-disaster.[40] These complexities cannot be ignored. Resilience is not uniform throughout a community, and a lack of resilience is not the fault of those affected by disasters. Again, context matters. Biloxi has a diverse mix of people, groups, and circumstances. There are people who respond in a wide variety of ways. There are a range of people and groups coping with a range of disparate levels of access to power and resources, often issues that are far beyond their control. As Barrios cautions, ignoring interpersonal relationships and political and economic power differentials in shaping recovery "amounts to a partial analysis that verges on victim-blaming when communities 'fail' to demonstrate resilience."[41]

Political Economy

In disaster research, anthropologists and social scientists use political economy to study how people's pre- and post-disaster differential access to political and economic power and related conflicts influence risk, vulnerability, and recovery processes. Groups who lack political and economic power historically may face different or greater risks and higher vulnerability long before specific hazards emerge through long-term processes of what Bolin and Stanford describe as "marginalization and exclusion," that Oliver-Smith describes as "inscribed through material practices (construction, urban planning, transportation), and Jones and Murphy note that vulnerability work links "the political economy of disaster with the daily lives of individuals, households, and communities who have experienced extreme events."[42] In this context, I insist that disasters and recovery therefore must be understood by looking at a long-term pre- and post-disaster context. Understanding the impact of and recovery process from Hurricane Katrina requires an understanding of the pre-Katrina patterns of differential access to political and economic power, as well as related resources.

Differential access to power shapes disaster recovery in two groups: (1) groups with less political and economic power before and after disasters face problems in recovery due to limited access to aid, restrictions on construction

and urban planning efforts, and a lack of financial resources and (2) groups with more power are able to shape the recovery process according to their own beliefs and desires.[43] Studying political economy in the recovery process reveals that varying political and economic conflicts may pre-date the disaster and emerge or re-emerge in new ways during recovery. It also demonstrates that a perceived lack of power may be contested before the disaster or in the recovery process as people with less power push for new organizations and structures to address their wants and needs. Biloxians who lacked political and economic power were keenly aware of the realities of their situations and many of the repercussions of it in their recovery processes. Not only did they deal with this on an individual level, but some also engaged with it on a larger level, working with and forming new groups to help themselves and others, publicly questioning their relative lack of voice compared to others with more power, and working together to recover. However, the reality of this context remains that access to political and economic power and resources directly shape people's access to what they need to recover, including financial aid and recovery opportunities.

Risk and Uncertainty

Within anthropological disaster research, risk and uncertainty are related to particular cultural-historical contexts, vulnerabilities and power differentials among local residents, and varied frequency and perceived severity of hazards. Perceptions of the importance of risks and uncertainties often vary between groups who prioritize different issues (e.g., housing, jobs, healthcare, infrastructure, churches, and schools). A risk and uncertainty approach emphasizes this diversity of priorities and the role specific priorities play in disasters and recovery efforts. This approach reveals how potential vulnerabilities and political economy issues relate to this varied prioritization, as "even when risks are perceived and experienced, some elements of a society still may not be in a position to take the necessary steps to mitigate or prevent the occurrence of a disaster" and thus may remain vulnerable.[44]

Moreover, a risk and uncertainty approach suggests that how people view or repress risk are culturally constructed ideas.[45] Related to these varied perceptions is the fact that different communities manage risk in a variety of ways, "through strategic and local networks and interactions."[46] In such a conception uncertainty is related but not identical to perceptions of risk. Chibnik explains that when facing risks, decision makers are able to "estimate the probabilities of different outcomes resulting from particular decisions," but when facing uncertainties, they are unable to estimate probabilities.[47] Most decision makers find themselves somewhere between these two extremes, with some "vague ideas about what the odds are of different outcomes" but

no concrete estimates.[48] People prioritize their decisions and needs based on their personal and cultural perceptions of various risks and uncertainties, including their pre-disaster identity, status, and circumstances.[49]

In Biloxi, with its history of repeated hurricane hits and threats, resident's perceptions of the risks and uncertainties of hurricanes are shaped by that history, their experiences with it, and the knowledge of that history they have gained from trusted sources like family members and friends. Once again, the long-term context of Hurricane Katrina must be considered rather than the short-term context of the storm's impact and immediate recovery period. Not only does this history affect the people of Biloxi's assessments of their own and their communities' risks and uncertainties but also the actions they take. In addition, decisions made about risk by outside groups like the state government, the federal government, and outside casino owners affect people in Biloxi, especially those who lack power and resources, a pattern also seen in other disasters.[50]

Cultural-Historical Context

It is important to note that particular cultural-historical contexts play a role in what people think about disasters and how they act in response to them. As Oliver-Smith describes, "many natural hazards are not sufficiently frequent or do not produce consistently frequent disasters, such that they might frequently not be perceived as threats."[51] People in particular contexts—unused to disasters or used to inconsistent effects or manifestations of disasters—may behave accordingly and dismiss potential threats. At the same time, people who are used to hazards acting a certain way or considering the most extreme events as less common may dismiss the odds of an event reaching its most extreme potential. In the context of repeated hurricane strikes over time there are both severe historic events and storms that cause less damage than expected, resulting in a potential conception of upcoming hurricanes as not likely to be one of the most severe historic hurricanes. Milder storms that cause less damage than expected reinforce this idea that those few severe historic events are less common. A disaster is not simply the intersection of a hazard and a vulnerable population but compounded by conflicting political and economic power in a particular cultural-historical context. This approach is an important part of anthropological disaster research as it allows researchers to contextualize disasters, people's beliefs about disasters, and how these beliefs influence people's behaviors before, during, and after disasters. It also allows researchers to consider the roles of varied vulnerability, risk and uncertainty, and political economy in disaster preparedness and recovery.[52]

Issues like varied vulnerability, risk and uncertainty, and political economy are themselves products of particular cultural-historical contexts and cannot be

fully explained outside of that context. The political economy approach alone cannot explain the disaster and its effects. Instead, as Smart and Smart argue, the disaster and its aftermath emerge from a particular cultural-historical context of previous disasters, political decisions about the significance of previous events, and an era of economic transition.[53] Contextualizing disasters and affected populations in particular cultural-historical contexts is critical to a full understanding of what happens in a given disaster and recovery processes, as well as how and why specific populations are affected differently. A population's cultural-historical context can help reveal the long-term processes that established modern populations' potential vulnerabilities, real and perceived risks and uncertainties, and political and economic power differentials and conflicts.

Applied Anthropology

Applied anthropologists use theoretical approaches like those discussed here and information generated from academic research with these approaches in applied disaster preparedness, response, and recovery work. Applied anthropological work on disasters, crises, and other emergencies demonstrates how anthropology is useful in disaster studies. Applied anthropologists can help improve inter- and intra-group communication, develop aid that meets the needs in particular of the vulnerable and less powerful, and access to knowledge and resources. Many of these efforts come from applied anthropologists' combined use of ethnographic methods and theoretical approaches like vulnerability and resilience, political economy, risk and uncertainty, and cultural-historical contexts. Applied anthropologists can combine ethnographic methods and theoretical approaches to reveal the ties between residents' beliefs and behaviors before, during, and after disasters. By understanding these ties applied anthropologists can assist people, governments, and organizations in efforts to provide more usable disaster preparedness, response, and recovery. Applied anthropologists' work helps make ongoing preparedness, response, and recovery efforts more approachable and useful for affected people and more successful for responders.

Beyond a better understanding of affected people's beliefs and behaviors, Kelman and Gaillard argue that a critical component to successful applied anthropological disaster work is research identifying and addressing root causes of disasters.[54] These root causes include issues such as vulnerability, inequality, and political and economic conflicts and power differentials. Using ethnographic methods and a combination of theoretical approaches, anthropologists studying disasters can gather better information on what factors contribute to disasters. They can also help develop ideas to increase access to aid and information, promote disaster preparedness, and mitigate inequality in the recovery process.

Following such applied anthropological approaches, my research demonstrates that there are significant issues with disaster preparedness and recovery in Biloxi. The root cause of these issues is not entirely Hurricane Katrina. The root causes of the problems faced in Biloxi's disaster recovery are largely vulnerability, political and economic power differentials and conflicts, and varied perceptions of and experiences with risks and uncertainties. In revealing these complexities through combined ethnographic methods and interrelated theoretical approaches, this work may be useful in efforts to reduce inequality, improve disaster aid access and distribution, and to understand what efforts do and do not work in particular cultural-historical contexts for further disaster applications elsewhere.

APPROACH

When anthropologists use political economy to study disasters, vulnerability theory may be interwoven with it. Characteristics that shape vulnerability by influencing people's "capacity to anticipate, cope with, resist and recover from the impact of a natural hazard" often include a lack of political and economic power tied to strategies used by the governing elite to maintain power.[55] Unequal access to political and economic power results in unequal opportunities and access to resources and knowledge.[56] People who are vulnerable or more likely to be vulnerable often lack political and economic power and the opportunities, resources, and knowledge that comes with that power. This lack of power may increase their vulnerability. Other research into Hurricane Katrina from a political economy approach has shown this pattern holds true for other people affected by Katrina.[57] This research shows that it holds true in Biloxi as well.

Using a political economy approach, I investigate groups in post-Katrina Biloxi who had more political and economic power both before and after the storm wielded that power to shape long-term city-wide recovery, both deliberately and accidentally controlling the recovery of less powerful people. I examine how differential power and related conflicts influenced the effects of the storm and shaped both short- and long-term recovery as groups who held power before the storm prioritized re-establishing a pre-Katrina status quo to maintain their power.

I use related risk and uncertainty approaches in post-Katrina Biloxi to explore how different groups experienced, prioritized, and perceived risks and uncertainties. I look at how these experiences, priorities, and perceptions were interwoven with vulnerability, access to political, economic, and cultural power, and conflicts between groups with varying amounts of power. I examine how the city's cultural-historical context was used by those in power

to promote their own agenda for recovery, referring to historic events of particular local importance to contextualize Katrina and its effects.

I explain how the results of each of these approaches and Biloxians' beliefs and behaviors were influenced by the area's specific cultural-historical context. This research generates new data on the effects of Katrina on Biloxi, the relationship between pre- and post-disaster issues, and how power differentials shape people's efforts to prepare for, cope with, and recover from disasters. It serves as a potential point of comparison to the effects of Katrina elsewhere and to other disasters. It constitutes an exploration of the place of vulnerability within a variety of broader contexts and its interactions with political economy and risk and uncertainty, therefore contributing to the ongoing development of anthropological disaster research.

I look at which residents were more vulnerable than others, particularly exploring how the characteristics of class status and geographic location are tied to vulnerability. I examine residents' perceptions of risks and uncertainties in Biloxi's particular cultural-historical context and how these perceptions influenced their behavior before, during, and after the storm. I look at the general cultural-historical context of Biloxi's history to better understand what elements influenced various residents' beliefs and behaviors. Ultimately, I use political economy to learn more about the political and economic power differentials and conflicts that existed in Biloxi before and after Katrina, how they vary between vulnerable populations, and what role they played in the long-term recovery process.

Interviews and surveys allow individuals to describe personal beliefs about disasters, culture, risk, uncertainty, and political and economic power structures and conflicts.[58] Participant observation reveals information on political and economic power differentials and conflicts, as well as how they affect preparedness and recovery efforts.[59] Media and historical data analysis expands on the role of cultural-historical context and potential influences on people's beliefs about and their behaviors before, during, and after disasters.[60]

In my research, interviews with individuals and participant observation revealed the characteristics of Biloxians that prompted vulnerability. It allowed residents to describe their views of risk and uncertainty and how those views differed from the perceptions of outsiders. Biloxians' experiences with and shared cultural knowledge of previous hurricanes influenced many residents' decisions about evacuations, even when at odds with expert or outsider opinions. Participant observation exposed political and economic power differentials and conflicts that pre-dated the storm, shaped the effects of the storm, and played a critical role in the recovery process. Such information was described in a few interviews, but participant observation yielded the clearest data on it. Participant observation, interviews, media analysis, and historical document analysis yielded data about the city's and its residents'

culture and history, as well as how this context influenced preparedness for, the effects of, and recovery from Katrina.

I used several data collection methods to construct a more complete picture of pre-Katrina issues, the effects of Katrina, post-Katrina recovery, and the ways each of these interact. I gathered data through participant observation, semi-structured interviews, surveys, historical and media document research, and transcript review. I analyzed the visual data that I recorded during my fieldwork, along with visual data residents shared with me and recorded by various media sources. Combined, all of this data allowed me to investigate Biloxi and its residents before, during, and after Katrina. The majority of my fieldwork for this project was completed in Biloxi between June 2010 and May 2011, although I also drew on previous fieldwork conducted between May and August 2006.

Participant observation, importantly, involves both observation and participation. It is, as many anthropologists will tell you, not a passive method. While living in Biloxi in 2006 and again in 2010 and 2011, I participated in the daily life of the city through activities like attending church and shopping for groceries and seafood. I also attended meetings that were open to the public, including meetings for the Biloxi City Council, wards, city planning, the school board, and recovery planning. I participated in special events held in the city, such as seafood festivals, Christmas fairs, and community classes such as net making that were designed to encourage residents' interest in the seafood industry. I also participated in events specifically targeted at commemorating or discussing disasters (e.g., events for the fifth anniversary of Katrina and informational sessions about the BP Deepwater Horizon Oil Spill). I attended local Mardi Gras balls, parades, and food pantries available to residents affected by the oil spill. Residents regularly engaged with me in extensive open-ended conversations providing additional information about topics covered in interviews. While living on the coast, I worked and resided primarily in Biloxi, but I also traveled to several nearby cities, such as Ocean Springs, Gulfport, D'Iberville, and Bay St. Louis. Throughout all of this I spoke to hundreds of people about their perceptions of things—the city, their communities, their lives, recovery, other current or historic events. I was always clear and upfront about my place as a researcher and people were often willing to share parts of their lives and their stories with me.

I also conducted seventeen extensive in-depth semi-structured interviews and surveys with residents of Biloxi. These interviews varied in length, but all included information on the participants' knowledge of Biloxi and its history with hurricanes, experiences in and knowledge of previous hurricanes, and experiences in preparing for, living through, and recovering from Katrina (in the short-term and long-term periods).

Many of these more extensive interviews appear in pieces of stories throughout this narrative. Interviewees in these more extensive interviews gave oral permission for me to record their words and stories in handwritten notes and, for some, with a digital recording. I have used pseudonyms throughout for each of these people. While some did not care if their names were used or not, I have used false names following the protocols put in place by myself and my university. For others, they said that being able to use a false name made them feel more comfortable telling their stories.

Wesley decided to stay in his home for the storm, vividly sharing what he remembered most: "The noise was terrifying . . . the levels . . . it's an indescribable sound."

Pearl evacuated for the hurricane but returned to the area as quickly as she could. Her rental home had been destroyed by the hurricane, and she found her work changing as she looked to help others also facing complications in recovery. While she had not been on the coast for the storm on her return, she remembered the smell and strove to share what it was like.

Andrew had evacuated as well for the storm, but also found himself returning quickly, ultimately making repeated trips in and out of the area to bring supplies into people who needed them.

Abigail evacuated north in advance of the storm, taking advantage of having family off of the coast. When she returned to the area, she found her office job transforming around her as they tried to help people affected by the storm, and she found herself dealing with the struggle to find new housing to replace her destroyed home, eventually moving to an area further inland and with higher elevation. She recounted the healing she felt from being about to work at a temporary medical camp, being able to "give back."

Bridgette had worked within the school system before retiring after the storm. She evacuated, in large part to keep her ailing sister, who she cared for, safe.

Annabelle who also worked within the school system rode the storm out at a shelter that she helped run during the storm. For her, leaving was not an option; she was needed there to help others in the shelter.

Margie rode the storm out with members of her extended family up the street from where her own home was. They figured they would be alright for Katrina because they had been for Camille. As the water rose around them, they moved into other houses nearby with other families, trying to stay safe.

Nina and her husband also did not think the storm would be too bad. Her husband stayed at their home for landfall so that he would be there to take care of whatever minor damage their property received. Nina stayed with members of her extended family in their nearby home. As she rode the storm out with them, he called with periodic updates about the rising water before they lost touch for two days. In the aftermath of the storm, they bought their

own travel trailer and began repairing their home with help from friends, family, co-workers, and volunteers who had come to the coast to help.

Ginger remained in her home with her husband for the storm. She had childhood memories of the 1947 Fort Lauderdale hurricane and remembered her parents being affected by Hurricane Camille. She emphasized that at no point did she consider evacuating for Katrina. She shared how, "I thought . . . you don't evacuate for storms." She shared dozens of photos with me of the storm, its aftermath, and its recovery.

Eva remained in the area with her extended family in family homes. She recounted her brothers' insistence that they be there to clean up as soon as possible, something she identified as a common attitude for men on the coast. She also shared the steps she and her family took to prepare, going beyond basic supplies and getting things like walkie-talkies for family members and neighbors so people could stay in touch during and after the storm without phone access.

Edward remembered Camille as well from his childhood. He and his wife decided to stay for Katrina. His work within the school system made the need to reopen schools clear to him from the beginning of the relief and recovery process.

Dorothy shared different stories of Camille, noting how her family had experienced a much calmer storm and recovery than her husband's family had. Despite knowing both sides of how the hurricane experience could be, Dorothy was needed to work at a shelter during the storm. She brought her husband with her to the shelter. Her memories of the storm and recovery also reflect her memories of earlier storms.

Erica's family lived in what had been her grandparent's home. Since they had been okay in Camille, she and her family felt safe staying for Katrina, particularly when combined with their concerns about the traffic on the highways trying to get off of the coast. She severely cut her hand during the storm when a window blew out leaving her, as she put it, "pretty useless" for the rest of the storm. Her immediate post-storm trip to the hospital with a rescue team to receive medical attention gave her a startling look at the devastation brought by Katrina.

Many volunteers shared images of their homes and the city from during and immediately after the storm with me during these interviews and at other times during my fieldwork. These images helped them share their stories with me and gave me a better sense of what they had seen as they stayed and returned and the extent of disruption of their homes and sense of place.

The survey I used in my research was, in part, developed from ones administered in post-Katrina New Orleans by Jan Rychtář, Eric C. Jones, Rick L. Bunch, and Robert P. Gove.[61] I gathered data from interviews conducted by other researchers and the media, collected by online organizations and

university archives like the University of Southern Mississippi's Katrina Research Center. These resources gave me access to residents who were unavailable to me due to issues like relocation or language barriers.

I analyzed historical and media documents that discussed the city, its residents, and hurricane landfalls from 1699 to 2019. Documents produced by the city included publicly distributed fliers, forms, and notes related to the state of the city, disaster preparedness, Hurricane Katrina, and relief and recovery efforts. Census data provided important background information, documenting the changes in population before and after the storm and organizing residents' demographic details such as age, race, ethnicity, and gender. Media research included mostly local news coverage about Katrina and the recovery process and came primarily from the town's newspaper, the *Sun Herald*. Many researchers have discussed how Katrina affected New Orleans and the surrounding parish area, and rightfully so.[62] Others, albeit a smaller group of researchers—myself included—have explored the effects of the storm outside of New Orleans, ranging from nearby bayou communities in the surrounding parish to other towns scattered along the coast.[63] I also cite their work to better contextualize and expand on this discussion, including research inside and outside of anthropology.

Many disaster anthropologists pull from a variety of theoretical and conceptual approaches in their analyses, an opportunity that helps expand the reach of the research, particularly when combined with multiple methodological approaches.[64] The overlap between these theoretical approaches helps strengthen each of them and the analysis as a whole. Here I suggest that political and economic power differentials and strategies by the elite to maintain that power, cultural variation of perceptions of risk and uncertainty, and characteristics that shape vulnerability continue to be problems in the United States, furthering anthropological efforts to develop a more holistic view of disasters. I further examine how modern political and economic power structures are part of both Biloxi's pre-disaster past and post-disaster recovery processes. When incorporated with ethnographic methods this work contributes to ongoing attempts by disaster anthropologists to encourage a broader consideration of the role cultural, political, and economic processes play in shaping disaster preparedness and recovery, particularly in long-term recovery.[65]

While combining and drawing from such a range of methods, theories, and conceptual approaches is complex, it is also critical to examining long-term disaster processes which are, themselves, necessary to developing a better understanding of disaster preparedness, response, and recovery. Hurricane Katrina and its effects on cities like Biloxi, Mississippi, are not isolated short-term events. They must be contextualized in time and space. This work is an effort to do just that: to understand how people perceived hurricanes,

evacuation, and recovery in long before a hurricane hits; to explore how pre-existing patterns of power and inequality shaped recovery years after the hurricane itself had dissipated; and how steps taken to recover from one disaster may influence the conditions of the next.

WHY NOW?

While some media coverage proclaims Biloxi to be "roaring back,"[66] the reality is more complex. What Cutter et al. deem the "recovery divide"[67] is real and present on the ground here in Biloxi, rooted in pre-Katrina history, and tied to Biloxians' perceptions of their own recovery, the recovery of their city and communities, and the recovery of others. The $125 billion in losses suffered in Katrina across the Gulf Coast were not entirely evenly distributed. And attempts to get and distribute aid, as well as to repair parts of the city with that aid, do not always run smoothly. Nearing the fifteenth anniversary of the storm, it is important to understand what has happened and been learned so far, but it is also important to remember recovery is ongoing and will affect the Biloxi that future hurricanes hit, as well as Biloxians' perceptions of those hurricanes.

Starting in 2018, Federal Emergency Management Agency (FEMA) began deobligating and denying funds for ongoing recovery projects, specifically PA-04-MS-1604-PW-11253 (PW-11253) "an improved project comprising 14 areas throughout the City of Biloxi which includes the improvement and realignment of the water distribution and sewage collection systems throughout the City" that were approved by FEMA "nearly ten years ago to help the city of Biloxi recover from the devastation caused by Hurricane Katrina."[68] In their appeal for the funds, the city clarifies that the state of Mississippi is backing their claims and supports their appeal. Writing on behalf of the city, Wicker et al. "support MEMA's recommendation that FEMA 'exercise its authority to approve the total reasonable PM/RPR and special services costs required to complete the underlying work' necessary to finish this vital infrastructure restoration project," work that remains ongoing over fourteen years after Katrina's landfall.[69] They argue that FEMA is "statutorily prohibited" from not providing the funding.[70] Current mayor of Biloxi, Andrew "FoFo" Gilich, noted in an email from the city ("Bmail") that "we are appreciative of the tremendous amount of support from FEMA in our rebuilding efforts, but we also expect fair treatment. The senators, the representatives, and the state of Mississippi all now agree: This is wrong and it needs to be made right."[71]

Recovery from Hurricane Katrina in Biloxi is not done. There are potential future implications for disaster preparedness, response, and recovery build off of the effects of Katrina, as well as from people's perceptions of those

events and how their perceptions of and responses to disasters shaped their behavior in later events. In particular, people's experiences with Katrina and the recovery process will influence their behavior going forward, both in daily life and in future disasters by shaping their perceptions of their own and other's risk, uncertainty, vulnerability, identity, status, and recovery which, in turn, affects their decision making and actions. Local grassroots organizations that have flourished since Hurricane Katrina continue to work to help other residents. Despite this local effort, there are real implications for future decision making and actions of people who were or were not helped or listened to by authority figures inside and outside the community. Ultimately, people's experiences and encourage preparedness, response, and recovery efforts must be contextualized in a way that encapsulate these experiences in order for people to work with officials and respond as best as possible.

This is that story in Biloxi, Mississippi.

NOTES

1. E.g., Button, *Disaster Culture*; Lauer, "Oral Traditions or Situated Practices?"
2. Ibid.
3. Ibid.
4. Oliver-Smith, "Anthropological Research."
5. Zaman, "Vulnerability, Disaster, and Survival."
6. Cannon, "Vulnerability."
7. Hilhorst and Bankoff, "Introduction," 2; Steinberg, *Acts of God*, 42.
8. Hewitt, *Regions of Risk*, 26.
9. Hewitt, "The Idea of Calamity in a Technocratic Age."
10. Hewitt, "Disasters in 'Development' Contexts"; Jackson "Un/natural Disasters"; Jones and Murphy, "Linking Broad-Scale Political Economic Contexts."
11. Oliver-Smith, "Theorizing Disasters," 24; Stonich, "International Tourism," 49.
12. Bolin and Stanford, "Constructing Vulnerability," 90.
13. Oliver-Smith, "Theorizing Disasters," 28; see also Hewitt, "The Idea of Calamity in a Technocratic Age"; Oliver-Smith, "What is a Disaster"; Hoffman and Oliver-Smith, "Anthropology and the Angry Earth"; Wisner et al., *At Risk*; Stonich, "International Tourism."
14. E.g., Pincha and Krishna, "Aravanis"; Juran, "The Gendered Nature of Disasters"; Bradshaw and Fordham, "Double Disaster"; Juran and Trivedi, "Women, Gender Norms"; Gaillard et al., "Beyond Men and Women."
15. E.g., Dominey-Howes, Gorman-Murray, and McKinnon, "Queering Disasters"; Yamashita, Gomez, and Dombroski, "Segregation, Exclusion and LGBT People"; Gorman-Murray et al., "Listening and Learning."
16. E.g., Peek, "Children and Disasters"; Masten and Osofsky, "Disasters and Their Impact on Child Development"; Fothergill and Peek, *Children of Katrina*;

Meyer, "Elderly Perceptions of Social Capital"; Rafiey et al., "Are Older People More Vulnerable."

17. E.g., Birkmann and Fernando, "Measuring Revealed and Emergent Vulnerabilities"; Collins and Bolin, "Situating Hazard Vulnerability"; Bolin et al., "Double Exposure in the Sunbelt."

18. E.g., Fussell, Sastry, and VanLandingham, "Race, Socioeconomic Status, and Return."

19. E.g., Peek and Stough, "Children With Disabilities"; Gnanapragasam et al., "Addressing Non-Communicable Diseases"; Gorji et al., "Cancer Patients"; Ton et al., "Expanding the Capabilities."

20. E.g., Oliver-Smith, "Peru's Five Hundred Year Earthquake"; Zaman, "Vulnerability, Disaster, and Survival"; Alexander, "The Resilience of Vulnerable Households"; Button and Oliver-Smith, "Disaster, Displacement, and Employment"; Nelson and Finan, "Weak Winters."

21. E.g., Scheper-Hughes, "Katrina"; Bolin and Stanford, *The Northridge Earthquake*; Underhill, "The Invisible Toll of Katrina"; Brown-Jeffy and Kroll Smith, "Recovering Inequality"; Hoffman, "The Monster and the Mother."

22. E.g., Cutter et al., "The Long Road Home"; Finch, Emrich, and Cutter, "Disaster Disparities"; Olofsson and Öhman, "Vulnerability, Values and Heterogeneity"; Graif, "(Un)natural Disaster."

23. E.g., Cardona, "The Need for Rethinking the Concepts of Vulnerability and Risk from a Holistic Perspective"; Lavell, "The Lower Lempa River Valley, El Salvador."

24. Marino and Faas, "Is Vulnerability An Outdated Concept?"

25. Wisner et al., *At Risk*, 11.

26. Bolin and Stanford, *The Northridge Earthquake*, 49.

27. Ibid., 74.

28. Ibid.

29. Fjord, "Making and Unmaking," 15.

30. Ibid.

31. Hewitt, *Regions of Risk*, 27.

32. Oliver-Smith, "Disaster Risk Reduction and Climate Change Adaptation"; Barrios, "'Here, I'm Not at Ease.'"

33. Oliver-Smith, "Disaster Risk Reduction and Climate Change Adaptation," 277; Ilesanmi, "Social Vulnerability and Resilience," 342.

34. Tobin and Whiteford, "Community Resilience and Volcano Hazard," 29.

35. Ibid., 32; Oliver-Smith, "Disaster Risk Reduction and Climate Change Adaptation," 277; Zolli and Healy, *Resilience*, 264.

36. Zolli and Healy, *Resilience*, 7; Kar, "Disaster Risk Reduction," 136; Oliver-Smith, "Disaster Risk Reduction and Climate Change Adaptation"; Holling and Meffe, "Command and Control"; Jaime-Rivertón and Pool, "The Impact of Volcanic Hazards."

37. E.g., Lewis and Kelman, "Places, People and Perpetuity"; Zolli and Healy, *Resilience*; Barrios, "'Here, I'm Not at Ease.'"

38. E.g. Aguirre, "On the Concept of Resilience."

39. E.g., Alexander, "The Resilience of Vulnerable Households."
40. E.g., Barrios, "'Here, I'm Not at Ease.'"
41. Ibid., 346.
42. Bolin and Stanford, "Constructing Vulnerability," 89. Oliver-Smith, "Theorizing Disasters," 36. E.g., Williams, "'The Dam is Becoming Dangerous.'"
43. E.g., Button, "Popular Media Reframing"; Brown, "Madagascar's Cyclone Vulnerability"; Brown-Jeffy and Kroll Smith, "Recovering Inequality"; Rajasingham-Senanayake, "Transnational Peace Building and Conflict"; Williams, "'The Dam is Becoming Dangerous'"; Brown-Jeffy and Kroll Smith, "Recovering Inequality."
44. Oliver-Smith, "Theorizing Disasters," 42.
45. Paine, "Danger and the No-Risk Thesis," 68.
46. Alexander, "The Resilience of Vulnerable Households," 97.
47. Chibnik, *Anthropology, Economics, and Choice*, 61.
48. Button, *Disaster Culture*.
49. Guillette, "The Foul Oder of Capital."
50. Ibid.
51. Oliver-Smith, "Theorizing Disasters," 42.
52. E.g., Wallace, *Tornado in Worcester*; Fleuret, "Indigenous Responses"; Oliver-Smith, "Peru's Five Hundred Year Earthquake"; Hoffman, "The Worst of Times, the Best of Times"; García-Acosta, "Historical Disaster Research"; Stonich, "International Tourism"; Smart and Smart, "Learning from Disaster"; Button, *Disaster Culture*.
53. Ibid.
54. Kelman and Gaillard, "Challenges and Opportunities."
55. Wisner et al., *At Risk*, 11.
56. Martínez, "Thirty Cans of Beef Stew and a Thong."
57. E.g., Oliver-Smith, "Anthropology and the Political Economy of Disasters"; Underhill, "The Invisible Toll of Katrina"; Maldonado, "A Multiple Knowledge Approach."
58. E.g., Bolin and Stanford, "Constructing Vulnerability"; Zaman, "Vulnerability, Disaster, and Survival"; Oliver-Smith, "Theorizing Disasters"; Guillette, "The Foul Oder of Capital"; Button, *Disaster Culture*.
59. E.g., Brown-Jeffy and Kroll Smith, "Recovering Inequality"; Trivedi, "'Hurricanes Did Not Just Start Happening'"; Williams, "'The Dam is Becoming Dangerous.'"
60. E.g., Oliver-Smith, "Peru's Five Hundred Year Earthquake"; Smart and Smart, "Learning from Disaster."
61. Rychtář et al., "Calculating Edge Length Bias."
62. E.g., Colten, "Vulnerability and Place"; Tierney and Bevc, "Disaster as War"; Yarnal, "Vulnerability and All That Jazz"; Aldrich and Crook, "Strong Civil Society"; Robbie, "Touring Katrina"; Hawkins and Maurer, "Bonding, Bridging and Linking."
63. E.g., Ethridge, "Bearing Witness"; Hassett and Handley, "Hurricane Katrina"; Ingles and McIlvaine-Newsad, "Any Port in the Storm"; Krol et al., "A Mobile Medical Care Approach"; Galea et al., "Financial and Social Circumstances"; Cutter et al., *Katrina and the Forgotten Coast of Mississippi*; Browne, *Standing in the Need*.

64. E.g., Fjord and Manderson using both vulnerability and political economy in "Anthropological Perspectives."

65. Oliver-Smith, "Anthropological Research"; Dyer, "Punctuated Entropy as Culture-Induced Change."

66. Jervis, "Biloxi 'Rebounding.'"

67. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*.

68. Gavin, "Letter"; Wicker et al., "Letter to Daniel Kaniewski."

69. Wicker et al., "Letter to Daniel Kaniewski."

70. City of Biloxi, "Congressional Delegation"; Wicker et al., "Letter to Daniel Kaniewski."

71. City of Biloxi, "Congressional Delegation."

Chapter 1

Setting the Scene

Biloxi is a small coastal city on the Mississippi Sound of the Gulf of Mexico. While the city dates its official history back to its founding by the French in 1699, there were people in the area before this. A Native American group, the Biloxi, pre-dated the founding of the city. The city by this name was founded in what is now Ocean Springs, Mississippi, to the east at Fort Maurepas and is sometimes referred to as "Old Biloxi."[1] References to the area were also noted as "Bylocchy" or "Bilocchy" in writings by Pierre Le Moyne d'Iberville and others and some confusion remains over its proper etymology.[2]

The modern city is rooted on a long waterfront of artificial sand beaches and heritage oaks. Recreational and fishing boats fill local harbors alongside the distinct outline of the long arms of shrimping boats and shorelines are covered in scattered piers. The large seafood processing and canning factories that once marked the landscape of the city's peninsula have been replaced by casinos whose neon lights reflect nightly on the water. Typically starting in January or February, weeks before Mardi Gras parades fill the streets with plastic beads and casino-sponsored doubloons. You can duck into restaurants anytime for gumbo or *bánh mí*, Vietnamese sandwiches that sometimes blur the line to the other local sandwich, the po'boy, but you usually have to wait for local fairs and festivals for *pusharatas*, small deep-fried fritters with fruit, nuts, and a thick glaze made mostly by women of the Ladies Auxiliary of the Slavonian Lodge. For years larger historic homes with large front porches gave way to shotgun houses, representing a distinct coastal blend of architecture that valued air flow in homes designed before or without central air conditioning and porch space. You can still find some places with shrimping and fishing nets hanging in trees for repairs, a clear marker of the interweaving of the seafood industry and local space.

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Even years after Hurricane Katrina, the city remains marked by the storm with damaged trees, vacant lots where homes once stood, and Mississippi Emergency Management Agency (MEMA) cottages (also known as "Katrina cottages"). While new construction and repairs have happened throughout the city—for homes, businesses, churches, and museums—gaps remain a visible scar in some neighborhoods. Part of the damage caused by Katrina and other hurricanes, of course, is also tied to the city's place on the waterfront in an area regularly affected by hurricanes. Despite these moments of destruction, many Biloxians still proudly identify with the city's coastal location. For these Biloxians, this coastal pride intertwines with identities they have, raised in specific neighborhoods, their own status, their ancestor's class, racial, ethnic, and national identities.

The city's history plays an important role in establishing the cultural-historical context of Katrina and residents' pre- and post-Katrina vulnerability, real and imagined risks and uncertainties, and political and economic power differentials and conflicts. Biloxians' experiences with hurricanes shaped their perception of the risks and uncertainties of future storms and the actions they took in response. The rise of the city's seafood industry transformed the population of the area, inviting in a series of different immigrant groups. Where they settled shaped the identities of neighborhoods. A transforming economy and related class status of local residents shaped potential vulnerability and political and economic power differentials. These differentials were also interwoven with race, ethnicity, and gender, as well as geographical location. People's risks and vulnerabilities were influenced not only by who they were but who they were relative to others and where they lived and worked. Biloxi's modern economy and population are firmly rooted in the city's past. Understanding the pre-Katrina influences on the different forms of potential and real vulnerability, the effects of the storm, and the recovery process requires starting with pre-Katrina Biloxi.

GEOGRAPHY

The city of Biloxi includes both a peninsula and a larger mainland area (see figure 1.1). The peninsula is bordered by the Mississippi Sound of the Gulf (or "the Gulf") to the south and by the Bay of Biloxi (or "Back Bay") and other waterways to the north. Back Bay and the waterways that connect to it nearly divide the city, leaving a marked visual distinction between waterfront properties on either side of the peninsula and properties that sit further inland (see figure 1.1). This separation also delineates areas of social and physical vulnerability, marking which areas are at more or less likely to be damaged or destroyed in a hurricane, where populations with less power live, what
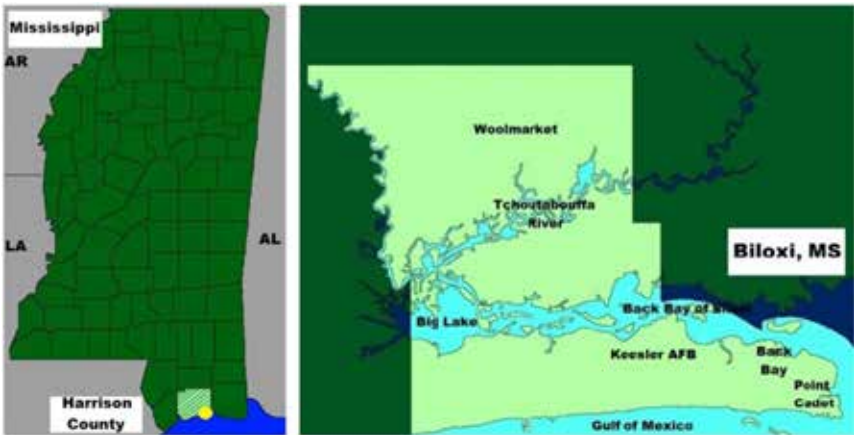
Figure 1.1 Map of Harrison County and Biloxi, Mississippi. *Source*: Created by Jennifer Trivedi.

regions will be rebuilt at different paces after a disaster. Areas on the peninsula and directly on the Gulf or Back Bay are at a higher risk of destruction from storm surges in hurricanes and often take the brunt of the hurricane's impact. These areas are often populated by a more racially, ethnically, and financially diverse population, often resulting in a greater variety of forms of risk, vulnerability, and resilience. Areas further inland in the city face wind, rain, and even some flooding damage from smaller waterways in hurricanes. These areas tend to be somewhat less racially, ethnically, and financially diverse. While their forms of risk, vulnerability, and resilience can also vary there tends to be a bit more of a consistent pattern to it.

Several other waterways transect parts of the city including Big Lake and the Tchoutacabouffa River, and these water systems spread flood risks out to other parts of the city. Lakes, rivers, and other waterways may overfill and flood during extensive rainy periods or hurricanes. Low lying areas bordering the Mississippi Sound and Back Bay are similarly prone to flooding. Many local residents were aware of these flooding risks and contextualized these risks with references to previous hurricanes and floods to gauge their own risk in storms. They knew where the water came to regularly and they knew where the water came during major hurricanes. Biloxians, like so many other people, know their local environment.

Biloxians also, unsurprisingly, know their built environment. Those I spoke with in 2006, 2010, and 2011 repeatedly made references to specific neighborhoods in Biloxi. Most frequently cited were older areas such as Point Cadet ("the Point"), Back Bay, and East Biloxi, all of which sit near the east end of the peninsula. Keesler Air Force Base (AFB) is also located

on the peninsula, but further westward than neighborhoods like the Point.
The more recently acquired neighborhood of Woolmarket was also widely
discussed in contrast with other areas. Woolmarket is located in the mainland
area of the city (see figure 1.1). It was established in the 1940s and 1950s,
but not annexed by Biloxi until 1999. At times it was distinguished as being
not fully part of Biloxi socially or culturally, even by its own residents.
These neighborhoods were ones referenced frequently by people I spoke to
in interviews and in casual conversations and by people speaking at public
meetings and events. I introduce them here because I think that part of telling
the story of Biloxi is referencing the ways in which people there describe it,
including the neighborhoods they identify as key to the area. This pattern of
distinct neighborhood identity is important to understanding how Biloxians
perceive themselves as members of communities of varying sizes, but also
to understanding how Biloxians perceive their potential risks, uncertainties,
and recovery options. For residents in neighborhoods on the peninsula, hur-
ricane risks and uncertainties are shaped in part by the threat of a direct hit
and associated storm surge, while residents in more inland neighborhoods are
often more concerned with localized flooding, rain, and wind.

The discussion of neighborhood boundaries in Biloxi is also framed by
how the geopolitical boundaries of these neighborhoods have changed over
time and are often used differently by insiders and outsiders or residents who
have lived their entire lives there or moved in more recently. While residents
may draw different specific boundaries around neighborhoods, most have
a general idea where such neighborhoods exist; Biloxians would not, for
example, name more northern inland areas as part of East Biloxi.[3] Despite
this confusion, Biloxians' personal identification with neighborhoods would
ultimately play a role in their perceptions of the recovery process. The Point
and Back Bay in particular are used to refer to much smaller areas by insiders
(e.g., people who were raised in Biloxi, particularly those alive prior to 1980)
than by outsiders (e.g., researchers or residents who moved to the area after
the mid-1990s). Nevertheless, neighborhoods remained strong identity mark-
ers for many people who identified themselves as being from neighborhoods
they lived as children or prior to Katrina, even if they no longer lived there
after the storm. When referring to different areas, I use local terms as often
as possible although there may be some disagreement even at the local level
about where the boundaries between neighborhoods are (see figure 1.1).[4]

Indigenous History

Biloxi's history is tied to a range of indigenous and colonial groups, an all
too common pattern throughout the United States. Long before French colo-
nization, artifacts recovered in the area that date to the Paleolithic period (2.5

million years ago to approximately 10,000 BCE) hint at a much longer history of people inhabiting the Mississippi Gulf Coast.[5] Multiple sites dating to the Mississippian Period (1000 CE to 1700 CE) are scattered across the Gulf Coast.[6] Writings of colonizers earlier on in Mississippi's recorded history rarely mention the Biloxi.[7] Despite this, the city does get its name from a precolonial Native American group in the area, the Biloxi, and some records do exist. Relations with Native American populations varied in the area over time, but colonial encroachment definitely disrupted the lives of the local Native Americans they named the city for.

Earlier records of the Biloxi tribe's number and location are hard to come by. Some sources claim the tribe lived on Back Bay.[8] Others say that this claim is erroneous and they lived on the Pascagoula River to the east.[9] These disparate claims may also reflect other accounts that indicate the Biloxi moved repeatedly or may have split into multiple groups, only some of which moved.[10] Purportedly members of the Biloxi tribe inhabited approximately twenty cabins in 1699, a number that remains consistent despite sources claiming these cabins were in different locations.[11] Limited descriptions of early indigenous life after colonization appear most commonly in older records or accounts by local historians. Within these, though, are hints of the early ties between behavior and the city's waterfront location. Boudreaux, for example, describes how shells were often used as scrapers alongside other tools. He also shares accounts from the French colonizers who note the role of fish, shrimp, and oysters in the local diet.[12]

Some of the Biloxi seem to have largely been forced out of the area and moved into Louisiana and Texas starting as early as 1702 although it is possible other members may have stayed after intermarriage.[13] While intermarriage was initially seemingly encouraged by the French to support connections between the groups and to make use of indigenous knowledge, this seems to have dissipated as the French colonial leadership realized that it would not automatically result in indigenous peoples adopting French customs, but was just as likely to result in French colonists adapting Biloxi, Chickasaw, or Choctaw customs.[14] Other Biloxi may have moved due to potential conflicts with other tribes in general or with other tribes who were affiliated with non-French colonial militaries, specifically the Spanish and the British.[15] Some of this travel seems to be still documented in modern maps and place names, such as Biloxi, Texas.[16] Disease is also likely to have played a role in deaths among the Biloxi, as it did for many indigenous groups.[17] Just twenty years after initial recorded encounters the Biloxi had gone from 420 members in the area in 1698 to 175 in 1720, a process tied not only to local deaths and relocation but also to movement and intermarriage.[18] And this reduction continued, with the Biloxi tribe in the area being estimated at 105 people in 1805, 65 in 1829, and just 6 to 8 in 1908.[19]

All of this information is often nestled within many other stories of the tribe, including buried gold, claiming land with axes stuck in trees, and the entire tribe or most of the tribe collectively drowning themselves in response to colonization.[20] The final of these, the mass suicide, is told sometimes about the Biloxi and sometimes about a nearby group referred to as the Pascagoula and includes variations from the most common response to colonization to the less common being lured by a singing mermaid.[21] However, a number of legends and otherwise unclear information about the Biloxi shows the real effects of colonization—little was recorded or could be fully confirmed years later as many members of local Biloxi tribe had died or fled.

Colonialism

Pierre le Moyne, Sieur d'Iberville ("d'Iberville"), a sailor and explorer, encountered the Biloxi when he came to the area on behalf of French King Louis XIV to settle the colony of Louisiana or, possibly, to find the mouth of the Mississippi River for Comte de Pontchartrain, the French minister of marine.[22] After anchoring off of Ship Island, d'Iberville and his crew saw a Biloxi campfire and went ashore. The Biloxi fled and d'Iberville and his men pursued them, eventually catching or catching up to the tribe members and making contact.[23] The colonial settlers traveled around the area, including the nearby barrier islands. They eventually established Fort Maurepas, also known as Fort Biloxi after the local Native Americans, in what is now present-day Ocean Springs, Mississippi, to the east of Biloxi.[24] Drought and a lack of fresh water near the site caused problems within the first year, resulting in the loss of food crops and a lack of drinking water.[25]

d'Iberville's initial colonization of the area was driven by the perception that the location was a safe place for ships to survive storms: "We made choice of this point on account of the sheltered bay, or roadstead, where small vessels can come and go safely at all times."[26] In 1699 Fort Maurepas was erected just outside of the modern city's borders and became the capital of the Louisiana colony.[27] Biloxi's original location was then shifted slightly to the site of the modern city due to what were deemed "unhealthy conditions" at Fort Maurepas and the desire to be closer to Ship Island.[28]

This history reveals Biloxi's long-standing ties to the Gulf of Mexico and its connections to the French colony of Louisiana. Such connections are echoed by modern Biloxians, several of whom described to me that they felt the city had more in common with Louisiana than the northern parts of Mississippi. These connections also continue culturally. Biloxi's strong Catholic identity runs throughout multiple ethnic groups (e.g., Mexicans, Filipinos, Vietnamese, Slovenian/Croatian, and French). For the first 100 years or so of the city's history Nuwer and Sicuro actually noted that "it was

socially and economically expedient for people who lived in this area to be Catholics."[29] The Gulf Coast region is often considered, at least by locals, as a distinct region of the South with its own traditions, foods, and influences. Related traditions like large annual Mardi Gras festivities tie the city's culture more closely to that of New Orleans, Louisiana, and Mobile, Alabama, than other areas of the so-called American Bible Belt that influences northern Mississippi. Culinary traditions also continue this pattern with Biloxians eating foods often associated with Louisiana such as po'boys, crawfish, and gumbo. French and Catholic influences on the Gulf Coast do not have as strong of a presence in other areas of the South. This differentiation has continued over time, with some residents in the modern era going so far as to admit to me that they sometimes questioned why the coast was part of Mississippi rather than part of Louisiana.

Not long after Biloxi's founding, efforts began to move the capital. Jean Baptiste Le Moyne, Sieur de Bienville ("Bienville," d'Iberville's brother, previous governor of the colony) saw New Orleans' location on the Mississippi River as a better site for commerce particularly when compared with the small islands and shallow waters off of Biloxi that necessitated the use of a succession of smaller boats to move cargo to land.[30] In the meantime, d'Iberville made trips in 1700 and 1701 back and forth between Biloxi and France, bringing more colonists and supplies back to the Gulf Coast.[31] Despite d'Iberville's trips back to France, parts of the settlement were already being first moved to Mobile by 1702 and then Dauphin Island (both of which are in present-day Alabama) where the French capital was temporarily set up.[32]

Despite the population at Dauphin Island continuing to grow, in 1719, the capital of the French colonies was moved back west to the Biloxi area, settling across from Ship Island.[33] This move may have been due to the effects of hurricanes. In 1717 a hurricane hit the Gulf Coast, filling the entrance of Mobile Bay with sand and encouraging the French decision to return to Biloxi.[34] By 1720 the capital of the Louisiana colony was set in "Nouvelle Biloxi" or "New Biloxi" on the Biloxi peninsula.[35] This move brought a wave of Swiss and German colonial settlers under treasurer of France John Law's Compagnie d'Occident, later called the Compagnie des Indies.[36] Concessions were given to some colonizers, allowing them to use land along the southern face of the Biloxi peninsula. By 1721 the local population had grown to 2,500.[37]

Other research into this population also reveals that many of these residents (91 percent) fell into one of three categories: prisoners, indentured servants, or soldiers. By 1726 half of them had deserted the colony, died on the journey from Europe, or otherwise fled.[38] Those who arrived and stayed in the colony were often quickly married and assigned land.[39]

Colonists and soldiers alike lived off of company rations.[40] When combined with financial problems of shipping companies in France and ongoing wars in Europe, these difficulties meant infrequent shipments of supplies to Biloxi. Food that did arrive was often then priced so high that many people could not afford to buy it.[41] All of this was further compounded by ongoing problems with hazards like flooding, making supply storage difficult.[42] Famine became enough of a problem that troops were quartered in the area to keep peace. Many people died from famine and associated attempts to avoid it, like eating plants that caused illness and death or eating oysters that were gathered by spending too much time in the water, potentially leading to hypothermia. In fact, the death rate left priests unable to accurately keep track of the deaths, although French colonists placed the deaths at over five hundred.[43]

As the white population of Biloxi grew and changed, so too did the Black population. Rooted in a history of slavery, Cook's work on histories and cemeteries in the area reveals the pattern of Africans being forcibly brought into the area. Some ship registries do not list Africans but others do and there seems to be a clear pattern of them being transported to the colony.[44] Between 1719 and 1722, Biloxi also saw the arrival of African slaves, forced into the area by the French colonizers.[45] Some of these Africans enslaved and forcibly transported to Louisiana from Africa before being moved east into Biloxi.[46] Some Africans were brought from other locations into Biloxi, including at least 1,128 in 1721 and another 227 in 1726.[47] At least twenty-eight of them died of illness quickly after arriving.[48]

Cook's research also reveals that many of these Africans may not have lived in the same area as the Europeans, but in a separate area: "African Habitation Site and Adjacent Brickworks [. . .] on the northern shore of the Biloxi peninsula from Keegan's Bayou to Rhode's Point," although questions remain given the relative lack of evidence on site.[49] This location is also part of the present-day neighborhoods considered part of eastern Biloxi, areas that are now more racially and ethnically diverse than other neighborhoods in the city. This is also noted by maps published by local historian Boudreaux.[50]

Bienville continued to argue for moving the capital from Biloxi to France, claiming that the land was "sterile" and the water near the shore was so shallow that it made unloading boats difficult.[51] Mounting pressure from Bienville and his supporters finally led to the movement of the capital to New Orleans around 1722.[52] The French finally conceded to his request in 1723, moving the capital to New Orleans from Biloxi officially and leaving a garrison of just six men at the Biloxi fort.[53] The shift in the capital's location hit Biloxi hard. By 1726, Biloxi may have had fewer than ten residents.[54]

Records also show hurricanes hit the Biloxi area in 1722, 1732, 1736, and 1740.[55] The first of these overlaps with the move of the Louisiana colony capital from Biloxi to New Orleans, leading some to suggest that the hurricane

prompted the move.[56] However, the hurricane also struck New Orleans, raising the Mississippi River there temporarily by eight feet.[57] Given the storm's effects both locations, it seems somewhat unlikely that the hurricane was the only factor in the move. The storm came ashore west of the Mississippi River, resulting in the destruction of buildings in New Orleans and the loss of food crops in Biloxi.[58] Purportedly, some people pointed to the devastation of New Orleans in this "Great Hurricane of 1722" as evidence the capital should be elsewhere.[59] Reports about the 1732 hurricane indicate the loss of food and crops was severe enough to generate famine conditions across the Gulf Coast, affecting Black and Native American populations the hardest.[60] The 1740 hurricane also destroyed crops as well as property, provisions, and homes, resulting in "near-famine conditions."[61]

These historical examples do give us a sense of the history behind Biloxi's hurricane hits. Even before historic storms like the 1947 Fort Lauderdale Hurricane, Hurricane Camille in 1969, or Hurricane Katrina in 2005, the city had a long history of dealing with the effects of hurricanes, gaining an understanding of the sorts of damage they did regularly and how bad the damage could get with the most extreme storms.

Changing Dominions

Over the following years Biloxi began to shift hands—becoming a part of British colonies, Spanish territories, and the short-lived Republic of West Florida. It finally joined the United States with the 1803 Louisiana Purchase. Despite this, French influence remained as residents often continued to speak French.[62] By this point, Biloxi was a small fishing village of approximately 450 largely French and Creole residents.[63] From this point forward Biloxi continued to grow slowly. In Biloxi, 1837 saw the establishment of the post office, 1838 its official incorporation as a town, and in 1841 it became a part of the newly formed Harrison County. By 1843 the population was approximately 500 individuals, although this number increased in summer with tourism from New Orleans.[64] Wealthy residents of New Orleans sought out Biloxi as a place to avoid the press of the city.[65] This era saw the growth of the city's tourism industry, an industry that continues through the present day.

Throughout the early 1800s the distinction between the French-influenced Gulf Coast with ties to larger coastal cities like Mobile and New Orleans and the northern part of the state continued and grew. Local coastal residents often "distanced themselves from the agrarian interested of the Delta planters and other inland landowners who helped push Mississippi to statehood in 1817."[66] Despite this, slavery continued in Biloxi. New slaves continued to be sent to the area, along with other cities along the Gulf Coast. Slaves were also transported out of Biloxi and to other areas throughout the United States

either by train or by boat.[67] Slaves were forced to work in the homes of the wealthy, sawmills, brickyards, or hotels. Throughout the 1800s, Biloxi also had a population of free Black residents. Free Black Biloxians worked in trades, owned and worked on farms, and owned boats and businesses. This includes the blacksmith Bernard for whom Bayou Bernard is named.[68]

Biloxi continued to grow, marked by the construction of the city's lighthouse in 1848.[69] The city was often used as a retreat, especially by the wealthy in nearby New Orleans and Mobile. Particularly during the yellow fever epidemic in 1853, the area became a place to escape, according to one description, "the stinking sewers, heat, dust and yellow fever of the cities for the Gulf breezes."[70] While tourists from these nearby cities were coming to vacation in Biloxi, the local population was growing, reaching nearly 900 local residents in 1860, 28 percent of whom were foreign born, largely from areas in what are now Italy, Germany, Ireland, and France.[71] Other local white residents included descendants from earlier English, Scottish, or Irish populations.[72]

In addition to this growing population, the roots of the city's future economy were growing. Local residents built boats, including their own, as well as repairing and using them. This was especially important given the need for shallower or adjustable boats to navigate the Mississippi Sound.[73] The growth of boats in the area also brought lighthouses, including the 1847–1848 construction of the Biloxi lighthouse which became a symbol of the city throughout history and particularly in recovery from Hurricane Katrina. This period also saw additional hurricane strikes, including the 1852 storm that uprooted treed, destroyed fences, and damaged small homes across the Mississippi and Alabama coasts, including in Biloxi. While such storms caused damage, they also became part of the repeated smaller hurricane strikes that reinforced the survivability of hurricanes over time.[74]

On January 9, 1861, Mississippi became the second state to secede from the Union and join the Confederacy, by a convention vote of 84 to 15.[75] Some Biloxians served in the Third Mississippi Infantry for the Confederate States of America.[76] The area became a source of conflict between Union and Confederate troops, an additional complication for the post-hurricane recovery of the city.[77] On September 16, 1861, Confederate troops were told to evacuate nearby Ship Island and concede it to Union forces.[78] Just over three months later, on December 31, 1861, Biloxi was taken by Union forces when Mayor James Fewell surrendered the city.[79] At that time only about 50 men and 500 women and children were left in the town.[80] While some remaining Biloxians ran the Union blockade for imported food and supplies, others depended on locally harvested seafood or grew crops to eat.[81] Efforts to preserve this food were also rooted in their location near a large body of salt water, which they removed the salt from to preserve fish and other foods.[82]

Biloxi's biggest and clearest connection to the events of the Civil War may have come in the war's aftermath. A local widow, Mrs. Sarah Dorsey, offered former Confederate president Jefferson Davis a cottage on her estate property, known as *Beauvoir*. He rented the home and began writing his version of the Civil War's history, *The Rise and Fall of the Confederate Government*. When Dorsey died in 1879, she left the property to Davis, who lived there until his death.[83] Eventually *Beauvoir* became a home for former Confederate soldiers, wives, and widows and, ultimately, for three Black men who had been enslaved Confederate body servants during the war.[84] The house remains on the coast, although was heavily damaged by Katrina and was subsequently restored. *Beauvoir*'s continued space as a tourist attraction is not without question or controversy, though, as Smith points to the avoidance of Civil War discussion, adding that included among what discussion around related issues exists at the site, the "museum contains a description of one of Davis's 'loyal slaves,' a historiographical trope that is still pervasive at many historic sites."[85]

When the Civil War ended in April 1865, Biloxi's recovery from the war was different than the recovery further north in the state, reaffirming a pre-existing division between the coast and other parts of Mississippi. The city's economy was increasingly tied to resuming a booming tourism trade not the agricultural economy based largely on cotton found in the rest of the state.[86] Because of the tourist economy, Biloxi fared better during Reconstruction than other parts of the American South. But economic redevelopment took time. Initially tourism was, unsurprisingly, much slower than it had been before the war, but eventually resumed, leading to the construction of new hotels, boardinghouses, and cottages.[87] The growth of the tourism and seafood industries established the roots of Biloxi's modern economy.

These industries also began to play an increasingly important role in how Biloxians perceived their city and themselves. And this transformation fed into the long-term historic processes that shaped the Biloxi that would be hit by Katrina, including the city's economic dependence on tourism.

The Seafood and Tourism Booms

By 1880 Biloxi residents relied on fish, oysters, and shrimp from the Gulf for both food and income.[88] At the time the local seafood industry was driven by raw oysters, shucked and packed in wooden pails with ice and shipped inland by rail lines established in 1869.[89] Three seafood canneries opened in 1881, one in Back Bay and two on the Point, allowed for by advances in the seafood canning industry such as bagging seafood before canning which kept it from turning black in transport.[90] Men, women, and children all worked in the seafood industry with most men out on boats harvesting seafood and

women and children working in canneries.[91] The by-products of the canning industry themselves also became a part of the city's landscape as city streets were paved with oyster shells.[92]

The seafood industry's growth helped the area's economy and fueled a significant population boom, with the population in the 1880s doubling.[93] This growth was fed both by employment in the industry and related immigration growth. In 1892, the Biloxi Canning Company alone employed 350 people[94] However, many of these people were part-time residents who migrated across the United States for work and left the coast after the seafood canning season ended.[95] Nuwer and Sicuro point out that those who remained year-round resulted in a high unemployment rate during the offseason.[96] Just ten years after the first seafood canneries opened Biloxi was one of the largest seafood canning industry locations in the United States (first overall, second behind Baltimore specifically for canning oysters).[97] The seafood industry was the biggest economic venture in the city and was increasingly a critical cultural component to city life. This early growth of the seafood industry also helped cement resident's associations between their personal and familial identities with the Gulf despite known risks from hurricanes and flooding.

Growing tourism in the 1800s established economic and cultural elements that continued into the modern era and helped diversify the local economy. Tourists came to the area looking for warm temperatures and access to the beach and water. Passenger train service expanded in 1871 and 1896, better connecting Biloxi to New Orleans, Mobile, Alabama, and Hattiesburg, Mississippi, and through these cities the rest of the United States. This brought summer tourists from as far away as Chicago.[98] By 1886 Biloxi covered 2,500 acres with approximately 1,500 to 2,500 full-time residents, a population that expanded as high as 4,000 to 5,000 with the influx of tourists in the summer.[99] Train service to the area was augmented by automobile access almost thirty years later when Highway 90 opened in 1925, following the beach locally and connecting Florida and California nationally.[100] Each step of improving travel accessibility, by train and car, increased the number of tourists who could easily reach the area.

THE CHANGING FACES OF BILOXI

In September 1906, a hurricane hit Biloxi. While areas like the Point suffered severe damage, reconstruction and recovery from the storm contributed to city growth. The remaining woods on the eastern end of the city's peninsula were cleared, allowing for home construction for immigrants coming for work in Biloxi. Three years later the September 1909 hurricane caused less severe damage, but erosion and other destruction led to the first calls for a seawall to protect the area.[101]

Despite these hurricane hits the city continued to grow and change. New events like the city's first Mardi Gras parade on March 3, 1908, drove tourism and quickly became important components of local culture and identity.[102]

The migration of seasonal workers dropped during World War I because of employment opportunities in armament factors on the East Coast. Worker shortages were filled by factories bringing Cajuns from Louisiana to work and continued immigration from modern-day Poland, Croatia, Serbia, and Slovenia.[103] These new workers shared some characteristics with early groups in the area. Entire families continued to work in the seafood industry with men on boats and women and children in the factories.[104] These new workers were also largely Catholic. Their influx led to the establishment of new local festivals such as the Blessing of the Fleet, a ritual involving a Catholic priest sprinkling boats with holy water and "intoning the ritual of the sea."[105]

Rum-Running and Gambling

Illegal activity was not unheard of in Biloxi. Mississippi was the first state to ratify Prohibition in 1919, but the coast quickly saw increasing rum-running. This rum-running and the city's waterfront location soon led to the establishment of a Coast Guard base on Back Bay in 1923. At the same time, the city was seeing a boom in tourists coming for the water and warmer weather.[106] Sometime after this, "Colonel J.W. 'Jack' Apperson, the owner and builder of the Buena Vista Hotel, together with W. H. 'Skeet' Hunt and Arbeau Caillavet, decided that a resort on one of the barrier islands would be just the thing to attract major national attention to the coast," as well as to be just into international waters in an attempt to circumvent state regulations on alcohol and gambling.[107] In 1926 despite this growing military presence to counteract illegal activity, the Isle of Caprice opened as a "gambling, drinking and recreation resort to thwart mainland laws" on a nearby barrier island, sometimes referred to as Dog Island or Dog Key.[108] Interestingly, this name itself is intertwined with Biloxi's hurricane history, supposedly becoming known as "Dog Key" after "a dog was supposedly found on the island following an unnamed hurricane."[109] Located just twelve miles offshore, the island was easily accessible from the mainland and frequented by both tourists and locals, efforts bolstered by regular runs to shore by the *Non-Pareil*, a boat owned by Apperson.[110] The island is not only a site of illegal gambling but also a resort with a restaurant that served almost 1,000 guests a night.[111] The Isle of Caprice and other sites of illegal activity were not shut down by military and government intervention, but by largely hurricane-caused and other erosion that destroyed the island around it.[112] Eventually the site is said to have burned down in the 1930s.[113]

Small private gambling clubs and casinos dotted the coastline. The widening of beachfront Highway 90 ("Beach Boulevard") led to increased tourism.

Legal activities like concerts, shows, and festivals also drew tourism dollars.[114] Resort hotels operating in the area such as the Edgewater Gulf, the Tivoli, the Buena Vista, and the White House served vacationing tourists.[115] In the fall of 2010 one older Biloxi resident recounted to me his memories of Biloxians traveling to New Orleans for the day and New Orleanians traveling to Biloxi for long weekends and summer vacations on the beach. However, this local reliance on an illegal and legal tourism economy continued to face risks from hurricanes.

Biloxi's location on the water is also not entirely positive. Its place puts the city straight in the path of many incoming hurricanes, and it has been hit directly or indirectly numerous times. Severe storms happen roughly every twenty to thirty years. Storms such as the Fort Lauderdale Hurricane in 1947 and Hurricane Camille in 1969 caused widespread destruction. Smaller storms, such as Hurricane Georges in 1998, caused significantly less damage, but were problematic as they reinforced people's beliefs about avoiding the next major hurricane and their ideas that important economic touchstones, like the casino industry, could survive hurricanes. Hurricane Katrina challenged the local narrative that Camille was the biggest storm that could possibly hit the area and disrupted local personal and economic ties to the Gulf of Mexico, forcing residents to navigate these issues in the recovery process.

Despite the sense of protection garnered by a 1924 seawall, the September 1947 hurricane that hit Biloxi killed twenty people and taught "new generations about destruction."[116] Each storm in this history not only directly impacted the city of Biloxi and its residents but also set into motion a series of recovery decisions that would shape the city that was hit by the next storm and how local residents perceived their risk, or relative lack thereof, to those future hurricanes. The 1947 storm and recovery from it demonstrated the relationship between hurricanes and the tourism industry. While the hurricane caused massive damage to sites that formed the basis of the tourism industry, recovery from the hurricane was fueled financially by the re-establishment of those sites. As recovery progressed, both illegal and legal tourism contributed to the joint operation of recovery and resurgence of the tourism industry. This early history of gambling remained well known across the coast in the modern era, encouraging perceptions of the industry as a potential economic boon for the city and potential hurricane risks to it.

Military Bases

A new Coast Guard base opened during the Depression in 1933.[117] In addition, the Biloxi Veterans Affairs medical facility opened that year in August. The year 1941 and World War II saw the introduction of increasing numbers

of military personnel and their tents, establishing what would become Keesler AFB.[118] Twelve thousand military personnel and Biloxians were employed to build the base.[119] Other nearby cities also had growing military facilities, like the naval construction battalion ("Seabee") base in Gulfport.[120] Many of the military personnel stationed at these bases had time to leave base and go out into the local community, adding to the local economy.

However, this was not without other problems. This influx of military personnel also led to pressure on the state law enforcement system by politicians who were embarrassed by the continued blind eye to illegal activity and the reputation the city was developing. Airmen stationed at Keesler were said to lose $500,000 of their $4 million payroll at illegal gambling sites in Biloxi.[121]

Wading In

From 1830 to 1850, the enslaved population on the coast grew from 953 to 3,482.[122] Also living in Mississippi during this period is a small but present free Black population—growing from 519 in 1830 to 936 in 1850, 56 of whom were located in Harrison County alongside 1,441 slaves.[123]

Between the end of the Civil War and the beginning of World War I the Black and African American population on the coast grew to 30 percent of the total population.[124] By 1960 in Biloxi it had reached 5,557, approximately 12.6 percent of the city's total population. By this point in time, Biloxi's population was also unique when compared with the rest of Mississippi—just 41 percent of local residents had been born in Mississippi, compared to 87 percent in the state as a whole. Driven by the military presence in the area, as well as an influx of people tied to the tourism economy, by the late 1950s Biloxi and the county around it were one of the "most urban, diverse, wealthy, nonagricultural, and fastest-growing areas in Mississippi."[125]

As part of the broader civil rights movement of the time, the 1950s and 1960s saw calls for desegregation focused on tourist sites. Biloxi physician Gilbert Mason used beach access to protest segregation laws, organizing wade-ins to fight the segregated beaches in 1959. After swimming off Biloxi Beach with seven or eight (accounts vary) other Black Biloxians on May 14, 1959, Mason was escorted to police headquarters and given a warning.[126] As Mason continued to push for an explanation from the city, his research revealed that by accepting federal funds for the beach after the 1947 hurricane, the beach itself had become public property and had to be fully accessible to all people, white or Black.[127] Later in 1959, on October 5, Mason along with Joseph N. Austin and Eulice White petitioned for "unrestrained use of the beach" by Black residents.[128] Some local officials countered with the idea of a segregated beach, separating off part of the beach exclusively for Black people's use.[129]

Mason and others continued to fight the idea of segregated beaches, calling for a fully desegregated beach and equal access to all parts of it for all residents, regardless of race. As part of this effort, wade-ins began. While Mason was alone for the initial wade-in on April 17, 1960, to protest the segregation of the beach by local officials, he was joined by 125 other Black protesters on April 24. They were met by angry protesters and violence followed: drive-by shootings, vandalism, arson, and two murders.[130] The U.S. Justice Department filed suit against Harrison County and several local officials for the continued segregation of the beach, a court case that dragged on alongside job loss, boycotts, and hundreds of threats and numerous acts of violence against George Mason. On August 16, 1968, federal courts confirmed equal access to the beach.[131]

Little Saigon

Starting in 1978, Vietnamese refugees fleeing the aftermath of the war in their country came to the Gulf Coast. Many entered the seafood industry, taking jobs in the canning and packing plants that other groups had begun to avoid.[132] Although these immigrants usually took low paying jobs such as fish cleaning at first, some eventually were able to save money, pool resources, and buy their own boats.[133] In 2006, one Biloxian described tensions that emerged between the Vietnamese and French and Slavonian immigrants and their descendants on the Biloxi peninsula. He said that these conflicts were often about the fishing methods of the newcomers. The Vietnamese used different methods and boats from other fishers, purportedly doing things like sometimes operating without lights. Instead of traveling in a circle around oyster beds, they ran boats in lines across reefs. This damaged oyster beds.[134]

Bumper stickers that appeared in the area in the 1980s calling to "Save Your Shrimp Industry—Get Rid of Vietnamese Fishermen" and the use of derogatory terms like "gook" and "fish breath" point to underlying racism and racial tensions. In her work on Biloxi's Vietnamese community, Schmidt has argued that the Vietnamese immigrants' status fleeing from the war and relying on American government aid divided them from other residents.[135] The mid- to late 1980s were a problematic time in an already struggling industry. Local stock began to decrease, leading local processing plants to begin packing imported seafood.[136] The initial boom in Vietnamese immigration to Biloxi in the late 1970s and early 1980s overlapped with several bad shrimping seasons which may have escalated tensions between new immigrants and other Biloxians. At their peak, tensions escalated to the point that a bomb was reportedly found on a Vietnamese boat. While tensions died down somewhat, they have not completely disappeared.[137] However, over time the Vietnamese have increasingly become part of Biloxi.

Many Vietnamese immigrants and their descendants live in East Biloxi in areas now known as Little Saigon, but originally populated by other immigrant groups in the seafood industry, particularly the French and Slavonians and Croatians.[138] Bakeries that make and sell French bread are now owned and run by Vietnamese. Vietnamese restaurants dot the eastern end of the city and various locations sell *bánh mí* advertised as "Vietnamese po'boys," referring to a Vietnamese sandwich in local Gulf Coast terms.

Gambling and Seafood

Both the tourism and the seafood industries have continued to support Biloxi's economy over time. However, the late 1980s and early 1990s saw increasing problems in both parts of the economy. Fewer young people were going into the seafood industry.[139] Unemployment levels reached historic highs.[140] State legislators from the Delta area and the Gulf Coast joined together to support the casino legalization movement to boost the tourism industry. Legal casinos were seen by many as a means to bring the city's economy back, to rebuild not only the city's financial security but also older pieces of the economy and culture: tourism and seafood. With these efforts, city and state officials and local residents prioritized the risks and uncertainties of economic problems ahead of potential risks from future hurricanes. Biloxians also associated the economic downturn of this period with continued recovery from Hurricane Camille (1969), thereby responding to ongoing economic recovery from one disaster ahead of the uncertainty of potential future disasters.

Although the Delta and the Gulf Coast are very different areas, both faced the realities of economic depression. Tunica has long been a poor and largely African American community located in northwestern Mississippi. Biloxi was somewhat better off economically and was whiter than Tunica but was also known by this point as a "somewhat forlorn and depressed seaside community."[141] In 1989 the state legislature approved gambling on state waters, conditional upon the ships moving toward international waters and building their legislation around laws already passed in the Midwest.[142]

In June 1990 the state legislature voted to legalize gambling in House Bill 2 in that summer's Special Legislative Session, providing it occurred on ships or barges located on water.[143] The Isle of Capri became the first legal casino to open in the area in 1992.[144] The site was named after the illegal gambling site the Isle of Caprice to create a "symbolic link to local history."[145] Mary Perez, writing for the *Sun Herald* twenty-five years later, recalled the scene:

> People started lining up at Point Cadet early in the morning on Aug. 1, 1992, to get inside the first casino in Mississippi. While free Champagne flowed inside the Isle of Capri, outside the line kept getting longer. The new staff even brought

water and towels to people waiting outside for three hours in 90-degree heat
for their turn to step aboard the riverboat. "They waited. They sweltered. They
gambled."[146]

December 1992 saw Mississippi leading the south in new job creation and in
the decade that followed Mississippi saw the greatest growth of any casino
market to open since 1990.[147] In just the first year after casinos opened in
Biloxi the city saw an increase in gaming tax and revenue fees from $487,172
to $6,124,480, an increase of over 1,000 percent. Despite this boom, the
threat of hurricanes loomed right from the start when, on August 25, the Isle
of Capri and President casinos were closed over concerns related to Hurricane
Andrew.[148]

By 1995 legalized casino gambling had replaced the seafood industry as
the city's top economic producer and by 1997 Biloxi's casinos accounted
for 35 percent of the state's gross gaming revenues of $2.2 billion.[149] Eight
percent of gross gaming revenues go to the state in taxes and an additional 4
percent to local governments, as well as casino tax revenue generated through
non-gaming sources such as hotel rooms and restaurants.[150] While expansion
of the casino market did not continue to grow by 1,000 percent each year, by
2000 Biloxi's gaming tax and revenue fee income had risen to $19,839,707.[151]

Despite this economic growth, some Biloxians have argued against casino
developing because of their concerns about crime and the potential effects on
the seafood industry. Schmidt cites Richard Gollot's comments on the issue:
"Biloxi will lose a $40 million (seafood) industry. It will be a Las Vegas
on a peninsula."[152] However, many residents fully support the casinos. One
young man told me in 2010, "Where else am I going to work, go out with my
friends, go out to dinner and party?" Over the years other residents have told
me that while they may not wholeheartedly support the casinos, they do view
them as helping the area economically.

Whether they approve or disapprove of legalized gambling and local
casinos, most of the residents I spoke with about the issue in 2006, 2010,
and 2011 regarded the legalization of casino gambling as a turning point in
Biloxi's history.[153] As von Herrmann et al. wrote in 2000 the casino indus-
try "provides the Coast economy with five or six growth components [e.g.,
job creation or tax revenues], which is not the norm for a community with
a population under 500,000."[154] Their report was sponsored by the Institute
of Higher Education and provided to the Mississippi state government. It
noted that casinos employed over 40,000 residents directly statewide in 2000
and casinos brought jobs to the area for an additional 18,000 people through
construction work and retail.[155] Despite this growth, the casinos and tourism
industries faced potential destruction when Hurricane Georges made landfall
in 1998. Moreover, people who supported the initial rapid reconstruction of

the casinos for economic growth and recovery in the area sometimes admitted to me in 2010 and 2011 that they were now less sure about the situation, having seen the casinos come roaring back across from still empty lots where homes once stood.

MODERN BILOXI

Modern Biloxi boasts a diverse population that traces its roots to various points in the city's history. It is important to discuss, at least in brief, Biloxi's history to reveal the roots of the varieties of ethnic and racial identities of local residents, identities that shape their perceptions of themselves, their communities, their history, and ultimately how these tie to their perceptions of their potential risk. For many individuals, identity is framed in part by broader sources such as religion (largely Catholic), nationality (largely American, but also other countries of origin for immigrant groups and their descendants), and regional origins (largely Southern). It is also framed by sources that many individuals consider more of a local mix, such as ethnicity and ancestry, neighborhood, and employment (both one's own and one's family's, even historically). Many residents and city officials often comment on the city's diversity, pointing to a history that includes the Native Americans (e.g., the Biloxi), western Europeans (e.g., French, Spanish, Irish), eastern Europeans (e.g., Poles and Yugoslavians), African Americans, Latinos and Hispanics (e.g., Mexico, Guatemala, Panama, Peru, and Spain), and Asians (e.g., Vietnamese).

This ethnic diversity results in a range of perceptions, resources, and knowledge. And this diversity directly affects people's beliefs and behaviors. It is critical to engage with this diversity because it means that Biloxi, like many places, is not a homogenous population that will perceive and react to events in daily life and disasters in the same ways. Moreover, this ethnic diversity and various ethnic identities are a source of pride for many Biloxians, leaving them reaching out others in the same community as part of their many social networks that are used in hurricane preparation (which includes influencing their perception of the hurricane and weighing of potential risk), evacuation or sheltering in place (including staying with others of the same group or related family networks), and recovery (using that social and cultural capital and networks to find assistance for recovery). Many current residents identify with one or more of these ancestral groups.

Biloxi's waterfront location not only drives the local economy but also serves as a source of pride and sustenance for city residents. Residents rely on seafood catches for food and income. The beachfront and Gulf provide relaxation and entertainment to locals as well as tourists. Residents often

speak with pride about the city's location on the Gulf, which connects deeply to their own personal or family roots as the location and related industries brought many families to the area. Many residents can discuss their familial roots in the area and their connections to the seafood or tourism industries historically. Biloxians frequently identify themselves by the ethnicity of their families who came to the city during these immigrations. People who have lived in the area their whole lives also readily identify themselves by their heritages, particularly if French, Slavonian, Italian, Irish, or Vietnamese. In general, Biloxians take great satisfaction in identifying and sharing their cultural heritage. These identities are further reinforced by continued membership in social clubs like the French Club or the Slavonian Lodge, determined by not only application but also familial heritage.

This diversity is described in public events like the city's annual Halloween cemetery tour. While there are certainly residents with other backgrounds, certain groups and their descendants are talked about more frequently including African Americans, the French (referring to French, Cajun, and Creole although sometimes Cajun and Creole are set apart), the Germans, the Irish, the Italians, the Slavonians/Croatians (or Yugoslavians as the terms are used interchangeable in the area), and the Vietnamese. Many current residents of the city continue to identify with the ethnicity of their ancestors, and social clubs based on this ancestry remain popular, particularly on the Point. Both the French Club and the Slavonian Lodge are known throughout the city, and the ancestry of members and other parts of the city's population are referred to regularly through direct identification ("he's French").

However, such diversity has led to certain social, political, and economic inequalities and conflicts, as well as varied potential vulnerability to disasters. Residents told me about how newly arrived Vietnamese fishers were initially (and are still today, in some cases) scorned by other fishers and shrimpers, blamed for catch declines, and sometimes subject to racist threats or attacks. After Katrina, African American residents felt discriminated against when the historically Black school, Nichols Elementary, was closed in favor of moving students to another nearby school. In public meetings and semi-structured interviews with me, school officials cited a smaller population in the city and affected neighborhoods, along with financial difficulties related to state funding and the economic recession as the rationale behind this decision. Many local Black and African American Biloxians felt that closing this school in particular given its history and reconstruction post-Katrina was either a deliberately racist act or a refusal to appreciate the school's heritage.

Members of various other ethnic and racial groups faced varying degrees of resistance from other residents if they wanted to move. Often wealthier and white inland residents demonstrated their political and economic power in public meetings by pushing to stop the movement of people into their

Figure 1.2 Slavonian Lodge. *Source*: Created by Jennifer Trivedi.

neighborhoods, particularly people who were looking at smaller and potentially more densely packed housing, including poorer, working class, and nonwhite residents from areas like East Biloxi.

While many Biloxians were divided by cultural, racial, and ethnic ancestry and by differential access to political and economic power, they were also divided geographically. These geographic boundaries came in three key forms: geophysical boundaries drawn by land and water lines, socially and culturally determined neighborhood boundaries, and politically determined ward boundaries. The city of Biloxi is officially divided into seven wards. The populations of these wards show where members of different racial groups reside in the city. There are also income and class status differences throughout the city. In general, areas of the city with more racially and ethnically diverse populations are also areas with higher rates of poorer and working-class residents.

Back Bay and the Point are both located at the near eastern end of the peninsula. In the 2000 Census this area had a per capita income just short of $16,000 and median household income of just over $26,000.[156] Neighborhoods in East Biloxi, these included, are also seeing a demographic shift. In 2015 Bill Stallworth noted that before Katrina, East Biloxi was pretty evenly divided between Black and white residents and included smaller

populations of Vietnamese and Hispanic residents.[157] Ward 1 is located at
the very eastern end of the peninsula and including the Point neighborhood
and is 72 percent white. Ward 2, located on the eastern end of the peninsula
and including Back Bay, is 31 percent white, 58 percent Black and African
American, and 11 percent other including Asians, largely Vietnamese.[158]

By contrast, the Woolmarket neighborhood, a relatively recent addition
to Biloxi, has a population made up of middle- and upper-class residents.
This status is defined not only by their income, but by other markers such as
occupations like doctors and lawyers and their own descriptions. Zip code
39532 includes the Woolmarket area and areas outside of Biloxi. Per capita
income there was $18,000 and median household income was approximately
$41,000.[159] These residents were generally less vulnerable and more resilient
to Katrina while also holding political and economic power both before
and after the storm. Ward 7, located in the northern part of the city on the
mainland and including Woolmarket, is 95 percent white, 2 percent Black or
African American, and 3 percent other.[160]

These areas were also affected by Katrina differently due to their loca-
tion and the vulnerability of their populations. Back Bay and the Point, for
example, were hit hard by Katrina from both the north and the south with
storm surges coming from both Back Bay and the Gulf of Mexico. The poorer
minority populations in those areas were potentially more vulnerable as well.
The interviews, surveys, and participant observation I conducted in 2010–
2011 revealed that Biloxians who were more physically and socially vulner-
able were more likely to have lost their home to the storm and less likely to
have rebuilt five years later. Woolmarket residents, whiter and wealthier than
other parts of the city, were further inland and suffered less storm damage.

Biloxi celebrated its 300th anniversary in 1999 and that same year
the Beau Rivage opened as the eleventh casino in Biloxi. The city then
expanded by annexing thirty-four miles of land north of Back Bay, includ-
ing Woolmarket.[161] But fears about a potential hurricane strike continued. In
spring 2005 "Mayor Holloway and the Biloxi City Council [took] the unprec-
edented step of buying a $10 million business interruption insurance policy"
in case something, including a hurricane, interrupted business on the coast.[162]

The cultural-historical context of Katrina's strike on Biloxi would go on
to shape the physical and sociocultural effects of the storm and would estab-
lish patterns that ultimately dictated the initial path of long-term recovery.
Biloxians' personal and shared cultural knowledge of previous hurricanes
would eventually influence their preparations for Katrina. Their ties to partic-
ular cultural, racial, and ethnic groups went on to shape their preparations for
the storm and how they would be affected by it. The political and economic
power differentials and conflicts between different groups that had been
established throughout Biloxi's history would shape vulnerability and risk,

and influence what power and resources they did or did not have access to in the recovery process. Exploring and better understanding this eventual context will make a more thorough examination and understanding of Biloxians' post-Katrina recovery possible. The background information and cultural-historical context of this chapter not only builds the basis for later discussions in this work but also reveals the driving forces behind preparedness for, the effects of, and recovery from Hurricane Katrina in Biloxi.

NOTES

1. Mississippi Genealogy, "Mississippi Forts."
2. Baca, *Native American Place Names in Mississippi*, 8–9; Swanton, "Historical Sketches of the Biloxi and Ofo," 5; Boudreaux, *The Seafood Capital of the World*, 13–14.
3. Schmidt, "Down Around Biloxi," Part 1.
4. Maps developed by author from state, county, and city maps released by the City of Biloxi, the state of Mississippi, and the USDA.
5. Boudreaux, *The Seafood Capital of the World*, 10.
6. Ibid., 13–14.
7. Swanton, "Historical Sketches of the Biloxi and Ofo," 5.
8. Porter, "A Legend of Biloxi."
9. Swanton, "Historical Sketches of the Biloxi and Ofo," 5.
10. Boudreaux, *The Seafood Capital of the World*, 16–17.
11. Porter, "A Legend of Biloxi"; Swanton, "Historical Sketches of the Biloxi and Ofo."
12. Boudreaux, *The Seafood Capital of the World*, 16.
13. Porter, "A Legend of Biloxi"; "Historical Sketches of the Biloxi and Ofo."
14. Cook, "Ancestral Analysis."
15. Boudreaux, *The Seafood Capital of the World*, 16–19.
16. Ibid., 18–19; Wooster, "Biloxi, TX."
17. Boudreaux, *The Seafood Capital of the World*, 14.
18. Swanton, "The Indian Tribes of North America," 175, 201; Swanton, "Historical Sketches of the Biloxi and Ofo," 5.
19. Swanton, "Historical Sketches of the Biloxi and Ofo," 9.
20. Porter, "A Legend of Biloxi."
21. Ibid.
22. Scholtes and Scholtes, *Biloxi and the Mississippi Gulf Coast*, 14; Nuwer and Sicuro, *The Buildings of Biloxi*, 13; Boudreaux, *The Seafood Capital of the World*.
23. Boudreaux, *The Seafood Capital of the World*, 13–14; Pesantubbee, *Choctaw Women in a Chaotic World*, 26.
24. Federal Emergency Management Agency, "Fort Maurepas"; Gayarré, *History of Louisiana*, 58; Rowland, *Encyclopedia of Mississippi History*, 237; Cuevas, *Cat Island*, 8–9.
25. Cuevas, *Cat Island*, 10.

63. Nuwer and Sicuro, *The Buildings of Biloxi*, 15; Scholtes and Scholtes, *Biloxi and the Mississippi Gulf Coast*, 22. A note of clarification regarding Creole and Cajun: Both terms are complex and increasingly used to mean different things. "Creole" refers to a white person of French or Spanish descent, while Cajun refers to a white person of Acadian or French Canadian descent. As Domínguez writes, "They are subdivisions of contemporary white Louisiana society" (*White by Definition*). However, "Creole" has also been used to refer to people of mixed white and Black ancestry and terms like "Cajun Creole" or "Creole Cajun" then refer to individuals of mixed Acadian and Black ancestry (Domínguez, *White by Definition*, 150–51). In this usage, the term refers to individuals with French ancestry who no longer identify primarily as "French." However, it is unclear if it refers to individuals of only white or of mixed-race ancestry.

64. Nuwer and Sicuro, *The Buildings of Biloxi*, 16.

65. Boudreaux, *The Seafood Capital of the World*, 34.

66. Hearn, *Hurricane Camille*, 36.

67. Berlin, *The Making of African America: The Four Great Migrations*; Davis, *Black Experience in Natchez*, 1.

68. Boudreaux, *The Seafood Capital of the World*, 35.

69. Hearn, *Hurricane Camille*, 41.

70. Ibid., 43.

71. Hearn, *Hurricane Camille*, 43; Boudreaux, *The Seafood Capital of the World*, 35.

72. Boudreaux, *The Seafood Capital of the World*, 35.

73. Ibid., 35–37.

74. Ibid., 38–39.

75. Ballard, *The Civil War in Mississippi*, 3.

76. Boudreaux, *The Seafood Capital of the World*, 39.

77. Hearn, *Hurricane Camille*, 43–44.

78. Boudreaux, *The Seafood Capital of the World*, 40.

79. Ibid.

80. Nuwer and Sicuro, *The Buildings of Biloxi*, 16.

81. Ibid.; Husley, *Images of America*, 8.

82. Boudreaux, *The Seafood Capital of the World*, 40.

83. Wynne, *Mississippi's Civil War*, 200.

84. Ural, "'Every Comfort, Freedom, and Liberty.'"

85. Smith, "Beauvoir, The Last Home of Jefferson Davis"; see also, Levin, "Worse Than Hurricane Katrina."

86. Nuwer and Sicuro, *The Buildings of Biloxi*, 15; Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 22–23.

87. Boudreaux, *The Seafood Capital of the World*, 40–41.

88. Nuwer and Sicuro, *The Buildings of Biloxi*, 17.

89. Scholtes and Scholtes, *Biloxi and the Mississippi Gulf Coast*, 35; Schmidt, "Down Around Biloxi" (Part 1), 8.

90. Nuwer and Sicuro, *The Buildings of Biloxi*, 17; Scholtes and Scholtes, *Biloxi and the Mississippi Gulf Coast*, 36.

91. Scholtes and Scholtes, *Biloxi and the Mississippi Gulf Coast*, 44–45.

92. Nuwer and Sicuro, *The Buildings of Biloxi*, 17.

93. Ibid.; Boudreaux, *The Seafood Capital of the World*, 46.

94. Boudreaux, *The Seafood Capital of the World*, 45.

95. Ibid.; Schmidt, "Down Around Biloxi" (Part 1), 9.

96. Nuwer and Sicuro, *The Buildings of Biloxi*, 18.

97. Ibid., 18; Boudreaux, *The Seafood Capital of the World*, 45.

98. Nuwer and Sicuro, *The Buildings of Biloxi*, 17.

99. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 22; Boudreaux, *The Seafood Capital of the World*, 40.

100. Nuwer and Sicuro, *The Buildings of Biloxi*, 20.

101. Ibid., 19–20.

102. Ibid., 19.

103. Ibid.; Schmidt, "Down Around Biloxi" (Part 1), 8–10.

104. Schmidt, "Down Around Biloxi" (Part 1), 6–9.

105. Nuwer and Sicuro, *The Buildings of Biloxi*, 21; Sullivan, *Down South*, 62.

106. Cuevas, *Cat Island*, 5.

107. Ibid., 5–6.

108. Nuwer and Sicuro, *The Buildings of Biloxi*, 20.

109. Cuevas, *Cat Island*, 5.

110. Ibid., 6

111. Hearn, *Hurricane Camille*, 51.

112. Nuwer and Sicuro, *The Buildings of Biloxi*, 20; Hearn, *Hurricane Camille*, 51; Nuwer and O'Brien, "Mississippi's Oldest Pasttime," 17.

113. Cuevas, *Cat Island*, 128.

114. Scholtes and Scholtes, *Biloxi and the Mississippi Gulf Coast*, 106.

115. Nuwer and Sicuro, *The Buildings of Biloxi*, 21.

116. Ibid.

117. Ibid.

118. Hearn, *Hurricane Camille*, 51–52.

119. Nuwer and Sicuro, *The Buildings of Biloxi*, 21.

120. Hearn, *Hurricane Camille*, 52.

121. Nelson and Mason, "Mississippi," 27.

122. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 18.

123. U.S. Census, "Comparative Table of Population," ix; U.S. Census, "Populations by Counties," 42.

124. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 25.

125. Butler, "The Mississippi State Sovereignty Commission," 113.

126. Ibid., 114; Zebrowski and Howard, *Category 5*, 140.

127. Zebrowski and Howard, *Category 5*, 141.

128. Butler, "The Mississippi State Sovereignty Commission," 116.

129. Ibid.

130. Ibid., 126–31; Zebrowski and Howard, *Category 5*, 141.

131. Zebrowski and Howard, *Category 5*, 142.

132. Schmidt, "Down Around Biloxi" (Part 2), 7.

133. Sonneborn, *Vietnamese Americans*, 67.

134. Schmidt, "Down Around Biloxi" (Part 2), 15–16.

135. Ibid., 12–14.

136. Nuwer and Sicuro, *The Buildings of Biloxi*, 22.

137. Schmidt, "Down Around Biloxi" (Part 2), 13–15; Durrenberger, *Gulf Coast Soundings*, 38.

138. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*; Park, Miller, and Van, "'Everything has Changed.'"

139. Schmidt, "Down Around Biloxi" (Part 2), 18.

140. von Herrmann, "The Casino Resort Solution," 3.

141. Ibid., 3–4.

142. Ibid., 5; Nelson and Mason, "Mississippi," 30–31.

143. von Herrmann, "The Casino Resort Solution," 5; Mississippi Gaming Commission, "History."

144. Nuwer and Sicuro, *The Buildings of Biloxi*, 22; Pittsburg First News, "Why Isle," 3.

145. Hearn, "Proposed Resort."

146. Perez, "25 Things."

147. von Herrmann, Ingram, and Smith, *Gaming in the Mississippi Economy*, 8; von Herrmann, "Were Casinos A Solution," 67.

148. Perez, "25 Things."

149. Schmidt, "Down Around Biloxi" (Part 2), 18; Nuwer and Sicuro, *The Buildings of Biloxi*, 23.

150. Richard, "The Future of the Casino," 160.

151. Clynch, Feig, and Kaatz, "The Impact of Casino Gambling," 91.

152. Schmidt, "Down Around Biloxi" (Part 2), 18.

153. Trivedi, "'Hurricanes Did Not Just Start Happening.'"

154. von Herrmann, Ingram, and Smith, *Gaming in the Mississippi Economy*, 11.

155. Ibid., 14.

156. U.S. Census Bureau, "Census 2000 Demographic Profile Highlights: Fact Sheet: 39530."

157. WLOX, "East Biloxi Leaders Say Hispanic Families Helping Spark Population Boom."

158. City of Biloxi, "Ward Boundaries."

159. U.S. Census Bureau, "Census 2000 Demographic Profile Highlights: Fact Sheet: 39531."

160. City of Biloxi, "Ward Boundaries."

161. Nuwer and Sicuro, *The Buildings of Biloxi*, 23.

162. Smith, *Camille, 1969*, 17.

Chapter 2

Hurricane History

Katrina's effects on Biloxi must be understood in the context of the city's long-term experiences with hurricanes. Hurricanes are a fact of life for coastal residents, have shaped the city's history, and influence people's behavior in recovery and future hurricane response.[1] Thus it is critical to examine how the people of Biloxi have responded to their many storms, particularly the most severe. It is also important to discuss them within larger discussions of disaster cycles, so here I use the term "mitigation" to refer to efforts to prevent or minimize future disasters, "preparedness" to refer to actively preparing for a specific disaster, "response and relief" to refer to immediate emergency response efforts after a disaster, and "recovery" to refer to longer-term clean-up and rebuilding efforts after a disaster. While Biloxians have coped with many other serious events and disasters, including non-hurricane flooding, the Civil War, and the BP Deepwater Horizon oil spill, the focus of my work in this chapter is on hurricanes.

Responses to these early storms demonstrate an awareness of the threat of future storms, including the need for the enforcement and creation of new building regulations and other protective measures. The storms and recovery processes show early mitigation efforts such as shifting locations and stricter enforcement of preexisting laws. Descriptions of these early storms in local media sources demonstrate local knowledge and social memory in the form of comparing various disasters. Later disasters, starting with the 1915 hurricane, reveal a different approach, one of creating new mitigation and preparedness efforts that focused on leaving a community in place and modifying it during the recovery period to prepare for future disasters.

More recent hurricane history, perhaps unsurprisingly, has had a much more direct impact on people's decision making and behavior related to Katrina. The local response to Hurricane Betsy's effects on cities like

New Orleans played a critical role in what would become the Biloxi hit by Camille and then Katrina, including early work focused on disaster preparedness. Hurricane Camille's landfall in 1969 not only directly affected local residents, their lives, and their perceptions of hurricanes, but it also brought together past, present, and future. The storm came as early work on disaster preparedness and prediction was just beginning. It devastated the city, wiping out large swaths of homes and businesses, both legal (fishing, shrimping, and canning work) and illegal (gambling in various other businesses). Recovery from Hurricane Camille took decades, during which additional issues like a declining seafood stock and increasing immigration from Vietnam raised a host of social, economic, and cultural complications for various people in the city. The effects of Hurricane Camille and this recovery process in turn set up the city and people who would be hit by Hurricane Katrina and thus Camille is given special prominence here in comparison to other historic hurricanes. The discussion of it here is more detailed precisely because it was more of an influence on people's perception of and actions before, during, and after Katrina when compared to other historic storms.

It is important to remember that people's recall changes over time. The further history moves from these events temporally the more likely people are to forget some information and to focus on certain aspects of what happened to them. This is not to discount any of the memories and stories people shared but is to give important context to how memory works. What is crucial here is that these memories, accurate or not, do influence people's behavior in response to future events. In considering their own personal experiences in and memories of previous events, people are dealing with strong influences that can shape their perception of previous and future events and thus can transform their behavior in future events. If people perceive themselves to have been safe in extreme historic hurricanes, like Hurricane Camille, they may consider their risk in the next hurricane to be lower than it might be to an outsider. If people perceive themselves as being capable of surviving hurricanes in general, especially smaller and relatively less destructive events like Hurricane Georges, they may be more likely to consider themselves able to shelter in place in the next hurricane. If people perceive hurricanes as being a risk they can manage, this perception may change their behavior, making them less likely to evacuate in the next hurricane.

This is, of course, complex. This complexity is in part due to the fact that there does not seem to be a specific set of circumstances where people's perception influences their behavior in one specific way. There are cases in which people perceived themselves as having been alright in a previous hurricane (again, like Camille), and thus choose not to evacuate in a later event like Hurricane Katrina. However, there are also cases in which people perceived themselves has having survived Camille through luck and still feel

uneasy looking at Katrina coming into the area and thus choose to evacuate. And it is difficult to tease out biases like outside influences or additional recall complications. For example, are they saying Camille was an influence in their decision only after having evacuated in Katrina and speaking with other people after they return? There is a fine line between considering and exploring these perceptions and declaring them absolute facts or the only influence in someone's behavior. Despite this, it is important to look into people's perceptions and experiences because they do play some role, even when biases are involved.

Even with this importance of considering a long-term history where each step influences the next, it is impossible to consider everything in a single book. I have tried to consider key events that shaped larger processes in Biloxi's history or that shaped the demographic and geographic shape of the city before and after Katrina, including a history of colonial settlement, repeated historic hurricane strikes, and large-scale events that affected the area during Katrina recovery like the economic recession and related housing crisis and the BP Deepwater Horizon oil spill. Many of these events, particularly repeated hurricane strikes and large-scale events during recovery, were also events people on the ground in Biloxi referenced as important to them, on their mind, or having some influence over their perceptions and actions. Again, this raises questions about recall after the event, but since recovery itself was an ongoing process and people were actively discussing these issues, they seem an important piece to understand.

Moreover, it is important to also look at an ongoing chain of experiences, perceptions, discussions, and transformation in the broader city, smaller groups of specific types of Biloxians, and individual people. What is critical to remember is that Katrina did not happen in isolation; it was a process that emerged from long and complex histories ranging from individual people's experiences to global climate patterns. Examining only Katrina as a mere isolated event does not explain the whole story, and it leaves us missing critical information about issues like vulnerability, resilience, and recovery. Katrina did not strike a city and people who were unaware of it, but also it did not strike a city and people who were thinking about only Katrina. Previous experiences with hurricanes and the knowledge people have and share about those hurricanes—whether it be one on one, within families and neighborhoods, or in historic records and media coverage—directly shape people's perceptions of hurricanes and their general perception of risk, uncertainty, and recovery.

For example, part of the push and initial support behind reopening casinos in the aftermath of Katrina in a way that was perceived as safer for them was people's perception of recovery from Hurricane Camille. The advent of legalized casino gambling in the 1990s in Biloxi may have been a complex series of decisions made at the state and local level, but by Katrina, people

perceived it as important to economic recovery. And these perceptions, again, can change over time and are complex. The initial support for casino reconstruction in 2005–2006 had significantly lessened by 2010–2011, particularly from people who were facing ongoing recovery processes and financial complications and who felt that the city had reached a point of clearly prioritizing casino recovery ahead of the recovery of community members.

Within this larger context, specific issues surrounding the legalization of casino gambling as well as transition from restricting casinos to traveling on boats to anchored barges right off of the beach played a significant role in shaping pre-Katrina Biloxi. Smaller hurricanes that hit those legal casinos between Hurricane Camille and Hurricane Katrina, particularly Hurricane Georges, and the survival of those casinos in such hurricanes reassured local residents about the safety and security of the legal gambling industry in the face of hurricanes. This period is important to understand because (1) it contrasts with the severity of Hurricane Camille and (2) it reaffirms in people's minds that Hurricane Camille was an archetype and no other hurricane could match it because subsequent hurricanes were smaller and less destructive. The decision to legalize casino gambling and the ensuing rise of Biloxi's economic dependence on casinos emerged from long-term economic recovery efforts following Hurricane Camille. As Mary Perez described in the *Sun Herald*: "Before that, in the 23 years since Hurricane Camille in 1969, Biloxi had become 'a tourist town without tourists.' The city was broke, said former Mayor A. J. Holloway, with no money to meet payroll or even fill a pothole. Casinos brought tourists, prosperity and jobs to the Coast."[2]

The reality of basing an economy on these casinos was tested by Katrina, affecting how the city was damaged and how rebuilding proceeded. Some Biloxians based their evacuation decisions on experiences with, knowledge of, and social memories of Camille and other storms. Rules put into place about the reconstruction of homes and businesses after hurricanes, and the enforcement or lack thereof of these rules influences the environment the next hurricane will affect. Such efforts are not always successful. The influence of one storm on how people prepare for another is not limited to Camille and Katrina. Camille's influence should not be treated as an outlier, but rather as one example of a regular process. The effects of and recovery from earlier storms led directly to mitigation efforts for future hurricanes such as the construction of a seawall and an artificial beach.

HURRICANE SEASON

Hurricane season on the Gulf Coast occurs between June 1 and November 30, although hurricanes can occur outside of this period.[3] It is also a period

of preparation as residents make sure they have food, water, and other supplies at home. Contrary to popular media depictions of coastal residents refusing to evacuate or throwing hurricane parties out of ignorance, many Biloxi residents I spoke with described efforts to prepare for the storm as best they could. These efforts were influenced by knowledge of previous storms, information about the coming storm, perceived risks and uncertainties, and access to resources. Biloxians cited personal experience and discussions with trusted sources like family and friends in shaping their perception of risk, their decision to evacuate or not, and in where to shelter in the city (at home, in shelters, and in the homes of friends or family members). People described information they were receiving about the impending storm like where and when it would make landfall as shaping their decisions about when to evacuate or get supplies. Moreover, some noted a lack of information about the coming storm as something that influenced their perception of it as being not quite as severe, affecting the amount of time they had to prepare and make decisions or leaving them uncertain.

Some Biloxians I spoke with had the resources to make the decisions for themselves, while others cited a lack of resources like funds to enable them to travel further away. These resources included things often discussed in hurricane evacuation decision making like a reliable vehicle, but they also included things like family members who lived off of the coast who could give them a place to stay. In addition, some Biloxians who chose not to evacuate altogether, but rather moved to another location in town, were themselves also using similar resources like nearby family with homes that could accommodate them.

The Mississippi and south Louisiana coasts, including Biloxi, are frequently affected by tropical storms and hurricanes. This area, known as the RICK-fan, named after Hurricanes Rita, Ivan, Camille, and Katrina, is actually twice as likely to be hit by a major hurricane as other coastal areas in Texas and Florida.[4] The risks faced by residents of this strike zone are further complicated by artificial development and environmental processes that have caused the destruction of natural barriers (e.g., islands and specific forms of vegetation).[5] Artificial development not only causes environmental degradation but also creates new kinds of risks and uncertainties such as the barge-based casinos that became shifting debris after Katrina.

Hurricanes regularly affect the Biloxi area. Biloxians are aware of historic storms because of their own experiences, as well as local knowledge and social memory. They are told about previous storms by other members of their social networks, and they are exposed to information about these storms in the local media as well as in information distributed by the local government. These disasters contribute to a normalization of hurricanes on the coast. Storms that become archetypes, like Camille, stand out somewhat against a

background of routine disasters. Such archetypes become measures by which to judge future hurricane threats. A few particular hurricanes stand out in Biloxi's history. Experiences with and memories of these historic hurricanes affected how people perceived risks related to other disasters, evacuation orders, rebuilding and new construction efforts during recovery and mitigation and preparedness efforts for future disasters. Biloxi residents often talk about past hurricanes, especially large and disastrous storms. Some accounts are based on their own lived experiences; others are based on media accounts and conversations with friends, relatives, and neighbors. Knowledge about past hurricanes from these diverse sources can lead individuals and groups to disregard government orders and advice before, during, and after storms. This memory has influenced people's decisions about preparedness, evacuation, and recovery, as well as affected government and individual mitigation and long-term recovery efforts. Residents described to me how they remembered surviving Hurricane Camille and so made the decision to stay for Hurricane Katrina because they assumed that they would be safe. Some told of how knowledge of other people's experiences with previous hurricanes encouraged them to go ahead and evacuate in Katrina. Steps taken in the aftermath of various historic hurricanes transformed the city's geography, shaping the impact of the next hurricanes.

Biloxi has been struck by numerous hurricanes. Some storms, notably Camille, have become archetypes. Others have become part of a normalization of hurricanes. The history of hurricanes in the area dates as far back as 1722.[6] Between 1717 and 2008, thirty-two known hurricanes have affected the Mississippi Gulf Coast directly.[7] Hurricanes make a direct hit on the area every ten to eleven years on average. While this does not guarantee that a storm will hit every —ten to eleven years as there are both longer and shorter periods between direct hits, it does demonstrate that Biloxi is affected by hurricanes on a regular basis. Increases in activity happen every thirty years or so.[8] Such claims are further underscored by other researcher's tracking of hurricanes like Cutter et al.'s notes on hurricanes striking the Mississippi Gulf Coast episodically throughout the 1700s, 1800s, and 1900s.[9] And this gap between storms can have real consequences for people's preparedness for the next event, as Charles Sullivan described to the *Sun Herald*: "What really stands out about [the 1947] hurricane is that a whole generation had come to maturity without firsthand knowledge of a hurricane. [. . .] We had experienced a bunch of storms at the beginning of the 20th century, with the last full brunt one being in 1916. That meant that 31 years had passed, so the people in 1947 didn't know what a hurricane could do."[10]

Despite this, Biloxians spoke regularly with me about archetypes and the normalization of hurricanes on the coast. Wesley pointed out rather nonchalantly, "I have never evacuated because [. . .] where I live is relatively high

and the house was built in 1904. I figure if it's been around that long, it's probably going to be around a bit longer." For Ginger, a woman born and raised on the coast, hurricanes were a part of normal life on the coast: "Things would come and we would be out of school for a day or something." These memories of minimal effects of previous disasters encouraged some residents to view many hurricanes as presenting little risk.

By contrast, severe storms became comparison points for subsequent storms in local media. When a major storm roared ashore on September 16–17, 1855, it caused erosion and damaged land under the Biloxi lighthouse.[11] The hurricane was compared to the 1819 storm. When several hurricanes made landfall in 1860 they were, in turn, compared to the 1855 storm.[12] The September 15 hurricane caused widespread destruction across the Gulf Coast and extensive damage in Biloxi, undermining the waterfront bluffs, obliterating the lighthouse, flooding wharves, destroying hotels, and scattering debris. It destroyed buildings and infrastructure in nearby towns on the coast, like Pascagoula, that had been rebuilt in the recovery from previous storms.[13] It was described by an article in the *Daily Picayune* on September 18 in comparison with the 1855 storm.[14] In turn, the next storm that followed on October 2, 1860, was contextualized with the September hurricane by a local correspondent: "As the September storm had swept the Coast clean, there was not much for its successor to do."[15] The emphasis of comparison between different storms, even storms that were destructive in their own right, suggests a pattern of comparison that suggests storms were being judged in context, rather than as isolated events.

Historic hurricanes affect mitigation and preparedness efforts for future hurricanes during the recovery process, as measures undertaken as part of rebuilding efforts during recovery periods are simultaneously mitigation and preparedness efforts for future storms, as was the case with the seawall built in response to hurricanes in the late 1800s and early 1900s and the artificial beach put into place after the 1947 Fort Lauderdale hurricane. Steps taken as part of long-term economic recovery from some storms set the stage for how future hurricanes affected Biloxi and how the area recovered from those future disasters, as was the case with the legalization and construction of casinos in Biloxi after Camille and the importance of those same casinos in the local economy before and after Katrina. The construction of the seawall after hurricanes at the turn of the nineteenth and twentieth centuries was undertaken to prevent subsequent hurricane damage and when it did not provide sufficient protection, the artificial beach was created after the 1947 Fort Lauderdale hurricane, giving rise to the perception of safety. Experiences with Hurricane Betsy in 1965 transformed emergency management and preparation efforts in Biloxi. The impact of Hurricane Camille lent support to the opening of the legal casino market in the 1990s

as a means to improve the area's economy, a step later perceived to have been the time in which the city truly recovered from Camille. Survival in Camille and other hurricanes lead some to shelter in place for subsequent hurricanes, influencing their perception of safety without evacuation and their ideas about the rarity of a "big one." For others, it encouraged their evacuation, but this often resulted in evacuation to areas just further inland in the city (areas still affected by wind, rain, and flooding) or north into Mississippi (areas that might also be affected by serious wind, rain, and sometimes tornadoes), viewing those areas as "safe" because they would not be hit by the direct storm surge of the hurricane. The importance of casinos in the local economy was further supported by their perceived safety from hurricanes after they suffered little damage from Hurricane Georges in 1998.

HISTORIC PATTERNS OF HURRICANES

Hurricane Camille in 1969 was not, of course, the first (or the last) hurricane to disrupt the local economy. It was also not the first recovery process that transformed people's perception of important components in the local economy. Nor was it the first hurricane to transform perceptions about hurricane impacts and recovery processes. Despite these shifts in perception, these recurring historic hurricanes also reveal a pattern of return, indicating the importance of the sense of place. Many Biloxians chose to stay and not permanently leave the city or the coast. Some, as after Katrina, moved into nearby towns or slightly further inland in the city as it grew, but they were not driven out of the area entirely.

With no warning for local residents, the 1893 Cheniere Caminada hurricane made landfall on October 2, causing over $1 million in damage along the coast.[16] Nearby lighthouses, much needed for local boat traffic, were damaged or destroyed, like the one on Cat Island across from Gulfport.[17] All five local seafood canneries were destroyed, dealing a blow to the local economy.[18] The destruction of the hurricane "advertised the area's alarming vulnerability to destruction from the sea, the need for stricter building codes, and the necessity of better predisaster and postdisaster planning by local, state, and federal agencies."[19] However, despite the alarms set off by the 1893 hurricane, growth continued in the high-risk area. By the end of the 1800s, Biloxi was the largest city on the Mississippi Gulf Coast with nearly 7,000 residents.[20] Similarly, the damage caused by the August 11–12, 1911, Category 1 hurricane across the Gulf Coast prompted increasing enforcement of preexisting but previously under-enforced building codes even in areas that did not suffer direct hits, but it did not result in a significant population decrease.[21]

On September 29, 1915, a Category 3 hurricane hit the Louisiana and Mississippi coasts, killing 275 people.[22] The 1915 storm destroyed many homes and washed away large portions of waterfront along what would eventually be called U.S. Highway 90 or Beach Boulevard.[23] In Biloxi, it destroyed the local Yacht Club, boats and ships, trolley tracks, and an amusement park on a nearby barrier island.[24] This damage meant that not only were local homes demolished, but the area's seafood and tourism industries were also affected. The following year on July 5, 1916, the Mobile hurricane hit the area and added to the damage, eroding the beach and uprooting trees, causing $3 million in damage along the coast.[25]

The effects of 1915 and 1916 storms began to convince Biloxians to construct a seawall to protect the main roadway along the water, waterfront homes, and cities and towns along the coast. As one letter to the editor from nearby Pass Christian argued, "I am opposing any bond issue for the purpose of building this road out of any materials *unless there is a proper substantial sea wall first built* to protect and make a place for such road" (emphasis added).[26] By 1924 the state legislature had passed an act specifically calling for the protection of coastal highways, further emphasizing the importance of something like a seawall to many people.[27] The need was further reinforced by a hurricane in 1926 whose winds began the destruction of the Isle of Caprice, including both the illegal gambling facilities and parts of the island itself since the development meant that "without the sea oats for protection the winds whipped away at the Island until it was eventually a flat sand bar."[28] The 1926 hurricane was the first test for the still-under-construction seawall, but the wall easily withstood the relatively mild impact of the storm, reinforcing the idea that the seawall could offer the city protection from hurricanes.[29]

Designed by Gulfport city engineer Hobart Doane Shaw, the completed seawall stood eight to eleven foot high when completed in 1927. It ran from Pass Christian to Biloxi, approximately twenty-six miles. Until the Hoover Dam was completed in 1938, it was reported to be the largest concrete structure in the world.[30] When opened on May 1, 1928, it "changed 'the ambiance of the Biloxi waterfront,'" while also offering some protection to the new beachfront highway.[31]

While these early storms had a direct effect on mitigation efforts on the coast few Biloxians I spoke with in 2006, 2010, or 2011 mentioned these early storms. However, many did refer to the fact that Biloxi had been repeatedly hit by hurricanes since its founding. Even a child born in 1915 would have been in their mid-nineties during my research, so it is unsurprising few people remember the storm. In addition to its continued effects on the physical landscape such as the seawall that still stands, the 1915 hurricane in particular appears in local histories in the area and is occasionally mentioned by local officials. Despite the damage caused by the 1915 and 1916 hurricanes

several hurricanes that followed caused substantially more damage and replaced those storms as "the big one" in popular imagination.

FORT LAUDERDALE HURRICANE

The 1947 Fort Lauderdale hurricane, also known as Hurricane George, struck the Gulf Coast on September 19. The hurricane made landfall in Louisiana and Mississippi as a Category 2 storm, killing fifty-one people.[32] With about twelve hours of notice thanks to ships coming back to the coast, 9,300 people were evacuated from the coast in advance of the storm; "such evacuation, a new experience in local storm preparedness, saved lives."[33] Those who remained faced 10- to 15-foot storm surges which breached and destroyed several portions of the seawall that had been built following the 1915 storm, as well as the highway behind it. Water reached over a block inland in Biloxi.[34] And, as one local recounted, "it took a while for the water to come up and then a long time for it to go out," the impact of a twelve-and-a-half-foot tide.[35] Biloxi also lay in a small zone, stretching across parts of Louisiana and Mississippi, affected by the greatest duration of hurricane force winds, resulting in what the local paper described as "staggering property damage" with entire areas "swept clean of buildings."[36] These winds lasted for hours while approximately 3,000 people riding the storm out in local schools being used as shelters.[37]

Years after the storm, Amy Cusac recounted her family's story for the local paper. She described her family as "green to hurricanes" since they had just moved from Oklahoma. Her step-father attempted to get some of the water out of the house by drilling a hole in the floor with a hand drill: "Water started shooting up from the hole, bringing in more water than we already had."[38] Amy and her mother would eventually travel by boat to a local hotel in the height of the storm: "But, no, I didn't want those men to take me to the Tivoli in the skiff until they told me I could take my dog, Herbie."

Other local residents also described moving mid-storm to reach safety, like Henry Lang: "It tore our house all up. [. . .] It tore the roof off and we had to go next door. It blew almost everything down."[39] He added, "We were high, and I was watching the water rise. [. . .] I was putting some pans in there to catch leaks. I didnt [*sic*] know the roof was blowing off. When it did, we had to go."[40]

Ginger, like Amy, also recounted her family's story from the 1947 hurricane from the perspective of a child: "I have lived through so many storms. I have lived through. . . my first hurricane was 1947. And it was . . . for a four year old, it was a blast. I . . .We camped out. [. . .] It was just, fun. So, I loved hurricanes. I'm the original hurricane girl." As she described her "hurricane

girl" status, Ginger was quick to laugh about her experience. Despite the destruction the storm caused, Ginger's early hurricane memories seemed to be good ones, not moments of fear. Residents I spoke with who mentioned the 1947 hurricane often described it from their own or other residents' childhood memories or from a historical perspective. For many, the storm was incorporated into personal, but general memories of the regularity of hurricanes and the damage they caused on the coast. At the same time, the physical effects of the storm on the coast and recovery efforts from it had long-term effects on the coast and on the effects of and preparation efforts following future storms.

Biloxi's beach area, as well as its commercial district, was heavily damaged and the storm caused over $17.5 million in damage, leaving both the seafood industry and tourism industry that the local economy relied on crippled.[41] Businesses like Gautier & Byrd Oil Warf lost almost everything: "The building was wiped from the face of the Earth, the safe with several thousand dollars in it was missing, and the large fuel tanks had become battering rams in downtown Biloxi. One tank paid an unwanted visit to the Greyhound bus station."[42] The damage was felt in all aspects of the local economy: "The Biloxi Strip, famous for its clubs and restaurants, was leveled by for one or two buildings, and evidence of illegal gambling ended atop the rubble."[43] Beyond the impact on local businesses, 477 homes were destroyed along the coast and 4,273 were severely damaged.[44]

The debris piled up and "worried that the Coast would burn en masse, a moratorium was declared on debris fires, and fire trucks stood on alert."[45] Beyond the fire risk, snakes were a real danger as was the heat. Airmen from Keesler Air Force Base stepped in to help clean up: "'Keesler Field, its officers and personnel are a godsend,' declared the Biloxi mayor."[46]

After the Fort Lauderdale hurricane, the breached seawall was rebuilt. As Canis notes, "the seawall 'held the line' of the coast; it did not save the beach or even the property in back of the wall. The system has served its purpose in lesser storms, but the 'big event' obviously cannot be dismissed."[47] A few days after the storm had passed, the local newspaper described how: "But it wasn't the wind that did so much damage along the beach. It was the water—waves towering 20 feet high which smashed across the seawall and battered the coastline with tons of water. Nothing could withstand the impact of those waves. They surged irresistibly over the beach highway to hit factories on Point Cadet and smash into luxurious Gulf Coast homes."[48] Because of this, following the seawall's reconstruction, an artificial beach was added as an additional buffer between the wall and the Gulf between 1950 and 1952, authorized through the 1948 River and Harbor Act. The beach had actually been recommended as an additional buffer for the area by the Federal Beach Erosion Board in 1944, but the 1947 hurricane clearly underscored the need

for additional protection. The beach was originally 300 feet wide and 5 feet high, covering preexisting mud bluffs, making it the "longest man-made beach in the world" at the time.[49]

The new artificial twenty-six-mile long beach drew additional tourists to the area quickly and it continues to do so.[50] Today it remains the world's longest artificial beach, although it is somewhat narrower.[51] Images that pre-date the beach seem to show some sand accumulation in front of the seawall, but researchers have suggested that this was often eroded by wave action, so no significant sand beach existed until it was placed there artificially.[52]

The new beach was funded through county and federal money, conditional upon its public accessibility, an issue that would come up later in the civil rights movement as local Black residents fought for equal access.[53] While the beach acted as an additional buffer, it did not block severe storm damage entirely. Biloxians I spoke with in 2011 were often aware of the beach's construction, including some individuals born after its construction. None of these residents spoke directly about the buffering nature of the beach itself, even those who discussed similar buffering action by barrier islands and by vegetation planted on the beach like sea grass. This awareness may be the result of social memory, as younger residents often described being told about the beach's construction and what the shoreline was like before the beach by older relatives. It is also likely influenced by witnessing the five renourishment projects that have taken place since the early 1950s in an effort to revitalize and maintain the sand beach.[54] Biloxians spoke openly about similar projects taking place on Deer Island in 2010–2011, talking not only about the fact that revitalization efforts were in progress on barrier islands like Deer Island but also about specific references to the island's height made in comparison to previous years.

The 1947 hurricane also offered space for other efforts for hurricane mitigation. A second seawall was built and the area between backfilled. Harrison County put new building codes into place, although it did make exceptions for existing buildings.[55] Finally, a federal grant provided funding to create the Harrison County Civil Defense Council, for which Julia Guice would become the "volunteer director of plans and training for Biloxi civil defense operations in 1957."[56] But the storm would have other, more negative consequences: "Many 1969 Hurricane Camille survivors reported resisting evacuation because they had been successful in riding out the major unnamed 1947 hurricane that struck the Mississippi coast. The false belief that safety in 1947 would guarantee safety in 1969 had cost many people their lives in Hurricane Camille."[57]

The 1947 hurricane and memories of it had effects on mitigation, preparation for, and recovery from future storms. It affected residents' general perceptions of hurricanes, contributing to the normalization of the threat

of hurricanes. Both the 1947 storm itself and recovery from it transformed Biloxi's landscape, including the reconstruction of a preexisting seawall and the creation of an artificial sand beach. These recovery efforts were also mitigation and preparedness efforts for future storms. While Biloxians retain memories of the artificial nature of these projects few directly equate them with recovery, mitigation, and preparedness efforts. Local residents may not discuss how the recovery efforts from the 1947 storm are themselves part of mitigation efforts for future storms, but they do remember the storm and the destruction it caused and the transformations of the local landscape that emerged from the storm had a direct effect on how future storms affected the coast.

HURRICANE BETSY

As Hurricane Betsy approached the Gulf Coast in 1965, preparations for the storm began in Biloxi and Harrison County, led by local residents Wade and Julia Guice, the area's new civil defense team, appointed by Dewey Lawrence of the Harrison County Board of Supervisors. The Guices used Betsy as a training device, implementing preparedness efforts based on new forms of data like satellite images of hurricanes before they made landfall and demonstrating deficiencies in the new response systems.[58] Betsy made landfall in Louisiana and Mississippi on September 9, 1965, as a Category 3 storm causing significant damage in New Orleans and affecting the rest of the coast.[59] Beyond understanding the impact of Betsy on the city and its population, perceptions of this hurricane and response to it in early civil defense and emergency management history start to shift perceptions of not only hurricane strikes in Biloxi, but the potential for different forms of response that would also come into play in Hurricane Camille just four years later.

When Betsy hit, Biloxi was inundated with over eight feet of flood waters, causing damage to commercial buildings and the beach, causing $10 million in damage in Mississippi.[60] Red Cross and federal government data showed that over 1,000 homes along the Gulf Coast were completely destroyed.[61] Betsy's destruction and recovery from it prompted the promotion of mitigation and preparedness efforts at various levels of government. In the aftermath of Hurricane Betsy in 1965, Colten notes that Rep. Hale Boggs (D-LA) "argued that it might be more costly to have an insurance program and to rely on disaster relief appropriations."[62] The Southeast Hurricane Disaster Relief Act of 1965 instructed the U.S. Department of Housing and Urban Development (HUD) to begin studies that led to the idea that flood insurance had to be tied to planning and land use measures.[63] The studies eventually lead to the National Flood Insurance Act in 1968. Such research,

planning and new regulations directly linked recovery efforts and studies of them with mitigation and planning efforts for future disasters. Furthermore, as Campanella notes, the Act put "the federal government in the business of storm protection."[64]

Aside from the changes in the Federal government, prompted by the widespread destruction caused by Betsy, the storm also prompted new regulations at the local level in Biloxi in an effort to increase resilience. As Wade Guice described, "Hurricane Betsy was an excellent training device. [. . .] She pointed out some deficiencies that we had in particular with an integrated [storm preparedness] system. And we were able to patch an awful lot of those holes."[65] The Guices had led preparedness efforts before Betsy made landfall and used the time after the storm to develop civil defense and response plans. They pulled together local police and fire departments, businesses, and volunteers. Harrison County began to plan, working to coordinate efforts between cities, including Biloxi, before another hurricane made landfall.[66] County officials put measures into effect designed to prevent illegal construction on the beach.[67] The city of Biloxi, along with nearby Gulfport and Long Beach, adopted the Standard Building Code (SBC) developed by the Southern Building Code Congress after the storm and created new construction regulations that affected recovery and reconstruction efforts.[68]

Although Betsy had significant effects on mitigation, preparedness, recovery, and rebuilding efforts in Biloxi, the actual physical damage it did to the area paled in comparison to Hurricane Camille, which struck the coast four years later. The critical effect of Betsy on Biloxi was its influence on regulations and disaster response efforts that paved the way for preparation for and recovery from Camille. Betsy left Biloxi under new federally mandated flood insurance regulations and with a growing civil defense team at the local level. Relatively few residents in Biloxi in 2010 and 2011 even mentioned Betsy. Those who did often emphasized that Hurricane Betsy had far more of a direct effect on New Orleans. Whatever effects Betsy had on Biloxi were soon overshadowed by Hurricane Camille which is the storm most residents of Biloxi reference regularly and discuss as one of the "big ones," even if they themselves did not live through it.

HURRICANE CAMILLE

Each of the hurricanes in Biloxi's past have had some influence on people's behaviors before, during, and after future storms, but Camille stands out as an archetype. Storms that struck the coast before Camille, particularly the 1947 storm and Hurricane Betsy, affected mitigation, preparedness, relief

and recovery efforts for Camille. Even before the storm made landfall, comparisons were made to previous storms. Wade Guice, part of the local civil defense team, described how early information about Camille portrayed it as just slightly more severe than Betsy.[69]

At landfall on August 17, 1969, Hurricane Camille was classified as a Category 5 storm but it was a relatively compact storm with hurricane force winds extending just sixty miles beyond the eye of the storm.[70] By contrast, Hurricane Katrina was a Category 3 storm at landfall near the Louisiana-Mississippi border, but much of its destruction came from a large storm surge and massive size with hurricane force winds extending 190 miles beyond the storm's eye.[71] This discrepancy is likely due to varied reports of wind speed from different locations. The variation between different measures of Katrina and the scope of destruction left by Katrina and Camille variation illustrates just the first of the complexities of people comparing Katrina and Camille: hurricane categorizations themselves may also be misleading due to their exclusive reliance on wind speed.

Camille was an outlier, a small but powerful storm that surprised even experts. As it approached the Gulf Coast, Camille was half the size of Betsy, measuring just 80 miles across, but with fast moving winds, topping 200 miles per hour. Observing the storm Dr. Robert H. Simpson noted, "Never before has a populated area been threatened by a storm as extremely dangerous as Camille."[72]

As Camille approached the coast local civil defense teams in Biloxi and Harrison County, led by the Guices, began preparation efforts, driven by their experiences with Betsy. Just prior to the storm in August 1969 the Guices took on new roles with Wade becoming the full-time director of civil defense for Harrison County and Julia the director of Biloxi's Emergency Operations Center (EOC).[73] The civil defense team met before the storm. On August 16, Wade told a *Daily Herald* reporter that the executive committee was meeting that afternoon to discuss possible evacuation orders and asked the reporter to publish requests to grocery stores, lumberyards, and other retail stores to voluntarily stay open late so that people could get supplies. The executive committee met and while other members argued that they should wait and see what the storm did, Wade and Julia argued instead that everyone should be put on alert and that evacuation orders should be issued on Sunday unless it was clear Camille was going to hit another area. They insisted that if the measures proved unnecessary, they would at least know their plans worked and, if necessary, the measures would save lives.[74]

When the afternoon edition of the local paper went out on August 16, the headline read "Hurricane Watch Posted for Coast Area."[75] On page two, suggested precautions for before, during, and after a potential hurricane were listed, telling residents to "stay home if your house is safe from high

water and flash flooding."[76] While officials or the media might no longer give these instructions to local residents, the fact that they have in such recent memory and in a storm many people consider to have been the worst storm to hit the area until Katrina makes it difficult to get that idea out of people's heads. Officials online and on television before Katrina might have been saying just to evacuate, but people who had experience with, memories of, or knowledge from others about sheltering in place, reinforced by memories of being told it was safe in previous hurricanes changes people's perceptions and makes the risk seem more acceptable for some local residents.

In Biloxi, preparations by Civil Defense and Red Cross officials continued as information on emergency shelters in local schools was published in the paper. Despite this, "[Wade] Guice said the Weather Bureau had advised him there was 'no chance' that a Saturday night evacuation of low-lying areas would be necessary."[77] Confusion about the evacuation remained until just hours before the storm:

> Although the warnings for Camille evacuation were judged largely successful by local officials, confusion existed between the public and forecasters. Confusion surrounded the predicted landfall area of Camille until as late as Sunday night, only 4–6 hours prior to landfall. Many people had retired for the night Sunday, convinced that the storm would veer north into the Florida panhandle, or at least into Alabama as predicted.[78]

By the time the orders were clearer to large numbers of people, "in the hours immediately prior to landfall, evacuation was impossible due to a number of of [*sic*] low-lying (eventually swamped) bridges."[79]

And other problems remained. New federal flood and insurance regulations and building codes put in place after Betsy had not had time to go into effect. Evacuation orders only went out early in the morning on August 17.[80] Even mandatory evacuation orders like many of those issued in the face of Camille were not enforceable since police officers and other officials can only force people to leave public areas, not private homes. Evacuations are never solely the product of official orders, but also emerge from individual and group decision making. That afternoon a tractor trailer overturned on one of the three main evacuation routes causing more traffic problems.[81]

Officials did try to encourage as many people to leave as possible, driving across the coast shouting over loudspeakers: "Get out! Get out! [. . .] This is a very dangerous area!"[82] However, complaints also arose about the effect of racial segregation in the evacuation process points to questions of racism, inequality, and vulnerability. African Americans evacuees described a segregated evacuation process as they were bused north into an entirely separate shelter system.[83]

Beyond a segregated evacuation, there were also local residents who did not hear of the impending storm: "We didn't hear or see anything that was going on with regard to this Camille thing."[84] For those who did hear about it, some made the decision to stay. In commentary that would be echoed again in 2005 with Katrina, some noted that they stayed in Camille because "the standard rejoinder was, 'I rode out the '47 hurricane and Betsy (in 1965) and I'll ride this one out too.'"[85]

Camille made landfall in Mississippi on August 17, 1969, as a Category 5 hurricane. The storm's wind speeds approached 200 miles per hour and tides were —fifteen to twenty-two feet above normal. The hurricane's eye was small, just —eight to twelve miles in diameter, and the storm as a whole was compact. Camille's hurricane force winds extended 60 miles beyond the eye and tropical storm force winds 180 miles. It moved forward at around fifteen miles per hour.[86]

By 8:15 p.m. power transformers were blowing, and people were losing power. By 9:00 p.m. airmen at Keesler Air Force Base waited anxiously in the first-floor hallway, surrounded by mattresses. By 10:00 p.m. the noise of the wind was enough to drown out radio news and water began moving ashore as oak trees collapsed and debris flew as buildings were destroyed.[87] Camille made landfall at 10:30 p.m.[88] By then local residents had already began calling the Biloxi police for help, but rescuers were unable to reach anyone safely. Rescues began as soon as they could, but this was not until around 5:00 a.m.[89]

Camille's waves were so powerful that "precast concrete deck slabs of the Biloxi Bay Bridge here moved longitudinally on their pile bents by surge-borne waves. Some slabs were displaced as much as 3 to 4 ft and considerable debris was lodged in the bridge railing."[90] Decades after the storm, driving over the bridge was a bumpy ride after the displacement of the slabs.

Damage estimates, adjusted for today, vary between $6 and $11 billion.[91] Across the coast, in total, 5,662 homes were destroyed and 13,915 suffered major damage.[92] 33,933 homes had minor damage. 1,082 mobile homes were destroyed, 621 had major damage. 679 small businesses were destroyed or suffered major damage. The damage was catastrophic in some areas: "For the entire length of the Mississippi coast extending three to four blocks inland, the destruction from Hurricane Camille was almost complete. Residences, motels, apartments, restaurants, and other buildings were swept off their foundations, demolished, and deposited in piles of scrap lumber and rubble together with fallen trees, smashed automobiles, and grounded boats."[93]

Around 9,000 to 10,000 people in Mississippi were injured, over 131 killed and 41 remain "missing," often counted with the dead for a death toll of 172.[94] It took days to find some of the bodies, leaving them decomposing in the heat and humidity and leaving some people uneasy as they sorted through debris:

Figure 2.1   Hurricane Camille Memorial. *Source*: Created by Jennifer Trivedi.

"You didn't know whether there was a body under it or not."[95] Even years after the storm, residents recalled the smells of the storm as "strange smelling mud . . . seemed to linger in the air."[96] Three of the dead remain unidentified, buried in graves marked Faith, Hope, and Charity.[97] The dead and missing are memorialized along the coastline, the memorial having been repaired after damage suffered in Katrina.

The storm is still remembered by many on the coast for its severity and particularly for the destruction it left behind (see figure 2.1), a process that has influenced their perceptions of and responses to subsequent events like Hurricane Katrina. As clarified earlier, there are often questions of the clarity of recall, especially years after an event. However, even if people's memories are unclear or their understanding of what they experienced has shifted, that current recall itself can influence their behavior and so it is important to understand and discuss how people recall and perceive events like Hurricane Camille, their experiences with it, what they have learned from others, and how they tell their stories about what they experienced and why it matters to them. Edward was born and raised on the Gulf Coast and had survived many storms on the coast, including Camille, which he rode out with his family at his father's office that was at the time quite close to the Gulf. Edward's memories of Camille demonstrate local knowledge about the storm, and he

commented that "Camille was a relatively compact, powerful storm that was relatively fast moving."

In 2006, 2010, and 2011 Biloxians readily talked about Camille in casual discussions and semi-structured interviews with me. They described their memories of where the water reached, what was destroyed, and living in the storm's aftermath, often without power or even regular communication with areas beyond the coast. In 2011, Dorothy described both her own and her husband's experiences with Camille and other storms. She emphasized how her family had been relatively unscathed by Camille: "We weren't so affected by Camille in my family. I was still living at home. And my parents got water, but just enough to cover the baseboards." Her husband and his family had a much different experience. Dorothy told of how her husband and his family rode the storm out in their attic as the house filled with water and nearby homes were completely destroyed. Dorothy was almost dismissive of her family's own experiences with Camille, emphasizing that they suffered far fewer losses than others, such as her husband's family. She was far more emotional about her husband's family's experiences, emphasizing what they had suffered through and lost in Camille.

Other residents described Camille through knowledge gained from others and social memory. Erica lives in an old family home with her husband and one of her children. As we sat at a large conference room table, she told me about her knowledge of Camille, largely based on her family's experiences with it. She told me how she and her family now lived in a home once owned by her grandparents:

> We live in an old home. My grandparents lived in that home during Camille. And during Camille . . . which was sort of the gold standard of storms down here . . . we knew what had happened to the house, how far water had come up the street, and we could not in our minds imagine it getting any worse than that. And water had not gotten up to the house and my grandparents had stayed in the house and the house had very little damage.

During a City Council meeting in Biloxi in February 2011, the discussion turned to mobile housing used to provide homes for residents after hurricanes. One council member pointed to the Camille trailers. After Camille some residents had turned to mobile homes for housing when their homes were destroyed. Some of these mobile homes remained in Biloxi and nearby cities on the coast long after Camille. This was, as it turns out, not a new discussion. When reaching out to Ward 6 residents, Councilman Edward "Ed" Gemmill described how, "I share the view of a good number of our residents that some areas still have 'temporary' trailers from as far back as Hurricane Camille."

In an article in Biloxi's annual publication on storm and flood preparedness in 2009, Community Development Director Jerry Creel described how older homes, especially on the eastern end of Biloxi, were built prior to flood-zone regulations. Creel notes that "they were grandfathered in" to the program, implying that homes which did not meet regulations, even after Camille, were permitted to exist as they stood. While it is certainly possible that some of these homes survived Camille other studies have suggested that some such homes in the city may have been hastily constructed or re-constructed after the storm.[98] While these efforts looked to minimize vulnerability and increase resilience, other researchers have suggested that they were often ignored in the face of the problematic economic reality facing many residents after Camille.[99]

The institution of new regulations after a disaster is often difficult. Failure to grandfather in such homes would have meant requiring homeowners to alter or destroy and rebuild their existing homes. In any city, such requirements would have been seemingly difficult to enforce and problematic for a variety of reasons including, for example, costs associated with such construction for the homeowner or local government if alterations to water or sewer lines were necessary. Such issues were likely particularly problematic in post-Camille Biloxi. Biloxians I spoke with, the texts of various documents, and other researchers have pointed to the city's economic problems after the storm. Often repeated is the idea that Biloxi did not recover fully from Camille until the legalization of casino gambling in the 1990s. In such an era of economic downturn and financial problems for both local government and local residents, it seems unsurprising that the focus would be on rebuilding rather than mitigation for future disasters, as Colten and Giancarlo wrote about post-Camille Biloxi. However, we must also consider the fact that such choices made in recovery from Camille increased the potential effects of and affected mitigation for, preparedness for the effects of, and recovery from future storms.

Relief and Recovery

In the aftermath of Camille, relief efforts were often difficult in part because of the scale of destruction, such as how twenty-six counties in Mississippi alone were declared disaster areas. Moreover, class and race were also issues in the relief and recovery processes. Dr. Gilbert Mason, then local head of the NAACP, describes the chaos and problems of relief efforts after the storm. He describes how the federal Office of Emergency Preparedness in Biloxi was staffed with people "totally unprepared for a disaster the magnitude of Camille." Lessons learned from previous disasters and plans made for future events proved to be not enough.

Other relief efforts such has those run by the Red Cross also encountered problems, both in general and with specific regard to African Americans. As Zebrowski and Howard describe,

> The [Red Cross'] rationale was that too much free food distribution in the disaster zone would be economically injurious to the local food retailers. Instead of direct food handdouts, [*sic*] victims along the Gulf Coast were given Red Cross food vouchers that they could redeem at local grocery stores. Unfortunately, the Red Cross staff hadn't taken the time to confirm that economic theory by conducting a census of the surviving supermarket.[100]

Some delays were seemingly tied to the agency's own priorities, reflected in claims that blankets and bedding were only distributed *after* cleaning materials and once clean-up had begun.[101] The organization's personnel "developed a reputation for needlessly humiliating those seeking relief, especially black folks, whom they often seemed to make beg, cajole, or grovel for assistance."[102] Assistance offered by the Red Cross and others was made conditional upon need and, purportedly, class status prior to the storm, perpetuating preexisting problems.[103] The problems were so bad that then-Biloxi NAACP chairman Gilbert Mason "told people to exhaust all other possibilities for aid" before going to the Red Cross for help.[104]

The Salvation Army also responded to the disaster, remembered in particular for their distribution of much-needed drinks in the hot days after the hurricane. Private businesses distributed food and drinks.[105] As Amy Steiner described years later, "we do what we have to help each other, and people from the outside came in. The Seabees were wonderful. The Salvation army. [. . .] I remember eating peanut butter and honey sandwiches. Everyone came together and helped each other, and that is what it is all about."[106]

Federal aid came in the form of HUD trailers, but the application process was complex and unequal. Even once a family qualified, there were often simply not enough trailers initially and rent for them was expensive. Small Business Association (SBA) loans were available, but also expensive and were seemingly tied to long-term depression and mental health issues.[107] Ultimately, 5,000 trailers were distributed in total, of which nearly 3,000 were used in Mississippi. While a few were delivered relatively faster, many took months to reach the area.[108] There were also problems with getting clear sites to put the trailers on and getting water and sewage services working in them.[109]

Across the coast, "confusion immediately following Camille allowed unregulated repairs and rebuilding. Building permits were initially waived, then a non-uniform moratorium was imposed, then lifted again, prior to the new building code being in place."[110] The lack of housing also caused other

long-term problems with people constructing what they could quickly to act as shelter, regardless of mitigation of future risk, prioritizing immediate needs ahead of potential future needs, decisions that make sense in the moment but would have lasting repercussions years later when Katrina roared ashore.[111]

Camille also left an indelible mark on other parts of the city and its residents, including questions of segregation and the local school system: "Guy H. Clark, chief of field operations for the U.S. Office of Education, told forty or so Mississippi administrators from the schools affected by Camille that "they could expect no federal assistance for repair and replacement of buildings, supplies and equipment if their schools were not in compliance with Title VI of the Civil Rights Act of 1964."[112]

While, as Smith notes, the request had been written before Camille, "the timing of the announcement was relevant."[113] Mississippi's Association of School Superintendents appealed the decision to President Richard Nixon and a back-and-forth among state and federal officials began. Ultimately the new post-Camille December 31 deadline for integration was enforced with pressure from the threat to withhold further aid funding.[114]

Long-Term Recovery Begins

In the long term, the city of Biloxi made efforts to remind people of the devastation caused by Camille. Even residents who had not been alive during Camille knew about the storm's destruction from talking with friends and family. They also knew about Camille from a film often shown on public television on anniversaries of the storm.[115] The film *A Lady Called Camille* depicts individuals preparing for the storms, as well as emergency management response and their efforts to get people to evacuate. The film portrays individuals who stayed as young, reckless, and disbelievers.

Residents who had remained for the storm told a different story. They had not evacuated because they remembered riding out previous storms without serious problems. Although they knew that Camille would be powerful, they thought that their emergency preparations would be sufficient.

The film depicts the helplessness of emergency responders before and during the storm despite promise from the federal government of aid. Civil defense workers could not force people to leave their homes; they could only ask people to leave, warn them of the storm's severity, and ask about next of kin. According to the film, emergency responders worried about their safety and were unable to attempt to rescue people during the storm. In the film's depiction of the storm's destruction and aftermath, emergency management and civil defense responders are depicted as needing aid: "Suddenly a thousand problems are overwhelming the few who have to meet them."[116] However, there was a brief moment of fanfare describing top-ranking federal

government officials coming in to view the damage with the assurance that the affected areas "will get all the help the government can give them."[117] Such depictions may play a role in social memory of the storm, including who people should look for to provide aid after a disaster. Residents I spoke with emphasized that the first aid to come after storms is often from individuals, families, and private organizations, not the government.

Long-term economic recovery from Camille was a slow-moving process. From the 1960s to the 1990s, tourism in Biloxi held steady or even declined year to year.[118] After Camille the economic issues of disaster recovery were further complicated by general economic downturns. There was an initial rush of new construction and reconstruction of businesses tied to the tourism industry after a hurricane that, according to one description, "gave businesses a chance to move, to repair, to modernize."[119] In an approach that foreshadowed the prioritization of moving casinos onto land and rebuilding them quickly after Hurricane Katrina, after Hurricane Camille "widespread social recovery" the Chambers of Commerce on the Gulf Coast said, "has to be sponsored by business which, in turn, will employ people."[120]

In 1971 a new state law created the "Gulf Regional District." The district was designed to allow for area-wide planning and "to marshal the region's cultural and human resources," specifically with the idea of joint disaster preparedness and response.[121] The plan never went into effect because all six coastal counties had to join voluntarily. Then mayor of Biloxi, Danny Guice Sr., later recalled how "the further we went beyond the immediate aftermath of Camille, the less people wanted to join one area-wide body."[122]

But over time many other problems remained. The hurricane killed millions of fish and shrimp and destroyed oyster beds in the area.[123] This damage hurt the area's seafood catching and packing industry. It also dealt a severe blow to the Gulf Coast's energy industry (largely centered in Texas and Louisiana) which, in turn, reduced the number of tourists coming to the general area.[124] Simultaneously, Camille covered the local beaches with debris and destroyed many of the other local tourism draws, including local clubs and restaurants and sites of illegal gambling. Economic problems caused and worsened by Camille continued in the 1980s.[125]

The fishing and shrimping industry was severely hurt by Camille, but slowly rebounded as seafood populations reestablished themselves until being further affected by changing seafood markets and prices. The seafood industry also went on to diversify in more recent years as it has drawn growing numbers of sport fishers. The Coast Guard was joined by the Air Force with the construction of Keesler Air Force Base. The base now houses the Hurricane Hunters, teams who fly around and into hurricanes to gather data. Prior to Camille illegal gambling was widespread along the coast and from the early 1900s brought tourists into the area, but that system was completely

destroyed by the hurricane and would only be replaced decades later by legalized gambling.[126]

In the 1990s, legalization of casino gambling on the water in riverboats or barges was seen as a way to bring income into poorer parts of the state including areas farther north in the state, particularly around Tunica and on the Gulf Coast, a "shot in the arm" to local tourism levels and, thus, the local economy.[127] I was often told that Biloxi's economy did not recover from Camille until the casinos started up on the coast. Other researchers have reported similar findings.[128]

The city was looking to jump-start the local economy. Although state laws initially focused on docked riverboat gambling on rivers, coastal legislators argued for equal opportunities on the Gulf Coast.[129] Ultimately, this push led to casinos on docked barges on the coast. The non-gambling buildings in the casinos (such as hotels or restaurants) could be located on land. Because the barges were connected to these facilities, the transition from land to water was hard to notice. 1992 saw the first legal casino open in Biloxi, the Isle of Capri.[130] The industry created thousands of jobs in the next few years.

HURRICANE GEORGES

Hurricane Georges approached the Gulf Coast in September 1998, several years after the casino industry emerged from the economic destruction of Camille. As it approached, the local paper described how "weather-wary coastal residents recognized Georges as a storm to be reckoned with. Not a killer, like Camille, but a bully that would do a tremendous amount of damage before the bout was over."[131] Nevertheless, many people did not evacuate because of the perceived smaller risk from Georges compared to other more powerful storms like Camille. Individuals who did try to evacuate faced massive traffic delays and construction.[132]

The storm was originally headed for a direct hit on New Orleans but veered toward Biloxi just before its September 28 landfall there.[133] Georges came ashore with 81 mile per hour winds, 117 miles per hour wind gusts, 25-foot high waves, and flooding. It was the biggest storm to hit the Gulf Coast since casino gambling was legalized. The storm caused over $5 billion in damage total and killed over 600 people in several countries.[134] However, in Biloxi and other nearby cities, Georges caused relatively little structural or road damage.[135] Of the eleven then operating casinos, one suffered far more severe damage—the Grand Casino Biloxi. The Grand suffered $10–15 million in damages, while "no other Coast hotel-casino had more than $5 million in damage."[136] A company spokeswoman, Jean Herbert-Wiesenburg, assured the public that the barge the casino rested on was not a problem, noting that

"'the barge did exactly what it was supposed to do' [. . .] which is rise and fall with the hellacious storm surge."[137]

As part of a study conducted for the U.S. Army Corps of Engineers, FEMA and Post, Buckley, Schuh, Jernigan, Inc. the Hazards Management Group (HMG) conducted surveys in Louisiana, Alabama, Mississippi, and parts of Florida regarding people's behavior before, during, and after Georges. The 193 interviewees from Mississippi came from the three coastal counties: Hancock, Harrison, and Jackson. Of these, approximately half came from Harrison County, where Biloxi is located.[138] Sixty percent of interviewees in Mississippi claimed to have evacuated (approximately 116 people).[139] Despite more than half of the informants evacuating, problems with evacuation orders and responses clearly remained. Sixty percent of the individuals surveyed heard no evacuation orders, mandatory or recommended.[140] Moreover, the term "evacuee" may be something of a misnomer; among individuals who did evacuate, few went very far. Eighteen percent remained in their own neighborhood and 27 percent in their own county.[141] In other words, approximately 45 percent of evacuees went no further than their own county, remaining on the Gulf Coast. Thirty-six percent went somewhere else in the state of Mississippi, but it is not clear how far away from the coast they went.[142]

Evacuated residents may be out of the flood or danger zone they live in, but still in the path of the storm.

Georges storm caused $310 million in damage.[143] Mississippi's state Gaming Commission ordered the casinos on the Gulf Coast to close for safety reasons. Many casinos did pay their employees hourly wages for the time they were closed, but tips and tax revenue were lost.[144] The hurricane itself was mild, but it raised a discussion about the potential effects of future hurricanes and encouraged commentary that the casinos' survival of Georges made them "hurricane proof."[145] In the aftermath of Georges, growth of the local tourism economy continued.

While Georges was not nearly as destructive as Camille, Georges is important. It demonstrates potential problems with evacuations that might serve as a warning for future hurricane response, particularly since the issue was studied shortly after the storm. Georges served to emphasize Camille's archetype status, and it demonstrated to local residents, officials, and business owners that casinos could survive a hurricane and thus continue to support the local economy after a storm. Other hurricanes had hit the area since Camille, like Hurricane Frederic in 1979, but Hurricane Georges is one of few storms regularly mentioned by local residents. It is also problematic, as Charles Sullivan described: "Thirty-five years have now passed so we have many people who have had no experience with anything as catastrophic as Camille. Hurricane Georges in 1998 did us a disservice because it was a Category 2, a third-grade fistfight compared to Camille. But now a new generation of people think they

are hurricane veterans. They may not be quick to leave."[146] His words, a year before Katrina made landfall, would prove prescient.

Biloxians mentioned Georges, often in passing, as an example of how the area had been hit with storms since Camille and, more specifically, since the casinos opened and how they have survived. Georges caused relatively little damage to casinos and associated hotels in Biloxi. The barges the casinos sat on, required by state law that mandated gambling take place on the water, suffered little damage aside from some roof and window damage from high winds and related rain-water contamination.[147] Because of this, the casinos also faced little business disruption. However, despite this, the business disruption they did experience underscored the economic impact of potential casino closures: then-"Mississippi Gaming Commission executive director Chuck Patton estimates the loss in state gambling taxes at $240,000 *a day* and at the local level, for both the City of Biloxi and Harrison County, a loss of $120,000 *a day*" (emphasis added).[148]

Local residents and casino officials claimed Georges demonstrated that casinos could take a hurricane and come back. While all of the then eleven casinos on the coast were ordered to close in advance of the hurricane, they generally suffered relatively little damage.[149] One *Sun Herald* article described how "casino executives said they anxiously watched Georges' approach since they had never had the opportunity to see whether the casinos were hurricane-proof as required. All of them passed."[150] Similar sentiments were echoed by officials in the national media. Harry Joachim, then executive director of the Biloxi Chamber of Commerce, was quoted in the *New York Times* as saying that "we always said we could build casinos that would ride [a hurricane] out and we did," adding "I don't want to say we weren't lucky because the whole Gulf Coast was pretty luck this time around. But we came through as advertised."[151] Such perceptions emphasize the link between the casinos and the local economy; threats to casinos pose an economic risk to the city and thus casino resilience becomes community resilience.[152] Nevertheless, there were also more cautious notes, like that made by Treasure Bay Resorts president Bernie Burkholder: "I think this was a wake-up call. [. . .] Anybody who doesn't see the vulnerability (of the casino industry) here is asleep at the switch."[153]

NOTES

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3. Dorst, "Subject: G1."
4. Bunya et al., "A High-Resolution Coupled," 345; Resio, *White Paper*, 23.

5. Morton, "Historical Changes."

6. Longshore, *Encyclopedia*, 308.

7. Bergeron, "History Says," F4.

8. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 142.

9. Ibid., 17.

10. Bergeron, "Lesson Learned," E1.

11. Sullivan, *Hurricanes*, 21.

12. Rowland, *Encyclopedia of Mississippi History*, 163, 176.

13. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 18.

14. Rowland, *Encyclopedia of Mississippi History*, 176.

15. Bergeron, "History Says," F4.

16. Hearn, *Hurricane Camille*, 45–46.

17. Cuevas, *Cat Island*, 112.

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19. Ibid.

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21. Pielke, Simonpietri, and Oxelson, "Thirty Years"; Godschalk, Brower, and Beatley, *Catastrophic Coastal Storms*, 55.

22. Blake, Landse, and Gibney, "The Deadliest," 7.

23. Melton et al., "Hurricane Katrina Storm Surge Delineation," 519; Canis, *Living with the Mississippi-Alabama Shore*, 112.

24. Hearn, *Hurricane Camille*, 48.

25. Longshore, *Encyclopedia*, 4, 309.

26. Lang, "Beach Road," 5.

27. Cowley et al., *Sand Beach Master Plan*, 86.

28. Cuevas, *Cat Island*, 6.

29. Hearn, *Hurricane Camille*, 50.

30. Shaw, *Images of America*, 57.

31. Hearn, *Hurricane Camille*, 49–50.

32. Roth, "Louisiana Hurricane History," 36.

33. *Sun Herald*, "Storm with No Name," E1; Bergeron, "1947 Hurricane," 1.

34. Hearn, *Hurricane Camille*, 53.

35. *Sun Herald*, "Storm with No Name," E1.

36. *Daily Herald*, "One Life Lost," 1.

37. Ibid.; Sumner, *North Atlantic Hurricanes*, 252.

38. Bergeron, "1947 Hurricane," 1.

39. *Sun Herald*, "Storm with No Name," E1.

40. Ibid.

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Chapter 3

Hurricane Katrina

While speaking with people on the coast, it became clear to me that, for many, the building of the casinos in the early 1990s represented the moment recovery from Hurricane Camille's 1969 impact had finished. Immediately, they became a significant presence in the local economy. This meant that by the time Katrina struck in 2005, the casinos were both seen as a system of hurricane recovery, at least economically speaking, an important source of jobs, a tourism draw that in turn supported more jobs in the larger tourism industry, and a source of tax revenue. Due to all of this, there were efforts to push through both new legal changes to permit reconstruction of the casinos on land where they were deemed safer (despite questions remaining of their location) and rapid reconstruction and reopening of the casinos. While these efforts were supported by people in the area at first, they were also largely driven by people in power like casino owners and operators, and state and local politicians.[1]

Beyond initial support from Biloxians in the more immediate aftermath of the storm, problems soon arose. The reconstruction of casinos on land within 800 feet of the water put them into areas that had long been neighborhoods full of homes. In some cases, this meant casinos buying out property from previous homeowners and forcing their relocation to other parts of the city. The legal issues surrounding the casinos also meant a range of issues for residents to deal with, even pre-Katrina. Renters who had been renting homes pre-Katrina had these homes sold out from under them, forcing them to relocate. Homeowners who refused to sell and could rebuild did so, but often in what became more isolated locations, lacking the close physical ties they had to neighbors before the storm. Others could not afford to rebuild and remained in a range of personally bought trailers and RVs, FEMA trailers, and MEMA/Katrina cottages as time went on. Some people did not rebuild

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but instead tried to sell empty plots of land to casinos and other developers—some successfully, some not, and some holding out for higher offers, even years after the storm.

In many cases, these patterns also followed along with questions of power and inequality. Who could afford to rebuild? Who could interact with local government officials to help shape policy and zoning changes to support their vision of rebuilding? Who was able to keep their own land and homes? The answer to each of these questions was more often than not people who had more political and economic power and stability before Katrina. The importance of understanding this cannot be discounted, nor of understanding the long and complex history of Biloxi, its residents, and its interactions with hurricanes. All of these issues are intertwined and shape people's perceptions of risk, uncertainty, hurricanes, recovery, power, and rights. And this complex interface in turn shapes the actions people take before, during, and after Katrina. Understanding Katrina holistically provides better insight into what might happen in the next hurricane. Katrina was not Biloxi's first major hurricane, nor will it be its last. Learning more about Katrina in this historical, cultural, political, and economic context helps us on several levels and leads us into a better understanding of how future Biloxians may respond to and recover from hurricanes and, more broadly, how people in general are influenced by history, culture, and power long before a disaster happens and long after the disaster itself is over, even after recovery is finished, if such a state exists.

The neighborhoods that were hardest hit by Katrina, those on the peninsula and in the larger area of East Biloxi, were also those that were the locations for casino rebuilding on land and had more racially, ethnically, and economically diverse residents. This fed into a relative lack of power and finances for many, as well as higher rates of groups like renters who were unable to make their own decisions about rebuilding their own homes.

In short, those pinpointing the building of casinos as the moment of final recovery from the historic devastation of Camille and the economic boom that followed lead directly into the ways people were able or unable to rebuild their homes or find other housing in the years after Katrina.

BEFORE LANDFALL

Biloxi's story of Katrina and recovery from it are important to understand in the context of its own history and culture, as both of these influence people's perceptions of and responses to disasters. More broadly, understanding Biloxi in Katrina enables us to have a conversation about what shapes people's perceptions, decisions, and actions. While research has been done on these

questions, largely in shorter-time frames closer to the disaster, taking a long-term approach that incorporates historical and cultural contexts before the disaster and long-term recovery after the disaster is essential to our fully understanding why people make the decisions they do even if they seem confusing to outsiders. As many researchers have argued over the past several decades, disasters are not just the product of a hazard, but rather also the people it affects, their perceptions of risks and uncertainties, their decisions and actions, and the wide range of influences on each of those, including their identity and status, the history and culture they live in, and how they remember previous disasters, whether or not they experienced them directly. Every person must go through a series of steps to process and respond to a warning, including hearing, understanding, believing, personalizing, deciding and responding, and confirming the warning.

Biloxians developed perceptions of, made decisions about, and prepared for Hurricane Katrina well in advance of landfall. Their experiences during and immediately after the storm, including detailed examples of their circumstances and memories of the events in that time built from anthropological data collection in the years after the storm, illustrates their experiences with Katrina, developed from their pre-Katrina lives and experiences. Their discussions of the reasons they did or did not evacuate, particularly with reference to previous disasters like Hurricane Camille, reveal the complex array of influences on their perceptions of risk, uncertainty, vulnerability, and hurricanes as well as their subsequent actions. But these conversations also raise additional questions about what people thought about Hurricane Katrina in retrospect—did they think it would be less of a disaster than it was? Did they know it was coming? And did they think they prepared the way they should have?

On Thursday, August 25, 2005, Tropical Storm Katrina passed over the Bahamas, hitting Florida fourteen hours later as a Category 1 hurricane.[2] By 5:00 a. m. (EST) on Saturday, August 27, the National Hurricane Center (NHC) reclassified the storm, now in the Gulf of Mexico, as a Category 3 storm and added that they expected the storm to make landfall in New Orleans.[3] Katrina continued to grow before weakening on August 28 from a Category 5 to a strong Category 3.[4]

On the morning of Monday, August 29, Katrina made landfall on the Gulf Coast near Buras, Louisiana, as a Category 3 storm with 125 miles per hour winds. The storm moved back over the Gulf briefly and then made landfall on American soil a third time near the Louisiana-Mississippi border. Katrina's storm surge was so powerful that it broke tide gauges all along the coastline.[5] While recordings that were taken and official estimates place the storm surge at twenty-four to twenty-eight feet high, Biloxians and other coastal residents I spoke with in 2010 asserted that they believed the surge had been much

higher.[6] For them, the official numbers were one thing, but their lived experience and the experiences of their friends and family members were more real.

Julie Suarez described how "my neighborhood looked like someone took a giant spoon and stirred a bowl because our possessions were all over the whole area."[7] I heard such descriptions repeatedly from Biloxians, comparing the scene to the inside of a washing machine. Katrina caused major damage in Biloxi but affected some areas more severely than others. The exposed peninsula suffered massive losses. Ninety percent of the buildings in the Point Cadet neighborhood were destroyed.[8] Slightly further west and more sheltered from the storm surge, Keesler Air Force Base lost nearly two-thirds of its housing. The base exchange, commissary, and the medical center (the second largest in the Air Force) were severely damaged.[9] Many historic sites were either damaged (e.g., the Biloxi Lighthouse, Old Brick House, Saenger Theater, and city cemetery) or totally destroyed (e.g., the Dantzler House, Tullis-Toledano Manor, and Crawford House).[10]

THE COMING STORM

Biloxians were not entirely unaware that Katrina was headed in their direction (although several informants said they only really heard about Katrina's threat to Biloxi about twenty-four to forty-eight hours prior to the storm) and made preparations. Two days before Katrina made landfall, Jim Cantore from the Weather Channel interviewed then-mayor A. J. Holloway on the beach: "I'm not sure how to say this to you, Mayor Holloway, but this storm has all the makings of what they call a perfect storm. You need to take a ride around your city today because many of the things you see today won't be here the day after this storm."[11] Residents checked their hurricane kits to make sure food, water, and first aid materials were intact and ready to go. Windows were boarded and shuttered, generators were gassed up. For many, such preparations made no difference. As Suarez wrote, "I thought I had done everything 'right' in preparing for the storm. Every supply we had bought for the storm washed away."[12]

The stories I heard from Biloxians in the years after Katrina revealed the difficult problems they faced in making decisions about their evacuations and preparations for the storm. These stories, combined with fieldwork at the site and, in particular, at public meetings, also gave insight into Katrina's place in a much longer history. Such stories revealed that people were influenced by events and their own and other people's decisions in previous hurricanes, sometimes even before they were born. They demonstrated that the rich depth of shared knowledge on a community or city level shaped how people perceived and responded to the disaster, resulting in people choosing not to

evacuate, to stay nearby, or to attempt to return back to their home neighborhoods after the storm. And these stories, perceptions, and actions further underscore broader conversations in the disaster and anthropological literatures, and how evacuees and non-evacuees alike make decisions for complex reasons in complicated contexts and with deep knowledge of history.

Several themes about the storm were prominent in my interviews. First was the idea that Biloxians "do not evacuate" or, if they do, they do not travel far. Second, many residents had not expected this storm to be "worse than Camille." References to Camille became a sort of mantra throughout my research: "Well, I didn't evacuate for Katrina because I was fine in Camille," "my house survived Camille, so I figured it would be fine," "no storm could be worse than Camille." And, in a specific quote I heard repeated numerous times and attributed to various sources, "Camille killed more people in 2005 than she did in 1969." This description of Camille clearly illustrates the important role of Biloxi's hurricane history in shaping residents' perceptions of the risks associated with Katrina. As Zebrowski and Howard describe from years after Camille, "a for-sale sign posted on an interior lot included the claim, 'no flooding in Camille.'"[13]

In late August 2005, Hurricane Katrina approached the American Gulf Coast. Biloxians learned about the storm's approach in two ways: (1) official and public sources such as the media and government agencies and (2) personal sources such as friends, family, and co-workers. The latter group relayed information received from official and public sources, as well as information gleaned from personal experiences. Recognizing and understanding the ways in which these two modes of knowledge dissemination fulfill different yet complementary functions is important because in a disaster situation, it is not only the information that is conveyed, but how it is dispersed that affects preparations and recovery efforts. In Biloxi, individuals tended to rely upon personal connections and local knowledge more than official expertise. Personal sources trumped official sources for many, as when residents ignored official warnings from government sources and chose to stay on the coast.

This is not to say that media sources were inconsequential to Biloxians—they provided a link to information released via official sources like the local government. And people paid particular attention to local news for this information, prioritizing it ahead of national or international news. Although many people watched the news, often this information was filtered through personal connections and experiences as people discussed the coming storm. Many people were alerted to the storm and the growing news coverage of it by people they knew. Similarly, information that influenced individuals' evacuation and recovery decisions divided along this line between official and personal sources. Some residents made their evacuation decisions because of official

warnings disseminated via the media, but many made their choice based on personal or shared knowledge and experiences. Initial relief and recovery efforts were supported by government agencies and NGOs (such as the Red Cross), but also by the efforts of individuals and small groups (especially church-affiliated groups). Sometimes these non-organizational groups were staffed by friends, family members, and co-workers of affected individuals, but many residents recounted the aid they received from strangers. The existence of these connections before the storm reinforced individuals' reliance on the information and resources available through personal connections.

LEARNING ABOUT THE STORM'S APPROACH

Residents of the Gulf Coast began to hear about Katrina and its potential landfall less than a week before the storm hit. As the storm moved and increased in strength, information and warnings about it changed frequently which forced individuals and families to make hasty decisions about their preparations not long before landfall. These delays were perhaps unavoidable given the difficulty of predicting a storm's behavior. Nevertheless, the fact remains that coastal residents felt that they had relatively little time to prepare and to make evacuation decisions. In the lead up to Hurricane Katrina, as happens frequently with hurricanes, multiple processes were in motion that shaped the evacuation of the city and affected residents' perceptions of risk and uncertainty, ultimately in turn shaping the actions they took. Despite the importance of historical context and the influence of personal and shared knowledge of previous hurricanes in influencing people's risk perception, this was not the only influence at work. Decisions of people, businesses, and government officials around them, and discussed in the media, also influenced people's perceptions and actions. It is important to dive more deeply into this and to examine these series of decisions and actions, including those made by casinos and government officials at varying levels. Also, importantly, these decisions are intertwined, as government officials gave orders and suggestions to casinos regarding closures and evacuations.

   In addition, casinos were not required to close unless and until the Mississippi Gaming Commission gave the order, sometimes as little as twenty-four hours before landfall despite the fact that securing the casinos could take as much as twelve hours. Without these closures, the city could have as many as 55,000 visitors and vacationers on site, in addition to needing to evacuate local residents. Moreover, the decision was often only made after the Harrison County Board of Supervisors issued an evacuation order for low-lying areas in the county.[14] Then-mayor A. J. Holloway had, in the months before Katrina, encouraged casino managers and the Gaming

Commission to call for the closure of casinos and hotel evacuations before any county evacuation orders, a move many resisted. Some city officials expressed their frustration over this resistance, as when one emissary asked a casino official "If you have a fire are you going to call the gaming commission and ask if you should evacuate [for that]?"[15]

These casino-related decisions are clearly related to government recommendations and decision making, with government officials making suggestions to casino managers at the state and local levels. During this same time, local people themselves began hearing about the hurricane, its potential path, and the steps the casinos and governments were making, as well as the perceptions and actions of individuals they knew on the ground. A few Biloxians I spoke with remembered preparing for the storm in these early moments. These residents' preparations were often part of official responsibilities for their jobs or volunteer activities. Edward recounted meeting with the Harrison County Civil Defense team in nearby Gulfport as Katrina was beginning to affect Florida. Annabelle learned about the storm as she made the decision to once again manage an emergency shelter, as she had in previous hurricanes. For residents like Edward and Annabelle who had official duties related to hurricane preparation and recovery, personal and family planning efforts were shaped, at least in part, by those duties. Annabelle, for example, would ride out the storm with her family at the shelter she managed.

Other residents who were uninvolved in official response were also following the storm, both in the media by watching the news coverage of Katrina's effects on Florida and in their personal lives. These residents had connections both to others making official decisions, like Edward and Annabelle, and people uninvolved in official decisions, but making decisions for themselves and their families. While not making official judgments, regular people making personal evacuation decisions had the potential to influence other people around them, both through the media coverage of Katrina hitting other areas and interviewing residents in those locations and local people's early perceptions of the storm. For them, early memories of the storm were not about their own preparations for Katrina, but the news that it had affected others. Even then, many residents of the coast were not thinking about Katrina as a potential threat. Ginger said, "I did watch this one when it came across Florida and as it came closer, I watched it, but I never really had any fear of it."

Many people I spoke with recalled not hearing about the storm until Friday, August 26, even though Harrison County began commenting on the need for evacuations on Thursday, August 25.[16] When I spoke with Erica she remembered speaking with a receptionist that afternoon at work. The other woman pointed out that their workplace might be closed on Monday because of the storm. Erica admitted that her first thoughts were of frustration, not fear. She was annoyed the storm would knock out power and force her to change her

work plans for Monday. She was not aware, she admitted, of the scope of the storm and the eventual destruction it would cause. Erica, like other Biloxians, expressed a relative lack of concern about the storm at this early stage. Biloxians who I spoke with who expressed a relative lack of concern about the storm early generally had at least a vague idea of what they would do if it did hit the area. The people who seemed less concerned were almost entirely people who had lived on the coast for an extended period of time or their whole lives and many of them had family networks on the coast or across the South. In part their relative calm seems to be tied to their own experiences with and knowledge of previous hurricanes and building on those experiences with and knowledge of hurricanes in their family and social networks. In a way they were not worried about Katrina because, they felt, they had been there before. As the storm grew closer more of these residents began to feel some unease about the impending hurricane, especially those who lived on the Biloxi peninsula. But for many people, this relative lack of concern is made clear in their discussions of a lack of information about the storm. Early on, residents were not getting information about the storm's potential effects on Mississippi, but rather its effects on Florida.

As Katrina sat in the Gulf, warnings about where the storm would move next varied; while the National Weather Service predicted landfall in Apalachicola, Florida, the U.S. Navy expected the storm to head toward New Orleans, Louisiana. This changing status meant changing warnings. This, in turn, meant that residents who were in the direct path of the storm might not be hearing warnings about their area. Friday, August 26, brought new predictions, including the specific threat to the Mississippi Gulf Coast, largely centered on Gulfport, a few minutes west of Biloxi.[17] As warnings shifted to include a possible landfall in Mississippi, Biloxians began to focus more on the storm and to make preparations for it. This shift forced a new consideration of the hurricane, changing people's perception of Katrina as a new potential threat to the city and forcing them to consider their risk in the context of the city's and their own history with hurricanes. When Katrina threatened the Mississippi coast, it began to invoke people's memories of previous hits, including both less destructive hurricanes like Georges and more catastrophic ones like Camille. People began thinking not only of Katrina as a hurricane affecting other areas, but as the latest in a long line of hurricanes to potentially affect them, forcing them to make decisions about evacuation and other preparations. Moreover, all of this was happening in their own contexts of access to—or a lack of access to—additional resources that might facilitate or hinder evacuations or being prepared to safely shelter in place.

Officials, meanwhile, were increasingly worried about Katrina's size and strength and were uncertain about what part of the coast it would affect, but these apprehensions do not seem to have reached all coastal residents. This

was likely the result of a variety of factors, including how and when emergency alerts were issued and, most importantly, how people obtained information about the storm filtered through personal connections.

By Saturday, August 27, officials were clearly growing more concerned about Katrina's potential effects on Mississippi. FEMA supervisor Leo Bosner sent a report to top officials in the Department of Homeland Security that pointed to Hurricane Camille's landfall in 1969 and warned that "the last time a hurricane of this magnitude hit Mississippi and Louisiana, 143 people died."[18] The NHC released Advisory 16, placing Katrina at Category 3 strength.[19] Later the NHC issued public warnings at ten o'clock local time that night that warned of potential flooding in the area as much as 15–25 feet above normal tide levels.[20] Mississippi Gulf Coast officials met and came "to a *unanimous* mandatory evacuation decision" just forty-eight hours before landfall.[21]

But the message had yet to fully reach many Biloxians. Erica described participating in the Heart Walk, a fundraiser, in Gulfport that Saturday, along with thousands of other coastal residents. She remembered a beautiful day with wonderful weather and described how "still nobody's really got Katrina front and center." For Erica, this was because "nobody was getting us ready for anything" and "I think there was very poor planning in terms of giving people lead time for this thing." "I have said to people before," she continued, "that in a way Katrina snuck up on us and in a way it kinda did. Because I don't think we were well prepared in enough time or given enough time to make some decisions or plans to get outta here." There are several important pieces of context to such comments. Recall, as discussed earlier, can be tricky. People may have forgotten hearing about the storm's potential aim at the Gulf Coast early on in the predictions because at the time they did not register it as a threat. People may not have heard about the storm's potential landfall in the area, even if it was being discussed in the media, if they were not consuming those media sources. However, I do think their memories of not hearing about the storm early on and their feelings of not being prepared by officials are important to think about in part because they reflect how people feel about the hurricane and officials while in recovery and in part because they may reveal deeper perceptions about risk, hurricanes, and official responses to hurricanes.

Sunday, August 28, brought more official attention to the storm and increased the number of Biloxians making decisions about what to do. The NHC declared Katrina a Category 5 hurricane. That afternoon President Bush declared states of emergency in both Mississippi and Alabama. While Mississippi governor Haley Barbour had already declared a state of emergency, he had not issued mandatory evacuation orders. By this time, Biloxians were learning more details about the storm, including the fact that

it was headed their way. Residents began to make decisions about their own evacuations, decisions that were often based on a few key pieces of information, including knowledge about the storm (particularly as distributed on the Sunday morning news on August 28 or learned from friends and family), experience with or knowledge of prior hurricanes (e.g., Hurricane Camille in 1969), concerns about complications related to evacuation (e.g., heavy traffic along evacuation routes), and personal responsibilities (e.g., job requirements or roles as caretakers in their family). Exploring these various influences on decisions is important to understanding the why and how behind the decisions people ultimately made. Each too is rooted in a historical and cultural context of previous experience with hurricanes, perceptions of risk and uncertainty, and access to needed resources to implement their desired decision.

THE DECISION TO STAY

Many Biloxians and other coastal residents did not evacuate, even though they knew that Katrina was approaching the area. They chose instead to ride out the storm at their own homes, family homes, or local shelters. This was rarely the product of Biloxians minimizing their vulnerability or risk. Their decisions to remain were largely based on their experience with and knowledge of previous storms (e.g., remembering being okay during and after Camille or what areas remained relatively undamaged in other hurricanes); their concerns about the evacuation process (e.g., traffic made up of other evacuees, from both the Mississippi coast, as well as the Louisiana coast and New Orleans to the west, would leave them stuck in their vehicles when the storm hit); and their personal roles in various groups, including both their family and larger parts of the community (e.g., their responsibilities to care for family members who would not evacuate). While qualitative data gathered on these responses does not give us a large set of quantitative data to point to statistical significance or to statistically compare different experiences and perceptions, it does give us a better sense of the range of issues people were dealing with and how they felt about them. This better sense of range is critical to our understanding of what may influence a person's decision to evacuate or shelter in place, as well as of potentially what may influence their long-term recovery decisions like returning to their previous home or relocated and, in turn, their preparation for and response to future hurricanes.

For people I spoke with, these factors played a significant role in their decision to ride the storm out on the coast, despite official warnings or suggested evacuations. Scattered throughout their stories about this decision were details about their reliance on knowledge obtained from their own

experiences or from friends, family, and other acquaintances. Even residents who were aware of the warnings often prioritized their own and others' local knowledge and responsibilities over expert statements. Biloxians pointed to their own experiences with hurricanes or the shared stories of experiences of family members, friends, and neighbors as reasons to stay or leave. Having family who survived Camille in a home that someone could ride Katrina out in, as Erica described, was an influence in deciding to stay. Needing to evacuate with a loved one with medical issues was a more personal influence on deciding to evacuate than much of what government officials said, as Bridgette recounted.

Cleaning Up Debris of Homes and Businesses

Some residents put their decision not to evacuate in a broader context, viewing the storm as a continuation of previous storm experiences and as a somewhat normal event. They described how Biloxians and other coastal residents simply did not evacuate for storms. Many added that being in the area immediately after the hurricane to begin the clean-up process as quickly as possible was important. Dorothy said that she and her husband remained in Biloxi in part because they thought it would be better to be at home and able to do something about any potential damage as soon as possible, adding "everybody back then thought you could do . . . like you could perform a miracle."

Dorothy's account shows how many Biloxians saw Katrina in the light of previous storms. For many previous, smaller storms, clean-up immediately after the storm was absolutely possible. These previous experiences contributed to a pattern of normalizing storms, leading Biloxians to see larger storms like Katrina as ordinary events that could easily be addressed.

Eva commented on her brothers' insistence that they be at home and ready to begin clean-up as soon as possible. Eva added that this seemed to be a common attitude on the coast, especially for men. She herself chose to stay in the area for the storm with her family, including her brothers, but noted that it was not unheard of for men to remain at home during hurricanes even as women and children evacuated.

Nina recounted how she and her husband watched coverage of the storm's approach: "We were watching the storm, but we didn't really think it was gonna be bad." While she did not evacuate the coast entirely, Nina did move to a seemingly safer location to stay with her parents during the storm. Her husband chose to remain at their home during Katrina, arguing that it would be fine and that he would be able to address any minor damage right away.

Massive amounts of debris would need to be hauled away. As then-mayor A. J. Holloway wrote ten years after the storm, "Entire blocks of neighborhoods

were reduced to debris fields."[22] A year after the storm, 2.08 million cubic yards of debris had been removed—just from city streets and public rights-of-way at an initial cost of $50 million, including 380 cubic yards of electronics alone.[23]

By comparing Katrina to previous storms, Ginger described how she or members of her family had been on the coast for many hurricanes. Hurricanes were, for Ginger and many others, somewhat routine events, despite the destruction they left behind. She remembered the aftermaths of both the 1947 hurricane and Camille (after coming home to visit later in 1969). Ginger emphasized that she did not plan to evacuate for Katrina: "I thought . . . you don't evacuate for storms . . . [my parents] didn't evacuate for Camille." This direct comparison, in contrast with general statements about hurricanes over time, reflects Camille's status as a typical example. Like Ginger, many Biloxians compared Katrina directly to Camille. Many of these residents described to me, as well as other researchers and reporters, how they thought if their home had been safe for Camille, it would be safe for Katrina. Their knowledge of local culture and history and personal experiences influenced their decisions about Katrina preparedness as much as expert recommendations.

Erica, for example, described hearing more news about Katrina and warnings to evacuate by Sunday morning. Not only was such coverage coming from the state and national level, but local officials were increasingly involved and speaking publicly about the storm. Then-Biloxi mayor A. J. Holloway gave interviews with Weather Channel reporter Jim Cantore on Sunday, beginning at 8:00 a.m., widely covered on television.[24] This increased coverage, especially at the local level, drew more people in to watch the news about Katrina.

Erica and many others were growing more concerned about the storm, but they were also very concerned about the timing of the evacuation and potential traffic hazards. Erica described how the media was "really predicting some dire things, but by Sunday we're also hearing that the highways are just parking lots." She contrasted an image of being stuck for the storm on the highway with the safety of her own home, noting that she and her family lived in what had been her grandparents' home, a building that had survived Hurricane Camille in 1969. "We could not, in our minds, imagine it getting any worse than that and water had not gotten up to the house." She added that during Camille "the house had very little damage." The fears about being stuck on the highway for the storm, combined with her knowledge of Camille, led Erica and her husband to decide to ride the storm out at their home in Biloxi despite their knowledge of official and media warnings about the potential severity of the storm.

Despite such decisions to remain in the area and the perception that their homes would be fine, a few people nevertheless took steps to protect important personal effects. Some brought such items with them to nearby family homes or shelters. Others put the items in what they considered safe areas, like upstairs or high up inside closets in an attempt to protect photographs or irreplaceable items from potential floodwaters. Many of these residents noted that they did not expect the storm to be as bad as it was and that they had thought the items would be safer in place than they would being moved around to various locations. Thus, they left photographs, family heirlooms, and other important personal effects in what they viewed as safe areas in their homes. Unfortunately, for some residents these efforts were not enough as such items were damaged or destroyed when homes flooded. When I spoke with people in 2010 and 2011 who lost important personal items by not getting these effects out of the area, they expressed regret and spoke to me about their efforts to save what they could after the storm, vowing to move and protect such items better in future hurricanes.

Personal Responsibility

For some Biloxians, the decision to remain in the area for the storm was based on personal roles, including their jobs, responsibility for family members, and their work at emergency shelters. Dorothy was called into work to help with people who would be staying there for the storm as a sort of shelter. She brought her husband with her, noting that in previous storms they had also stayed in the area when he had been called into work.

Annabelle stayed to run a shelter, as she had for previous storms. While her decision was based in part on wanting to help others, she also pointed out that it ensured a safe place for her family, including her parents, who refused to evacuate for hurricanes. Annabelle parents, like many others, argued that since their home had withstood Camille, it would withstand Katrina. Her role in the shelter enabled her to stay safe during the storm and help keep her parents safe as well.

Every person I spoke with who decided to stay on the coast for Katrina did take steps to prepare. They also noted that these were the same preparation efforts they would have made for any storm. Such common preparations include ensuring there was enough non-perishable food and water for everyone at a particular location for at least three days, as well as gathering batteries, flashlights, candles, weather radios, medication, and ice in coolers. Individuals who moved to another location (like a shelter or someone else's house), often took supplies like these and a few items of their own clothing with them.

Eva pointed out that her family had walkie-talkies ready to communicate with each other and a few other people in the neighborhood who were staying. Most individuals and families also took precautions to protect their home and vehicles as much as possible.

Cars were moved to nearby empty lots or onto higher ground. The windows on homes were sometimes boarded up with plywood and items outside the home that might become a hazard in high winds (like patio furniture) were moved into homes or garages.

On Sunday, Governor Haley Barbour declared an emergency for the state of Mississippi.[25] That day before the storm saw an increase in local emergency preparations as well, including the opening of storm shelters for residents who were not or could not evacuate. Annabelle and other volunteers prepared the shelter on Sunday, opening the doors to residents with special needs who would be staying there for the storm.

THE DECISION TO EVACUATE

People I interviewed and who spoke with other available sources (both the media and other researchers) who decided to evacuate for Katrina spoke about a range of influences on their decision to evacuate, including their roles as family caregivers (for other people who wanted to evacuated or needed to be evacuated), orders to evacuate (official military orders), and concerns about the size and power of the storm (often based on discussions with friends and family). Even among residents who heeded official evacuation warnings, people described the reasoning behind their decision as being influenced by family and friends, not just expert opinions.

It is important to note that every one of the people I spoke with who evacuated had a specific destination and the resources to get there. None of them drove off in the hopes of finding hotels or other spaces to stay in; instead, they all evacuated to pre-determined locations or to the residences of family members and friends in other areas. Such individuals and families were able to evacuate, in part, because while they might not have to find the funds to support a stay of indeterminate length at a hotel, they could stay for free with friends and family who lived off the coast. They did have some costs, particularly gas for vehicles, but the evacuation cost them less than it otherwise would have without those resources.

Having to Evacuate: Serving as Caretakers for Others

Bridgette was caring for her ill sister at the time and began debating whether or not to evacuate on Saturday. She had to determine what would be best

for both herself and for her ill sister. Bridgette said when she went to Mass that evening, she decided to wait and listen to the Sunday morning news to figure out if the storm was powerful enough to be a threat. She and others were increasingly turning to local news sources as a means of learning more details about the storm. As the Sunday morning news described the storm as a Category 5, officers from the Biloxi Police Department came to her door. The officers told Bridgette that they were going around to local homes and taking down the names and addresses of residents and next of kin so that officials would be able to notify families if residents who did not evacuate were killed by the storm.

The news coverage and police visit combined with her sister's health ultimately persuaded Bridgette to leave, deciding to evacuate herself and her sister to a relative's home in Georgia. While the official and media encouragement pushed her decision in the moment, it was also a decision very rooted in her personal responsibility for and ties to her sister.

Edward noted that his wife, who works at Keesler Air Force Base, was told to evacuate the area. Brigadier General William T. Lord, commander of the 81st Training Wing (81 TRW) at Keesler ordered base personnel to evacuate ahead of the storm at 6:00 p.m. local time on Saturday:

> As [Hurricane Katrina] began to get very powerful, we really began to focus our attention. We thought that we would have time perhaps to wait it out through the weekend, and then she began to travel much more quickly, almost due north. So it was Saturday that I decided that we needed to head into shelters. [On] Saturday evening I declared under my own authority, [following] a little consultation with the two mayors [when I] told them what I was doing and not asking their permission, and evacuated 10,000 people.[26]

Despite such direct orders, many residents off base with ties to Keesler stayed in the area, including Edward and his wife.

Other local residents recounted talking with family members and friends instead of officials in making their decision to evacuate. Abigail first heard about the storm at work on Friday from a co-worker, leading her to ask: "What do you mean there's a storm out there?" She did not make a decision about her evacuation until Sunday, like many residents on the coast. Abigail did decide to leave the coast, although she did not go far. After talking with friends and family members, Abigail decided to head further north in the state to stay with family, "just in case." Her concerns were largely focused on the size and potential power of the storm. However, for Abigail, as for Pearl, the decision to evacuate was made easier by the fact that she had somewhere to evacuate to, as family members in other areas opened up their homes.

Without this resource, the decision to evacuate can be more complicated, as many people cannot afford an indefinite stay in a hotel room. Financial circumstances matter at many points in the evacuation process: Can someone afford to own a car that they can evacuate in? Can they afford enough gas to get it, and them, out of harm's way? Can they afford someplace to stay? This latter question is particularly important to consider for families with situations that may not work in many shelters or hotels, thus limiting their options (like pet ownership) or whose entire social and familial network is located in the area affected by the hazard, thus eliminating the option of staying with a trusted person.

HURRICANE KATRINA MAKES LANDFALL

Hurricane Katrina made landfall near the Louisiana-Mississippi border on Monday, August 29. By mid-morning, President Bush issued emergency disaster declarations for both states, as well as Alabama. While it had reached Category 5 status in the Gulf with sustained winds of 175 miles per hour, the storm had weakened.[27] At this point, the storm was a strong Category 3 to weak Category 4 storm. Despite this weakening, the hurricane remained a large storm with a diameter of 460 miles and some of its Category 5 intensity remained in a storm surge that was more powerful than expected from a Category 3 or 4 hurricane.[28] Years after the storm, many Biloxians have vivid memories of their experiences during the storm, even though it had weakened before landfall. Despite their descriptions of riding the storm out from a variety of locations, many described the feeling of being at the center of the storm, somewhat akin to "being in a washing machine." Of the roughly 25,000 homes and businesses in Biloxi, Katrina took out at least 6,000, nearly a quarter of buildings in the city.[29]

People I spoke with who remained on the coast during the storm vividly remembered the winds and floodwaters. But individuals' memories of the storm vary, particularly in relation to light. Erica recalled that by early Monday morning it was already very dark. Annabelle echoed the sensation: "In my mind I keep thinking it [was] night because it's such a dark time in my memory. But it wasn't [night], it was daytime." Dorothy argued that what daylight was visible through the storm saved lives because people could see enough to save themselves by clinging to trees and structures or by simply avoiding debris in the water with them. Camille, she noted, had happened at night and was even darker, implying that Katrina would have killed even more people had it struck at night like Camille. Descriptions like these demonstrate how different personal recollections of a shared event can be. They

show how individuals ascribe varying levels of importance to their own memories, placing events in particular contexts.

However, they also reveal how memories of previous experiences with hurricanes and perceptions about earlier hurricanes are an important influence on people's perception of and responses to future hurricanes. Even if people's own recollections of experiences in previous storms are hazy or they are building on other people's recollections for knowledge about earlier hurricanes, people still use such recollections in their decision making in subsequent hurricanes. It is likely not possible to categorically say that one experience with one specific previous hurricane will make all individuals do the same things in response, but historical and cultural context matters and represents information considered by local residents in preparing for, responding to, and recovering from hurricanes. People's decision making in hurricanes is not simply a response to the magnitude of the hurricane and official orders or suggestions of appropriate behavior. Their decisions are made based on perceptions, memories, and shared recollections. Dorothy's description reveals not only how she remembered Katrina, but also how she contextualized it in her knowledge of previous hurricanes and the importance she ascribes to specific events.

Hurling Debris: Wind Strength and Speed

Despite the storm being downgraded from a Category 5 to a Category 3 by the time it made landfall on the Gulf Coast, Katrina still brought powerful winds with it. Harrison County experienced at least Category 2 force winds of ninety-six miles per hour.[30] Many areas north of the Gulf Coast were affected by these hurricane force winds and even residents who evacuated remember them. Abigail, who had evacuated to a city seventy-five miles north of Biloxi, described how even the winds there were "getting pretty bad" by Sunday night. On Sunday and Monday, tornadoes spawned from the high winds posed a significant threat to people across a large area of Mississippi. While the effects of Katrina were obviously not as bad further north in the state, the movement of the storm and the power of the winds involved were enough to cause significant problems. Although the three coastal counties (Hancock, Harrison and Jackson) were most severely affected, forty-nine of the state's eighty-two counties were affected enough to qualify for full FEMA aid.

On the coast itself in the direct path of the storm the winds were, of course, the worst. Ginger and her husband boarded up her home and moved their most prized possessions away from the windows. Ginger hoped this move would protect them from the wind which, she noted, she was "most worried about." They then went to ride the storm out at her parents' nearby house.

Ginger recalled waking up around 4:40 that morning and checking the phone to find that there was still a dial tone, but no power in the house. By that point it was raining, and the wind was beginning to blow. As the storm grew stronger, Ginger noted that it was the wind that bothered her the most, recalling how the house shook violently from the wind. When Ginger and her husband moved upstairs to avoid potential storm surges, a window was knocked out by the wind so violently that it cracked the surrounding wall. As they made their way to the attic, they watched the trees blow back and forth from the power of the wind.

Wesley did not evacuate for Katrina, choosing instead to remain in his home on the Gulf Coast. Around 5:30 a.m., as the storm approached landfall, he recalled the near hurricane force winds, which were strong and loud enough to wake him up. As with many people, the wind caused damage to Wesley's home and property. The wind toppled a tree on his land, knocking down his fence and poking holes in his roof. But most of what Wesley remembered about the wind was the sound: "The noise was terrifying . . . the levels . . . it's an indescribable sound." He likened the sound of the wind gusts to the sound of a freight train roaring past him. As Wesley described, it would take minutes for a wind gust to peak and several more minutes for it to wind back down. The wind was at a constant roar, making power lines scream, punctuated by the freight train wind gusts. Hearing the noise combined with the house shaking, causing paintings on the walls to rattle, was "unnerving."

Erica and her family had also chosen to remain on the coast. Around 8:00 a.m., they heard a loud crash from their second floor. Heading upstairs, she and her husband realized the wind had blown the window out in their son's room. As they scrambled to cover the hole, nailing down plywood on the inside of the window, the other window in the room blew out as well, sending glass flying. Erica severely cut her hand as she moved to shield her face, rendering her "pretty useless" for the rest of the storm. It was the height of the storm and, as Erica recounted, "there was no going for help, [the storm] was already that bad." And so, she simply rinsed off her hand and wrapped it in a towel, waiting for the storm to end so she could seek medical attention.

As she and her family rode the storm out, Erica described how "the wind was still howling and blowing. And you just, you could just feel . . . even though our house is very sturdy, you could feel it shaking, feel it moving and the sound of that wind was really scary."

From her vantage point at a shelter further inland in the city where she had stayed to help, Annabelle recalled seeing the wind sending scrap metal, wood and other debris flying around the building. She described how cars would "jump up a foot and come back down." People staying in the shelter, particularly Annabelle and others in charge of running the facility, were concerned about the potential for a piece of debris to be flung through a window by the

winds. So, in moments when the winds were relatively calmer, Annabelle and others ran out and hauled what debris they could inside. As the storm continued, windows blew out upstairs in the building. People working at the shelter braved the wind to mop out the rain thrown through the broken windows as best they could.

The winds also caused problems for people who rode the storm out on their boats. Some families who live on fishing vessels and other boats chose to stay in the area, tying their boats together in more sheltered waterways to protect them as best they could. This was especially common for Vietnamese fisher's families in the area. In an interview conducted by Linda Van Zandt and Von Nguyen at the Church of the Vietnamese Martyrs, Rev. Phan Duc Dong, also known as "Father Dominic," describes riding the storm out on one boat with an extended family. Staying on the boat the night before, Father Dominic was seasick because of the rocking of the boat, caused by the winds and the resulting waves. As the storm progressed, fishers tied their boats together for protection, forced to crawl along them because of the strength of the winds. Father Dominic recalled some of the fishers using their boats to rescue others who had fallen into the water as their boats succumbed to the wind and waves: "He had to do it or the other boats turn upside down. The other cousins' families would be killed."[31]

The severity of the winds, described by many people's personal accounts of the storm, reveals the extent of the damage caused by Katrina and just how widespread the storm's effects were. Even seventy-five miles north of the coast, people like Abigail remember the severity of the winds. These destructive winds were part of the reason forty-nine counties in the state of Mississippi qualified for FEMA aid. The effects of the winds described by residents on the coast show just how catastrophic the winds were, contributing greatly to the overall damage caused by Katrina. Moreover, these effects demonstrated the extent of the damage a hurricane can cause to the coast, particularly since Katrina was not a full Category 5 storm when it made landfall. Katrina's destructive force points to the fact that potential future storms could conceivably cause significantly more wind damage if they made landfall as Category 5 hurricanes. This, in turn, prompts a consideration of the long-term efforts needed to prepare the state in general, as well as the coast and individual homes and businesses in particular, for future storms.

Floodwaters: Rain and Storm Surge

While the winds caused extensive damage, clearly remembered by the people who experienced them, Katrina's rain and storm surge also caused significant problems. The storm surge pushed tremendous amounts of water into Biloxi. For many residents, the water was well beyond what they imagined was

possible, going beyond their own experiences with flooding from previous storms, even historically destructive storms like Camille. Biloxians I spoke with remembered how shocked they were that so much water came ashore during the storm. Many had not expected any significant water damage to their homes, relying on personal and social memories of previous severe storms like Camille to estimate the potential storm surge, rain, winds, and overall damage that would come from Katrina. People who thought their homes were far enough inland or on high enough land to avoid flooding were taken by surprise when the water reached them. The water remained a problem long after the storm. Pearl, for example, described the stench of "Katrina water" and how things she and her family had saved from the ruins of their home smelled for years afterwards.

Rain from Katrina began to hit the coast on Sunday afternoon, hours before the storm made landfall. Over a week Harrison County would see thirteen inches of rain.[32] When the storm did hit land, resulting waves reached heights of forty feet, indicating the potential for major storm surges.[33] But despite the fact that Katrina had been downgraded before landfall, the storm surge was more like what might be expected from a Category 5 storm. Katrina's storm surge was immense, breaking historic records and reaching as high as twenty-three to twenty-eight feet in some parts of Mississippi, approximately a 250-year event in Biloxi.[34]

Residents I spoke with on the coast in 2006, 2010, and 2011 insist the numbers are even higher, with some suggesting that, based on their own experiences, the storm surge must have been as high as thirty to forty feet. Moreover, further research on the storm surge depth by researchers like Fritz et al. seems to back these claims up, using rapid response fieldwork measurements to reveal storm surge depths exceeding ten meters (over thirty-two feet) throughout coastal Mississippi.[35] Their onsite research after Katrina reveals the visual impact of the surge: "A typical view from a survey boat shows a sharp damage trimline along the entire oceanside of the Beau Rivage Lighthouse and Casino in Biloxi with only the steel frames remaining at the lower floors, while at the upper floors not a single window was broken."[36]

When Katrina's storm surge had receded and rescue efforts began, the power of the water in Katrina became clear. As Cooper and Block describe, "The Mississippi coast had been absolutely ripped by Katrina's storm surge, and though it was a more conventional disaster than what was unfolding in New Orleans, it was a catastrophe on a scale rarely matched in disaster annals. Entire towns had simply disappeared."[37] But for residents who chose to remain on the coast during Katrina, the power of the water during the storm became clear much sooner.

Although Nina decided to ride the storm out with her parents in the area, her husband decided to remain in their own home. She woke up Monday

morning to a phone call from her husband, telling her that the water in their home was up to his ankles. Nina thought, and told him, that he was exaggerating. He insisted he was not and called again when the water reached his waist. He called a third time, saying the water had gotten so high he was going to swim to a neighbor's house up the street. At this point his phone went dead and Nina did not hear from him for another two days. Nina's doubts echoed that of many other coastal residents. For her, it was simply inconceivable that the water would reach so far inland and get so deep in areas closer to the Gulf of Mexico. Nina's disbelief about the water had not dissipated in the years since the storm. She remained as shocked that the storm surge had reached so far inland and been so deep nearly six years after the storm as she had been when her husband first called her to report the situation at their home.

Many people in the area shared Nina's shock and disbelief. As the storm made landfall, Erica recalled her husband staring out the window and commenting: "Gosh the water is coming up." Erica, lying on the floor and trying to hold her injured hand still, remembers doubting his claims. When he told her that her car, parked in a nearby field in an effort to prevent it from hitting their home, was floating she was shocked. By this time, from her place on the floor, Erica noted that "I could hear water under the house and I'm thinking, gee, this is bad." As the water continued to rise, the family moved upstairs. Remembering the storm years later, Erica said she did not grab anything as she made her way upstairs, no valuables, photographs, or other memorabilia: "I guess at the time I didn't think about it, even though in my mind the water was coming in [to the house]," adding that it "wasn't important at the time."

While upstairs, Erica remembered her husband monitoring the water around the house from a window. The family only headed back downstairs when "he finally said that he thought the water was going the other way." As they made their way down, Erica said she was surprised by the relative lack of water in the home. Instead of deep flooding, she remembers puddles scattered throughout the house, as if the water had just pushed its way up through the floor. Erica was quick to point out that the family was "very fortunate that way." Despite the damage to their home, she quickly learned that they had escaped relatively unscathed compared to the catastrophic destruction across much of the coast.

Many people, like Erica and her family, moved upstairs to protect themselves from the incoming storm surge. Eva, staying with her family, remembers moving upstairs to outrun the water, hoping it would stop before it reached them. She said that during the storm she had to face the fact that she and her family might all die. Eva did not think most Americans realized that residents of the coast faced the prospect of death. In retrospect she considered it "a stupid way to die." Eva described how many people filmed the storm as it came in. The films, she said, started out with people joking around, but

as they fled the water, moving upstairs and into attics, many people began to apologize for staying on the coast instead of evacuating. The individuals in these films, like Eva herself, realized that the massive storm surge might kill them. Although the water stopped and Eva and her family survived, their homes and cars were severely water damaged. Nevertheless, Eva noted, she felt lucky to have survived.

Margie and her family also faced flood waters during Katrina. While she evacuated from her own home, she only went so far as to stay with her parents up the street. Margie figured that since their home had been fine during Camille, it would also be safe from Katrina. As Katrina made landfall, however, water started moving closer to the house. Margie and her family watched the water reach the ditch in front of Margie's nearby house. At that point, Margie's father put a cement block in the middle of the driveway to gauge how close the water was to their home. Within minutes the water was past the block. Given how fast the water was rising, the family made the decision to go across the street to another family home.

From their new vantage point, Margie and her family continued to watch the water rise. It was soon clear, via the glass backdoor, that the water was halfway up the side of the house. They gathered family members, holding on to one another as they waded through the water between the three homes the family was scattered throughout. They moved to another nearby house, finding another family already there. The water rose further, but eventually stopped, just as the water reached the back porch of the house next door. Margie's family stayed in the house until the water receded, finally walking back to what was left of their flooded home. They realized that their personal memories of Camille were not an accurate representation of what happened during Katrina. For them and many others, the reliance on Camille as a predictive model for Katrina proved highly problematic and dangerous.

Even young children remembered the flooding from Katrina. In the aftermath of Katrina, Biloxi school children wrote and drew about their experiences, eventually compiled in a book by Barbara Barbieri McGrath. As an eighth grader recalled:

> The first instant we knew we were all in trouble was when we saw that tidal wave come through to the Back Bay and hit us with such a force, it almost smashed all the windows. Immediately, water started to flood in. In another half an hour, water was up to almost my hips. In another half an hour, though, the water started to creep out of the apartment. This water ruined everything it touched.[38]

Even much younger children described the water and its effects on the city. As one kindergartener said, "My house drowned."[39]

While the storm surge caused widespread destruction, problems with water on the coast were compounded by the large amount of rain from the storm. In many areas and throughout much of the storm the wind, rain, and flooding prevented police, fire fighters, and other emergency personnel from going out to help people who had been stranded or injured by the storm. These first responders, all of whom faced the storm themselves, did the best they could to help people in the area. Fire and police stations themselves flooded, leaving some first responders stranded themselves. As transcripts from 911 emergency calls during the storm reveal, operators were left to inform Biloxians that rescue was unavailable.

Caller: And I've got two small kids, and the water's rising.
Operator: Ma'am, we don't have anybody that we can send to you. All of our officers are off the road for their safety.
Caller: How am I supposed to get out? I've got two small kids.
Operator: I don't know ma'am, we don't have anybody who can get to you.[40]

911 operators took over 240 calls from people during the storm when they were unable to perform rescue operations, calls they followed up on as soon as they could after the winds died down.[41] After the storm had passed, Vincent Creel, Biloxi's public affairs manager, recalled "encountering one of those operators, a fire department employee, weeping openly as she heard firemen report the discovery of the bodies of people she had talked to in those desperate 911 calls."[42]

Many of these first responders ended up sleeping at the shelter Annabelle ran when they could take a break from helping others. Annabelle recalled military and emergency personnel bringing survivors to the shelter by the truck load, often soaking wet from the rain and the flood waters. People were freezing cold from the water. Annabelle and others raided the gym and theater departments, putting people in whatever dry clothing they could find. As they began to run out of blankets to warm people up, Annabelle recalled: "I took curtains down out of classrooms to cover people," trying to help people dry off and warm up.

As they got people at the shelter dry and warm, other problems arose, like how to feed everyone. Some of Annabelle's family members who helped her in the shelter braved the storm and headed through a breezeway to raid the cafeteria and make sandwiches. Since the cafeteria still had power, they were also able to give people milk to drink. They rationed the food, feeding people a half a sandwich at a time, since no one knew how many more people would come to the shelter or how long they would have to feed them for. By the end of the storm the shelter would hold 800 people. Annabelle recounted how the cafeteria had been stocked by a private company and

after the storm she had to "make good" with them for the supplies that had been used.

In the aftermath of Katrina, people across the Gulf Coast were faced with many problems, largely centered on meeting basic needs like medical care, food, water, and shelter. While these requirements were, in part, immediate needs that had to be dealt with quickly, they were also part of a process of long-term recovery. For example, while people whose homes had been destroyed needed to find temporary shelter in the immediate aftermath of Katrina, they also had to deal with a long-term housing situation. Addressing this issue often resulted in a series of temporary fixes, such as staying with friends, family, or co-workers, or getting a FEMA trailer, which eventually lead to more permanent solutions. Relief and recovery efforts after the storm were shaped partly by how people had been affected by the storm and partly by what aid was available to them from a variety of different groups ranging from family and friends to random strangers to church volunteers to disaster aid organizations. These efforts, in turn, have helped to shape long-term recovery efforts in the years since the storm.

RETURNING AND BEGINNING TO REBUILD, JUST LIKE BEFORE

The destruction caused by the storm made it difficult for some people to make it back to their homes. Nina and her parents, for example, were only able to drive part of the way to her parents' home. After that, debris forced them to walk the rest of the way. The loss of not only their home but their entire neighborhood left her parents in shock, something Nina recalled she "had never seen [that] before." This shock was not uncommon in the days after the storm as people began to process the destruction of their homes, workplaces, and neighborhoods. This shock affected individuals' initial recovery efforts as they began the process simply by trying to wrap their minds around the destruction of much of their lives. As the initial shock began to wear off, damage surveys and clean-up began.

Some residents who had evacuated managed to make contact with friends and family still in the area and get some information about the state of their homes and the city before they returned. After making the initial decision to return to the area, many faced difficulties simply reaching the coast, in part because of the scale of destruction and, for some, because of troubles finding gas for their vehicles. And while many of these people returned home to survey the damage, some left again, postponing efforts with the damage and finding a new home.

Bridgette, who had evacuated for the storm with her ill sister, remembered getting a call from a cousin still in the area the day after the storm. Residents who had remained on the coast often shared information when they were able to contact people, both on and off the coast. As family and friends began to communicate, information was shared about specific homes and the general state of the coast. Her cousin told her that her home was gone, leaving only her front stairs; "everything else has been blown away, the whole neighborhood." To get back and assess the situation, Bridgette's nephew drove her back to Biloxi. She remembers seeing the destruction of her home: "There was nothing." She found hardly any of her possessions, only her work keys and a windbreaker on the lot and her drapes in a tree up the street. Despite the massive losses, Bridgette argued, "I think . . . that I was . . . I was blessed because I didn't have to do like a lot of other people, go through their personal things and grieve over what they had lost. I was spared that process." Her sister's house had been washed off of its foundation and "everything was all . . . like a washing machine had gone through it." She remembers seeing rescue workers still at work in the neighborhood. They "were going through and putting signs on the door, [indicating] whether or not people had died and all."

After Bridgette had surveyed the damage to her home and neighborhood herself, she went to live temporarily with family out of the area and figure out what to do next. While she and her nephew had managed to make it into the area, the return trip was more complicated. They thought they might not make it because they could not find gas anywhere along the coast or the route out of the area until they reached Greenville, Alabama, over 180 miles away from Biloxi. Bridgette's situation was not unique. Many people clearly remembered the gas shortages after the storm, and a few argued that the high prices of the gas available clearly constituted price gouging. For residents who had evacuated trying to return to the coast, the availability and cost of gas was hugely problematic. People recalled loading gasoline containers into the back of truck for their travel, bringing whatever gas they needed to travel with them.

In addition to high gas prices or a general lack of gas, returning to the area was further complicated by the government sending the National Guard in to keep non-residents out of the area. Residents in the area perceived this as being for several reasons, including keeping sight seers out of the area. Erica remembered there being a lot of "looky-loos, people just riding around" immediately after the storm and attributed the National Guard presence to how "they had to kind of get a handle on that." However, this also proved problematic for residents. Despite living in the area, some people had trouble getting back to their homes because of the restrictions designed to keep sightseers out of the area.

Some residents who were able to get back to their homes and neighborhoods decided to return permanently as soon as possible to survey and begin dealing with the damage right away. Andrew had evacuated in advance of the storm but returned to the coast as quickly as possible the day after the storm to see the damage and help as he could. He commented that he had not been expecting the scale of the destruction that he saw when he reached the area. He soon began helping organize aid—some through organizations like the NAACP and some independently. Andrew, like many people, used resources he had available to help others. Efforts like these were not uncommon. Many people's earliest memories of aid after the storm came from individuals or private groups, not the government. This may play a role in individuals focusing more on personal and local resources and information.

Damage, Recovery, and Thinking Back

After the storm had blown past, many people began their first surveys of the damage around them. Some, like Erica, noted the damage as they traveled to get aid. Others simply left their homes to survey the damage, to see what was missing, and start to figure out how they could get around. This surveying process was, for many, the first step in the relief and recovery process as it allowed them to better understand what had happened and what they would need to rebuild. Photographs and family heirlooms, in particular, were the focus of many searches, although some were simply looking at the destruction and hoping to salvage anything they could find from their pre-Katrina lives. Many residents remembered vividly the debris scattered throughout their own homes as well as the city in general, as well as the mud and the smells. Such memories are long-standing, with Biloxians describing how they had similar memories from previous severe hurricanes, especially Hurricane Camille. This is likely one reason Camille and recovery from it was so front and center in many resident's minds, the striking similarity of the patterns of destruction, an especially clear comparison when compared to storms that had caused less damage.

Debris made up of parts of homes and businesses, Gulf mud and fish, and people's possessions was scattered across the coast (see figures 3.1, 3.2, 3.3, and 3.4). Clean-up was an expensive and time-consuming process, but various levels of government and private organizations quickly began offering assistance in the clean-up process. Debris removal was itself a massive project. Edward remembered how the city had a contractor in place to begin removal immediately after the storm. The clean-up resulted in twenty-four hour, seven-day-a-week, bumper-to-bumper traffic jams, full of trucks hauling debris to landfills. There was "no telling how many trucks or hundreds of trucks." Such piles of debris were not an uncommon sight after severe

Figure 3.1 Damage and Debris. *Source*: Photograph by Thomas Skrmetti, used with permission.

Figure 3.2 Missing Schooner Restaurant. *Source*: Photograph by Thomas Skrmetti, used with permission.

Figure 3.3   Destroyed Biloxi-Ocean Springs Bridge. *Source*: Created by Jennifer Trivedi.

Figure 3.4   Grand Casino Damage. *Source*: Created by Jennifer Trivedi.

hurricanes, but they always have a significant emotional impact. When recalling hurricanes later, one memory that seems to stick in people's minds is the piles of debris generated, all the bigger and more memorable in more severe storms. Part of why Hurricane Katrina seems to have made people think of Hurricane Camille not just before landfall but also during the recovery period is comparable images like these—piles of debris, the smell of the mud and rotting food, and the devastation of people's lives and livelihoods. These powerful memories encourage comparisons in people's minds of the two events, but they also somewhat problematically set them apart from other hurricanes as something rarer, something more severe, but also something less likely to happen.

On her walk home from the hospital, Erica and her family encountered enormous piles of debris, including one at least ten feet high in the middle of the street near their home. She wondered if that had been what saved their home, acting as a dam to keep the water away. The debris was everywhere: "You can't describe the kind of debris and the fact that so . . . that homes were now completely gone, there was nothing there." Entire blocks of houses were missing, she recalled, accounting for the immense amounts of debris. The debris proved to be a major problem for residents, as it restricted their access to relief efforts and caused problems for first responders who tried to reach them, as Erica described to me when she had to reach the hospital in the back of a truck with other affected residents after severely cutting her hand on a broken window during the storm.

When Nina finally returned home, she remembered her husband's commentary that the water had risen above his waist, thinking "he wasn't B.S.-ing me like I thought he was."[43] As she described seeing her home filled with mud and debris, Nina added that "I'll never forget that vision in my head." She remembered how "the smell was disgustingly unbearable." She could not find words to describe the smell, but she pointed out that she "could still smell it," even over five years after the storm. Abigail also commented on the smell in the air and remembered it as the smell of dead bodies, debris, and chicken shipped into nearby ports. And the smell lingered. As one man described at a City Council meeting when talking about a home damaged in the storm and abandoned afterward, "the smell from the home is so bad, curious kids won't even go near it."

Casinos were also destroyed during the storm. As systems in place to secure gambling barges failed, the structures became enormous projectiles, crashing into and landing on top of other businesses and homes. The Grand Casino in Biloxi ended up on the other side of Highway 90, purportedly landing on top of what had once been a nursery school. The Palace Casino was knocked partially over, leaving it tilting into the water. Windows were blown out along the Beau Rivage as lower levels flooded. The pattern of damage continued across the casinos in the area.

Despite the destruction, the earliest clear memory of government aid among my informants came when Abigail described seeing National Guard troops in the area a week after the storm. While it is certainly likely that government aid workers were in the area sooner, people's memories seem more focused on the help given out by individuals and private groups. Even the Catholic bishop Thomas Rodi "visited the offices of the *Sun Herald* to express his disappointment, frustration, and anger at the sluggishness of the federal response."[44] As Abigail was out surveying the damage in the city, she remembers seeing military vehicles mounted with machine guns, adding that "you felt like you were in a third world country." She spoke with some of the soldiers working in the area and vividly remembered talking to some who had recently returned from war zones overseas and their comments that it was "easier there" and "tougher working here than in Iraq" commentary that stuck with Abigail.

With the help of other Biloxians and volunteer groups Abigail was able to pile up the debris on her property for the government to haul away. The city tore down what was left of her home. She remembered how workers simply had to nudge one corner and the entire structure collapsed. While government clean-up efforts like house removal and debris pick-up in residential areas were well organized, other government clean-up programs emerged from one agency helping another. The commander of the U.S. Navy Seabee base in Gulfport offered their assistance to the Biloxi schools to help remove debris from school campuses. The city's superintendent took them up on the offer and they did a lot of "heavy lifting" getting the campuses cleared of debris. This was not new for the Seabees, the Construction Battalion (CB) in the U.S. Navy. They are responsible for various construction projects associated with the American military and are based (in part) out of and attend training in Gulfport, MS, a city neighboring Biloxi. They have offered support to cities following a number of disasters since the early 1990s.

WHO REMAINS? WHO RETURNS?

Before Katrina on any given day the city's 50,644 population could be doubled by the number of visitors at casinos and beaches.[45] By 2010, five years after Katrina, the total population had been reduced by approximately 13 percent.[46] The city was also less white and less Asian, but a greater percentage of its residents were Black or Hispanic or Latinx.[47] By 2017 the total population numbers had held fairly steady from 2010, coming in at 45,328, but some of the racial demographics had continued to change. The white and Asian populations had continued to decline as a percentage of the whole. The

Hispanic or Latino population was down slightly. Meanwhile the Black or African American population was up.[48]

Over this time period there was also an increase in the poverty rate, likely the result of not only Katrina and recovery (including who had or had not returned and stayed) but also other issues like the economic recession, going from 11.2 percent in 2000 to 18.2 percent in 2017.[49] In short, over time, post-Katrina Biloxi was slightly less white, more Hispanic and Latino and Black and African American, but also had a higher percentage of residents living in poverty when compared to pre-Katrina Biloxi. Within this, looking more closely at the Asian population, it is clear that Biloxi is also less Vietnamese than it was before, an important consideration given the historic community in the area.[50]

Such population shifts are important to consider because they show the transformation of the city over time. These shifts also raise questions about why such demographic changes happened, which in part seem to be based on who had the resources to leave and who had the desire to stay or leave. While my work is qualitative in nature and thus does not reveal a statistically significant data set or a large number of interviews, the stories I gathered from local residents seem to reveal both issues at play. The residents I spoke with who had relocated were slightly more likely to be white than black, but regardless of race all were middle to upper class. The residents I spoke with who stayed were more likely to be middle class, working class, or poorer, although there were some more upper middle to upper class residents. Biloxians who left expressed homesickness for their original neighborhoods, but emphasized they were safer in areas further inland. Biloxians who stayed, at least in the neighborhood, nearby neighborhoods near the water or in their pre-Katrina homes expressed the importance of place and of returning and staying home. Those who returned to, rebuilt, or repaired their pre-Katrina homes were more likely to be those in the middle to upper classes. A few also downplayed the future risks, citing the relative rarity of storms as severe as Camille and Katrina, a pattern that echoed people's pre-Katrina memories of Camille that shaped their decisions to shelter in place instead of to evacuate.

While estimates point to at least 20 percent of Biloxi's houses being damaged or destroyed by Katrina, these numbers do not tell the whole story.[51] Areas along the water, particularly areas of East Biloxi at the end of the peninsula, were hit much harder and suffered much higher damage rates than areas further inland. Such issues are clear not only in quantitative estimates[52] but also through qualitative estimates—being on the ground in 2006, 2010, and 2011 revealed the very different patterns of destruction and recovery neighborhood by neighborhood and city by city, as did Biloxians I spoke with in interviews and at events, as well as those who spoke out publicly at city and other meetings.

As the initial shock of the destruction caused by the storm and piles of debris began to wear off and more residents who had evacuated returned to the coast, clean-up and recovery efforts began in earnest. People whose homes or workplaces had been destroyed began looking for temporary or permanent housing solutions and, if needed, new jobs. Church services resumed, sometimes in other buildings or on empty lots in the case of faith communities whose own church buildings had been destroyed. Schools reopened as quickly as officials could arrange for teachers and, where schools had flooded, temporary classrooms. Residents who had suffered losses began the sometimes long and, for many, frustrating process of applying for and obtaining aid from a variety of organizations. And while people began relief and recovery efforts, they continued to survey the damage around them. As these efforts began, people also resumed contact with friends and family across the coast, sharing stories of their experiences and information on the availability of aid.

Such immediate restoration efforts reveal something of people's thought processes—homes were rebuild not only as shelters but as important personal spaces; churches that reopened and repaired were centers of their communities and highly valued spaces by their parishioners; schools were important as spaces for students to come together and to allow for child care so parents could return to work and earn incomes for daily life and recovery; even casinos were valued as a key economic component to long-term recovery. These thoughts also reflect their connections to the history of earlier hurricanes with residents referencing their known importance to recovery because of prior experiences with hurricanes. Homes needed to be rebuilt because they had also been part of previous recoveries and were important to multiple generations of people; churches had weathered and reopened after previous hurricanes as spiritual community spaces; schools being back in session allowed some return to what some residents called normalcy after historic hurricanes; and casinos were critical to economic recovery from Katrina just as they had been after Camille.

Obtaining and Communicating Critical Information

Information quickly spread via word of mouth about where aid was available and who had made it through the storm safely. However, rumors also began to circulate about the death toll and potential cover-ups. Several people I spoke with described hearing the rumors that flew around the area in the aftermath of the storm about how the number of dead was being covered up by officials. They spoke of rumors they had heard that the number of dead was far, far higher than had been admitted and that refrigerator trucks had been brought into the area to store bodies. Most of the residents I spoke with about

the issue denied that such claims were true, but the fact that such rumors were circulating caused fear and tension throughout the area. These rumors also had the potential to make residents doubt official statements on the hurricane and its aftermath. This, in turn, increased the odds that people would not listen to government orders about evacuation, areas to avoid, and steps to take in the recovery process. Moreover, this fed into general doubts about the government response, spurred on by coverage of the crisis in New Orleans.

As people began to try to contact family and friends in the area to see if they had survived the storm and others off the coast to let them know who was safe and what the damage was, communication problems became clear. It was often difficult, if not impossible, to get phone calls through to other areas or to receive calls. Many coastal residents recalled not yet knowing how to use text messaging or having planned for it in their cell phone contracts. However, it quickly became apparent that text messages were working when phone calls were not. In an effort to reach out to others, people began handing their cell phones to younger family members and friends' children, encouraging them to text other people to communicate with them. While certainly not a contingency many had planned for, residents often recalled the newfound importance of texting after the storm, when it became a key means of sharing information.

Erica clearly remembered these communication problems and how some people could not or did not know how to text message. Edward kept in touch with co-workers working to reopen area schools via text message. Annabelle learned how to text when co-workers who had evacuated her texted to see if she was safe. So, she figured it out and texted any cell phone number she could track down for other co-workers. Since the storm many people on the coast have gotten text messaging expressly for the purpose of communicating in the event of a hurricane. When Hurricane Isaac struck the coast in the fall of 2012, several of the contacts I had made on the coast put this new technology into action, texting to let others know they were safe after the storm. In part the increase in text message availability and usage is likely caused by the general growing popularity, availability, and affordability of text messaging plans, but in 2010 and 2011 many residents directly pointed to the aftermath of the storm as the reason they had messaging plans added to their cell phone contracts.

Individual Aid

Residents of the coast I spoke with had clear memories of who had helped them after the storm, especially the earliest responders. Individual people and small groups offered a variety of forms of aid. Some individuals drove into the area with vehicles full of whatever supplies they could bring. Initial aid

efforts focused largely on basic needs like food and water. Erica described how, in the days after Katrina, she and her family were sleeping on their screened in porch since it was too hot to sleep in the house and it was dark and quiet outside anyway. In the middle of the darkness, Erica heard a vehicle on a nearby street, since it stood out in the quiet, and a man calling out "ice" and "water." Acting on reflex, she yelled out "stop" and went running after the vehicle. It was a man with ice and water in his truck, distributing it as needed. Erica recalled how it was "stuff like that that's memorable . . . as silly as it is, but to get that excited about some ice." She also remembered a man who came to the area from Mobile, "who just drove over and set up a little grill," feeding anyone who wanted hotdogs and cold drinks from a cooler. He said to her that he "just couldn't watch it and not do anything."

People who themselves could not make it to the coast also offered aid. Edward pointed out that people from across the country offered aid. So much aid poured into the area that Edward and other co-workers had to designate a detached building on the Fernwood Campus, the alternative school before the storm, as a donation distribution point. They dubbed the facility "Fernmart." Two teachers who had district responsibilities staffed the facility and employees were told to go get whatever they needed for themselves and their families, their classes, or their students. They even advertised the facility to parents.

Supplies were organized into boxes with labels like "third grade boy" and filled with snacks, toys, and clothes that such a child might need, giving children something to eat, to wear, and to play with. After initial supplies like water and diapers were distributed, the facility began giving out donated gift cards to stores. The system not only organized the massive amount of donations coming into the area but also allowed for people to meet whatever needs they had which, Edward noted, varied tremendously.

Some individual aid also came from other coastal residents. Nina remembered her boss giving her money to help her purchase few things she and her husband needed. Abigail worked at a temporary medical camp with over 150 patients. The process, she noted, was healing for her, offering her the ability to work with people who came in from a variety of areas to help. For Abigail, the ability to help others from the area was "very, very healing. [. . .] I felt like I was giving back."

People on the coast remember clearly the kindness of random strangers. Such individuals told coastal residents that they had seen the situation on the news and simply had to help, even if it meant offering aid out of their own pockets. Other individuals who came to the coast with supplies did so because they had friends or family in the area. Many of these people were willing to help whomever they could.

How people remember the aid offered by individuals is important because it affects their recall of the event and thus their potential perceptions and actions in the next event. Just as memories of aid and other issues in previous hurricanes influenced people's expectations, perceptions, and actions in Katrina and recovery from it, memories of aid after Katrina shape people's perception of aid organizations and efforts moving forward. Biloxians who spoke fondly of particular groups helping after Katrina also spoke of them as reliable in general and thus potentially sources of aid in future disasters. By contrast, people who spoke of frustrations with specific groups, including government agencies, insurance companies, and aid organizations, also sometimes expressed concern about being willing to work with them in the future, even if they needed help after a hurricane. Ostensibly people are remembering the kindness of strangers in a difficult time. However, they are also remembering this aid ahead of the aid offered by NGOs and government organizations. When people affected by Katrina described who they received aid from, they first mention individuals or small groups (particularly churches). Discussions of government aid often begin only after prompting and directing questions about it.

NOTES

1. Trivedi, "'Hurricanes Did Not Just Start Happening.'"
2. Cooper and Block, *Disaster*, 97.
3. Brinkley, *The Great Deluge*, 3.
4. Cooper and Block, *Disaster*, 127.
5. Ibid.
6. Ibid.; Graumann et al., *Hurricane Katrina*, 4.
7. Suarez, "Me and Katrina," 15.
8. Sullivan, *Down South with the Dixie Press*, 67.
9. Capasso, "Operation Dragon Comeback," 5. Base exchanges are retail stores located on U.S. Air Force bases. They sell a variety of goods and are comparable to small department stores.
10. Adkinson, "City of Biloxi," 6–7.
11. City of Biloxi, *Katrina & Biloxi*, 4.
12. Suarez, "Me and Katrina," 15.
13. Zebrowski and Howard, *Category 5*, 241.
14. Smith, *Hurricane Katrina*, 17.
15. Ibid.
16. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 52.
17. Ibid., 98.
18. Cooper and Block, *Disaster*, 100.
19. Brinkley, *The Great Deluge*, 3.

20. Smith, *Hurricane Katrina*, 21.

21. Ibid., 20.

22. Holloway, "'Reviving the Renaissance,'" 10.

23. City of Biloxi, *Katrina & Biloxi*, 52.

24. Smith, *Hurricane Katrina*, 22.

25. Brinkley, *The Great Deluge*, 103.

26. Ashcroft and Mason, "Operation Dragon Comeback," 5.

27. Mooney, *Storm World*, 147.

28. Brinkley, *The Great Deluge*, 132; Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 54.

29. Smith, *Hurricane Katrina*, 107.

30. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 56.

31. Phan, "Interview."

32. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 57.

33. Brinkley, *The Great Deluge*, 129.

34. Mooney, *Storm World*, 147; Federal Emergency Management Agency, *Hurricane Katrina in the Gulf Coast*, 1–19.

35. Fritz et al., "Hurricane Katrina Storm Surge."

36. Ibid., 13.

37. Cooper and Block, *Disaster*, 170.

38. McGrath, *The Storm*, 20.

39. Ibid., 36.

40. Smith and Ellis, "Rebuilding Biloxi."

41. Smith, *Hurricane Katrina*, 36.

42. Ibid., 31.

43. "B.S.-ing" is American slang and is short for "bullshitting" someone, pulling their leg, or lying to them.

44. Smith, *Hurricane Katrina*, 56.

45. Ibid., 17; U.S. Census Bureau, "Profile of General Demographic Characteristics: 2000."

46. U.S. Census Bureau, "Profile of General Population and Housing Characteristics: 2010."

47. Ibid.

48. U.S. Census Bureau, "ACS Demographic and Housing Estimates."

49. U.S. Census Bureau, "Selected Economic Characteristics"; U.S. Census Bureau, "Profile of Selected Economic Characteristics: 2000."

50. U.S. Census Bureau, "Profile of General Demographic Characteristics: 2000"; U.S. Census Bureau, "Profile of General Population and Housing Characteristics: 2010"; U.S. Census Bureau, "ACS Demographic and Housing Estimates."

51. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 61.

52. Ibid., 59–60.

Trying to Go Home

In the aftermath of Katrina, many Biloxians found themselves trying to go home, an effort that was complicated not only by the physical destruction of their own homes but also by the physical destruction across the city and disruption of neighborhoods. This was not an issue that would be resolved quickly. Some Biloxians found themselves unable to ever go home, because what remained of their physical house had to be condemned and demolished by the city or because landlords sold property that renters could no longer return to. Even residents whose homes were habitable found themselves unsure of where they were in the landscape due to piles of debris, lost street signs, and blocked roadways. The sense of dislocation for local residents was something they recounted to me in their stories, even if their homes had been relatively undamaged.

During post-Katrina recovery in Biloxi, forms and amounts of temporary and semi-permanent housing varied. Many residents who lost their homes initially made temporary housing arrangements, including living with family and friends or in FEMA trailers. Over time, these people moved into semi-permanent and permanent housing. Semi-permanent home choices included rental homes, apartments, MEMA cottages, and travel trailers. These options were seen by residents as semi-permanent solutions to their housing problems. They were places to live in after temporary housing was no longer feasible and until permanent homes could be rebuilt, rented, or bought.

Such housing options were often used by residents for months or even years after the storm. Semi-permanent home options allowed residents to begin rebuilding and to stay in the city. This contrasted with earlier temporary residences that sometimes resulted in people living in other cities and states,

wherever friends and family could house them. Many residents used their time in semi-permanent housing to prepare for their lives in new permanent homes by replacing possessions that had been lost in the storm. By allowing residents to live in the city, semi-permanent housing encouraged the rebuilding of permanent homes and businesses. It allowed residents to contribute to local and state taxes, return to jobs, put their children back in school, and resume attendance at churches and social groups.

As more residents began to move back into permanent homes, debate began about where these homes could be located. An assortment of local businessmen, city and county officials, and residents encouraged and supported efforts to build new homes, subdivisions, and businesses in northern parts of Biloxi. More northern inland areas of Biloxi were considered safer from hurricane damage, as it was further from the water. However, this emphasis on shifting the population northward was met with resistance by some residents who had lived in those parts of northern Biloxi prior to the storm.

Upper and middle-class residents of inland areas of northern Biloxi were concerned with the potential effects of an influx of new residents, particularly in densely packed or "affordable" housing, a term that was often perceived as referring to low-income housing. Hence, they spoke out against new development they thought would bring such housing into their neighborhoods. Some northern Biloxians feared that the nearby presence of less valuable housing would reduce the monetary value of their own homes. Others expressed concerns that smaller, more tightly packed homes would have a negative effect on their way of life. Meanwhile, lower-income residents sometimes found themselves struggling to find and afford safe permanent housing. Residents who relied on public housing faced particular concerns due to availability and affordability. This debate clearly revealed the conflict between residents with varying degrees of political and economic power and strategies of those in power.

The demographic and geographic layout of Biloxi reveals a pattern that appears in other cities as well: areas of greatest risk are also often home to a higher rate of poor, working-class, and lower middle-class residents. In Biloxi, as in many other locations, these areas were also more racially and ethnically diverse, having higher percentages of Black and African American, Hispanic and Latinx, and Asian residents and lower percentages of white residents compared to other parts of the city. Many of these groups and residents across all races and ethnicities present in the neighborhoods were also tied to social networks based on these identities and so organizations and places like the Vietnamese Martyrs Church, the French Club, and the Slavonian Lodge were also in these neighborhoods. Many of these groups had maintained a presence on the peninsula and in East Biloxi for generations, a point made by

many of the people I spoke with. For them, the urge to return home was quite strong, despite the serious risks they faced.

All of this intersected with the dimensions of class, power, and voice that would go on to shape the recovery process, including the repairs and reconstruction of housing. Power and wealth do not always mean that a person or group can avoid being affected by a disaster, but they can sometimes make the recovery process somewhat easier. People who have more power and greater wealth often also have better access to other resources and knowledge that may help them navigate the process. People who lack power and wealth before a disaster often face additional hurdles in recovery, including sometimes feeling like and actually lacking a voice in decision making on a larger scale, even if they retain their own agency. Of course, there were middle- and upper-class Biloxians who lost their homes, struggled to recover, and were in the hardest hit areas. However, it is also important to understand how people with less power and wealth often faced these issues with additional complications like a complete lack of insurance funds (although this was also not unheard of for middle- to upper-class residents who had insurance companies who resisted releasing full or any funds), a lack of other sources of aid tied to issues like a lack of insurance and renter status, and a perceived and real lack of power to influence regulations and decision making in recovery. Many of these poor to working-class to lower-middle-class residents were also either in homes that had been paid for and inherited, forcing them to go from no monthly mortgage or rental payments to higher amounts in an area with now limited housing, or in a variety of precarious housing situations ranging from renting to sharing spaces with others.

In addition to class status and income, other forms of identity and group affiliation were central to debates surrounding the creation of new housing. Prior to, during, and after Katrina, many Biloxians identified with different neighborhoods, classes, races, ethnicities, or ancestries. Biloxians' self-identification sometimes affected their perception of recovery efforts and proposals for new development.

One aspect of self-identification in Biloxi is a distinction between "insiders" (residents of the city) and "outsiders" (non-residents). There were a few exceptions—people who lived outside of the city but maintained close ties were sometimes seen as insiders or simply "not outsiders." During initial relief and recovery efforts, outsiders were generally viewed positively. Residents described their appreciation for people who came into the city or their neighborhood to help. However, as the city moved forward into long-term recovery efforts, the view many residents had of outsiders became more complicated. Conflicts arose about who had the right to say what would happen in a particular neighborhood or to the city as a whole.

Many residents talked about their struggles in attempts to recover their pre-Katrina lives.

Efforts to solve the problems they faced varied. Grassroots and external aid organizations worked to merge outside expertise and aid with local knowledge. These endeavors included rebuilding homes modified to meet both new FEMA guidelines and the needs of the proposed inhabitants (i.e., access ramps for residents in wheelchairs or those who had trouble using stairs). There were also organizations, both governmental and nongovernmental, working to make post-Katrina housing culturally relevant as well as physically protective ranging from MEMA's Katrina cottages to external aid organizations putting architects in touch with the local residents they were designing new spaces for. Many of those efforts to make homes culturally relevant including the addition of porch space, a key issue for local residents who used the space as part of their home and who saw that space as an important place to connect to their social networks, families, friends, and neighbors. These combined efforts of grassroots and outside aid organizations also worked on non-housing questions like ensuring local children could be in day-care settings, so their parents could work, which also provided educational and development opportunities to those children or providing computer literacy skills and information to the elderly—information they often needed to navigate recovery paperwork, but that also gave them access to a new set of skills. Combining grassroots efforts, local knowledge and needs, and outside expertise and funding was especially helpful for residents who lacked power or felt like their voices were not being heard at a local level, helping them address specific problems like housing and education, but also amplifying their voices with power. Such attempts extended into providing financial assistance, including a range of monetary options from donations to loans. While these efforts were complicated by the divide between insiders and outsiders, work by many organizations sought to breach that divide by combining the abilities and resources and addressing specific local needs.

As residents moved through temporary and semi-permanent housing, many continued to look for and work on permanent homes. For all the residents I spoke with or heard speak publicly, a permanent home was their ultimate goal. What form this home took varied. Residents who could afford to do so used aid funds, insurance money or savings to repair pre-Katrina homes. Others built new homes from these same funds. Some residents who could not afford new homes benefited from the work of aid organizations who built homes for them. Pre-Katrina renters and some homeowners turned to rental apartments or homes. And, ultimately, some residents transformed semi-permanent housing, especially MEMA cottages, into permanent homes.

BUT I'M REALLY FROM—

When I spoke with residents in Biloxi in 2006, 2010, and 2011, many were quick to identify themselves from particular neighborhoods. Residents not only said they were from East Biloxi, for example, but cited specific areas like Point Cadet ("the Point"). These neighborhood identities seemed to be prioritized over city affiliation. When speaking before the City Council and asked to say where they were from, a resident might not only say what city, but what neighborhood. When asked where they were from in daily discussions throughout the community, residents would cite specific neighborhoods. And residents identified first as coming from a particular neighborhood and only then as Biloxians when responding to questions in my semi-structured interviews. This strong sense of identity complicates insider and outsider status in Biloxi, as someone may be from the same city, but a different neighborhood and therefore an "other." After Katrina, however, people often found themselves living in new neighborhoods. While many continued to identify with their pre-Katrina neighborhood, they chose or had to move elsewhere. This movement put new pressure on certain areas. As some residents looked to move out of East Biloxi or off the peninsula entirely, other areas in Biloxi, particularly those further north and inland, found themselves facing a potential influx of new residents along with questions about how housing in the area should be structured, neighborhood identity, and even city identity.

Residents in areas of northern Biloxi argued that the city needed to address issues like road repairs and water access expansions before promoting and supporting new growth in the area. In one case in a court case regarding a new annexation in the Woolmarket area, the courts noted that "although Biloxi has made progress in delivering city water and sewer services to the Woolmarket area, the city 'did not do a very good job' in delivering those services in a timely manner."[1] Residents across the northern parts of Biloxi echoed this complaint. Specifically, in reference to the proposed new subdivision, at public meetings they argued that their infrastructure was already strained and adding new homes into the area would break the system, resulting in problems with water and sewage services and increased traffic. These arguments were made couched in "us vs. them" terminology with locals identifying first as residents of their annexed neighborhood and only then as Biloxians. This is perhaps unsurprising given the relatively recent annexation but is also interesting as residents changed their primary affiliation with their arguments. When arguing against the new subdivision for reasons like neighborhood integrity, residents identified with their neighborhood. When making the argument that they deserved to be heard and listened to by city officials, they said they were Biloxians. And these tight ties to specific communities

and neighborhoods, both for individuals and families over time, influenced people's decisions in Hurricane Katrina recovery.

However, this is also perhaps unsurprising given the patterns of feelings and behaviors that emerge after disasters. Initially there is often a perception or feeling of people coming together in prosocial behavior and what the Turners, in an originally non-disaster context, characterized as *communitas*, the sense of deep coming together among a group of people that goes beyond the feeling of community they might normally experience in daily life.[2] Pushing further into anthropological concepts, this is a post-disaster period people who have been affected by the disaster may be somewhat displaced briefly from their pre-disaster status, which they will return to as recovery continues.[3] There is, during and after disasters, an immediate period of prosocial behavior. *Communitas* after disasters is real, but it can also be fragile.[4] However, this initial rush of goodwill and assistance after the disaster is not permanent. Struggles for control—political, economic, and cultural—begin to emerge. Debates about framing of stories begin. Pre-disaster issues reemerge. *Communitas* fades, emotions like anger bubble to the top, all even as the real problems and concerns of recovery remain for years or decades.[5] Even when considering academic research, interest wanes not long after a disaster, usually after a few months or possibly years.[6]

Some of these issues of fading *communitas* may be at work in the disagreements and conflicts that were clearly ongoing in long-term recovery in Biloxi. Groups that might previously have felt or been perceived as in a point of unity began to refracture and return to pre-disaster groupings. People and the groups they belong to begin to reaffirm their boundaries. Some may still be in the process of recovery while others feel recovered, setting up a potential clash of interests at a larger scale, a situation that is further complicated by ongoing issues from and clear perceived re-emergence of pre-disaster uneven distributions of various forms of power, wealth, and resources.

The debate about people potentially moving from coastal East Biloxi neighborhoods into northern inland areas of Biloxi also echoes points raised by Tierney, Oliver-Smith, and Hoffman in their work—the idea that recovery and recovery assistance are only complete if resources are available for anyone who needs them. Disparities in coverage come through things like geographic conditions, rural-urban divisions, institutional problems and failures, fair resource distribution, deliberate efforts to block aid to certain groups, and, critically, the perceptions of these questions and aid distributions.[7] While moving into areas they feel safer in should be an option for people affected by disasters, it is important to work to understand the repercussions of those movements: Are the people who move really safer where they end up or chose to move to? Does the movement of people out of an area disrupt the cultural fabric of the areas they move from and to? What new forms do the

communities these people are engaged in take? What are their transformations? How may they be prepared or not for the next disaster?

IT'S ONLY TEMPORARY—
OR IS IT SEMI-PERMANENT?

As residents of Biloxi transitioned from immediate relief efforts to a long-term recovery process, renters and homeowners also transitioned from living in temporary housing to finding semi-permanent housing. In making this transition, people turned to a variety of housing options. Their options were rooted in a variety of issues, including physical availability, safety and perceived risk of different forms of housing, and pre- and post-disaster power, resource, and wealth access. Did people have local family members, friends, and social networks that they could rely on for temporary or even semi-permanent housing? Many of the Biloxians I spoke with initially lived with friends and family members—in Biloxi or elsewhere. Biloxians who had local networks with intact housing relied on those local friends, family members, coworkers, and neighbors first. If they did not have such people around them, they looked to similar people in relatively nearby areas, ranging from thirty minutes to six hours away, essentially non-coastal counties further north in Mississippi out to areas like Atlanta, Georgia.

Others lived in mobile homes or travel trailers. And some moved into government-issued mobile homes, including FEMA trailers. If a person viewed living temporarily in a trailer as an acceptable risk during hurricane season, could they gain access to one through government aid systems? If not, could they afford to buy one outright? Biloxians who had local contacts and networks often still turned to this range of mobile housing options and some explained that they either needed the physical space (e.g., if they had children or larger families) or that they needed private space away from members of their larger family and friend networks. Some local residents even worked with people in their networks to place multiple such mobile homes together or nearby one another to combine the availability of other people to help in recovery and daily life with some sense of private space. These temporary housing options allowed people to transition into semi-permanent and permanent arrangements. For many, rebuilding or buying new homes was a step toward putting that component of their lives back together.

In the immediate aftermath of Hurricane Katrina, temporary housing was common, especially in severely affected neighborhoods. Temporary homes were often shared residences, as people affected by the storm moved in with friends, family members and coworkers (in Biloxi or elsewhere) or into FEMA trailers. Some also briefly resided in emergency shelters. Residents

with minimal home damage were able to move back into permanent housing fairly quickly. However, those whose homes sustained more damage were pushed from temporary into semi-permanent housing. Semi-permanent options were homes that offered residents more stability and security than temporary quarters but were intended to be lived in only until permanent homes were repaired, built, or bought. Thousands of people affected by Hurricane Katrina in Biloxi relied on a variety of semi-permanent housing options, including rental homes, apartments, travel trailers, and MEMA cottages.

Each of these forms of housing presented different problems. House or apartment rentals were difficult to obtain because extensive storm damage led to a low supply of rental properties relative to demand. In the aftermath of the storm and the beginning of the economic and housing crisis, RAND Gulf States Policy Institute (RGSPI) conducted research into the situation. Housing affordability was an issue even before Katrina and when the storm made landfall it damaged more than 60 percent of the county's housing stock, in Biloxi and other cities.[8] After the disaster these issues were compounded by a 20 percent increase in rent, the loss of public housing options, and a loss of employment, at least temporarily, for many.[9] RGSPI looked to gauge initial housing recovery from the fourth quarter of 2005 through the second quarter of 2006, during which time permits for just 27 percent of the lost housing stock were issued in Biloxi. This fits neatly in with other areas of the coast, which ranged from 4 percent to 83 percent, and the Mississippi Gulf Coast as a whole at 25 percent.[10]

Increasing rental costs from this loss of housing stock remained elevated years after the storm. As of 2012, when GCCDS published a report on the Mississippi Gulf Coast's housing stock, over 21,000 households in the Gulfport-Biloxi-Pascagoula CSA (combined statistical area) earned less than $13,000 a year. Using the suggested rule of calculating 30 percent or less of income to consider housing affordable, that means these 21,000 households should be spending just $360.00 per month on both rent and utilities. GCCDS point to the problem of this when fair market rent at the top was $550.00 per month for a one-bedroom apartment.[11]

Alternatives like purchasing and living in travel trailers required funds for the original purchase, as well as a location to park a trailer. MEMA cottages were initially limited in numbers (less than 3,500) and only accessible to certain residents, based on how long they had been without a home and having been affected by Hurricane Katrina. Some Biloxians faced restrictions on where and how new permanent homes could be built, resulting in longer-than-expected stays in semi-permanent housing.

Some homeowners had minimal damage to their homes. These residents often remained in their homes while clean-up efforts and small repairs were

made. Erica, for example, talked about how her house had seen very little damage, largely limited to a few puddles on the floor from where water had come up from underneath the house and a damaged car port. The car port was torn down by a group of volunteers. Erica and her family cleaned up the water that had gotten into their home but stayed in the house during clean-up. She said they did not want to leave their house because it was relatively intact although "it had problems."

Edward and his family also remained in their home during repairs, even though it took months to get them completed. Eva and her family, who had stayed in their home for the storm, also stayed in their homes as they cleaned up and did what repairs needed to be done. Several residents reported being scammed out of funds during the rebuilding process, particularly by paying workers up front for work that was never completed. Even residents with more extensive damage to their homes remained in them as they began clean-up and repair work.[12]

Biloxi homeowners who had their homes severely damaged or destroyed by Hurricane Katrina were sometimes unable to remain in their homes while repairs were made. These residents found themselves facing a series of decisions when it came to shelter. For many, the immediate solution was to stay with family members or friends. This solution made use of personal networks and local resources that remained available after the storm. Others relied on government intervention and aid, moving into FEMA trailers. Many individuals then moved into semi-permanent housing, such as self-purchased mobile homes or MEMA cottages. These two stages of housing options were seen as steps toward getting back into their own homes.

LIVING WITH FAMILY AND FRIENDS, USING PRE-KATRINA SOCIAL NETWORKS

Initially after the storm, many residents who had lost their homes stayed with family members and friends as they worked to find longer-term semi-permanent housing. While the residents I spoke with about this transitional phase were grateful to the family and friends who had opened their homes, they also described the problems with these situations, including longer commutes and the stress of not having their own homes. Residents viewed these living situations as temporary solutions and began searching for alternatives quickly, often moving into their own mobile homes or FEMA trailers as soon as possible.

Margie, for example, talked about how many of her family members had lost their homes in Hurricane Katrina, herself included. The extended family ended up staying with other family members in the area, splitting themselves

among the available houses while they waited for word from FEMA. Bridgette described moving between different friends' houses, trying to find the best place for her. Influencing Bridgette's decision was the location of the homes and the person she was staying with.

FEMA TRAILERS, PROBLEMS WITH OUTSIDE AID

FEMA trailers were mobile homes distributed by the FEMA to residents in affected areas for shelter after the storm, often criticized for their appearance and associated with accusations of health problems. Many coastal residents said they were not placed in these trailers until January 2006, five months after the storm. These people spent some time living with friends and family members, moving into FEMA-issued mobile homes when they became available. Some of these Biloxians moved from FEMA trailers directly into their new or repaired permanent homes. A year after Hurricane Katrina, 2,300 FEMA trailers were scattered across Biloxi.[13] But as one resident of the coast Sue Wen Brown noted, "living in a FEMA trailer is not back to normal."[14]

Pearl remembered the trailers as full of chemicals and harmful to her health. Dorothy noted that living there "was a challenge" and described the space as "claustrophobic." Bridgette was happy to be in a trailer, saying it was "my own little space."[15] But regardless of their perceptions of the trailer, most residents viewed them as a temporary home. Naomi Foster, a teacher in Biloxi, talked about how "it has its ups and downs. It's very cramped, it's difficult to move around. But I'm just thankful that we do have it. Ya know, if I thought it would be permanent, I would go out of my mind."[16]

Bridgette waited for several months before she got a FEMA trailer, finally getting one in January 2006. Once she received her trailer, Bridgette decided to live in one of the mobile home parks set up across the city. Bridgette, like many other residents who decided to live in these parks, made the decision to stay there due to the park's proximity to her job. Some of the lots had been set up, she claimed, for herself and other school personnel to live close to their schools. This proximity was important because gas prices were high and the storm had damaged roads in the area, both of which made the commute to and from work difficult.[17]

A variety of debates soon emerged around the creation of FEMA trailer parks. These conversations reveal how local areas had to deal with federal and state disaster response in the long term. Not all of the residents were from the Biloxi area. Residents of areas like New Orleans, LA, and Slidell, LA, were evacuated to a range of places, including the Mississippi Gulf Coast. Annabelle described residents who had to leave their own homes in Louisiana living in Biloxi FEMA trailer parks and sending their children to local schools.

Some residents had their trailers put on private property. For example, Abigail was lucky, she said, in that a power company employee lived in the area and she was able to use this connection to get power hooked up to her trailer easily. She had to find a hook up for sewage. Even with these steps taken, it took weeks to get her trailer. Abigail believes she got her trailer as quickly as she did because she helped someone through her job. This person, she described, was able to get her a FEMA trailer just three months after the storm. Abigail remembers hearing about formaldehyde in the trailers, but she was "so grateful" to have a roof over her head, particularly when the city tore what was left of her house down. She described living in the FEMA trailer as "an experience" and remembered how she could clean the entire space in two minutes.

TRAVEL TRAILERS AS AN ALTERNATIVE, IF YOU CAN FIND AND AFFORD ONE

The number of residents who relied on self-purchased (vs. FEMA-issued) travel trailers is hard to pin down because there are no official government documents about their purchase and use on the coast. Very few people I spoke with discussed buying them (less than 6 percent). In part this seems to be a question of availability, a point made by Nina who did buy one. Another part of this seems to be cost. Many people particularly lower-income residents would not have had the funds on hand to purchase one. What I refer to here as "travel trailers" include self-purchased or borrowed travel trailers, recreational vehicles (RVs), and, occasionally, temporary mobile homes. It does not include mobile homes that residents used as permanent housing options before or after Hurricane Katrina.

Residents resorted to using these travel trailers if they had concerns about gaining access quickly to a FEMA trailer or other form of temporary housing and could afford to purchase a travel trailer. While most people who wanted FEMA trailers eventually received them, many had to wait months. Because some people had nowhere else to live or had severely limited living spaces, waiting was not always a feasible option. When MEMA cottages eventually arrived, access to them was also limited. Official documents cite various requirements to move into MEMA cottages. Biloxians sometimes mistakenly thought that these were not the only requirements. I was told by people that in order to qualify for a cottage, they had to be in a FEMA trailer and enter a lottery system.

Residents often wanted travel trailers because they could be placed or moved anywhere. Many of these people wanted to remain on site at their property during repairs and rebuilding. Some FEMA trailer residents also chose to have their trailers placed on their property for similar reasons. Residents noted to ease with which they could leave the area during storms.

As with MEMA cottages and FEMA trailers, how long residents stayed in travel trailers varied widely. Nina and her family stayed in their travel trailer just long enough to make basic repairs to the walls of their home. By contrast, one man who spoke out at public city meetings lived in his travel trailer with his family over five years after the storm, as he continued to rebuild their home. Residents who remained in their trailers for years still considered them semi-permanent solutions. People I spoke with or who spoke in public about using travel trailers were mostly pre-Hurricane Katrina homeowners looking to rebuild or buy new homes.

Nina and her family were able to quickly move back into their home because it was still structurally sound, although damaged in the storm. For needed repairs, they received help from church volunteers. In part because of the help they received, Nina's family and other residents were able to move out of their travel trailers within the time limits set by government-sanctioned exceptions to zoning laws regarding placement of travel trailers. Other residents who used travel trailers as semi-permanent housing remained in them for much longer and eventually faced shifting attitudes among members of the city government and Biloxians who were no longer willing to let regulations be set aside. By the fifth anniversary of the storm, some officials and citizens felt that there had been enough time for recovery. In their view, residents who were not yet in compliance should alter their semi-permanent housing options to meet permanent housing requirements. They thought that enough time had passed so that home recovery could be completed.

Rising construction costs delayed transitions to permanent housing for people still in temporary or semi-permanent housing. When one man still living in a travel trailer while trying to rebuild his home himself spoke before the City Council, he described how the money he received from the government and his insurance company left him unable to afford professionals to design and rebuild his home. His pre-Hurricane Katrina home had been built to withstand damage from a hurricane but was nevertheless destroyed. He wanted to rebuild a more storm-resistant home but claimed that he had to do much of the work himself to make sure available funds would cover all of the costs. In the meantime, he and his family lived in a travel trailer on their property, partly due to a desire to maintain residence in that location and partly to ensure the security of their construction supplies.

By 2010, city officials were ready to remove travel trailers from most areas. The man speaking out about his travel trailer had a permit to have the trailer on his property but claims it had been withdrawn on the grounds that it did not meet the necessary requirements of a permanent shelter in the area. The travel trailer had previously been allowed under post-Hurricane Katrina exceptions to city regulations, implemented to allow for recovery efforts. He pled his case before the City Council to appeal an earlier decision to withdraw his permit.

In response, a city official said that after five years, he should be further along in the construction of his new home. The council ruled that he had to move the trailer to a nearby RV park. The man said the move would further delay his progress, a problem if the city wanted to encourage residents to rebuild in the city. He argued his case not only for himself, he claimed, but for other people working to rebuild. When the Biloxi City Council voted on the matter, the man lost his appeal and was told to move the travel trailer off his property.

If they remained on site in the travel trailer, officials argued, the man and his family would be at a greater risk from future disasters themselves, as the trailer would be unable to withstand hurricane-force winds and flood water. This would affect the rest of the city's population, as their risk would contribute to higher insurance rates if the city did not uniformly enforce flood zone regulations. Community needs superseded this man and his family's individual rebuilding efforts. This was true for many residents who found themselves still living in temporary or semi-permanent housing years after the storm. They were told to find permanent housing or move to more substantial semi-permanent housing (such as MEMA cottages or rental homes or apartments). Residents like this man who lived in travel trailers were told they could only do so if the trailers were in specific areas, like RV parks. However, even some of these RV parks were themselves near the water and thus at potential risk for storm damage.

Residents who relied on travel trailers as semi-permanent housing found themselves forced to meet permanent housing regulations. As individuals they objected to city orders to move their trailers, but there does not seem to have been any unified effort to protest. The reaction from city officials and others who spoke out at public meetings was focused on two arguments. First, there was the length of time it had been since Hurricane Katrina (over five years) and the idea that this time should have been sufficient for personal recovery. Second, the well-being of the city as a whole was a concern. To promote city-wide recovery, officials had to enforce regulations like zoning as a means of improving safety ratings and thus reducing insurance rates.

MEMA COTTAGES: PRE-KATRINA CULTURE, POST-KATRINA RECOVERY

MEMA cottages (such as the one in figure 4.1) emerged from a $400 million appropriation to the U.S. Department of Homeland Security (DHS) "to support alternative housing pilot programs that would simultaneously provide both short and intermediate term housing solutions" as the Alternative Housing Pilot Program (AHPP).[18] Because they emerged from Hurricane Katrina recovery efforts, the cottages are also referred to as "Katrina

cottages." In contrast with FEMA trailers, MEMA cottages were mobile homes specifically designed to match local architecture and to be aesthetically appealing, as well as more resilient to hurricane damage.

Mississippi was one of five states to receive AHPP funds, along with Alabama, Florida, Louisiana, and Texas. Mississippi received by far the largest share of these funds, $275 million, over 65 percent of the initial appropriation. This funding led to the development of MEMA cottages through the Mississippi Alternative Housing Pilot Program (MAHP).[19]

MEMA cottages were designed to balance the necessity of homes that could withstand future hurricanes, accommodate local styles and specific needs, and be aesthetically pleasing. Residents and researchers cited the visual appeal of the cottages as important for mental and emotional health in the recovery process. MEMA cottages were designed with local architectural styles in mind, a factor many officials and residents considered in their approval of the cottages as semi-permanent and then permanent housing. By mimicking local pre-Hurricane Katrina building styles like the importance of porch space and historic shotgun houses, MEMA cottages were designed to blend in with their surroundings. Original shotgun houses are small, narrow homes. They are often placed in close proximity to one another, limiting the amount of land they take up. In them, rooms are generally placed one directly

Figure 4.1   MEMA Katrina Cottage. *Source*: Created by Jennifer Trivedi.

behind another. As news coverage about the cottages described, "Where a FEMA trailer looks grim and dispiriting—who wants to live next to one, let alone in one?—this house, known as the Katrina Cottage, is airy, bright and charming."[20]

Residents I spoke with about this issue described how they felt "better" looking at MEMA cottages rather than FEMA trailers, noting that they reminded them of "old Biloxi" and they thought the cottages "blended in" with remaining homes. A survey of some cottage residents completed in 2008 demonstrates that there was at least some early success with the cottages as semi-permanent homes. People who lived in the cottages said they thought it "feels more like home" and that they could "resume pre-storm activities, such as inviting family and friends over." In general, MEMA cottages residents felt a greater sense of normalcy and safety than they had in FEMA trailers.

The cottages also accommodated individual needs. Disabled or physically challenged residents found the cottages relatively easily accessible. In addition, the cottages were built to withstand hurricane-force winds of up to 130 miles per hour.[21] The cottages would eventually demonstrate their resilience when they withstood latter hurricanes like Hurricane Isaac in 2012.

Initially, cottages were distributed by Mississippi state emergency officials and intended to be used as semi-permanent housing. By 2007, over 2,800 MEMA cottages were in use in Mississippi.[22] Length of residency in MEMA cottages varied widely. According to a survey conducted of a portion of MEMA cottage residents in 2007–2008, 16 percent had moved out before the fall of 2008.[23] Other residents were still living in the cottages in 2012, some having adapted them into permanent homes. Beginning in 2010, some MEMA cottages went on sale to the public. Several hundred of them were auctioned off over the next few years. Other residents bought those cottages or other cottages at auction and have begun living in them as permanent homes.

As time went on, some officials and residents raised concerns about the placement and potential permanence of MEMA cottages. According to a study conducted by Abt Associates Inc. and Amy Jones & Associates, "Several local officials said that the Cottages would have been more welcome immediately following the storms than they were later."[24] Some city officials believed that installing cottages would delay redevelopment efforts. Other officials and some residents viewed the cottages as equivalent to mobile homes and travel trailers, believing they should be subject to the same restrictions.

MEMA cottages were not entirely without problems. Official studies by MAHP note that they were open to both homeowners and renters, but recipients were required to demonstrate that they were residents of affected counties prior to Hurricane Katrina, directly affected by that hurricane or

Hurricane Rita, and in need of temporary housing for at least six months. Residents who qualified for a cottage had to have land to put it on, as no community sites were established, as had been the case for FEMA trailers.

Many Biloxians mistakenly believed that only people who had lived in FEMA trailers were eligible for MEMA cottages. This pervasive belief meant that some qualified people did not apply for cottages.

As time went on and MEMA cottages became permanent, some people pointed to the higher aesthetic value and safety parameters of them over mobile homes. This prompted both residents who were already living in MEMA cottages as semi-permanent housing and other residents who had not finalized permanent housing options to purchase the cottages, transforming them into permanent homes. But residents who wanted to make the cottages permanent homes faced the challenges of meeting the same requirements as other such homes in the flood zone, including home elevation. By 2010, MEMA cottages appearing in flood zones were often elevated. Some were on simple cinderblock pilings, while others were on more permanent elevated foundations.

Some Biloxians thought that the MEMA cottages were not acceptable as permanent homes. They resisted the idea that any form of mobile home be a permanent housing alternative. Some even went so far as to argue for the removal of pre-Hurricane Katrina mobile homes.

These more extreme arguments seemed to center on the ideas that mobile homes were not aesthetically pleasing, not safe in disasters, especially hurricanes, or signs of poverty or low-class status.

Despite the problems with official and public reactions to the MEMA cottages, they gradually became increasingly popular as permanent housing options. People already living in MEMA cottages and wanting to buy them faced periods of uncertainty, as the state initially said it would take almost all of the cottages back from residents after March 31, 2009.[25] They later changed this position, allowing all cottages to become permanent homes. Beginning in 2010, MEMA sold available cottages at auction. Paula Smith, an Alabama resident hoping to buy a trailer, complained about the higher prices: "You were led to believe because of the prior auctions that they would have at least have been at a reasonable price, but they're not. You've got people that are coming in here buying 13, 14, 16 at a time because they have an endless amount of money to work with. And you have these poor people who are looking for just a place to live."[26] Residents who wanted to make MEMA cottages permanent homes had to be able to afford one.

In response to complaints about high prices, MEMA director Mike Womack said that he "would really like for everyone who needs a home to be able to purchase one. [. . .] But we are bound by state law to have an open auction and we cannot exclude someone because they're a dealer or because

they happen to be a little more wealthy than another one."[27] After the cottages went up for private sale, the Biloxi City Council considered zoning changes to allow them in previously restricted areas. The spread of MEMA cottages throughout neighborhoods that had not previously held extensive mobile or temporary homes required legal changes at the local level. At public City Council meetings in 2010, city officials and residents commented on the fact that the cottages looked more appealing than other mobile homes, including FEMA trailers. One city official emphasized the cottages' ability to withstand hurricane-force winds, arguing that this was an advantage over mobile homes and travel trailers.

As more permanent MEMA cottages came into Biloxi, the change was clear. Driving around Biloxi in 2010 and 2011, the cottages were increasingly scattered throughout the city. While city officials debated wide-scale zoning changes to accommodate MEMA cottages, some requests were considered on a case-by-case basis. When one resident petitioned the Biloxi City Council for an elevation variance for their cottage, a city councilman spoke in support, noting the importance of residents wanting to stay in the area and rebuild. Examples like this reveal the decision-making process of the City Council, including special allowances to place MEMA cottages in flood zones. Support varied for different types of semi-permanent residences. Residents in travel trailers were denied the right to remain on their property when community safety concerns trumped personal recovery. However, MEMA cottages that were deemed safer were allowed to stay, as they posed less of a threat to existing safety ordinances and property insurance rates.

TRYING TO RENT WITH RISING COSTS

As people affected by Hurricane Katrina moved out of temporary housing, some began to look for rental houses and apartments as semi-permanent housing. Others intended rental properties to be fully permanent homes, including some who had rented residences before the storm. Biloxians who wanted to return to rental properties competed with former homeowners who viewed rental properties as semi-permanent options. However, the overall number of rental units had decreased due to storm damage and land sales to casinos. Across the Mississippi Gulf Coast, FEMA estimates indicated that over 15,000 rental units were seriously damaged or completely destroyed and 10,000 units were less severely damaged.[28]

Due to limited availability and increased interest, rent prices rose significantly after Hurricane Katrina. By the spring of 2006, rental costs had increased from their pre-Hurricane Katrina levels by 25 to 30 percent. A two-bedroom apartment that cost $600 per month before Katrina cost $820

just six months later.[29] Despite this increase, rental units that were available were quickly filled. By March 1, 2006, available units were almost fully occupied.[30] More rental homes and apartments became available over time, but costs remained high compared to pre-Hurricane Katrina. A one-bedroom apartment in Biloxi cost between $600 and $700 a month by the summer of 2010. This increased cost was particularly problematic for low-income residents with already strained funds. The higher cost of rent was offset for some lower-income residents by the Disaster Housing Assistance Program (DHAP), which was distributed through the U.S. Department of Housing and Urban Development (HUD). However, not everyone qualified for the program and rental aid was of little use to residents who could not find a home to rent.

As Reilly Morse, an attorney with the Mississippi Center for Justice, notes, "Rental Katrina victims are essentially the most powerless group of all in trying to fashion a recovery," adding that "they have to depend entirely on landowners and land developers to make something happen."[31] Renters largely lacked political and economic power. Many of their houses and apartments were destroyed. They were unable to make the decision to rebuild. Some landlords chose to sell their land to other developers or casino owners and renters had trouble replacing these lost homes. Many residents thought an increase in the homeless population could be attributed in part to casinos taking over land once available as rental or low-cost housing.

Pearl, a renter before Hurricane Katrina, described the problems she faced as casinos took over land. The plot where her rental home once stood became a gravel parking lot for a nearby casino.

While residents living in semi-permanent housing were still working toward permanent housing solutions, there were a variety of delays, including lack of funds and time-consuming construction. Aid was delayed as various private sector organizations placed requirements on assistance.[32] The insurance money and assistance many people received was soon no longer enough to cover the rising costs of construction in the area. This meant some residents spent longer periods of time in semi-permanent housing than other Biloxians or city officials wanted them to or than they originally intended.

Early on in the recovery process, local groups that were previously not engaged with disaster recovery began to help residents affected by Hurricane Katrina. Prior to Hurricane Katrina, the local chapter of the NAACP focused on civil rights, as most branches of the organization do. However, when Hurricane Katrina made landfall and the effects of the storm became clear, members of the local branch began to notice problems with recovery. In particular, the NAACP looked to help renters who were not getting the same federal aid opportunities as homeowners. As they began to address these issues, the local and state levels of the organization supported their efforts.

Initially, in the immediate relief efforts after the storm, Andrew saw a need for resources to be distributed in the area. The NAACP at the state and local level used their resources to help him distribute resources like food. While the NAACP had a long history at the local level of helping residents gain access to equal rights and resources, according to Andrew, their role in disaster aid was relatively new and forged quickly in the aftermath of Hurricane Katrina.

However, as time progressed, new problems began to emerge. It became clear to Andrew and others working at and with the NAACP that renters were not receiving the same aid as homeowners. As people applied for grant money to help find and rebuild homes, renters were often rejected. Andrew noted that renters really "didn't get anything."[33] And adding to this problem was the fact that prior to Hurricane Katrina many of the renters in poorer neighborhoods like East Biloxi had to choose between paying their rent and paying for other supplies like heat and medication. Already vulnerable to the effects of disasters, these poor residents frequently found themselves facing a lack of aid after the storm.

Pearl was herself a renter at the time of Hurricane Katrina. As she pointed out, when she lost her home she did not qualify for aid as a homeowner. She was out of a place to live but was not getting aid to help find a new place. The land her home had been on was sold to a casino, leaving her with no way to go back.[34] Many other renters faced similar problems. And, since many homes and rental properties had been destroyed, many more people were looking to either rent new homes or to rent space temporarily while repairing or rebuilding their homes. In addition, many rental properties were located in some of the hardest hit areas, meaning that many of these homes were destroyed or severely damaged.

While Judy Jackson and her family had rented a three-bedroom house for $650 per month before Hurricane Katrina, after the storm the same space cost twice as much. Judy noted, "We don't make that kind of money to even attempt to pay them that kind of money for rent."[35] She and her family continued to stay with extended family around Biloxi. Many renters found themselves in situations similar to Judy's and staying with family or friends until they could find and afford new rental homes.

The NAACP engaged in more than $1 million worth of diverse relief efforts including distributing clothes, promoting education, and providing money to renters.[36] According to one Biloxian, Andrew, the organization distributed tens of thousands of dollars in money to renters. The NAACP also worked with the Mississippi Center for Justice to pursue legal action against HUD. This lawsuit resulted in the redistribution of $132 million in aid funds to renters and "other individuals who were left out of the previous recovery efforts."[37]

PUBLIC HOUSING, POWER, AND RECOVERY

Although low-income housing was an important component of the Biloxi's reconstruction, residents of certain neighborhoods did want such homes in their vicinity. Low-income housing became an ostracized form of permanent housing, with people arguing "not in my backyard." Progress toward rebuilding low-income housing was slowed by these protests. When construction plans and efforts began, attempts were made to increase the availability of low-income single-family homes and to intersperse these homes throughout mixed income neighborhoods. "Barrack style housing" was being replaced for many with "mixed income communities," including opportunities for home ownership.[38] In an attempt to guarantee funds for the reconstruction of low-income housing, the state NAACP ultimately sued HUD.

Hurricane Katrina severely affected low-income housing, including public housing, much of which was located in areas of eastern Biloxi. Several Biloxi Housing Authority apartment complexes and developments were severely damaged or destroyed. While repairs were made where possible, some sites had to be demolished. The executive director and chairman of the board of the Housing Authority, Bobby Hensley and Delmar Robinson, "were united in their commitment to increase the number of affordable housing units available" for Biloxi residents "in an area that was now lacking that availability due to Katrina."[39] As of February 2013, 818 public housing units were managed by the Housing Authority. In addition, as of 2010, the Housing Authority was managing the Section 8 Program, providing 594 Housing Choice Vouchers and assisting over 1,400 families with housing assistance.[40] These residents were among the most vulnerable in Biloxi, reliant on public housing for homes and often poorer and working class.

In December 2010, a representative of the Biloxi Housing Authority spoke before the City Council. He emphasized that his organization had been trying to increase development in East Biloxi since Hurricane Katrina. They had identified over 200 vacant or substandard structures in the area and were looking to build single-family lots on such properties. The representative repeatedly noted that they wanted to be an urban renewal agency in the city. Their goals included increasing "the availability of decent, safe and affordable housing," ensuring "equal opportunity in housing," promoting self-sufficiency and assisting "development for families and individuals," and improving "community quality of life and economic viability."[41] At a public City Council meeting, one resident spoke in support of the Biloxi Housing Authority's efforts, noting somewhat bitterly that they were "one of the few organizations with an interest in Biloxi."

The authority's work went beyond simply housing residents in need. Through partnerships with non-profit organizations the authority opened a

free health clinic, started an early childhood education center, and offered adult day care services.[42] Such efforts were critical to getting vulnerable residents back into homes and back into Biloxi.

Despite these efforts, researchers such as Lowe have pointed out that "the state of housing for lower-income households along the Mississippi Gulf Coast has remained in crisis."[43] The state of Mississippi had reduced disaster Community Development Block Grant (CDBG) recovery funds and diverted $770 million for "affordable housing restoration" to other projects, including restoration of the state port in Gulfport.[44] These diversions occurred due to federal waivers to the state allowing the transfer of funds. By spring 2009 "only 20 percent of disaster CDBG recovery funds spent on housing recovery went to increase the supply of housing for lower-income households."[45] This diversion led to a lawsuit by the state branch of the NAACP and others. Where funds were truly most needed became a subject of debate between business and housing interests, as well as between low-income residents, their proponents and the state.

The debate about funds for housing being diverted also brought to light the question of differential treatment of African Americans affected by Hurricane Katrina. It is somewhat difficult to determine causality and to establish how people were treated differently and exactly why this differential treatment occurred. There is an overlap between race and ethnic classifications and class status. Neighborhoods that include higher percentages of racial and ethnic minorities, such as East Biloxi, are often also low-income areas. This combination of factors in this particular cultural-historical context made many of these Biloxians particularly vulnerable. Many of these neighborhoods were also in high-risk areas, resulting in severe damage from Katrina.

In 2008, the state branch of the NAACP, the Mississippi Center for Justice, the Gulf Coast Fair Housing Center, and the Lawyers' Committee for Civil Rights Under Law sued HUD "to compel Mississippi to spend recovery money on poor and minority residents who they said were left out" of rebuilding and recovery efforts.[46] This lawsuit sat at the intersection of the NAACP's new role in local disaster recovery on the Mississippi Gulf Coast and the broader context of the organization's fight for racial and economic equality in the United States. The suit represented a particular subset of vulnerable residents, the often African American and Hispanic poor and working class relying on the public housing system for homes. Reilly Morse, of the Mississippi Center for Justice, noted that "the core allegation of the complaint was the state had failed to extend assistance to wind-damage homeowners and that the effect of that was to disproportionately leave out of the recovery African-American households."[47]

Derrick Johnson, president of the Mississippi chapter of the NAACP, said that "a majority of coastal residents denied home disaster assistance were

those with low incomes" (Lynch 2010). Johnson described how "it is unfortunate that money earmarked for the recovery victims of Hurricane Katrina is now being taken away for the purpose of business development" (NAACP 2009). The lawsuit claimed HUD's approval of the fund transfer waivers "authorized Mississippi to drop its commitment to lower-income households affected by Katrina from 50 percent to 13 percent."[48] James Crowell, president of the Biloxi branch of the NAACP, commented:

> This is in essence creating another disaster, only it's man-made. It's unconscionable that HUD would approve a plan that neglects tax-paying citizen. [. . .] The return of the $600 million to the housing budget would make it possible for our friends and neighbors to have somewhere to live. [. . .] That is why this lawsuit is important for those of us who are still trying to recover from the impact of Hurricane Katrina.[49]

The suit was dismissed by a federal judge on the basis that the plaintiffs did not have standing to bring the case, but in November 2010, a $132 million settlement was reached.[50] The money would be directed to lower-income households in Mississippi affected by Hurricane Katrina. Gerald Blessey, the state's Gulf Coast housing director, countered: "Did we miss this last group? Yes. But we've caught them because we wanted to [. . .] and sure we wish we'd have got to it sooner, but for their sake we are going as quickly as we can now to solve this problem."[51] The funds were being made available to low-income residents, including a new Neighborhood Home program to repair low-income housing damaged by Hurricane Katrina and to place low-income residents in federally constructed housing like MEMA cottages.[52] Despite the settlement, Andrew said the state was still diverting $570 million to work on the port in Gulfport.

REBUILDING HOMES, BUILDING UP, AND BUILDING COSTS

Perhaps the most obvious permanent housing solution was rebuilding pre-Hurricane Katrina homes. The cost of rebuilding a home in flood zones after the storm was higher than the cost of building there previously, in particular higher insurance for homes in the area, costs associated with "building up" or elevating homes above floodwaters as per new FEMA regulations, and higher construction costs in the area after the storm, including costs of labor and supplies. The city itself acknowledged the higher costs in their State of the City mailer in 2010: "Some areas of our city will rebuild quickly. Some will take longer than others and some, for better or worse, will never return to the way

they were, given the challenges of the cost and availability of insurance and the expense of new construction requirements."[53] In hard-hit East Biloxi, the casinos were able to rebuild on land in higher risk areas, but many residents were not able to do so. For residents like Pearl, this pattern demonstrated the differential economic and political power held by casinos and by residents.

As the construction of new homes began, problems quickly emerged. In some areas of the Mississippi Gulf Coast, Cutter et al. point to local officials' estimates that required permits may have been underreported by as much as 25 percent, "as some of the reconstruction was done without permits as many residents did their own construction without help from contractors, licensed or otherwise."[54] Permit numbers also point to potential increases in new development or redevelopment in less hard-hit areas, as Cutter et al. found in parts of Harrison County. While areas with no damage had 27 percent of houses before Katrina, they also held 45 percent of permits after Katrina.[55]

Meanwhile, homeowners in particularly hard-hit areas like East Biloxi found themselves faced with new regulations that governed their home construction. Other residents found themselves unable to afford new, higher rates that insurance companies began charging after the storm. Questions of affordability were raised, particularly in low-income areas like East Biloxi. For example, Andrés Duany, an architect and founder of the Congress for the New Urbanism, said an affordable three-bedroom home started at $140,000. City Councilman Bill Stallworth countered that an affordable home in East Biloxi was in the $65,000 to $95,000 range.[56]

Home Insurance and Affordability Before and After

Beyond problems with affordability, Biloxians faced problems about where the funding to rebuild and purchase new or rent homes would come from. Insurance losses from Hurricane Katrina were huge. Estimates indicated that at the time the storm "generated the largest single loss in the history of U.S. insurance"—$40.6 billion in private insurance claims and $15.3 billion in claims for the National Flood Insurance Program (NFIP), one-third of which were claims from Mississippi.[57] As a result, insurers raised rates. Getting insurance funding from previously held policies was also complicated for many people on the coast. Residents who wanted insurance funds found themselves delving through a variety of paperwork and visits to get the money. Most residents—over 90 percent of residents in Harrison County, which includes Biloxi—did not have flood insurance.[58] Some residents were denied state aid because their homes were uninsured before the storm.[59]

Margie and her family had insurance on their home. They, unlike many other people, had both homeowners and flood insurance. Margie said that most of their insurance money came from the flood insurance and they

received only a small percent of their homeowner's insurance. She noted that they had no problem getting the funds from the flood insurance, but the homeowner's insurance was more complicated. She said that people usually did not get much from their homeowners' insurance policies. Bridgette, in contrast, only had homeowner's insurance on her home, as well as two homes she rented out to people. She received relatively little money from her policies and what she did get was not enough to replace her home.

Delays with insurance funds caused problems for many residents. Julie Suaste said, "Family is treading turbulent water. If they don't get money from either insurance or the government, they're not sure they can afford to rebuild. But just walking away from the mortgage on their damaged house will ruin their credit."[60] Naomi Foster did not have flood insurance on her home, leaving her and her husband waiting for a decision by the insurance company that carried her homeowners' policy. She said, "You wait for the insurance to make a decision and then you wait for FEMA and your life is in someone else's hands."[61]

Some residents grew so frustrated with the wait and the lack of funds the insurance companies were distributing that they sued the companies. Bridgette took part in one such lawsuit, but a judge ruled that she had no claim because the insurance company did what it was supposed to do. Bridgette clarified later that she had a regular homeowner's policy that covered things like fire and wind, but not flood insurance. Bridgette said she and many others thought flood insurance was to cover situations like a bit of water on your floor to replace the floor and other things in the house, while homeowner's policies would cover an entire loss. In her experience the insurance companies simply ruled total losses were the product of water and the storm surge (thus flooding) and not wind or other processes. These decisions meant that residents who had homeowner's insurance, but not flood insurance, often got little or nothing for their homes.

Other residents who could afford flood insurance did not have it before the storm. Some did not have flood insurance because they did not live in the flood zone. Others were told by insurance agents that they did not need it. Erica said her family had homeowner's insurance, but no flood insurance. She noted that they were not required to have flood insurance, based on where their home was, but in retrospect it seemed like a "foolish" decision. After Hurricane Katrina someone told her that if you could see the water from your house, you should have flood insurance. Erica and her family did have homeowner's insurance and their policy paid for repairs due to wind damage. Even though they did eventually get funds, it took time. Erica claimed that "you learn patience in this process, otherwise you just go crazy." She added that they looked to the insurance company and the options for funds to repair their home as a chance to "make us whole again."

When I asked Erica if she now had flood insurance, she laughed and assured me she did. Residents who could afford insurance after the storm, like Erica, often bought it. Abigail said that despite the fact that her new house is about a mile away from the river and on a high hill, she still insisted on buying flood insurance, even when her insurance agent and lawyer laughed at the idea.

Many residents did not have insurance or lacked flood insurance specifically, particularly vulnerable low-income residents in areas like East Biloxi. Andrew told me about how before the storm many poor residents, especially the elderly, often found themselves having to choose between things like home and flood insurance or medication and food. Reilly Morse, a Gulf Coast lawyer, said, "When you have to choose between your medicine and a homeowner's insurance policy and you're living in a house that maybe you haven't had to pay for, you're probably going to keep yourself alive before you go and insure the house."[62]

After the storm, insurance rates increased significantly. In areas where people were unable to afford the pre-storm rates, the new higher cost of insurance seemed impossible to meet. Andrew described insurance rates that were five times higher than they had been before the storm in some especially hard-hit areas of East Biloxi. The Mississippi Windstorm Underwriting Association raised rates by 90 percent for single-family homes.[63] This left many residents unable to afford insurance, even if they knew they needed it or wanted to have it.

Grants and Loans, Resources and Knowledge

Eva described how many residents who wanted aid relied on spaces like the local public library to access resources like computers and fax machines to complete their paperwork. People came into access and print out forms and send them into agencies such as FEMA or the Small Businesses Administration (SBA). Eva recalled how as late as November, three months after the storm, the library was still full of people completing the paperwork. The library stayed open as long as possible to accommodate residents who needed to apply for aid.

Some residents applied for and received grants through agencies like FEMA. Nina and her husband, for example, received a grant that helped them pay for supplies to rebuild their home. Sometimes getting access to the grant funds was complicated. While Bridgette's grant eventually helped pay for her new home, she had to apply several times before her application was accepted. She had given up on getting a grant and was focused on looking for other funding sources when someone she knew convinced her to try again. With her final application Bridgette was awarded a $100,000 grant and, when notified, she said, "I thought I would pass out."

In addition to grants, loans were available for some residents through the SBA. But SBA loans were not always an option that homeowners wanted to use. Abigail described how she qualified for a SBA loan and was offered a great rate, but she did not take it, instead getting a private loan with a bank. Abigail turned down the SBA offer because, she said, they wanted to hold both her new home and her old land as collateral. Abigail argued this was not right. Instead, she turned to a higher interest rate bank home loan.

In addition to the complexities of the paperwork involved, the confusion surrounding who could get aid and from what source and when further complicated the situation. Erica talked about how people were not sure what aid was available. She noted that they would get messages to call certain numbers and make claims, but that rumors about who got what aid and how they got it ran rampant around the town. Margie and her husband also qualified for a SBA loan. Margie referred to it as "a process." She recounted how she had to go to a number of different places, including several malls, to complete the necessary paperwork. The complexity of the process was only compounded, she said, by the rumors about aid circulating in the area, including who qualified for what assistance and where they had to go to complete steps to get access to that aid.

Rebuilding, but Not Always in the Hardest Hit Areas

While living in a variety of mobile homes or with family and friends, many homeowners began planning to rebuild their homes or looking for new homes to buy. These plans included not only the physical construction of homes for many but also the process of replacing the contents of their homes. Using funds from insurance policies, government grants, SBA loans, or traditional bank mortgages, residents paid to replace their homes and whatever else they had lost inside them. People began looking for new homes to buy or rent or started work on rebuilding their homes while living with friends and family or in mobile homes. This part of recovery, however, was hampered for many people by limited funding, particularly true for more vulnerable residents who often lacked the funds, resources, and knowledge to enable rebuilding. These limits led some residents to do the work of rebuilding their homes by themselves or with volunteers from a variety of groups like churches and charities. For some, the need to rebuild their own homes caused significant delays.

Others such as Nina were able to repair and rebuild their homes relatively more quickly. While living in a travel trailer on their property, Nina and her husband began repairing their severely damaged home. They lived in the trailer until the house was what Nina referred to as "livable." Nina pointed to the help they got from others in rebuilding their home. Neighbors and church volunteer groups, for example, came out and hung sheet rock that the couple

had bought. Margie and her husband took much longer to rebuild their home. They worked with her parents to rebuild their home first, staying with them until their own home could be completed. Their main focus was getting her parents back in their home. Only after that was accomplished did they rebuild their own home, over two years after the storm.

Rebuilding homes was complicated for some residents by new flood zone regulations. As Community Development director Jerry Creel said:

> Those who are looking to repair heavily damaged homes in a flood zone need to be aware of a few things. [. . .] If the damage amounts to more than 50 percent of the fair market value of the home, it's considered "substantially damaged" by FEMA. This means that in order for a building permit to be issued, the home must be brought into full compliance with the flood ordinance and FEMA regulations.[64]

Meeting these regulations often included "building up" or elevating a home above potential floodwaters. As FEMA looked to increase required elevations of homes, some residents found themselves facing a need to raise their homes as high as sixteen to eighteen feet off the ground.[65] The additional cost of this raising was significant. And it was even more expensive for elderly or disabled residents who had to try and fit handicapped access ramps or elevators onto their property to make the homes accessible.[66]

Despite these problems, home reconstruction in the area was growing by June 2006, when home building permits reached near record numbers.[67] However, these new homes were often not being built in the hardest hit areas. This underdevelopment may be problematic. While homes not built in the area can, obviously, not be destroyed by future storms, the underdevelopment in areas like East Biloxi has left entire communities uprooted and searching for not only new areas to live, but new schools for their children, new jobs, and, for many, new social networks.[68]

BUYING NEW HOMES

Some residents looked to buy new homes instead of rebuilding. But this was not without problems. Dorothy said she and her husband were "very lucky" to find the home they did for an affordable cost. She said the prices of homes were inflated over $10,000 after the storm. Abigail, who had been looking for a new home before the storm, described similar homes going for $30,000 more after the storm. But, as Dorothy noted, "people were paying because they were desperate." Rising costs put home ownership out of many people's hands, pushing up the number of people looking to rent in the city.

This pushed the cost of rental properties up as well as both former renters and former homeowners looked to rent properties in the area.

Bridgette also talked about the lack of available homes to buy. When she was out looking for a new home, she learned there was already a waiting list for lots in new upcoming subdivisions. It was nine months before a lot was available for Bridgette to build her new home on. For Bridgette and many others, location was a problem. Although some residents wanted to rebuild where their homes had once been, regardless of the danger they were now familiar with from hurricanes and storm surges, others wanted to be much further away from the water. Bridgette refused to build close to the water, adding "I'm over living near the water." Moving homes to areas they saw as out of harm's way was one way that residents attempted to find resilience and minimize risk. However, it is not without other complications such as the disruption of social networks.

TRYING TO COME HOME

Many new building regulations related to new FEMA and disaster preparedness rules went into effect in May 2009.[69] Higher costs stemming from these regulations were more of a burden where the flood zones overlapped with poorer neighborhoods, such as East Biloxi. But rebuilding in these areas, Biloxians I spoke with discussed the importance of rebuilding specific neighborhoods. As one resident described at a public meeting, "As East Biloxi goes, so goes Biloxi." Organizations that helped residents rebuild their homes also emphasized the importance of rebuilding certain neighborhoods. Architecture for Humanity described how "relocating homeowners from their community, their neighborhood, and their homes could be a fatal blow to an already vulnerable community."[70]

As Architecture for Humanity noted, because there was no relocation program, some residents had no choice but to rebuild in East Biloxi and other hard-hit areas. Despite this, many residents lacked the funds to do so. Low-income residents often did not have insurance before Hurricane Katrina and thus did not receive payments for their destroyed homes. Residents who did have insurance often found that the money they received did not cover the cost of reconstruction, especially with the rising cost of materials and labor.[71] Government aid came slowly and required extensive paperwork. People I spoke with who applied for government aid complained about the amount of paperwork required.

By the fifth anniversary of the storm "less than 800 permits [had] been issued for the construction of new homes."[72] Programs like the Gulf Coast Community Design Studio (GCCDS) and Architecture for Humanity worked to help residents rebuild and to gain access to funding.

Some residents wanted to rebuild specifically where they had lived before Hurricane Katrina. At public meetings, in conversations across the city, and in private semi-structured interviews, people described attachment to the places they lived before the storm. Many said it was important to them to rebuild, not to move. Whether they moved or rebuilt, most strongly identified with specific neighborhoods, speaking about not only their desire to rebuild in general but to return to what they considered home, to the people and spaces they knew.

In an effort to encourage development, various organizations began rebuilding homes for residents who needed them and distributing aid to help others. Efforts focused on problems faced by residents after the storm and transitioning from temporary to semi-permanent and finally to permanent housing. Organizations worked on getting residents into "sustainable" and "resilient" housing that suited personal needs. These efforts worked for some people: by August 2008, 75 percent of the 2,200 homes left standing in East Biloxi were repaired and occupied. Between one and two hundred of the nearly 2,500 empty lots in the area had new homes on them.[73] The most successful of these efforts were those that translated outside aid to local needs with the help of residents' knowledge. This paralleled the success of the MEMA cottages.

These grassroots and external aid organizations worked to respond to problems faced by residents affected by Hurricane Katrina, particularly the need for safe, affordable permanent housing. In addition to their willingness to address local needs, the successes of such efforts sprang from the organizations' work to demonstrate the idea that "effective disaster response does not just bring shelter to people. Rather, it must house people in a livable environment that can renew the local community."[74] Meeting individual and local needs instead of simply implementing a plan designed only by outsiders to create easily installed housing allowed for this livable environment and helped these organizations to avoid some of the miscommunications and problems that have arisen in disaster recovery efforts internationally.

COLLABORATIVE AID, BRINGING INSIDERS AND OUTSIDERS TOGETHER

In order to help residents in need move into permanent homes, several aid organizations collaborated with each other, drawing on resources and knowledge from insiders and outsiders to build new homes. Through donations from individuals and architectural firms, Architecture for Humanity established a partnership with GCCDS and Hope CDA (Community Development Agency). This enabled them not only to build new homes but to work out the logistics of getting people into those homes and helping them sell their previously held property, if necessary.

GCCDS was established in Biloxi after Hurricane Katrina as an outreach initiative of the Mississippi State University's College of Architecture, Art, and Design. Their goal was to "provide architectural design services, landscape and planning assistance, educational opportunities and research to organizations and communities along the Mississippi Gulf Coast."[75] Their mission was

> to provide professional assistance that increases the capacity of local communities and organizations to address issues of housing, public space and neighborhood development. To provide leadership that advances the local, regional, and national dialogue on issues of design, affordable housing, coastal resiliency, and sustainable development. To expand design education by providing opportunities for students and interns to explore community-based design, design-build, and sustainability.[76]

In Biloxi specifically, GCCDS has worked on forty homes and several public buildings.

GCCDS has worked with a variety of other groups on the coast, including both local and outside organizations. Such collaborations have allowed them to extend their reach and help more people. For example, a house built for Patty was the product of many people, including Brad Guy (director for Operations for the Hamer Center for Community Design at Pennsylvania State University), Bryan Bell (director of Design Corps), Sergio Palleroni (University of Texas at Austin), twelve architectural students from Design Corps, and the Hope CDA.[77] As Vincent Baudoin describes, "the project has acted as a laboratory for a number of approaches to coastal rebuilding. First, a collaborative design process drew on the ideas of the homeowner, architects, sustainable design experts, and a diverse body of students and volunteers. Second, its construction combined students' design/build work with contracted work and volunteer labor."[78] In addition to collaborating with professional groups, the team worked closely with the home's intended occupant, Patty, learning what she wanted and needed in a home.[79] This partnership with the future home occupants was perhaps the most important part of their response to underdevelopment and housing needs in Biloxi. It helped local residents recover from disasters by leveraging their own knowledge about themselves, their families, and their communities, thereby maximizing the effectiveness of outside resources.

This cooperation was made possible by two key approaches. First, GCCDS' goals included an important role for future home occupants in home design with the idea that residents had varied needs and desires for their homes and that these should be addressed in new home construction. Second, the groups and individuals involved with GCCDS' efforts were willing to cooperate and

coordinate. Failure to complete either of these approaches has led to problems with recovery after other disasters. For example, a lack of cooperation between different NGOs and affected residents following the 2004 tsunami in Sri Lanka led to problems with communication and aid distribution.[80] Part of GCCDS' work was done in collaboration with Architecture for Humanity.

Architecture for Humanity's Model Homes Program developed seven different model homes to figure out how to best finance and build homes in East Biloxi, considering issues like meeting new FEMA elevation requirements, mitigating flood risk, and making the homes affordable.[81] Architecture for Humanity described the work they did in East Biloxi specifically,

> in the wake of Hurricane Katrina, many East Biloxi residents feared that new building codes required by the city of Biloxi would dramatically increase the cost of rebuilding by forcing them to elevate their homes, ultimately making it impossible for them to return home. The Biloxi Model Home Program addressed these concerns by inviting architects from around the nation to design and build sustainable, hurricane-resistant, affordable homes that met new construction standards and height elevations required by the city.[82]

The model home program focused on building sustainable elevated homes more resilient to hurricanes and flooding with the goal of having best practices in place for future disasters.[83] This set of best practices was also adapted to the local environment. Architecture for Humanity was clearly planning for long-term recovery in the area, working to set up sustainable and resilient housing that minimized risk and helped reduce losses in inevitable future hurricanes. The program allowed residents to work with the architects designing their homes, again combining local knowledge with outside resources.

Despite these plans, many of these smaller agencies did face problems related to lack of resources and funding when it came to building complete houses. These issues forced the groups to work on a much smaller scale than the MEMA cottage system or the FEMA trailer system. As of 2015, GCCDS has assisted with the construction or repairs of approximately 330 homes.[84] Architecture for Humanity constructed seven homes in Biloxi, although the organization as a whole was forced to file for bankruptcy and close in 2015.[85]

Architecture for Humanity also worked with the Warnke Community Consultants and Enterprise Corporation of the Delta to design a plan to help residents afford to rebuild while waiting for other funds. The organizations created a revolving community loan fund, managed at the local level, for "pools of money lent or granted to community members for economic development."[86] There was no interest assessed on the loans and no regular payments were required. A lien on the property was held against the loan. If the home was sold within five years, the loan funds were recaptured with the sale.

If the home remained unsold, the loan was gradually forgiven until, ten years later, they were forgiven entirely. Loans were repaid by residents, and the funds were then loaned to others in need. In East Biloxi, the initial loans were seeded with funds from Oprah's Angel Network.[87] However, this approach proved somewhat problematic because many residents did not qualify for earlier phases of government aid. Having to wait to access aid money meant loan funds were not recirculated into the system, causing delays.

In the summer of 2006, working with Hope, Architecture for Humanity began looking for candidates for their model home program. The candidates were largely chosen by need, although families living in FEMA trailers were prioritized.[88] Once families were selected, architects submitted housing designs. Design teams were asked to keep several criteria in mind when designing the homes: (1) a sense of community, (2) affordability, (3) accessibility, (4) skilled labor, (5) economic growth, and (6) landscape. The end results varied according to both outside expertise (the design teams) and insider knowledge (the residents). The Odom home was designed to meet flood elevation requirements and with an in-law flat rental unit.[89] The Nguyen family home was designed to accommodate a larger family with four children.[90] The Tyler family home was a struggle to balance raising the home twelve feet off of the ground with the desire for porch space.[91]

All of these and the other homes were built with the idea of sustainability in mind. This goal is part of broader cultural and political trends in the United States in home construction in general and in disaster recovery specifically, demonstrated in the aftermath of disasters like the Joplin, Missouri, tornado where organizations and local residents worked to rebuild the city more environmentally friendly and sustainable than it had previously been.[92] These larger trends are part of the cultural-historical context that shaped the form recovery homes from smaller organizations like Architecture for Humanity and GCCDS took. In this case, Architecture for Humanity acknowledged that sustainability of new homes in the face of future disasters was dependent upon context. Their context, they claimed, "was rooted in a long-term view of the survival of a particular home. We though [*sic*] about the prosperity of not just the first owner but generations of families living in the home."[93] Approaches like the model home program relied on outside experts and resources, but they would not have worked without the attention paid to local knowledge and needs.

BUILDING NORTH FOR PERCEIVED SAFETY

After Hurricane Katrina, as many residents looked to build or buy homes outside of the flood zone, increasing numbers of people began to look

toward the northern part of the city. Northern Biloxi was largely whiter and wealthier than areas like East Biloxi, people in neighborhoods in the area publicly expressed that they did not feel fully a part of Biloxi, and the area was less severely affected by Hurricane Katrina, setting up a potential post-*communitas* fracturing of groups along geographic and related identity lines. However, as then-mayor A. J. Holloway noted, "Given that we have Gulfport to the west, Ocean Springs to the east, and water to the south, our natural path of growth is to the north."[94]

This was not an entirely new discussion. As the city's comprehensive plan, adopted by the Biloxi City Council in December 2009, notes, in 1996 the city's plan included extending the northernmost city limit up to the De Soto National Forest, much further north than the city's northern border at the time and far away from the Gulf of Mexico. In 1999 the city expanded to annex the Woolmarket area and land around the Tchoutacabouffa River. In 2004 the city expanded again, this time to annex the area east of Biloxi and north of neighboring D'Iberville. After Hurricane Katrina made landfall and the destruction and long-term effects of the storm became clear, there was an increased focus on residential and business expansions into the area, with many proposals for new developments. These proposals sometimes required zoning changes, leading public debates—online, in the form of circulated petitions, and at public meetings.

In response to demands for development in northern areas of Biloxi, existing residents pushed back, arguing against the increased population density. The conflict around one new subdivision was especially intense, with residents of north Biloxi neighborhoods speaking out at many public city meetings. This protest centered on several key issues: (1) the recovery process since Hurricane Katrina and where new homes should be built in the aftermath of the storm, (2) neighborhood location and infrastructure, (3) availability of homes in other areas, and (4) forms of identity, including based on neighborhood identity and class status. The debate about this new subdivision revealed conflict at the local level as residents prioritized personal and neighborhood needs and identity ahead of city-wide recovery. These protests extended preexisting cultural, political, and economic lines of conflict into post-Katrina recovery. The northern Biloxi residents speaking out against such new homes were predominantly white, middle to upper class, and often explicitly stated that they did not feel part of the geopolitical boundaries or culture of Biloxi.

Debates over proposed development and related zoning changes to allow for the new subdivision revealed conflicts between middle- and upper-class residents of northern neighborhoods in Biloxi and lower and middle-class Biloxians seeking to move northward, as well as developers seeking to meet the demands of or earn money off of, depending on who you asked, the latter.

The developers acknowledged that they would make money on the venture, but also discussed their plan as a needed burst of additional housing further inland. Others, including some protesting against its construction, accused the developers of being only in it for money. Many residents of the northern areas resisted the incursions, arguing against those that required zoning changes in particular. Residents from areas closer to the water who wanted to move north, especially those who wanted to move for safety reasons, argued in favor of zoning changes and new developments. Developers responsible for the new plans, of course, argued in support of them to the community and city officials. These divisions were most clear at public city meetings where the proposed new developments were discussed.

These debates raised issues about identity and perception. The argument that some northern Biloxi residents made that there were houses available already and those should be occupied before new homes were built is not without merit. GCCDS noted that Harrison County as a whole had a 17 percent residential vacancy rate in 2010, compared to a rate of 14 percent on the Mississippi Gulf Coast as a whole and 8 percent in the United States.[95] Similar patterns existed in the apartment market, with Harrison County's apartment vacancy rate at 12.5 percent in 2011 compared to the Mississippi Gulf Coast rate of 7 percent and the United States rate of 4 to 6 percent.[96]

However, even where housing was available, GCCDS cautions that "high residential vacancy rates can be symptomatic of imbalances in the housing market, such as an oversupply of housing, lack of demand, or a *lack of appropriate housing options*" (emphasis added). Housing that was available but was in what was or what people perceived as a high-risk area seems to have been deemed inappropriate by local residents looking for housing options. Some of the highest rates (20 percent) within Harrison County were located on the peninsula, including areas of East Biloxi and the beach front, all areas that had been devastated by Katrina and had higher rates of income diversity, potentially contributing to post-Katrina housing vacancy due to the inability to afford insurance, the inability to afford higher rents, or a greater likelihood of being negatively impacted by the economic and housing crisis.[97]

At one City Council meeting, a city official described the effort that had gone into drawing new development into the area. He emphasized that Biloxi needed not only new development but specifically needed single-family homes. Constructing new homes exclusively in hard-hit East Biloxi was "unrealistic," he argued, because of the higher cost of building elevated homes and the increased costs of insurance. Building in northern parts of Biloxi, in contrast, would allow for "safe housing." This new subdivision in particular had been redesigned, the city official claimed, after public meetings in the area suggested neighbors wanted larger lots and homes to be more spread out on the exterior of the subdivision.

The new design was effectively "a gated community . . . without the gates," as homes sat off the road and smaller lots were included only on the interior of the subdivision, blocking off higher density development. The city official, speaking in support of the new subdivision, emphasized that there was a public need for such development in the wake of Hurricane Katrina. The developer claimed that there was a need for new homes to be built in northern parts of Biloxi specifically, further away from the water, and thus "free from the perils of further hurricanes." In order to build the new subdivision, developers were required to gain Planning Commission and City Council approval for a change in the zoning of the area from RE-R (Residential Estate-Restricted) to the higher density PD-R (Planned Development-Residential) Master Plan.

Biloxi officials described how "considering the post-Katrina insurance and construction costs in east Biloxi, as well as the significant amount of land added to the flood zones, Biloxi's addition of the critical area [in the north] will provide the city with 'much needed vacant, unconstrained land north of its existing city limits.'"[98] Court documents revealed that city officials deemed annexation and movement north "critical to the future of the City of Biloxi."[99] The new subdivision raised questions about the availability of housing, and the perceived need for homes further away from the water. Underscoring both of these was a debate about whether housing patterns that intersperse lower-, middle-, and upper-class housing would be beneficial to individuals, neighborhoods and the city.

One local resident from northern Biloxi, speaking at a City Council meeting, argued that he wanted the zoning change measure tabled to give residents time to "understand the effects" of the new subdivision. Another resident angrily said a City Council vote to approve the zoning changes for the new subdivision would be a "slap in the face" of people who had been trying to rebuild over the proceeding five years. Opposition to the new subdivision was well organized, with petitions circulating in the area and numerous residents coming to speak repeatedly at public meetings. The opposition even organized to wear the same color at meetings so they were easily identifiable and repeatedly used similar slogans like "we are Biloxi." As I attended meetings where the new subdivision was discussed, residents who were part of the opposition were easily identified as such—both by what they wore and what they said. Meeting rooms were always full of people when the topic of the new subdivision was raised; it seemed to have become a focal point for local residents' concerns about where new construction to accommodate people affected by Hurricane Katrina would take place, even over five years after the storm.

Letters of protest arrived with the Planning Commission and the City Council. Many of the letters are direct or nearly direct replicas of one another,

pointing to the organized approach the opposition took. Many letters repeated the same language:

> I oppose the proposed zoning map amendment from RE-R to PD-R. PD-R rezoning puts the character of my neighborhood, my community and the substantial investment in my property at risk. Let me be clear. Your constituents have not requested a change in zoning. To the contrary your constituents through petitions, emails, phone calls and strong public appearances with the Biloxi City Council, citizens have made it clear that we feel strongly about maintaining the RE-R zoning.[100]

The letter writers argued that there had just been a new Land Development Ordinance (LDO) signed into law and asked "in the last few months has this area had such a significant change to justify changing this zoning? No!!"[101] The letters added,

> It is my understanding that before a property may be rezoned, the party seeking to have the property re-zoned must prove by clear and convincing evidence that either: there was a clerical mistake in the original zoning, or that the character of the neighborhood has changed to such an extent as to justify reclassification, and there exists a public need for re-zoning. No such clerical error exists and the character of the neighborhood hasn't changed in decades, never mind the three months since the LDO and Comprehensive Plan were completed and approved.[102]

This argument stems in part from the fact that there must be a clerical error or a change in the community to rezone the area comes from the court case *Gillis v City of McComb*. It was a lawsuit in which Norman B. Gillis, Jr. sued the city of McComb, Mississippi, and Sami Shariff for rezoning a one-acre lot of land owned by Shariff. The plot of land was sold by Gillis to Shariff to build a home. The land is located between two residential apartment complexes owned by Gills. Shariff then petitioned the City of McComb to rezone the land from residential to commercial. The McComb Planning Commission and Board supported the rezoning. After filing suit, the Circuit Court of Pike County upheld the decision. In the Mississippi Court of Appeals ruling, JJ Irving wrote that "it is well-settled law that before a zoning board may reclassify property from one zone to another there must be proof that either (1) there was a mistake in the original zoning, or (2) that the character of the neighborhood has changed to such an extent as to justify reclassification, and there was a public need for rezoning."[103] Letter writers and protesters charged that if developers wanted to build there, they had to meet current zoning restrictions, meaning bigger lots and bigger homes and, thus, more expensive lots and more expensive homes. Letter writers concluded: "I do not oppose growth for

the [. . .] area, however, I insist that it should be smart growth that does not change the character of our neighborhood or put my property value at risk."[104]

But not all residents opposed the new subdivision. One man spoke in favor of the new development, arguing that it would have a positive economic effect on the area, including bringing new jobs and "progress." One woman claimed that "change was inevitable" and while she sympathized with current residents of the area, change like the new subdivision would affect all residents, not just those in northern Biloxi. Supporters of the new subdivision often focused on the need for safer housing away from the water and the economic boon that might be created with new construction. These supporters also spoke of potential increased tax revenue, an important point in a national economic recession and at a time when city coffers were running dry. Deciding whether to prioritize the needs and demands of a population looking to rebuild or the wishes of the population already in place created division among city officials and local residents.

An attorney cited Gillis v City of McComb to argue that requests for a zoning change had to be justified by an error in the original zoning or a change in the character of the area. He insisted there had been no error in the most recent zoning of the area in 2010 and no change in the character of the part of Biloxi where the new subdivision was proposed. He argued that residents wanted to "preserve the true character of our neighborhood" and that they had "invested in good faith" in the lower density zoning that already existed in the area. Several people said that they did not oppose development in the area, simply development that required a zoning change, claiming that they wanted to "preserve the true character of [their] neighborhood." One woman added that she and others were "not opposed to growth in Biloxi, [we] just want smart growth." Residents emphasized that they had bought homes and property in the area specifically because of low density zoning. One man who lived in the north Biloxi area claimed that "I bought that land, six acres, so I could have my freedom."

The Mississippi Supreme Court's ruling in Edwards and Brewer v. Harrison County Board of Supervisors 2008-CA-01271-SCT (hereinafter "Edwards v. Harrison County") supported the decisions of the Circuit Court of Harrison County, First Judicial District, and the Harrison County Board of Supervisors and the Planning Commission to allow rezoning of land to encourage rebuilding further north in coastal counties. Writing for the court, Justice Pierce noted that Bill Hessle, director of operations and property management, had "pointed out that the growth of the county is due north and that Hurricane Katrina has increased the growth in that direction" (2009:4). Pierce cited case law that states that there must be clear evidence of a mistake in the original zoning or a change in the character of the neighborhood. For Pierce, Katrina itself marked a significant change in the character of the area. He argued that

> Hurricane Katrina made landfall on August 29, 2005. The impact of this natural disaster on the State of Mississippi and, more significantly, on the Gulf Coast of Mississippi, is a phenomenon that cannot be ignored in the case before the Court today. Indeed, the whole world, let alone the Harrison County Board of Supervisors, was on notice of the devastation and destruction the citizens and land of the Mississippi Gulf Coast suffered from Hurricane Katrina.[105]

The court decided that not only had Hurricane Katrina significantly changed Harrison County, but that it had "jettisoned the growth of Harrison County from south of Interstate I-10 to north of Interstate I-10."[106] The new subdivision developer claimed Edwards v. Harrison County mandated local officials "rethink current zoning plans" and move away from the water.

When the developers began arguing their case for a new subdivision in north Biloxi, they cited the Edwards decision as evidence of the need to move north. And when they moved for zoning changes, they cited the decision to argue that there had been a significant change in the city as a whole with Hurricane Katrina, including in northern Biloxi by virtue of its place in the city. The developer of the new subdivision argued that Hurricane Katrina, when combined with new FEMA regulations and increasing insurance costs, made the current zoning "incorrect" and supported a zoning change. Residents of northern Biloxi, however, countered that they did not believe there had been a change in their neighborhoods specifically, even if there had been in other areas of the city. The presenting attorney said that there was no evidence to support the rezoning decision, claiming that "to say the whole area has changed because of Katrina isn't specific." Some residents also countered that even if there had been a change in the character of the area there was no need to change the zoning laws or build new subdivisions because homes were available for sale in the area.

Residents and developers who supported the construction of the new subdivision in northern Biloxi focused on the need for affordable single-family homes in Biloxi that were safer from hurricanes by being further inland. Such arguments illustrated people's perceptions of inland Biloxi, despite its proximity to the coast, as being safer and having less risk associated with hurricanes compared to the peninsula and more water-front locations. One city official said that Biloxi needed new single-family homes to replace the nearly 5,000 lost to Hurricane Katrina. While he admitted the city had issued building permits for multifamily residences like apartment complexes, he noted that they had issued less than 800 such permits for single-family homes. By contrast, the presenting attorney claimed there were over 1,700 single-family homes for sale in the Biloxi area and argued that people who wanted to buy homes could simply buy one of those, although he presented no information

about the price of these homes or where they were located. Similarly, one woman later claimed that there were 622 homes on the market in the county as a whole, priced from $150,000 to $200,000.

I did not conduct a formal count of homes available in each neighborhood, given that homes went on and off the market with relative frequency and neighborhood boundaries were debated even by local residents. My own travels around the city and quick perusal of "for sale" signs seemed to show many of the city's properties on the market were repaired or damaged homes or empty lots (figure 4.2) in East Biloxi, a view of the city at least some residents seemed to share and that data, like that obtained by GCCDS, reinforces.[107] This perception is important as well, as it can shape how people see the homes available to them in general, something compounded by Biloxians'

Figure 4.2   Empty Lots for Sale. *Source*: Created by Jennifer Trivedi.

strong ties to specific neighborhoods and some residents' desire to move away from the water for safety.

Some residents who opposed the new subdivision argued against it in the context of the economic recession. One man described how, in his view, foreclosure rates were up in the city and prices were coming down. Because of this, houses were available in the area for what he deemed "good prices." He argued that it made no sense to change the zoning and density of the area when there were homes available to residents who wanted to move into the area. Another man specifically argued against the higher density zoning, noting that "I worked hard to get where I am," living in an area with plenty of space. One woman said there was "no need" for the new subdivision with other homes already on the market. A man stood and emphasized that there was no need for new housing in Biloxi, "affordable or otherwise."

The objections to new housing being built when other homes were ostensibly available varied, but so too did reasons behind wanting to build and buy new homes. Residents pointed specifically to the area where homes would be available, wanting homes away from the water and in areas with lower insurance rates. Others pointed to the cost and size of new homes designed to be small and affordable when compared with larger and potentially more costly homes that were currently available for sale. Some people in Biloxi spoke specifically about moving into different and often new neighborhoods in a deliberate effort to avoid renters who they saw as lowering property values or disrupting pre-Hurricane Katrina life.

Class Status and Identity

One of the problems with the new subdivision was that it required zoning changes to allow for more densely populated neighborhoods in the area of north Biloxi. As the public discussion about the proposed zoning changes began, statements related to class status and the economic status of current and potential new residents began to emerge. Seemingly upper and middle class, largely white residents used language that pointed to their own political and economic power and thus, by its absence, revealed something of the lack of power of more vulnerable residents. Such discussion revealed the conflict between the groups and pointed to such conflicts as pre-dating the storm.

Many of these issues were couched in terms like "less educated" or more directly by classifying them as residents of "low-income housing." Such terminology is not unheard of and, as Mantsios notes, "there are few among the poor who speak of themselves as lower class; instead, they refer to their race, ethnic group, or geographic location," adding "neither are those at the other end of the economic spectrum likely to use the word 'class.'"[108] The reality of Mantsios' description plays out in Biloxi: residents were quick to openly

identify themselves by race, ethnic group, ancestry, occupation, education, or neighborhood identity, but much less likely to directly identify themselves by class status. Residents did, however, talk about the class status of others, particularly the poor. Sometimes this was spoken of directly ("poor people were hit harder by Katrina," one woman told me) and sometimes this was spoken of by referencing other issues, like the need for "low-income housing" (referring to the homes themselves, rather than the people who might occupy them).

Some opponents of the new subdivision claimed it would bring low-income or subsidized housing into their community. The developers and supporters of the proposed subdivision insisted no low-income housing, but only "affordable" housing, would be included in the project. They repeatedly referenced the fact that while lots would be smaller than those currently in the area, necessitating the zoning change, they would not be as small as those lots available in East Biloxi. The smallest of the lots proposed in the new subdivision was larger than the average lot size in poorer neighborhoods in East Biloxi. In one public meeting a woman in the crowd indicated one of these small homes on small lots and asked the planning commission, "Would you want that next to your home?" One city official voiced his support for the subdivision, noting it was better planned and less crowded than homes in many other proposals. Some residents who spoke out against the proposal argued that they simply opposed the zoning change to make it a higher density area. Other objections, though, seemed to be more focused on objections to lower-income housing.

At a public meeting, one woman addressed the developer: "I know you're saying you're not [putting in low-income housing] and I believe you," but went on to question if low-income housing would be part of the new subdivision. Following reassurance from the developer and city officials, another local resident claimed Biloxi "needs low-income housing. Can you guarantee us it won't become low-income housing?" Another woman wondered if the proposal that the subdivision would not include low-income housing was "set in stone," noting that low-income housing was built in other areas of Biloxi on smaller lots like those proposed for the interior of the new subdivision. Despite repeated assurances that the new development would not include low-income or subsidized housing, arguments against it continued to be made on those terms, indicating the perception among some who opposed the subdivision that such a shift was inevitable or that it was their biggest concern.

Even residents who spoke in favor of the new subdivision did so with the caveat that low-income housing should not be allowed. One woman supported the new subdivision, but made it clear it should not include Section 8 or low-income housing. She said that instead, the approval of this new subdivision was "an opportunity to do the right thing." This focus on low-income

housing may have arisen from post-Hurricane Katrina efforts by the Housing Authority and others to place low-income housing with single-family and other homes in mixed income communities. But this repeated focus on low-income housing and specifically the fact that residents did not want it in their area raises several questions, including where lower-income residents were supposed to live and if they would be relegated to high-risk areas nearer to the water. Despite these discussions of not wanting low-income or more affordable smaller homes nearby, few residents directly pointed to their own class status or income. They did not explicitly note the monetary value of their own homes. And they rarely discussed the value of comparative value of homes with discussions focused clearly on property values, although this may have been a concern for some residents who already had homes in the area.

Although the planning commission approved the new subdivision, along with the necessary rezoning, the City Council was more split. In a November 2010 vote about the issue, the motion to support the planning commission's decision failed due to a lack of majority, with a 3–3 tie among the council. The developers continued to push for the zoning changes and permits needed for their construction, offering a series of altered plans. The planning commission continued to show support for the new development. Eventually, the City Council approved a plan for the new development, contingent upon certain modifications to the development proposal.

This vote was met with vocal resistance from residents who opposed the new subdivision with boos and shouts of "y'all must be in his pocket" and "shameful."

Conflicting Desires for Home

As people moved through the recovery process, their desires to return home revealed conflicting perceptions, opportunities, and actions. After Hurricane Katrina, residents moved into new homes or areas for a range of reasons. Some moved simply because they found a home elsewhere that they liked. Others moved because they did not want to rebuild their own home. Residents were also sometimes forced to move, including into rental homes or apartments or MEMA cottages, because they could not afford to rebuild. But for many residents, rebuilding in East Biloxi and other harder hit areas meant facing the prospect of future storms and their ability to destroy homes once again. When I spoke with residents who made the decision specifically to move further away from the water, they noted that their decision was based on fears of another storm and the damage it would cause.

While some residents looked to move to northern Biloxi for safety in the memory of Hurricane Katrina, people who lived in northern Biloxi themselves sometimes argued that Hurricane Katrina and its effects were no longer

an issue. These comments echoed earlier protests against the introduction and increased permanence of MEMA cottages in many neighborhoods along the coast. They became a component of some northern Biloxians' resistance to new development in their area. Residents argued that others should have recovered from Katrina sooner and certainly should have completely recovered and rebuilt by a specific time (first two years after the storm, then five).

One woman argued that Katrina "happened five years ago" and rezoning in September 2010 had gone on "regardless of Katrina." She added, asking, "Isn't it time to stop using Katrina as an excuse?" Another resident said, "We're getting along fine." A resident of the area proposed for the new subdivision argued against this idea. He described how "everyone sees what's not happening on the Point and the beach." He said with fewer houses and higher insurance rates, more and more people were looking to move north in the city. One man added that the area had been annexed by Biloxi specifically for future growth. He acknowledged that he knew people in the area did not all want change, but that it was needed for the city as a whole. The developer of the new subdivision claimed that Hurricane Katrina had changed the face of the entire Mississippi Gulf Coast.

Approaching the sixth anniversary of Hurricane Katrina in 201, many areas of Biloxi appeared to have not yet recovered from the storm and remained underdeveloped. As long-term recovery progressed, insider status became more complicated as fractures between people based on identity within the city emerged. These fractures were visible particularly as residents transitioned between temporary, semi-permanent and permanent housing options. Some residents resisted new home construction if they thought they would be infringed upon by others. City officials debated new home construction and the semi-permanent or permanent nature of housing options like travel trailers and MEMA cottages. In addition, residents and officials alike questioned the timeframe of the shift to permanent housing—sometimes calling out residents still working to recover if they felt these recovering residents were not moving quickly enough for the benefit of the city as a whole.

NOTES

1. City of Biloxi, *Katrina + 5.1*, 13.
2. See also Richardson et al., "From 'No Man's Land' to a 'Stronger Community'"; Jencson, "Disastrous Rites"; Turner, *Communitas: The Anthropology of Collective Joy.*
3. Oliver-Smith, "The Brotherhood of Pain," 234–35; Hoffman, "The Worst of Times, The Best of Times," 144.
4. Oliver-Smith, "Postscript," 239–40.
5. Hoffman, "The Worst of Times, The Best of Times"; Hoffman, "Postscript."

6. See also McKinzie, "A Tale of Two Cities."

7. Tierney and Oliver-Smtih, "Social Dimensions of Disaster Recovery," 135; Oliver-Smith, "The Brotherhood of Pain"; McKinzie, "A Tale of Two Cities."

8. McCarthy and Hanson, *Post-Katrina Recovery of the Housing Market Along the Mississippi Gulf Coast*, xii.

9. Ibid., xiii; Gulf Coast Community Design Studio, *Mississippi Gulf Coast Regional Housing Assessment*, 3.

10. McCarthy and Hanson, *Post-Katrina Recovery of the Housing Market Along the Mississippi Gulf Coast*, 38.

11. Gulf Coast Community Design Studio, *Mississippi Gulf Coast Regional Housing Assessment*, 12.

12. Appel, "In Poverty-Stricken Mississippi."

13. Smith and Ellis, "Rebuilding Biloxi."

14. Stelzer, "Biloxi, Miss. Suspiciously Evicts Katrina Relief Center."

15. Trivedi, "Empty Lots," 288.

16. Smith and Ellis, "Rebuilding Biloxi."

17. Trivedi, "Empty Lots," 287–88.

18. Federation of American Scientists, *A Response to Katrina*, 1.

19. Buron et al., *Assessing Quality of Life*, ii.

20. Stark, "The House That Katrina Built."

21. Handley, "Starting Over."

22. Buron et al., *Assessing Quality of Life*, i; Abt Associates Inc. and Amy Jones & Associates, *Developing*, 1.

23. Buron et al., *Assessing Quality of Life*, v.

24. Abt Associates Inc. and Amy Jones & Associates, *Developing*, 13.

25. Cornish, "'Katrina Cottages'"; Abt Associates Inc. and Amy Jones & Associates, *Developing*, 3.

26. Thomas, "MEMA Cottage Auction."

27. Ibid.

28. Policy Development & Research, *Gulfport-Biloxi*, 5.

29. Ibid., 5, 12.

30. Ibid., 5.

31. Stuckey, "Katrina Dried Up Rental Market."

32. Architecture for Humanity, *Biloxi Model Home Program*, 22.

33. Trivedi, "Empty Lots," 289.

34. Ibid., 290.

35. Smith, "Reinventing Biloxi."

36. Gamber, "NAACP Helps," 56.

37. NAACP, "The Mississippi State Conference."

38. City of Biloxi, "Public Housing."

39. Biloxi Housing Authority, "Housing Authority History."

40. Ibid.

41. City of Biloxi, "Public Housing."

42. Robinson, "Housing Authority," 10.

43. Lowe, "Policy versus Politics," 57.

44. Ibid.; NAACP, "Mississippi State Conference NAACP Files Suit."

45. Lowe, "Policy versus Politics," 58.

46. Ibid.; Lohr and Peñaloza, "'Left Out.'"

47. Lohr and Peñaloza, "'Left Out.'"

48. NAACP, "Mississippi State Conference NAACP Files Suit."

49. Ibid.

50. Associated Press, "Judge Dismisses"; Lohr and Peñaloza, "'Left Out.'"

51. Lohr and Peñaloza, "'Left Out.'"

52. Lynch, "Katrina Victims."

53. Holloway, "Rebuilding Efforts," 1.

54. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 81–83.

55. Ibid., 84.

56. Lewis, "Battle For Biloxi."

57. Chriszt, "Hurricanes Spawn."

58. Barksdale, *After Katrina*, 50.

59. Lowe and Shaw, "After Katrina," 823.

60. Smith and Ellis, "Rebuilding Biloxi."

61. Ibid.

62. Ibid.

63. Chriszt, "Hurricanes Spawn."

64. City of Biloxi, *Katrina & Biloxi*, 3.

65. City of Biloxi, *FEMA's New Flood Elevation Maps*.

66. Trivedi, "Empty Lots," 291.

67. Chriszt, "Katrina Update."

68. Trivedi, "Empty Lots."

69. City of Biloxi, *City of Biloxi Comprehensive Plan.*

70. Architecture for Humanity, *Biloxi Model Home Program*, 20.

71. Ibid.

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73. Architecture for Humanity, *Biloxi Model Home Program*, 12.

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Chapter 5

Recovering over the Long Haul

Recovery efforts from Hurricane Katrina began, of course, immediately after the storm but have remained ongoing for years since. The issues faced in long-term recovery are tied to issues that long pre-date Hurricane Katrina, like historic cultural, political, and economic conflicts, and inequalities and historic disasters. The early stages of recovery are intertwined with the ways in which different people and groups found themselves facing a range of complications in the storm. Each Biloxian had a different experience with Katrina. But certain shared themes do emerge in their various accounts of storm preparation, in their experiences during the storm, and in their earliest relief and recovery efforts. People I spoke with on the coast have clear memories of first hearing about the storm and of the factors that influenced their decisions to stay or leave. Many even remember their frustration with the timing of the storm as an interference to their work, a fact they look back on five years later and laugh about, in their eyes, the absurdity of thinking Katrina would result in one or two days of disruption at work. They remember the moments during the storm—the roaring winds, pouring rain, and rising waters. People remember the first moments after the storm and their efforts to get help. They remember who helped them, even if they do not know the name of the individual or the group they were associated with. They remember what they forgot, what mementos of family life and history that they can never replace. And recovery certainly did not run smoothly for everyone. Abigail recounted how one of her neighbors committed suicide in his vehicle in front of his house soon after the storm.

Coastal residents' experiences just before, during, and just after the storm influenced their decisions and behavior during long-term recovery. In some ways, this influence emerged from practical reasons. People who had lost

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their homes or their cars had to deal with the SBA and banks to get loans to rebuild, they had to find or build new homes, and they had to deal with insurance companies, when they had insurance, to fund repairs or replacements. But in other ways, this influence is less practical and more emotional. People who lost everything had to cope with those losses and did so in different ways. Repeatedly people spoke to me about laughing through the recovery process, claiming laughter was the only coping mechanism they had to deal with the loss and destruction. Others cite their newfound fear of the water as the factor that drove their decision to move to another location or to ensure that they had flood insurance, regardless of where they lived after the storm.

By looking at personal experiences before, during, and after the storm, it is possible to take the first step toward understanding future behavior during disasters, in the long-term recovery, and in preparations for future potential disasters. Moreover, it makes clear the importance of personal and local knowledge and how these forms of knowledge are prioritized over official warnings. While overall numbers, such as how many homes were lost, what insurance rates were, and how high the storm surge was, are important, so too is seeing the stories behind those numbers. Ethnographies of how people experience and remember disasters are a crucial component to learning about the long-term disaster recovery process.

The thoughts and actions of many more vulnerable residents during this transitional phase demonstrate their lack of power, resources, and knowledge, their conflicts with those with more political and economic power, and their heightened vulnerability to disaster. At the same time, their efforts to gain access to power, resources, and knowledge and to reduce vulnerability, risk, and uncertainty clearly reveal their agency. Residents openly discussed these issues in interviews and discussions that occurred during my participant observations. They were not simply victims of a disaster that accepted their vulnerability. Instead, many made efforts to organize and reclaim power, often with the support of outside agencies. Local groups such as Coastal Women for Change (CWC) and Hope CDA (formerly the East Biloxi Relief and Coordination Agency and the East Biloxi Coordination, Relief, and Redevelopment Agency) defined the changing character of the overall relief and recovery effort. These groups were formed to address problems that arose with recovery, specifically where Biloxians perceived gaps in aid efforts.

During this period many residents tried to find semi-permanent homes to replace their temporary housing as rebuilding plans and opportunities continued to take shape. Problems with housing that existed before the storm were exacerbated by Katrina's destruction. Residents of East Biloxi cited the need for affordable housing and job opportunities as two of the biggest problems both before and after the storm.[1] Distinctions between renters and homeowners were important, especially in terms of availability of aid.

Biloxians emphasized that rebuilding the city entailed not just reconstructing homes, but also reopening businesses, getting students back to school, and re-establishing neighborhood parks and churches. Andrew, for example, said that from his view there were several important components to recovery, including good schools, the economy (which includes reopening local stores and businesses), churches ("whatever their God may be"), and housing. Biloxians often talked about "their community" and a "sense of community." Most residents used these terms interchangeably with the term "city." They sometimes, however, used the term "community" to refer to sections of the city, especially their own neighborhoods.

VULNERABILITY AND EAST BILOXI

According to the Governor's Commission on Recovery, Rebuilding & Renewal, about two-thirds of the housing units in Mississippi's three coastal counties "were occupied by households with income below the U.S. median level (approximately $42,000 as of the year 2000)."[2] In Harrison County, where Biloxi is located, 14 percent of households lived below 150 percent of the federal poverty level.[3] By contrast, on the floodplain on the Biloxi peninsula, in East Biloxi, 22 percent of households were below 150 percent of the federal poverty level.[4] Many of these residents were in lower income neighborhoods like East Biloxi. As city councilman Bill Stallworth noted, "East Biloxi is the poorest section of Biloxi and was completely decimated by the storm."[5] Ninety percent of the housing available in East Biloxi before the storm was severely damaged or destroyed.[6]

Delurey et al. describe how, within a two square mile area of East Biloxi specifically, 40 percent of residents had incomes under $15,000 before Katrina. Most residents in the area live on less than $26,000.[7] Of the roughly 12,000 residents in this area of town, half were white, about 30 percent were African American, and many of the rest were Vietnamese.[8] Sharon Hanshaw, of the CWC, described the area: "This is a left-behind community." She added, "We need affordable housing—not projects, but homes that people can pay for on a living wage in Mississippi. [. . .] But the message right now is, 'if you're not rich, get back.'"[9]

Poorer areas like East Biloxi were also those most likely to be hit hard by hurricanes because they are often low-lying areas near water. Sampling 6,404 housing units on the Biloxi peninsula, 94 percent of households were found to be below the U.S. median income level. Eighty percent of those homes suffered "extensive to catastrophic damage."[10] This stood in contrast with the overall rate for Harrison County at 68 percent and the overall rate for Biloxi of destroyed structures at about 20 percent (5,014 of 25,575 structures).[11]

Residents' locations thus put them at greater risk to storm damage and their income levels made recovery more difficult, in part because of a lack of funds and in part because it reduced the likelihood that they would be able to minimize risk with efforts like obtaining insurance.

Not only were these particularly vulnerable populations likely to be more severely affected by Katrina, they were also less likely to be able to easily recover from the storm. This follows patterns established for other populations by anthropological and other disaster research.[12] In an area where residents struggled to meet basic needs before Katrina, let alone pay for homeowners or flood insurance, the increase in rates after the storm made insurance unattainable for many. These high insurance rates, combined with the high cost of rebuilding, resulted in relatively little reconstruction in neighborhoods like East Biloxi, particularly in the first year after Katrina.[13] Furthermore, for immigrant populations or residents who do not speak English as their first language, obtaining aid, including completing complex legal paperwork, may be more complicated.

In 2006, the Biloxi Relief, Recovery and Revitalization Center arranged for Warnke Community Consulting to conduct a survey of East Biloxi. Of the 511 residents surveyed, most placed their income at less than $34,999, both before and after Katrina. Sixty-three percent said they had owned their home prior to Katrina, while 32 percent said they rented.[14] Based on the survey responses, even before Katrina made landfall the area's residents were concerned about needing "more employment opportunities" and "more affordable housing." When asked about what they wanted to see in recovery, "respondents were asked to choose the three things they most want to see rebuilt, restored, or improved in East Biloxi." Residents responded with "affordable housing," "sense of community," and "employment opportunities," indicating that the biggest problems that had existed before Katrina remained problems after the storm.[15]

These hard-hit neighborhoods included homeowners who had inherited their homes from parents and renters who rented small homes or apartments. The homeowners who had inherited their homes often could not afford insurance and, after the storm, could not afford to rebuild homes. These homeowners often found themselves renters after the storm. And renters who lost their homes had little to no control over whether or not their home was rebuilt, leaving them struggling to find a new place to live.

Prior to Katrina, much of the local economy was centered on casinos and the tourism industry, along with the seafood industry and Keesler Air Force Base.[16] However, despite the economic importance of casinos, their return to Biloxi after Katrina was not without controversy. The perceived prioritization of rebuilding of casinos ahead of homes and moving casinos onto land where homes had previously been located raised questions about how recovery should work.

CREATING LOCAL GROUPS

In the aftermath of Katrina, several new local groups emerged to address perceived needs and gaps in aid and recovery efforts. The fact that these groups did not exist before Katrina but emerged soon after reveals something about the realities of pre-Katrina structures not being fully prepared to cope with the effects of the storm, despite local people's feelings of being used to hurricanes. In addition, the emergence of these groups out of populations that had lived in the area before, during, and after Katrina reveals something of local perceptions of the need to help themselves and each other rather than relying on, in their view sometimes inadequate, outside resources. Moreover, their emergence in the immediate aftermath of the hurricane reveals something of Turner's *communitas*. For those that stayed together long through the recovery process, it also reveals something of a resistance to the subsequent later recovery fracturing of *communitas* or the rooting of these groups in specific pre-, peri-, and post-Katrina unified groups. This idea of new organizations being rooted in pre-Katrina identities and groups reveals a piece of the social networks within those groups and the trust that exists between those people. The reliance on pre-Katrina existing organizations also rooted in group identity and community (like the local NAACP chapter) further confirms this idea. While local, these groups often developed with the help of outside agencies. Although efforts by these groups to find solutions to local problems began in this transitional phase, they continued into the long-term recovery process. These efforts addressed not only disaster recovery but also issues of resilience and risk that could potentially transform the effects of future disasters on residents.

While these groups often began with local individuals, they were also supported by outside organizations, particularly Oxfam. Oxfam's efforts in post-Katrina Mississippi were part of its first efforts in the United States.[17] Their work in Biloxi supported local organizations, combining local knowledge and personnel with outside resources. According to Oxfam, "Local voices have the power to bring about important change." The organization distributed $1 million in grants to twenty-five different local partner organizations.[18]

CWC

In the aftermath of Katrina, a group of women began meeting together to discuss issues they and their families were facing in the recovery process. The group first met casually at a funeral home and later at a church. As they discussed the problems facing residents in the city, the women began to organize into a formal group, CWC, with the support of Oxfam. Oxfam's literature describes how "the women shared the same concerns about their community: The government was pouring millions in renovation funds into

Biloxi's big shoreline casinos, but low-income residents had few options for affordable, permanent housing."[19] Pearl, who was affiliated with the group, questioned "why the people can't have a plan" independent of plans she and others saw as focused on casinos. Such questions are also reinforced by the literature on disaster research, echoing the priorities and decisions make in disaster recovery. As Cutter et al. argue, "Recovery is about the social choices that communities make, and these choices manifest themselves in the landscape."[20]

Before Katrina the members of CWC had themselves been residents of the city with strong ties into various communities and groups. Pearl, for example, admitted that she had not been an organizer before Katrina, but she had been a community member with strong ties to people in her neighborhood. This cultural connection is what made groups like CWC so important and impactful: it was neither a top-down response nor an outsider in response, but it was the response of regular people who wanted to help the people they felt connected to both before and after the storm. These people saw not only post-Katrina Biloxi and the clear needs like infrastructure repairs and housing. They saw pre-Katrina Biloxi and echoes of those pre-disaster problems reflected in relief and recovery efforts around issues like who did or did not have a voice, power, and resources. They sought to address post-Katrina recovery specifically because it was rooted in these pre-Katrina issues.

The CWC began by encouraging participation in the city's recovery process. A key component of this encouragement and the CWC's mission in general was spreading knowledge. As Pearl insisted, "It's okay to share knowledge." CWC worked to spread information about local events. Members were told about meetings going on across the city and urged to attend and participate, lending their voice to the discussion of recovery plans. Pearl talked about how the CWC hosted a public panel at a local funeral home, inviting the mayor and City Council to "promise in front of people" that they would include the public in recovery planning and work to address people's needs. By connecting residents with official recovery planning, CWC encouraged personal participation in that planning process, offering the opportunity for residents who might otherwise not be involved to voice their opinion about what steps were being taken to begin long-term recovery. Many residents' engagement with the meetings themselves became a means to promote resilience, fight vulnerability, and reduce uncertainty. By organizing in groups like the CWC, Biloxians who were more vulnerable and less powerful had a better chance of being represented in political and economic discussions, even if they personally could not attend the meetings.

In addition to efforts to get members to participate in public meetings, the CWC identified and responded to specific needs in the community based on information they got from residents. These efforts were largely targeted at

helping the most vulnerable residents (i.e., members of lower and working classes, the elderly, and single parents or parents who both worked). When they surveyed members of the community, the CWC found that people needed to get back to work after the storm but lacked childcare options. Pearl said they began to train people to watch children in their homes, filling the need for childcare, particularly in poorer neighborhoods like East Biloxi. They raised funds to subsidize the income of women who provided childcare. They emphasized the importance of educating the children being watched. Preparation for future storms also became part of the CWC's work in the city.

Working with Oxfam, the CWC began reaching out to other people affected by disasters around the world, including women in India who had been affected by the 2004 tsunami. Pearl said they joined a discussion about climate change and its effects on disasters, including how different communities like their own could be vulnerable to disasters. According to Oxfam, "the CWC decided to focus on disaster preparation by partnering with a local transit company to arrange for buses to bring people to storm shelters."[21] CWC also began to work on disaster preparedness issues in their own community. They put together hurricane preparedness kits and distribute them to people in need through local churches.[22] These efforts shifted CWC's focus from strictly recovery from Katrina to preparation for and attempts to build community resilience to future disasters by minimizing risks and improving access to resources.

In 2014 CWC achieved official nonprofit status. Executive director Sharon Hanshaw described what that change meant for the organization: "When a person says, 'Sharon I'm about to be put out my house, and I don't have any money to pay my utilities.' We can reach into the budget and help them. Before, we were not able to do that."[23] The groups' focus has been transformed and is now firmly focused on "women's empowerment and community development through programs for the elderly and children."[24] Their Facebook page reveals the importance they place on empowering and helping their community as ads for education town halls appear next to those for voter rights workshops and flyers for events related to Black Women's Equal Pay Day.[25]

Steps Coalition

CWC demonstrates how Biloxians worked to fill perceived needs in the community. These efforts are largely a departure from ongoing political processes, efforts to fill the gaps left behind when governmental disaster aid did not meet all of the needs of the most vulnerable, poorest, and least powerful. The two organizations sought to address local needs by working with residents in their community. While these groups were supported by outside organizations, they offered a connection between outside aid and resources

and local needs and knowledge. These groups also offered much needed aid, particularly in hard-hit areas like East Biloxi with lower-income residents that were especially vulnerable to disasters.

A number of such groups work as part of Steps, a coalition dedicated to five key issues: economic justice, environmental justice, affordable housing, preservation of historical communities, and human rights.[26] Andrew described Steps as "grassroots leadership" that allowed the community to speak for itself. He argued that organizations like Steps were important to help people speak up and be heard. He pointed to the organization's ability to pool information and resources, including sending people to the state capitol in Jackson, Mississippi, to speak for the area to state government officials.

Lowe declared Steps the "best organization" for the work to "increase awareness of community concerns, rally support, and build capacity and influence to affect change."[27] Part of what seems to have made Steps work is the combination of external funding and internal connections—funding from Oxfam America and the Twenty-First Century Foundation, membership from local nonprofits and community members.[28] The Steps Coalition emerged after Hurricane Katrina from a collection of existing nonprofit organizations and other community members. Like CWC, Steps was the product of pre-Katrina Biloxi as much as it was the product of initial Katrina relief and recovery efforts. The shared desire of the organizations and people was to "build capacity and leadership and provide a voice for the community," efforts rooted not only in the needs they saw in Katrina recovery, but strong ties to pre-Katrina issues, problems, and people.[29] Forty-one different organizations work as part of Steps, initially built as an alliance of housing advocates.[30] More broadly their work is engaged in questions of affordable housing, economic justice, environmental justice, human rights, and the preservation of historical communities.[31] Steps has also worked to reach out to local residents, including launching a series of community meetings "to educate residents about an important issue facing the community and ways they can be meaningfully engaged in the decision making process," including informational meetings tied to and organized push back against the governor's diversion of $600 million to the Port of Gulfport and way from local housing.[32]

Hope CDA

Hope CDA (formerly the East Biloxi Relief and Coordination Agency and the East Biloxi Coordination, Relief, and Redevelopment Agency) was started by East Biloxi resident and City Council member for Ward 2, Bill Stallworth. Hope was founded just days after Katrina made landfall. The agency described its founding as being "in response to dire and immediate need to coordinate and support relief and recovery efforts in the devastated

community of East Biloxi."[33] Hope, like Steps and CWC, was rooted in the perceptions of needs, power, and resources that existed both before and after Katrina for local residents. Stallworth, others with the organization, and local churches who supported Hope in the initial relief period were themselves part of pre-Katrina Biloxi, aware of its people, needs, and problems. Hope's initial efforts were also supported by Oxfam and the NAACP, reinforcing the need for local work to be supported by outside resources (Oxfam, NAACP) and the connection of pre-Katrina non-disaster groups on the ground in Biloxi before and after the storm (the local chapters of the NAACP).

At first Hope worked to distribute food and water from their main office. They then began helping residents complete aid application paperwork for grants and loans. Increasingly, Hope focused on rebuilding goals and plans, particularly in East Biloxi and by working with vulnerable populations who lived there. As part of these efforts, they helped coordinate volunteers coming into the area and looking to help.[34] The center offered a place for residents to not only share ideas about the future of the community but to access donated aid, meet with other relief and recovery organizations that had come into the area, and to access and take part in planning efforts.

The group's newsletter provided information about how to prepare for future hurricanes and about the recovery process. Information was released about Biloxi Housing Authority.[35] The newsletter gave information about other community organizations and how they could be reached. It gave advice designed to protect people in the recovery process, such as a column on "protecting your assets: predatory lending practices."[36]

As Hope shifted from short-term relief efforts to long-term recovery, the group's main initiative became assisting residents with "obtaining sustainable permanent housing."[37] This focus on sustainable permanent housing was part of Hope's efforts to promote resilience. They also offered a wide array of programs designed to support these efforts, including job skills training, assistance for small businesses, and community outreach, "which creates a flow of information to the diverse residents of low-income communities concerning resources, programs, and training."[38] But there were problems.

In 2014, Secretary of State Delbert Hosemann began looking into the program, suspecting them of "flipping" houses—buying and reselling for a profit—as well as misuse of funds tied to meals and travel.[39] Stallworth countered the accusations with the idea that "community development is a lot more than just putting a house in place. [. . .] It's helping the people in those houses get to be stronger, get to be more independent and be able to sustain themselves," adding that "there's no question about this hurting the mission of Hope CDA. Anytime there is a quote, unquote cloud, people pull back, funding sources are shrinking and the fact that we have to spend so much staff time responding to this."

GETTING BACK TO WORK—A PRECURSOR
TO REBUILDING HOMES

Getting people back to work was seen as a critical component to moving the rest of the recovery process. Without a solid return of businesses of varying types and sizes, local residents told me, they would not be able to get back to work, earn income, and rebuild their homes. A large component of this needed return was seen, at least initially, as being tied to the casino and tourism economy. Before Katrina made landfall, twenty-two percent of the jobs in the three coastal counties (Hancock, Harrison—where Biloxi is located, and Jackson) were tied to the leisure/hospitality sector and in Harrison County specifically, jobs tied to tourism made up 28.7 percent of local jobs.[40] People's livelihoods relied on the casinos and related aspects of the tourism industry and so did their potential recovery. However, the steps taken to ensure the casinos stayed and reopened are not without their consequences, introducing questions about their right to rebuild in areas residents struggle to rebuild homes in and the realities of their future safety versus people's perceptions of that safety.

Moving Casinos onto Land

Prior to Katrina, casinos had only been allowed to build on barges. These barges were not out in open water, but rather well anchored just on the beach. While gambling had to take place on the water, hotels and other auxiliary properties associated with the casinos could be built on land. The casino portion was, technically, on water, but walking through one left visitors with the sense of a continuous space they had entered into from land. The result was a series of waterfront casino complexes across the coast. Eva said that the casinos were put on water as a concession to religious objections to gaming, a sentiment echoed by other residents. But despite the casinos' location on the water, they were a powerful engine of the local economy. In Harrison County, thirty-seven percent of private industry workers were employed in the leisure and hospitality industry in some capacity, including as casino employees.[41]

All of the Gulf Coast's twelve operating casinos, along with one scheduled to open soon after Katrina's landfall, were severely damaged or destroyed by the storm. Other parts of the hospitality industry, like hotels and local restaurants, were similarly devastated. In the aftermath of Katrina, concerns about whether or not the area's casinos would return emerged. Even before Katrina in the local newspaper, the *Sun Herald*, the argument was made that "moving Coast casinos onto land, out of the direct path of hurricanes, is no different than the city of Biloxi working to ensure that tall buildings don't encroach on Keesler Air Force Base's flight path."[42] After Katrina, "many of the casino operators had expressed concerns about rebuilding the floating

barges that would be easy targets for another hurricane."[43] Every day the casinos were closed, the state lost a half a million dollars in revenue. According to Petterson et al., "It must be acknowledged that long before Katrina made landfall, Mississippi's Gulf Coast had already become irreversibly dependent on the gambling industry."[44] Reopening the casinos and ensuring they stayed in the city was, for many people, essential to the ability of the city as a whole to recover. This perception was tied to the reality of the large presence of the casino industry in the local economy, but it was also tied to the perception that the casinos coming into the area in the 1990s had been what really allowed for recovery from Hurricane Camille to be complete.

State lawmakers, in response to the hurricane, changed the state's laws to allow casinos to be built on land, provided they remained within 800 feet of the water, an effort supported by Biloxi officials.[45] These legal changes were passed to encourage casinos to come back into the area along with the jobs and tax income they brought to the city and the state and to make casinos safer during future hurricanes. After the law was changed, all ten casinos in Biloxi assured the city they would rebuild.[46] Beau Rivage spokesman Bruce Nourse described Biloxi's future with casinos: "It will come back bigger and better than probably any of us can imagine at this point in time. We're talking three-to-five years down the road. We feel it's a pretty safe bet to invest in Biloxi, Mississippi. Given our history, it's pro-business. Three-to-five years down the road, we'll be rocking and rolling."[47]

Casinos offered many employment opportunities in the area. The Economics and Statistics Administration (ESA) noted in their report on the coast's recovery: "The gaming industry is important to the economic vitality of the Mississippi Coast."[48] Reopening casinos put people back to work in the initial years after the hurricane, allowing them to earn incomes that let them rebuild and purchase new homes. By the end of 2005, some casinos were putting people back to work, including three that had already reopened. Ten pre-Katrina coastal casinos (such as Treasure Bay, figure 5.1) across the Gulf Coast were expected to open by October 2006 which Larry Gregory, the gaming commission's executive director, expected to bring back 13,000 jobs.[49] In their volume on Katrina and Biloxi, the city of Biloxi cited these re-openings as a key point of recovery, on par with the reopening of U.S. Highway 90 and the removal of three-quarters of the debris caused by the storm.[50] At the end of 2005, these three casinos were producing between 58 percent and 70 percent of the gaming revenue of the previous year.[51] By the first anniversary of Katrina, seven of the thirteen coastal casinos had reopened and employed 11,118 people.[52] Three years after the storm, in the midst of the economic recession nationwide, there is a slight downturn in these numbers, but eight casinos still employed 10,653 people.[53] However, five years after Katrina, but also four months after the BP Deepwater Horizon oil spill, eight casinos were employing fewer people, just 8,984.[54]

Understanding the impact of casino employment on the Gulf Coast is important but can also be difficult. Casino employment was not without some problems. While some casinos kept employees on their payrolls through December 2005, despite being closed, the businesses let many of these people go that month, resulting in the loss of over 8,000 jobs in the Gulfport-Biloxi area.[55] Patterns of casino employment over time and in the context of other events points to how casinos and their employment numbers may be tied to larger processes like the economic recession and declining tourism with an event like the BP Oil Spill, but it also points to the fact that casino jobs are not guaranteed, even if the casinos are brought back after a disaster. The casinos can also drive general tourism to the area that can bolster smaller businesses in the hospitality industry. However, casino restaurants and hotels may also be competition for those local businesses. In addition, with many small communities scattered along the Gulf Coast, residents may live in one and work in another, so what happens in one city cannot be fully isolated from its neighbors.

Despite these problems, in the immediate aftermath the casinos were perceived as a critical component to the city's recovery, rooted in the ties between the legalization of casino gambling and recovery from Hurricane Camille. The casinos were perceived not just as potentially helpful in recovery but essential to it, necessary for local residents to have the income to rebuild.

Figure 5.1   Treasure Bay Casino Reopens. *Source*: Created by created by Jennifer Trivedi.

The Seafood Industry

The seafood industry has long been a pillar of the economy in Biloxi. As the Report of the Economic Development Committee noted in *Coming Back: An Executive Summary of the Reviving the Renaissance Steering Committee* described, "Prior to Katrina the seafood industry was struggling to get by, facing high fuel prices, low prices on the sale of shrimp and seafood processors were selling their property to developers, thus creating a shortage of dock space, less places to unload their catch and fewer fuel and ice docks."[56]

Coping with these preexisting issues, many fishermen were particularly vulnerable and faced problems with disaster preparedness and recovery. Katrina caused damage to processing plants and harbors and devastated the local populations of shrimp and oysters. When I attended the Blessing of the Fleet in the summer of 2006, almost a year after the storm, residents pointed out how few ships there were going out to catch seafood compared to previous years. Despite this, the Blessing went on and has continued in years since. Seafood industry workers and processing plants faced significant difficulties as they tried to come back.

Many shrimpers and fishers who owned and operated their own boats had seen those boats damaged or destroyed by the storm. Some whose boats had survived left Biloxi for harbors in nearby towns that had not suffered as much damage. Lack of insurance payouts drove seafood processors to sell their

Figure 5.2   Shrimp Boats. *Source*: Created by Jennifer Trivedi.

land to developers rather than try to rebuild. Higher land prices, driven in part by casino development and speculation, encouraged such sales. As Petterson et al. note, "There are intrinsic trade-offs between the shrimping industry and the waterfront development that Biloxi will have to make" (see figure 5.2).[57]

Government Agencies

In the first part of the twenty-first century, Keesler Air Force base contributed to the local economy by providing local jobs and money spent in the local economy.[58] The base was hit hard by Katrina. The base suffered extensive damage, and many military families were displaced by the storm. Housing was so severely affected that the Economic Development Committee called for specific efforts to supplement on-base housing with housing in the community.[59]

Other government agencies looked at the destruction suffered in Katrina and sought to learn something from it. Eva said there were workshops for library employees and planners in the months after the storm. However, she noted that she thought it was something like "locking the door after the horse was stolen." She said there were people (disaster planners) coming from areas like Texas and Delaware and trying to tell them what to do. She countered with the idea that "no one plans for total disaster," describing how the community was unprepared to suffer such devastating losses.

Other Businesses

As the Economic Development Committee in Biloxi noted, "More of the city's residents work for a small business than a large one, and those small businesses often provide critical support to the larger firms."[60] Many of these small businesses were damaged or destroyed in Katrina—as many as 5 percent of all such small businesses in Harrison County were lost.[61] Some of these small businesses also struggled to reopen in the year after the storm. Wesley described how the owners of one small local business "slept on the floor in the shells of their home and business, slowly cleaning, repairing, and eventually reopening the business before beginning work on their own home."[62] Some small businesses deliberately decided to take their time reopening, pointing to the extensive infrastructure problems that would prevent their customers from reaching them even if they were open.[63] And it is important to note that these small businesses, regardless of which industry they are in, are important to the local economy. Biloxians I spoke with revealed the importance to them of seeing local businesses return for several reasons including economic (providing jobs and tax dollars), personal (enjoying their products), and cultural (their value to communities as an important

and historical space). While none of the residents I spoke with tied their recovery decisions to the existence of local businesses, they perceived those businesses as essential to the recovery of the city financially and culturally.

Larger businesses were also hit hard by Katrina. Not only did this lead to physical damage that had to be repaired, but it also greatly impacted employment opportunities in both the short and the long term. But large businesses also worked to return to the area. Mallory remembered the mall and businesses in it trying to reopen. She noted that Sears was the first store she could recall that came back. She noted that she thought they reopened to help people, to fill a community need, and not strictly for profit. Mallory said that, at first, they were only really selling basics, items that seem geared toward meeting these needs.

BUT THE DEBATES CONTINUE

The return of businesses to the area created different conflicts, including leaving many residents personally torn, wanting economic growth and jobs that were created by city goals like bringing back and keeping casinos in the area and the return of old and opening of new businesses including casinos and other businesses, but also a prioritization of rebuilding homes ahead of reopening casinos in particular. Residents who described this conflict to me focused extensively on casinos. They described that they thought the casinos brought some good to the area, like jobs. However, they also brought problems, particularly in the wake of Katrina when casinos took over previously residential areas. Some residents fell on clear sides of the issue—wholly supporting casino re-openings or strongly opposing the city's prioritization of them, but many fell somewhere in between. Immediately after the storm, the state government changed the law to allow casinos to rebuild on land in an effort to ensure that they returned and rebuilt. At various levels of government, incentives like reduced taxes were offered to encourage businesses to rebuild or to come into the area. The local government also helped fund the construction of non-casino tourist draws in the city, trying to create new jobs and bring in more tourists.

Although casinos make up a large part of Biloxi's economy, there have been critiques of the industry and its growing monopoly over local tourism. A range of factors play into Biloxi's tourism economy and even when things contribute to tourism or the larger economy, they can be potentially harmful for local residents and neighborhoods.[64] By February 2011, most of the casinos that had been in the area before Katrina had reopened. Some were even expanding—the Palace Casino was working on a $45 million addition.[65] And plans were developing for a new casino, Margaritaville, to come into

the area (which it would do in 2012). However, despite this growth, some people, like Pearl, felt that the casinos were being prioritized over residents. This prioritization of casinos over local residents was perceived as an especially large problem in neighborhoods in and around areas of East Biloxi both because that was where the majority of the casinos were clustered and because many of the neighborhoods around them had higher populations of poor, working class, or lower-middle-class residents, had been hit the hardest by Katrina, and were still struggling to recover and rebuild homes. These perceptions tied to pre-Katrina feelings and views of casinos coming into the area and questions of inequality, access to resources, and power, as well as these processes in recovery. For some Biloxians, like Pearl, the focus on the casinos in the years after the storm was less just an issue of economic recovery and more an issue of inequality and vulnerability.

The city acknowledged that the casinos were rebuilding at a different rate than were hard-hit residential areas, but deemed casino reconstruction critical to the recovery effort:

> Today, at the five-year point, the Biloxi recovery remains a study in contrasts. Some of the areas of the city—the casino-resort sector and those residential and commercial areas away from the water—have indeed rebuilt, providing thousands of jobs and an engine to drive Biloxi's storied hospitality industry, and homes for families. Other areas—Point Cadet and other waterfront and low-lying areas vulnerable to storm waters—are still defining their future.[66]

Casinos provided funds that supported other tourist enterprises. Several casinos sponsored various buildings on the Ohr-O'Keefe Art Museum (figure 5.3)

Figure 5.3   Ohr-O'Keefe Art Museum Sponsorship. *Source*: created by Jennifer Trivedi.

campus. Casinos also sponsored parade floats and krewes (organizations that take part in Mardi Gras parades and balls), and events at other public gatherings, even Katrina memorial events.

By 2010, one city official claimed Biloxi had gained 208 businesses. New museums opened and old museums from before the storm reopened. A new Visitors' Center was built. Some Biloxians were less than enthusiastic about new businesses. They thought money being spent on non-casino tourist attractions were a waste of funds. One resident protested loudly against the use of city funds to help support the rebuilding of the Seafood Museum. Others objected to the amount of money spent on the new Ohr-O'Keefe Art Museum. Supporters of these projects countered that they would help the tourism industry by getting people out of the casinos and into the community when they came to visit. Opponents of the projects argued the money could be better spent elsewhere, especially helping people in need.

The perception that tourism revenues were not high enough was pervasive. Some residents attributed this lack of funds to the Katrina recovery process, but others pointed to the economic recession and the BP Deepwater Horizon oil spill. One city councilman claimed that between Katrina and the oil spill the city had lost a lot of business on the beach that had not yet returned by February 2011. He claimed that some business owners were "too scared to come back to the city of Biloxi." Some recovery efforts caused new kinds of problems. Casinos that reopened on land often took over land that had previously housed local residents, forcing them to relocate. Although some Biloxians were glad to sell their property to the casinos, renters had no say in the matter. Biloxians sometimes thought that aid given to businesses would be better used for repairing roads and bridges and for helping individuals affected by the storm and the oil spill.

RETURNING TO SCHOOL, RETURNING TO WORK, AND FACILITATING REBUILDING HOME

For people who still had jobs after the storm, returning to work was sometimes problematic. Workplaces were often hindered by problems similar to those individuals faced at home. Nina was unable to return to work because they had no water available. Workplaces, like homes, had also been destroyed, leaving employers to figure out how to rebuild and reopen much as residents were trying to repair and rebuild their homes. People who worked in the now-destroyed casinos faced limited options. Some casinos offered employees other positions during the recovery process, allowing, for example, cocktail waitresses to work as secretaries helping to process the paperwork needed for rebuilding. Others simply offered to continue paying employees for a

specific time period after the storm, allowing them time to find other work or for the casinos to reopen. And a few casinos fired their employees, unable to afford to keep them on while attempting to rebuild or having been forced to close their doors after the storm. Businesses across the coast faced similar decisions—try to find other work for employees while they were shut down, continue to pay employees without work, or simply fire employees.

Parents who could get back to work needed for their children to be back in school during those hours. Without school in session, parents had to find other care for their children in order to be able to go back to work. The day after the storm, school officials went out to try to determine what state the schools were in, driving around with a chainsaw to help make their way through piles of debris. Out of eleven local schools, two had been completely underwater. Officials soon realized there was a pressing need to reopen the schools as quickly as possible, as one described to me, "Folks have to eat, they have to work, they can't go to work if their kids are unsupervised." They prioritized the elements needed to reopen the schools: water, teachers, and transportation. Power, he added with a chuckle, would be nice, but was not necessary in the same way.

The superintendents of local affected school systems met and pulled a date out of the air, a random date by which to resume classes. They ended up having the schools reopened and running in September, a mere nineteen days after the storm. Utility companies and local governments were working together to get systems like water and power up and running again. Transportation issues to reopen the schools also required the help of local governments, particularly the city's police department, to clear infrastructure and determine available bus routes. The police department ultimately set aside a lane for bus traffic, as needed, to encourage the process. Getting teachers and other school officials back required tracking them down and getting them to return. Bridgette remembered getting a call asking her to come back. She headed back to the area, staying with a co-worker so she could get to the school easily.

Before Katrina made landfall, 6,125 students had been enrolled in Biloxi public schools. When they first reopened that number was down to just 3,167. Five months after Katrina, it was up a bit, but not to pre-storm levels, resting at 4,321 students.[67]

Erica described how after the storm she remembered thinking to herself that they needed to reopen the schools as soon as possible because the devastation was "so widespread" that they needed to get children back into a somewhat normal environment quickly. Talking about the children, she said, "they couldn't fix that [the destruction], those were adult problems. Adults had to fix Biloxi, as best as it could be fixed," adding, "I couldn't see anything positive coming from kids having to just mire in the destruction and seeing parents feeling that sense of. . .almost desperation." Similarly, Annabelle

remembered hearing, "Your community won't heal until your schools open" in the aftermath of the storm.

Once students were back in school, Erica noted, "I'm not sure how much school was going on," with school officials and teachers dealing with questions like where students were living and what supplies their families needed. "We had them and that was a good thing, but it was not normal," although, she added, it "felt normal" for the students to be back with their friends. The storm had been a collective trauma and being back in school, with any sense of normalcy, "something about that made it less traumatic, because it was collective."

School re-openings went slowly at first. The first day the schools were open again, they had just half of the normal number of students. Despite the low attendance numbers, the school system tried to keep schools and classrooms intact as best as possible, wanting to provide students with that sense of normalcy, although, Edward noted, this came with increasing usage of the phrase "the new normal." To do this, modular classrooms provided by FEMA to replace the flooded schools were placed on other schools' campuses but kept as independent schools. However, even with these efforts there were some shifts. Not all of the faculty and staff could or did return. And, given the complications with destroyed housing and people living wherever they could, students were allowed to attend whatever school they could most easily get to, regardless of what their listed address was before or after the storm. Extracurricular activities soon resumed as well. Annabelle described how, soon after the schools reopened, the high school held its first football game. With power still lacking in most areas of the city, there was little to do at night. "Everybody came, it was huge . . . it was a huge community event," Annabelle said. "I don't even remember who we played; I just remember it was packed."

But while getting students back into schools had a positive effect on children and the city as whole, it was not without its problems. To reopen as schools, those facilities being used as shelters had to be emptied, cleaned, and sanitized. This, in turn, meant kicking out people who were still living there. Annabelle, who had run a shelter in an area school during and after the storm, described the problems with these efforts. By the time school was to resume, people were living in the shelters, using them as homes. When word began to travel around that the shelters would be closing so the schools could reopen, people begged her to stay. "It was gut-wrenching," she described, remembering people who had lost everything pleading to be allowed to stay. Officials put people on buses and evacuated them to somewhere in North Mississippi that had avoided storm damage. "That was hard," Annabelle said.

Different levels of government provided funding to repair, rebuild, and reopen Biloxi schools as quickly as possible after Katrina. Getting students

back to schools and to some semblance of "normal" was seen as a prior-ity. However, shifting populations and tax bases led to eventual school closures, frustrating residents who had begun settling themselves and their children back into a routine centered on their pre-Katrina schools. While there was a lot of discussion around the tax funds casinos contributed, there was less discussion of the tax money brought in through local residents owning homes. Getting students back in schools and parents and other adults back to work was important not only for a "sort of return to nor-malcy" that many residents described to me, but also to bring tax money back into the community through property and sales taxes, which are criti-cal to recovery.[68]

Nichols School

When schools reopened, administrators made an effort to keep classes and schools together as much as possible. Students whose schools were destroyed met in trailers on the campuses of other schools. Teachers who could come back to work returned as quickly as possible. The effort was made to give students and staff some sense of stability in a turbulent time. However, as schools were rebuilt and reopened, the school system faced decreased enrollment in certain areas and financial restrictions resulting from lower tax revenues. By 2010, enrollment in the Biloxi school system was down by 20 percent.[69] Four schools were closed—Lopez, Nichols, Michelle, and Beauvoir. This move proved controversial, especially in the case of Nichols Elementary in East Biloxi.

School administrators insisted the school was closed simply out of neces-sity: too few students were attending after the storm and merging Nichols with another school meant the district was able to meet necessary budget cuts. Some residents argued that the choice to close Nichols was wrong. They said that it was an award-winning school, just rebuilt for millions of dollars post-Katrina, and a historically African American school. The debate over Nichols revealed not only how some African American residents felt about their place in Biloxi but also their perception of the cultural, political, and economic power structures that drove the school's closure.

In a *New York Times* article on the school, Robbie Brown described how "residents of the poor and largely Black east side of Biloxi" say that "the neighborhood is losing one of its chief sources of pride and cohesion."[70] Considering the emotional and cultural attachment to spaces like the Nichols School is critical to understanding decision making and conflict in disaster recovery. People do not just want these spaces rebuild out of practicality, although that is often also a factor, but also because of the deep roots such spaces enable in the community.

Andrew questioned why newly rebuilt schools like Nichols had been closed, asking why older schools in worse shape remained open. The city claimed that the decision to close Nichols instead of nearby Gorenflo, less than four miles away, was made because "Gorenflo is 35 percent larger than Nichols and could accommodate the existing Gorenflo and Nichols students." But while the city claimed that Gorenflo was large enough to accommodate the students in both schools, parents of students and other community members disagreed. Instead, they argued, classes in Gorenflo were now too full, leaving teachers overworked and students with less attention and supervision. They called on the school system to reopen Nichols to alleviate this overcrowding.

Critical to the discussion around Nichols Elementary was the issue of racial identity. Accusations of racism emerged in the debate about closing the school, as some residents claimed the school system's decision to close it was founded on its Black and African American heritage and, to some extent, current student body. Some residents, mostly from East Biloxi and Black or African American, claimed that in choosing to keep Gorenflo open instead of Nichols, school system officials had rejected the schools' heritage. They argued that the school system had brushed aside concerns of current and former students and their families because they were Black and African American. Former students argued for the school to be reopened, citing its status as a black school and cultural landmark. As Clemon P. Jimerson, Sr. said at one meeting on the issue, "I am only one of God's chosen few here tonight to ask you to reopen Nichols. It's a part of our culture [. . .] and it is the only school with a long rich Black history."[71] Evelyn Clay, a graduate of the schools' predecessor, Nichols High School, noted that the building itself was not what was important, but rather "it's the heritage that the school brings to the community."[72]

Comments like Jimerson's and Clay's reveal the deep pre-Katrina, historical, and cultural roots of decisions made during Katrina recovery in a changing landscape of Biloxi. What were perceived by some as recovery decisions—fewer students meant a need to condense schools—were perceived very differently by others. For some members of the Black community in Biloxi the closing of Nichols was the shuttering of a critical piece of their history, heritage, and culture. They also reveal something of the perceived political and economic power dynamics at play before and after Katrina and the ties between them.

In response to discussions about the closing, an organization Save Our Schools Coalition (SOS) was formed to fight to keep the school open. When the school closed, the group sued with the support of law firms from New York and California.[73] SOS petitioned the school board to reopen Nichols on several occasions. James Crowell, co-chairman of the Coalition and

president of the Biloxi branch of the NAACP, claimed that "the children are not being able to be fed within a time frame that they have. [. . .] They are using irregular classrooms in terms of using closets or storage spaces to house the kids, because there are [*sic*] no classroom space. Teachers are doubling up in classes."[74]

As debate continued, the Kellogg Foundation offered $1.5 million to reopen the school. One city councilman who supported reopening Nichols said that this was an opportunity to forge a relationship with the Foundation and that the city should not "blow it." The Foundation's offer was rejected by the school board. The city responded to the rejection, saying that they had given a "conservative estimate" of the amount the school district would save by closing Nichols: "Fact is. . . the real question should have been 'How much does it cost to operate Nichols each year?' That answer: at least $1.2 million a year."[75] Officials expressed concerns about what would happen if the funds ran out prematurely and what they would do after the grant ended, especially if the area tax base had not yet recovered. The Nichols School reopening movement and response to infrastructure repairs demonstrated how residents prioritized their identity, closed ranks, and pushed back against outsiders, even when those outsiders were local residents who identified with other groups.

CHURCHES AND FAITH

Many churches were severely damaged or destroyed by Katrina. Despite the cost, most churches on the coast were repaired or rebuilt, although some efforts took years. For example, St. Michael's Catholic Church (figure 5.4) did not reopen until December 2010. One city councilman spoke about the reopening of St. Michael's, describing how it would "help East Biloxi come back." This focus on the rebuilding of churches was not just a matter of rebuilding or repairing buildings that had been destroyed or damaged in the hurricane. Churches were seen as a critical component of recovery because they were seen as a critical component of the communities people belonged to and the histories and cultures that came with them. Bringing them back was just as important to local residents as was bringing back homes, schools, and businesses. Restoring churches helped restore communities and bring people back. Even people who were forced or chose to move into other neighborhoods or even nearby cities often came back to their pre-Katrina churches. Bringing churches back meant bringing people back.

Many Biloxians emphasize the importance of faith, prayer, and church membership. Residents spoke about the mental, spiritual, emotional, and physical aid they received from their own and other churches. The great

Figure 5.4   St. Michael's Church. *Source*: Created by Jennifer Trivedi.

majority of Biloxians are Christians, including many Catholics. Biloxians used churches as places to meet for discussions about Katrina, its effects, and the recovery process. Many churches in the area held multiple events to raise money or supplies for people in need, both inside and outside of the community. Residents centered on churches to focus on a sense of what some described to me as "normalcy" and others as a "sense of community." The re-establishment of churches in the area created an effort to help residents affected by Katrina, even those who were not part of those churches, their neighborhoods, or members of the same groups as their congregation.

After Katrina churches began giving basic aid and fellowship to their members. They later also helped non-church members with recovery and preparedness. Five years after Katrina, churches were distributing emergency preparedness kits developed by CWC to residents in need throughout the city. Churches also provided aid to people in other areas affected by disasters. Sometimes this aid was reciprocal, with Biloxi churches sending aid to communities and churches that had helped Biloxians after Katrina. For example, in 2011 aid was sent to people in Tuscaloosa, Alabama, affected by a tornado. Churches also became places where prayers were said for disasters. While attending church services and Catholic masses across the city, I heard

prayers said for individuals and families affected by Katrina and by the BP Deepwater Horizon oil spill.

OTHER EXTREME EVENTS

In addition to post-Katrina recovery, the city faced additional emergencies, crises, and disasters during the same time period. Ongoing economic and environmental stability in the area was essential to a smoother recovery process, but this was not what Biloxians experienced. Instead, while continuing efforts to recover from the storm and rebuild their communities, Biloxians found themselves facing down an economic recession, an oil spill, and more hurricanes.

The Economic Recession

The economic recession that began in 2008 caused financial difficulties for many people in the area. As with the rest of the nation, some lost their jobs. Others found their work hours reduced because of a decline in local tourism. The related collapse of the housing bubble caused difficulties in the sale and purchase of homes. Homes that had survived Katrina or been rebuilt quickly after it might find themselves empty in the aftermath of the housing bubble bursting and the ensuing recession. Vacant housing, especially in areas on the peninsula where up to 20 percent of the homes were vacant, became not only a loss of property taxes in a city still struggling with recovery and in need of funds, but also a space in which Biloxians could resist construction of new homes in areas that were more safely further inland.[76] Arguments, as previously discussed in this book, emerged that people looking for housing could move into available houses vacated in the downturn even though some people did not want to live in them for a variety of issues like their perceived risk of being in neighborhoods hard hit by Katrina and on the water and increased post-Katrina insurance rates in such areas.

Following the burst of the housing bubble in 2007, the United States was thrust into a significant recession. This recession affected people across the country. As one city councilman commented that the city was "in a pickle, just like everybody else in this economy." However, the recession had a particular set of repercussions for residents of Biloxi and the Gulf Coast. Some residents I spoke with in 2010 and 2011 cited the recession as part of the reason recovery from Katrina had been, in their eyes, slow.

At the fifth anniversary of the storm the city described how "sales and gaming taxes remained off in Biloxi, after enjoying a streak of record-breaking months a year after the storm. Of the city's three primary revenue streams,

only property taxes have improved over the past three years, primarily due to countrywide reappraisal."[77] There were also practical concerns, such as the financial budget of the city. In 2010, the Biloxi City Council "passed a municipal budged [*sic*] that includes [a] $3.8 million deficit—the smallest deficit in at least five years."[78] Despite this, city officials continued to voice concern about the budget, pointing out repeatedly at public meetings and in citywide mailers that they were having to once again dip into a dwindling general fund. When some officials and residents looked to outside organizations and government agencies, they did so with a focus on what those organizations could do to for local needs, rather than how those organizations acted in general.

In 2010 one city official described how FEMA had replaced many of the city's police cars and fire trucks. These vehicles now had to be insured with money from the city's coffers. These extra costs were a strain on the city's budget in a time when tax funds were short and money was still being expended on recovery. At a public budget meeting with the City Council, one councilman suggested that the city should remove all capital improvement projects not specified for reimbursement by MEMA or FEMA from the city's budget. Another councilman noted that even with projects they were being reimbursed for, the city was still initially out money it did not have.

Governmental funds revenues reduced from Fiscal Year (FY) 2007 to FY 2008, in part seemingly tied to a reduction in other intergovernmental sources which is a category that includes some of the federal funds received to help with ongoing Katrina recovery.[79] Ad valorem taxes, paid in arrears (i.e., delayed), also reveal the impact of the storm and the subsequent recession, dropping significantly from FY 2006 to FY 2007. While they increased some from FY 2007 to FY 2008, this increase still did not return them to earlier levels.[80] Ad valorem taxes also increased from FY 2008 to FY 2009, but sales taxes were down during that same time period, as were other forms of revenue.[81]

Some funds that had been borrowed for initial Katrina relief and recovery now had to be repaid. An especially large loan taken out for costs incurred with Katrina was now due. The city was trying to get an extension, but that would accrue over $1 million in interest. A city councilman argued that they were under the impression that 75 to 80 percent of the loans would be forgiven but was told by other city officials that this had not happened for a variety of reasons. One explanation often given was that gaming revenues had increased. City officials noted that they were appealing the refusal to forgive the loan, but that the city could not count on that.

Residents also saw the recession and end of the housing bubble as affecting home recovery. Protestors against zoning changes for a new subdivision in the northern part of the city argued that there were already homes available in the area because of foreclosures. Residents pointed to these new homes

as ones that needed to be filled before new housing was constructed. Others countered that more affordable housing was needed, requiring the construction of smaller homes on smaller lots specifically to accommodate people who might not want or be able to maintain a large piece of property.

BP Deepwater Horizon Oil Spill

On April 20, 2010, an explosion occurred on BP's Deepwater Horizon oil drilling platform, leading to three months of oil flowing into the Gulf of Mexico. As Sharon Hanshaw of CWC said, "Fishermen fear this could be the end of their career," adding, "they're asking questions like, what kind of compensation can I receive? Can I still fish and be okay? How long, if the spill reaches land, will I be out of work?"[82] Local residents I spoke with described their concerns and questions about if it was safe to eat locally caught seafood, a point that was brought home to me very clearly when I encountered oil-soaked fish washed ashore on local beaches (see figure 5.5).

But despite these concerns, many local residents continued to eat seafood fished from the Gulf. At one public meeting about the oil spill, an older man questioned what else residents who needed to fish to eat were supposed to do. He seemed distressed, understandably, at the prospect of not having access to seafood as a food source. While most residents are not entirely reliant on fishing or shrimping, these are ways to supplement food access and are both especially critical for lower income families and for their emotional and cultural bonds to community, heritage, and family.

A medical benefits settlement with BP and other responsible parties provides help for only 90,000 of the 140,000 clean-up workers and 110,000 out of over 21 million coastal residents.[83] The settlement excludes mental

Figure 5.5   Oil Spill–Soaked Fish. *Source*: Created by Jennifer Trivedi.

health benefits, as well as benefits covering a range of illnesses from cancer to neurological disorders. Specifically excluded from receiving benefits are the 194,000 businesses and individuals who took one-time offers of funds from BP.[84]

Local public events centered on seafood continued. In September 2010, I attended the local seafood festival. It was well-attended despite concerns about the spill. Nevertheless, several booths were set up where people talked about protecting and cleaning the Gulf (including one by a local nature pres-ervation group and one by the Sierra Club, as well as some information at the local Seafood and Maritime Museum tent). The Seafood Museum tent also sold selling anti-BP and anti-oil spill t-shirts. The anti-BP sentiment in the area was high at the time. Several residents I spoke with noted that they were refusing to buy gas at BP stations. Despite these references to the oil spill at the festival, I heard no mention of concerns about the spill affecting the seafood they were eating.

At the same time, employees of the casinos and tourism industry expressed concerns that tourism dollars would dry up due to the spill. When BP initially refused to pay benefits to casino employees for lost hours or wages, employ-ees protested outside of the casinos along U.S. Highway 90. Many residents noted that they thought casino employees had been affected by the spill.

At public meetings, some city officials encouraged organizations to ask BP for funds, citing the recession and a lack of tax revenue as reasons the city could not fill the void with their own funds. One city councilman objected to the idea that organizations should petition BP for money but other officials pointed to the funds various organizations had gotten from FEMA and other agencies after Katrina. They thought that might be available now after the oil spill. Some members of the public echoed this sentiment. One man, speaking in support of funding for public libraries, said that maybe if the city could not afford to support the library system, BP should be asked to contribute funds. He claimed that the city's rumored lost sales, hotel, and gaming tax revenues that summer perceived with a decline in tourism by local residents were the fault of BP because of the oil spill and so BP should replace the funds. Some people were quick to point out that they needed city funding. Not all organi-zations received FEMA money after Katrina and not all of them qualified for funding from BP now. Other city councilmen continued to insist that groups apply to BP for aid, adding that the city should write a letter explaining their position and inability to help these organizations, thinking that would help them qualify for aid. It is unclear if this letter ever happened, but it was clear that there was a perception of the impact of the oil spill making recovery from Katrina harder.

Organizations that had emerged to help local residents in the wake of Katrina turned their focus on the oil spill. CWC partnered with Gulf Coast

Restoration to distribute a fact sheet about the oil spill in both English and Vietnamese in an effort to reach more coastal residents and fishers.[85] Hanshaw said, "Now we have to address the spill too, because that's a form of preparedness also."[86] The oil spill was not directly tied to housing, but it was tied to larger questions of recovery and stability for local residents. In addition, many of those most affected by the oil spill, people who worked in the seafood industry, also lived in the hardest hit areas of East Biloxi. The impact of the oil spill during Katrina recovery set what progress they were making on recovery back. For groups like CWC, rooted in pre-Katrina perceptions of identity, community, and unequal voice and access to power and resources, contributing to oil spill recovery at the same time was critical to helping local residents be better prepared for whatever disaster happened next and have more stability in their daily lives. For many residents of Biloxi, the oil spill was a new disaster, but one that was not entirely separated from Katrina. Given when it happened, during long-term Katrina recovery, residents were quick to tie the two together, as well as their potential effects on the city as a whole and on people within it.

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5. Ibid., 4.
6. Ibid., 8.
7. Ibid., 10.
8. Lewis, "Battle For Biloxi."
9. Kramer, "A Force of Nature."
10. Barksdale, *After Katrina*, 68.
11. Office of Policy Development and Research, *Current Housing Unit Damage Estimates Hurricanes Katrina, Rita, and Wilma*, 17; City of Biloxi, "The Existing 100-year Floodplain and Katrina's Path of Destruction."
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13. Trivedi, "Empty Lots."
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19. Oxfam, *Sisters on the Planet*, 5.
20. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 5.

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26. Steps Coalition, "Communities Worth Calling Home."

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28. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 107; Morse, "Come on In This House," 135.

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30. Sock Enterprises Inc., *Steps Coalition Strategic Plan*, 3.

31. Gulf Coast Community Foundation, "Steps Coalition."

32. Steps Coalition, "What We Do"; Morse, "Come on In This House."

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34. Architecture for Humanity, *Biloxi Model Home Program*, 16.

35. Hope, "About the Biloxi Housing Authority," 2.

36. Ibid., 4.

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39. Walker, "Hope CDA Finances."

40. Trivedi, "Empty Lots," 299.

41. Garber et al., "Hurricane Katrina's Effects," 24.

42. Boone, "Mississippi Gaming Chairman," A1; Trivedi, "Empty Lots," 300.

43. Davidson, "The Gulf Coast's Tourism Comeback."

44. Petterson et al., "A Preliminary Assessment," 661–62.

45. Rivlin, "Bright Spot."

46. Ibid.

47. Smith and Ellis, "Rebuilding Biloxi."

48. Economics and Statistics Administration, *The Gulf Coast*, 23.

49. Davidson, "The Gulf Coast's Tourism Comeback."

50. City of Biloxi, "Preliminary Info," 52.

51. Davidson, "The Gulf Coast's Tourism Comeback"; Schmidt, "Report of the Economic Development Committees: Tourism," 34.

52. Office of Governor Haley Barbour, *One Year After Katrina*, 12; Mississippi Gaming Commission, "Directory of Current Operators August 2006."

53. Mississippi Gaming Commission, "Directory of Current Operators August 2008."

54. Mississippi Gaming Commission, "Directory of Current Operators August 2010."

55. Chriszt, "Katrina Update."

56. Gollott and Duggan, "Report of the Economic Development Committees: Seafood Industry/Marine Resources," 42.

57. Petterson et al., "A Preliminary Assessment," 660.

58. Salcido, "Report of the Economic Development Committees: Military/Government Contracting."

59. Ibid.

60. Lyons, "Report of the Economic Development Committees: Small Business," 39.

61. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 71.

62. Trivedi, "Empty Lots," 294.

63. Barksdale, *After Katrina*, 92.

64. Lowe, *East Biloxi Community Benefits Report*, 65.

65. City of Biloxi, *Katrina + 5.1*, 2.

66. Holloway, "Rebuilding Efforts," 1.

67. City of Biloxi, *Katrina & Biloxi*, 52.

68. Wayne, "Storm and Crisis."

69. City of Biloxi, *Katrina + 5.1*, 2.

70. Brown, "A School Closing."

71. Battiste, "Kellogg Foundation Rejected."

72. Brown, "A School Closing."

73. Thomas, "Save Our Schools."

74. Pham-Bui, "Group Makes New Allegation."

75. City of Biloxi, *Katrina + 5.1*, 7.

76. Gulf Coast Community Design Studio, *Mississippi Gulf Coast Regional Housing Assessment*.

77. Ibid., 2.

78. Ibid., 3.

79. Staehling and Lanham, "Letter to the Mayor and City Council of the City of Biloxi, Mississippi" (FY 2008).

80. Staehling and Lanham, "Letter to the Mayor and City Council of the City of Biloxi, Mississippi" (FY 2008).

81. Staehling and Lanham, "Letter to the Mayor and City Council of the City of Biloxi, Mississippi" (FY 2009).

82. Kramer, "Biloxi Braces."

83. Juhasz, "Investigation."

84. Ibid.

85. Kramer, "Biloxi Braces."

86. Ibid.

Conclusion

The first anniversary of Katrina saw the clean-up of the city continuing, casinos reopening, and homeowners and renters living in temporary and semi-permanent housing while they looked to arrange permanent housing. The first year had revealed many problems with recovery and aid distribution, prompting individual residents and local groups to step up and work toward solutions for these problems. These problems were often linked to pre-disaster Biloxi and the experiences, identities, knowledge, power, and resources of Biloxians. Decisions about whether to evacuate or not influenced by previous experiences in and knowledge of historic hurricanes like Camille or the 1947 Fort Lauderdale storm, as well as by experiences in less destructive storms which, in turn, reinforced the idea that hurricanes were survivable. The hardest hit areas of the city were populated by higher rates of lower income, working and lower middle-class residents from a more diverse racial and ethnic background, leaving them struggling to recover when these pre-disaster conditions were compounded with lost housing, increasing housing and insurance costs, and a lack of power and resources to influence city-wide.

As gaps in cultural, political, and economic power affected some residents' access to outside aid, new internal groups or preexisting groups with other priorities before Katrina began efforts to aid more vulnerable and less resilient residents, building on a sense of *communitas* soon after the storm, a perception of the needs of people in Biloxi, and an understanding of what problems had existed before Katrina and would exist long after. The rapid reconstruction of casinos, at first seen as a necessary component of recovery as their initial construction had been for recovery from Camille, became a point of contention as *communitas* fractured back into group identity and as

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those hardest hit residents felt that the casinos's recovery had been prioritized ahead of their own, echoing larger pre-Katrina problems those residents faced with a lack of power.

As Biloxi began shifting from immediate response efforts to long-term recovery, home reconstruction was particularly important to the process, as it allowed people to continue to live in the area and rebuild other aspects of the city. People moved from temporary, to semi-permanent, to permanent homes. Some found themselves transforming semi-permanent housing into permanent. Other residents rebuilt old or built new permanent houses. The public discussions and ultimate decisions about who could rebuild what types of homes in which areas reveal clearly the pre-Katrina socioeconomic class issues that affected the city and resulted in varied vulnerability. Others remained in semi-permanent housing. As casinos moved from not just rebuilt but to expanding while empty lots remained on the peninsula and residents continued to live in what they viewed as semi-permanent housing frustrations increased. With development looking to move further inland to avoid potential future storm surges, residents of those further inland northern areas pushed back, holding on to their own sense of neighborhood identity history and the less destructive effects of Katrina.

In addition to class status and income, other forms of identity and group affiliation were central to debates surrounding the creation of new housing. Prior to, during, and after Katrina, many Biloxians identified with different neighborhoods, classes, races, ethnicities, and ancestries. Biloxians' self-identification sometimes affected their perception of recovery efforts and proposals for new development.

During initial relief and recovery efforts, outsiders were generally viewed positively. Residents described their appreciation for people who came into the city or their neighborhood to help. However, as the city moved forward into long-term recovery efforts, the view many residents had of outsiders became more complicated. Conflicts arose about who had the right to say what would happen in a particular neighborhood or to the city as a whole conflicts that revealed a fracturing of *communitas* into pre-Katrina groups, identities, and problems. As long-term recovery progressed, insider status became more complicated as fractures between people based on identity within the city emerged. People in different neighborhoods resisted intrusion into their areas, concerned it would disrupt their recovery and their perception of a continuation of their pre-Katrina lives.

Many residents talked about their struggles in attempts to recover their pre-Katrina lives. Efforts to solve the problems they faced varied. Grassroots and external aid organizations worked to merge outside expertise and aid with local knowledge. These endeavors included rebuilding homes modified to meet both new FEMA guidelines and the needs of the

proposed inhabitants (i.e., access ramps for residents in wheelchairs or those who had trouble using stairs). Such attempts extended into providing financial assistance, including a range of monetary options from donations to loans. While these efforts were complicated by the divide between insiders and outsiders, work by many organizations sought to breach that divide by combining the abilities and resources and addressing specific local needs.

While home reconstruction was critical to the long-term recovery process, the reconstruction and reopening of other structures such as businesses, schools, churches, bridges, and roads were also important. Residents spoke openly about the range of problems that continued in this phase of long-term recovery. The reopening of these organizations and structures brought some residents back to previously damaged or destroyed neighborhoods and pushed others to increase their efforts to return.

Biloxians needed local businesses and employment in order to afford the cost of rebuilding homes. Rebuilding and reopening schools and resuming more regular schedules than had been kept in the first year after the storm allowed children in the city to reestablish some sense of normalcy. Parents were better able to rebuild and return to work, knowing that their children were being supervised. Social gathering places like churches provided residents in a deeply religious city the opportunity to reconnect with friends and family members. Infrastructure repairs were considered a high priority by many who argued that such repairs would spur efforts to reopen and rebuild everything else.

In the six years after Katrina, there were new crises and disasters. Of particular note are the economic recession, beginning in 2007, and the BP Deepwater Horizon oil spill in 2010. Economic problems that had begun before Katrina and been made worse by the storm were exacerbated by the recession and oil spill. People who had been dealing with financial difficulties before Katrina and struggling since the storm now found themselves facing additional monetary problems. Residents lost income as tourism and seafood sales declined. A shifting and declining tax base led to revenue problems for the city.

Since that point recovery has continued, with efforts to balance daily life and ongoing recovery. Work has continued on damaged infrastructure and roadways over the last fifteen years. Some homes have been rebuilt on what were empty lots post-Katrina or in new areas. A new baseball stadium has opened. New restaurants have opened, and old ones have returned.

This examination is important to fully understanding long-term Katrina recovery in Biloxi. While some other researchers exploring long-term recovery have dealt with the ongoing contexts shaping disaster recovery, far more work is needed to fully understand the complexities of navigating long-term

ongoing situations while working on disaster recovery.[1] This work is, in part, an effort to contribute to that need.

QUESTIONS REMAIN

In 2012 Hurricane Isaac dumped rain across the Louisiana and Mississippi Gulf Coasts.[2] Biloxi found itself dealing with a storm surge that put the beachfront road underwater. Flooding throughout other parts of the city closed seventy different roads.[3] Despite residents being used to hurricanes, the extent of the damage caused by the Category 1 storm surprised some. Biloxi's then-mayor commented, "There's a lot more water than I would have thought. The mayor added that he regretted not ordering people to leave. 'That's not the weather's fault. That's our fault.'"[4]

Response to Isaac in Biloxi also pointed to problems with hurricane classification system and how people perceive and respond to lower category storms. Despite the devastation wrought by Katrina, Denny Mecham (executive director of the Ohr-O'Keefe Museum of Art), described how "everyone was surprised by this [. . .]. They try to prepare you, but for people who are used to a Cat. 3 or Cat. 5, this doesn't seem like much [. . .]. Everyone was saying, 'We'll be open by Thursday morning.' Well, this is not how this one is turning out."[5]

Reactions to Isaac reveal that there is still a perception of smaller hurricanes as less of a risk and that larger, more destructive hurricanes are rare. These responses echo people's memories of their decision making before Katrina and how it was unlikely to be another Camille. These responses reiterate a pattern of smaller hurricanes being seen as normal and survivable, reinforced by smaller-scale events like Georges. And these responses reflect an ongoing pattern of thought that is easy to slip into: higher-category more-destructive hurricanes like Camille and Katrina are rare, maybe once in a generation events; and lower-category less-destructive storms are more likely and Biloxians have experience with them, daily order will resume soon, and evacuation is not usually needed.

These patterns of thought are also reinforced by structural questions that exist in a community. Residents in areas most likely to be hit hardest by a hurricane are also more likely to have lower incomes, making evacuation harder. People may not be told to evacuate in smaller events. If they are told to evacuate they may prioritize the advice of friends, family members, neighbors, co-workers, and their own experiences and knowledge of previous storms to shelter in place. They may not have the resources to evacuate outside of the area. Personal information sources are critical to disaster preparation and recovery. In terms of emergency management, it may in fact be more

important to mobilize and strengthen these interpersonal networks than it is to focus on official information distribution. Through sharing information about potential disasters, signals about risk may be amplified or reduced.[6]

Biloxians have ties to place and social networks that support decisions to stay to help others who will not leave or to keep homes safe. People who lack the power to shape pre-hurricane planning also often lack the power to shape post-hurricane recovery. Casinos are intact after small storms and so are okay where they are, but it is critical to reopen them quickly after a storm large enough to severely damage them because they drive economic recovery.

Approaching these questions with the lens of political economy shows how residents with more political and economic power work with the governing elite to maintain that power by attempting to control industry recovery (e.g., allowing rapid and land-based casino redevelopment even in high risk areas). Beyond this, efforts are made to maintain this power through a political focus on ensuring access to lower risk areas by wealthier and more politically powerful residents even at the expense of more vulnerable residents left without homes, with uncertainty about their future, or in higher risk areas. Biloxians' public discussions in political settings reveal ideological language that frames less culturally, politically, and economically powerful residents as potential problems for the community.

Biloxians' views of risk and uncertainty are shaped by a particular cultural-historical context that include personal and shared experiences with and knowledge of hurricanes and disaster recovery. Related to this perception is the fact that different communities manage risk in a variety of ways. In Biloxi, residents weighed risk and uncertainty both before and after Katrina when making decisions about where to go, how to access resources, and who to approach for assistance.

A long history of hurricanes shaped residents' perceptions of risks and uncertainties. Political economy before and after the storm was shaped by a history of prior political power, access to government office, perceptions of and ties to economic systems, and ideology. Vulnerability and resilience were formed by characteristics such as socioeconomic class status, race, and gender. Each such characteristic improved or reduced particular Biloxians' abilities to prepare for, cope with, and recover from Katrina but each of these were also influenced by broader social, cultural, and political processes long before the disaster.

THE FUTURE

Future research in post-Katrina—and now post-BP Oil Spill and post-Hurricane Isaac—Biloxi would add to our understanding of long-term recovery in

the city. Many Biloxians say that the city will need ten to twenty years to fully recover. These estimates are based on the amount of time it took for the city to recover from Camille. The exact definition of "fully recover" varies between residents but most seem to focus on having livable, furnished homes that are not FEMA trailers (although MEMA Katrina cottages seem acceptable for some residents), steady employment, and a return to pre-Katrina or better infrastructure, particularly roads and schools. Most residents acknowledge that recovery from Katrina will not mean an exact recreation of their lives and the city before the storm. Even then these estimates may be less accurate for some residents than for others with more stability and power. In 2010, then-governor Haley Barbour argued that recovery was nearing completion, just five years after the storm, but, as Cutter et al. note, "many residents, still without permanent homes and adequate livelihoods, may be skeptical of this proclamation."[7] Such questions were not only true at the five-year mark but they remain true ten and fifteen years after the storm. What recovery means, especially on a personal level, is not universal or monolithic. What recovery means for whole communities, and if they feel it has been achieved, may not line up with official claims.

Residents who were most vulnerable, faced the most risk, and held the least political and economic power before the storm have seemed more focused on how recovery can improve problems they had before the storm. For example, Pearl described how CWC was working on helping adults (especially seniors) learn computer skills, providing childcare for working parents, and improving resilience for the most vulnerable residents by distributing food and goods and sharing information about aid and recovery resources. Pearl described each of these elements as part of the Katrina recovery process but also insisted that they may help residents have better resources and knowledge, making them less vulnerable to the next disaster. Anthropological investigations into residents' conception of full recovery would potentially yield insight into Biloxians' beliefs and behaviors through ethnographic methods. This might include the influences on residents' perceptions of recovery, what they considered normal, and the potential conflict between Biloxians who want to return exactly to their pre-Katrina lives and those who want to use the recovery process as a means to change pre-disaster vulnerabilities, inequalities, and conflicts.[8]

In particular, more work on specific populations within Biloxi would be valuable to a better understanding of the specific risks and problems they face pre-, peri-, and post-disaster. This could include, but is certainly not limited to, Biloxi's Black and African American, Vietnamese, and Hispanic and Latino communities; shrimpers and fishermen or casino employees specifically; elderly and disabled residents, including veterans; or a deeper analysis looking at long term versus new residents to the area.

Finally, comparative research between Biloxi and other communities along the Gulf Coast would allow for a more comprehensive picture of the region and the varied effects of Katrina. Conducting a wider scale project tracing long-term recovery and the differences over it in Biloxi, New Orleans, and some of the smaller towns and fishing communities along the Mississippi and Louisiana Gulf Coasts would further advance our overall understanding of the effects of the hurricane. Previous anthropological disaster research has compared the effects of different disasters on cities or how different populations and cities have been affected by the same disaster.[9] This comparative research may offer insights into the differences between communities, bring to light issues that play a role in disaster preparedness and recovery that might otherwise go unnoticed, and illustrate patterns between various disasters and affected peoples. Understanding Biloxi and recovery from Katrina there is just one part of a much larger and complex puzzle of local identity, disaster preparedness and recovery, and cycles of how pre-disaster processes shape long-term recovery.

This is one piece of the larger story of Hurricane Katrina. This is one view of Biloxi's story, its hurricanes, its homes, its cycles over time, its problems, and its challenges. The story of Biloxi is not yet done, nor is the story of its recovery from Katrina.

THE PAST, THE PRESENT, AND THE FUTURE

The Katrina memorial (figures C.2–C.3), which now sits near the city Green, is filled with pieces of people's lives before the storm.

Kat Bergeron in her work for the *Sun Herald* described clearly how "the '47 survivors that the supreme confidence that they had lived through the worst of the worst. Sadly, this attitude lead to a higher number of Camille deaths when some refused to evacuate because 'the waters of '47 didn't come this far.'"[10] As a police captain at the time in nearby Pass Christian recounted his stories of Camille and how "a lot of older people were telling me they stayed there in the '47 hurricane so they'd be alright. Some evacuated; some didn't."[11] His recollection appeared in the local paper, the *Sun Herald*, just shy of two weeks before Katrina would make landfall. As I discovered interviewing people after Katrina, this idea had not changed: "Well, I didn't evacuate for Katrina because I was fine in Camille," "my house survived Camille, so I figured it would be fine," and "no storm could be worse than Camille."

Recovery over the last fifteen years has ebbed and flowed, interspersed by both moments of *communitas* and by fracturing and reaffirmation of small group identities within a larger community. It has been full of people reacting

Figure C.1   Biloxi Lighthouse. *Source*: Created by Jennifer Trivedi.

not only to their own experiences and needs but to those of people around them in their communities. New groups have emerged from the aftermath of the storm, driven by their knowledge of needs in the area both before and after Katrina, while other groups have contributed in ways they did not expect or have faded from view. Well after the storm, CWC continued to work to assist vulnerable residents with disaster preparedness and recovery.[12] Architecture for Humanity filed for bankruptcy in January 2015.[13] There is

Figure C.2 Hurricane Katrina Memorial. *Source*: Created by Jennifer Trivedi.

a new Seafood Industry Museum on the Point and a new Visitor's Center, designed to resemble the Dantzler House that was on the site, expanding on the city's history for local residents and visitors, diversifying the tourist draws in the area.[14] The Ohr-O'Keefe Museum of Art, another new draw that ties to the city's history and coastal artists, remains open despite previous fears about its sustainability on the coast.[15] Nichols Elementary School, the post-Katrina rebuilt school following in a history of Black education, after pushback from the community was reopened.[16] Recovery is more than just rebuilding schools, churches, businesses, or even homes. It is about building

Figure C.3   Hurricane Katrina Memorial. *Source*: Created by Jennifer Trivedi.

Figure C.4   Biloxi. *Source*: Created by Jennifer Trivedi.

on what came before, what people want, and how people perceive their needs, wants, risks, and uncertainties, even when these wants and perceptions vary between groups, necessitating conflict and coordination.

For many years disaster research focused on one of two areas: the study of the hazards involved in disasters, including those located in specific environments, and the study of people's perceptions of and responses to disasters, especially in the period immediately following the disaster itself.[17] As researchers learned more about people's own perceptions of, risks in, and behavior before, during, and after disasters, they called for a "rethinking of disasters."[18] Despite this, long-term recovery has been a relatively less researched period. It is important to remedy that and to spend time examining and working on what long-term recovery looks like. However, we cannot look at recovery in isolation.

Katrina and its recovery were shaped for Biloxians by their historical and cultural context. Previous hurricanes in their own or other people's lives shapes their perception of risks in different types of hurricanes and thus affects their decision making and actions in the next hurricane. A long and complex history of different racial groups and ethnicities rooted in a range of economic systems and opportunities shaped where people lived, neighborhoods they saw as home, and access to resources, power, and knowledge. Cultural ideas about risks, uncertainties, and heritages shared among people and across generations encouraged sheltering in place or local evacuations, the reconstruction of churches and shared spaces, and the desire to return *home* not just to a house.

NOTES

1. E.g., Fortun, *Advocacy after Bhopal*; Button, *Disaster Culture*; Browne, *Standing in Need*.
2. Robertson and Severson, "Isaac Drenches Gulf Coast," A1.
3. Severson, "Biloxi Surprised by Isaac's Rain."
4. Ibid.
5. Robertson and Severson, "Isaac Drenches Gulf Coast," A1.
6. Kasperson et al., "The Social Amplification of Risk," 180.
7. Cutter et al., *Katrina and the Forgotten Coast of Mississippi*, 5.
8. Superstorm Research Lab, "A Tale of Two Sandys."
9. E.g., Dyer and McGoodwin, "'Tell Them We're Hurting'"; Oliver-Smith, "Anthropology and the Political Economy of Disasters"; Barrios, "'Here, I'm Not at Ease.'"
10. Bergeron, "Lesson Learned," E1.
11. *Sun Herald*, "A Devastating Dame," A7.
12. Coastal Women for Change, "Our History."
13. Lee, "Good Intentions."

14. City of Biloxi, "Biloxi Visitors Center."

15. Ohr-O'Keefe Museum of Art, "About the Ohr-O'Keefe."

16. WLOX Staff, "Biloxi School District to Reopen Nichols Elementary."

17. Hewitt, *Regions of Risk*; Hilhorst, "Responding to Disasters"; Oliver-Smith, "'What Is a Disaster?'"; Oliver-Smith, "Anthropology and the Political Economy of Disasters"; Wisner et al., *At Risk*.

18. Ibid.; Hewitt, "The Idea of Calamity in a Technocratic Age."

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