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Land Loss: Attachment, Place and Identity in Coastal Louisiana

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Land Loss: Attachment, Place and Identity in Coastal Louisiana

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Abstract

This dissertation explores how people frame environmental change. Specifically, this work explores the identity loss that residents of coastal Louisiana experience due to coastal land loss. I rely on 126 in-depth interviews of residents from communities in six coastal parishes (counties). Respondents convey the meanings they give to land loss through constructing a narrative of place. A phenomenological approach is employed that focuses on how stories are told and the subjective interpretations of societal members. First, Louisiana's coastal communities hold a significant attachment to place that in many cases has been developing for close to three centuries. For most residents, place is an inseparable part of identity. Second, Louisiana's coastal land loss is an environmental disaster that causes a heightened awareness of place attachment among residents. Along with a keen awareness of their attachment due to anxiety over land loss, residents believe little is being done to abate that loss. While some erosion and subsidence of the coastal wetlands is natural, much of the loss is caused by human action upon the environment. Communities have watched this mostly slow onset disaster for over fifty years, yet the issue only began receiving significant attention in the last few years of the twentieth century. A third factor contributing to the sense of loss residents experience is their alienation from the bureaucratic and technological processes of coastal restoration. Residents believe that their localized expert knowledge has been dismissed by the institutional expertise of scientific knowledge. Residents say that part of who they are is eroding and they feel helpless and in some respects, prevented from doing anything to alleviate that loss. Exploring the impact of Louisiana's coastal land loss on residents' attachment and identification with place can shed light on the role communities themselves can play in policy and restoration projects. In this regard, the meanings residents' ascribe to places are important for how and what decisions are made concerning those places.

Chapter 1 - Introduction

> "I watched the waitress for a thousand years,
> I saw a wheel inside a wheel
> I saw a call within a call…"
> Gilian Welch

Hurricane Katrina arrived in southeastern Louisiana on Monday August 29, 2005 and a few weeks later, on September 24, Hurricane Rita made landfall along the Louisiana and Texas border. The dire predictions from hundreds of academics, scientists, and state and local officials had come to fruition. As bad as the devastation was, it could have been much worse. In particular, if Katrina had traveled a few miles further west, the eye-wall and the most destructive segment of the hurricane (the eastern portion) would have scoured New Orleans much more brutally. Indeed, it is hard to fathom.

But Katrina and Rita impacted the physical coastline more powerfully than it would have in the mid-twentieth century. In decades past, similar hurricanes would have been weakened by a robust set of barrier islands and wetlands. Louisiana's wetland system, which comprised as much as 40% of the nation's wetlands during the middle of the twentieth century (Louisiana Department of Natural Resources 2004), weakens storms as they move inland and, thus, serve as a buffer for New Orleans as well as smaller towns and communities that dot the coastal region. However, since the 1950s Louisiana has been losing an average of 34 square miles of wetlands per year (LCA Fact Sheet 2004). Consequently, with less and less land to weaken them, storms like Katrina and Rita reap much more destruction than they would have in 1950.

A result of the damage incurred by these storms, especially that of Katrina and its subsequent torrent of media coverage, was that Louisiana's coastal land loss was brought

to the attention of the nation's leaders and citizens. Large-scale restoration proposals once thought too big to gain adequate funding seemed to gain new life. However, even though the hurricanes of 2005 brought necessary attention to the decimation of Louisiana's coast, restoration remains uncertain. Restoration involves rebuilding a vital ecosystem damaged by natural processes which is accelerated by human encroachment. True, coastal erosion from wave action and storms are primary natural causes, but these natural losses are exaggerated and quickened by human activities, mainly from levees and oil and gas industry activity. The leveeing of the Mississippi River has caused land loss, including subsidence, while the most significant increase in loss began in the 1950s with exploration in the region (LCA 2004). For decades, communities of south Louisiana have been clamoring for restoration support. As a result, there are some restoration projects in place, but these are relatively small-scale and piecemeal. More recently, the state has joined the chorus by mounting a national media campaign and lobbying effort, dubbed "America's Wetland: Campaign to Save Coastal Louisiana," to fund region wide restoration (America's Wetland 2006).

At this point, it is not known if any or what funding will be diverted from current restoration projects to assist in the rebuilding efforts of Gulf Coast communities. It certainly may be that the devastation wrought by Hurricanes Katrina and Rita will bring weight to the urgency and importance of Louisiana's coastal lands and compel the federal government to dedicate the needed resources to coastal restoration. Prior to Katrina and Rita, it seemed that the residents of Louisiana's coastal communities were skeptical of government and the possibility of any significant restoration. This skepticism carries over

into the aftermath, so coastal residents are probably crossing their fingers but not over confident.

Most residents of coastal Louisiana and all of the communities included in this study were substantially impacted by Hurricane Katrina. Some communities -- Lake Catherine, lower Plaquemines and eastern St. Bernard -- suffered total devastation. Residents of these three communities are all displaced, their homes and communities completely destroyed. The other communities -- Delcambre, south Terrebonne and Grand Isle -- suffered widespread damage but did not suffer total annihilation, and are now engaged in the slow rebuilding process. The residents of these communities have a long history in Louisiana's coast. They are deeply attached to place and have been calling for action as they have watched the erosion of their landscape.

The Call Before the Storm

The voices of the residents in this study send out a plea to alleviate the damage, to stop the bleeding. They cannot do it on their own. They speak with an air of urgency that exemplifies a fear of losing not just materiality, but identity. While analyzing the data, their voices, it was evident that they were calling for assistance. Yet now, in light of the storms, their call seems prophetic. As I will outline in the subsequent chapters, the meanings that respondents attribute to coastal land loss reflect their sense of self.[1] And their sense of self reflects their identification with place. That is, the landscape, with both its physical and social elements, is a primary realm through which the self comes to see itself, and consequently comprises a significant part of identity. Furthermore, the

[1] Meanings of coastal land loss are outlined in chapters four, five, and six. In depth exploration of these meanings is explored in chapter six.

processes that occur in the landscape, such as coastal land loss, impact identity. In short, place is an integral part of residents' identities.

While identity is more fixed than the self, both are fluid. The self is an ongoing conceptualization where meanings are negotiated and definitions change. Subsequently, when the self deals with consistent and unrelenting change, self-definitions, the components of identity, change.[2] The meanings that residents give to the disaster of coastal land loss are indicative of a self contextualized within a culture changing under the pressure of a mutating landscape but caught in a particular historical moment. The self is engaged in figuring out the meaning of the ongoing change, and as residents talk about land loss, they reveal an identity that is in question, tenuous. Pre-Katrina and Rita, the identity of many respondents was defined in terms of immediate jeopardy. Even then, identity was precarious. Then, as Brown and Perkins (1992) argue, Katrina and Rita must have yielded drastic changes to identity that often occur as the result of rapid onset disasters. In the wake of Hurricanes Katrina and Rita, there is no doubt that self-definitions were thrown into question.

However, prior to Katrina and Rita, when the interviews in this study were conducted, the meanings residents gave to place and coastal land loss were reflective of their identity or self-definitions.[3] While meanings varied, often within individual narratives, land loss always effected conceptions of place. In short, the unfolding disaster of land loss was mediating meanings of place as conceived through the self-definitions of the interviewed respondents (Greider and Garkovich 1994; Brown and Perkins 1992).

[2] A more thorough examination of the self and identity is given in chapter two.
[3] Chapter five and six explore how the meanings that the respondents give to coastal land loss are reflective of identity.

During narrative collection, residents conveyed self-definitions that were at best uncertain. It might seem that now, after Katrina, identity would be wholly dismantled. However, as Kimberly Solet, a reporter for *The Houma Courrier*, the primary newspaper of Terrebonne Parish, wrote to me in an e-mail on October 10, 2005, "as you know, because of their strength and determination, many bayou residents are already rebuilding." Residents' resolve has sustained community and their relationship with place for generations. With this in mind, it seems likely that determined rebuilding serves as a primary coping mechanism which functions as a staunch reassertion of identity through a reclamation of relationship with place. Yet both place and residents' relationship to it will mutate and adjust to the new reality.

While Katrina and Rita have definitely impacted the identity of millions, Louisiana's coastal land loss is and has been a personal issue that affects these respondents' sense of who they are. The event is not just an environmental disaster occurring where they live; it takes on many layers of meaning. One layer of meaning has to do with the fragility that the phenomena inflicts on identity. As place slowly disappears, residents experience an erosion of security as the places they knew intimately become strange. Identifying as a coastal resident of Louisiana means having a certain familiarity with the landscape, and when the landscape changes and becomes strange, then that self-definition no longer applies. Further exacerbating the fragility of identity is the symbolic loss that occurs with the physical loss of land. Childhood memories, familial connections, and significant associations with occupations are symbolized by place, and as the land disappears, identity becomes fragile due to the eradication of the physical places that were a part of its construction.

Residents' relationship to place is a salient part of identity. And the voices of the respondents' in this study convey an attachment integral to identity. From such a strong attachment and identification with place, damage to their environment becomes injury to the self. In short, metaphorically, residents say they are dying. This is evidenced by resident narratives in the analysis chapter. The peril that the self and identity face causes the event to be experienced through anxiousness, desperation, and vulnerability. The potential of the event means the possible death of an integral component of identity. Nevertheless, while Hurricanes Katrina and Rita quickly overcame large parcels of land and brought the possible ruination of southern Louisiana closer to a reality, many residents, even those of the most devastated communities, have launched a staunch effort to reestablish place and stave off that potential death of identity. The rest of this study establishes how residents of coastal Louisiana interpret the experience of losing the places in which they live.

Dissertation Chapters

Chapter 2, "Theories of Place, Attachment, and Environmental Change," the theory chapter, sets the theoretical basis for this study. First, the justification for this study is given, and I then move into a brief description of the disaster of coastal land loss. Not being trained in geology, I outline the geophysical forces underlying coastal land loss as best I can. The chapter then moves into a literature review of place attachment and environmental change. From here comes the theoretical basis for this study. I describe place attachment and its utility for explaining how communities formulate meanings and thus react to environmental change. The various literature is used to clarify conceptualization of the relationship between place attachment and identity.

Next, “Methods: Phenomenology, Narratives, and Place Attachment,” Chapter 3, explains the utility of a phenomenological perspective in describing residents’ understanding of coastal land loss. Phenomenology focuses on interpretation of experience. The chapter summarizes why a qualitative phenomenological approach is more appropriate than quantitative measures or other qualitative methods such as ethnography. Chapter three also outlines the development of this study from its inception as the first project of Dr. Shirley Laska’s Center for Hazards, Assessment, Response and Technology (CHART) at the University of New Orleans. The selection of communities, the sampling technique, an overview of the data, the interview guide and subsequent categories used in analysis are all described in detail. I then explain the analytical framework employed, interpretive phenomenological analysis (IPA) as the science of meaning and meaning making (Smith 2004). After validity and reliability of this approach is thoroughly explicated, I turn to a brief description of the histories of each of the communities chosen for the study. This historical overview sets the stage for analysis through a description of the differences between communities and highlighting of the similarities in landscape and environment which has helped to mold their social history. From here we can better understand how residents experience coastal land loss. This is the aim of phenomenology.

An overview of the findings is given in Chapter 4, “Findings Chapter: Resident’s General Perceptions of Coastal Land Loss.” Where and how often respondents broach the subject of land loss in a narrative about place is integral to establishing the salience of the issue for respondents. Thus, I present and describe where respondents first raised the topic and then how often by breaking narratives into thirds and showing where

respondents first spoke about land loss. This chapter also explores the frequency and pervasiveness of land loss in respondents' narratives. For example, if respondents raised the issue early in their interview and then spoke about it throughout their narrative then land loss was considered to be an especially significant feature of place for that resident. In addition, as another first phase of analysis, general themes that arose from the data are presented and described. These general themes or substantive units describe what respondents say about coastal land loss. For example, in their narratives respondents may emphasize land loss as a value laden political issue or a mere natural phenomena or an event that threatens the life of the community and individual. These general, substantive themes determine what respondents say about land loss yielding what it means for their place attachment constructs. Themes mediate their experience of this event.

Chapter 5, "Analysis Chapter: How Residents View Coastal Land Loss," engages an in-depth examination of respondents' understanding of the phenomena. Whereas Chapter 4 looks at where and what respondents say about the issue, chapter 5 focuses on *how* respondents speak about land loss, thus revealing the symbolic significance of the phenomena. Looking at how respondents talk about land loss reveals the meaning the event holds for them. As a result, we come to understand what it is like to experience the phenomena. I analyzed residents' passages about land loss for commonality and categorized their statements according to common themes. Borrowing from Creswell (1998), I call these themes "meaning units" that exemplify how residents characterize land loss. Meaning units are presented and explained in-depth using extensive data. This chapter is interpretive and idiographic. That is, it is idiographic in that residents communicated their intentions through rich descriptions of the data or meaning units, and

it is interpretive in that the meaning respondents are trying to convey is ciphered out. From a textual standpoint, this chapter is the most relevant in that it provides an extensive examination of the varying ways that respondents experience coastal land loss.

While the analysis chapter provides extensive examination, Chapter 6, "The Essential Experience of Coastal Land Loss," extracts the essence of what it is like to experience this environmental disaster. Chapter 6 searches for the core of respondents' accounts. Simply put, it aims to uncover the primary meaning residents intend. Certainly, there is wide variance in respondents' experiences. However, by trying to ascertain what respondents are essentially saying, we can understand more fully what Louisiana's coastal residents are experiencing and thereby draw correlations with our own, seemingly unrelated, experiences. In short, by moving toward the particular we also move closer to the universal.

This insight allows us to understand how their experiences may inform our own and reveals to us how we might improve upon restoration projects, policy, and coastal community organizations which might anticipate future needs in other communities. Concluding this study, Chapter 7, "Saving Their Coast: Residents and Their Environment," addresses not only these issues but the restoration process, in general. In this chapter, residents' experience of coastal land loss and the subsequent impact to identity is considered in the context of what that may mean for long-term coastal restoration. I conclude that it is imperative for residents and their communities to play a vital role in the restoration process, rather than rely on current restoration traditions which is causing communities such frustration.

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Chapter 2 – Theories of Place, Attachment, and Environmental Change

Introduction

This study explores how people think about environmental change. Specifically, how do residents in coastal communities of Louisiana frame the changes occurring in their environment – land loss? The answer to this question will highlight the thematic elements that arise out of narratives about place. Communities in six coastal Louisiana parishes (counties) are included: Jefferson, St Bernard, Terrebonne, Plaquemines, Orleans, and Iberia Parishes. The communities within these parishes have long histories with some existing more than two centuries. Many of the communities have always faced change due to hurricanes, development, and erosion. Even more, coastal land loss has been a major factor for south Louisiana for about the last 50 years. Prior to Hurricanes Katrina and Rita these communities were faced with great environmental change that now, after these storms, seems more glaring. This change is due to coastal land loss brought on by the slow onset disaster of erosion and land subsidence that is exacerbated by the fast onset disasters of hurricanes and tropical storms.

In late August of 2005, Hurricane Katrina and then Hurricane Rita in early September capitalized on the effects of coastal land loss. The storms' impacts were made all the more severe due to more than 1.2 million acres of land lost since the 1930s (LCA 2004). Louisiana's coastal wetlands and barrier islands had served not only as a vital ecosystem and resource base for the nation, but also as a buffer which weakened storms as they move inland. The land slowly breaks down hurricanes thereby reducing the impact on more inland communities and urban areas like New Orleans. However, Katrina

and Rita erased large portions of land in an instant. Now, Louisiana's coast is more vulnerable to future storms and increased slow-onset land loss.

The slow-onset disaster of coastal land loss and its relation to place attachment is the primary concern of this research. Prior to Katrina and Rita, when this research took place, issues of environmental change in the region were increasingly coming into the national spotlight and coastal restoration projects were being *proposed* on a scale heretofore unprecedented. Now, in the 'post-Katrina era' Louisiana's land loss is in the national spotlight, yet due to the massive rebuilding efforts that will take place along the Gulf Coast, it remains to be seen what effort rebuilding the coastal wetlands will receive. What seems certain is that coastal restoration will receive more attention in the post-Katrina era. Because the ecosystem includes humans, the social sciences must play a role if efforts are to be successful and sustainable. The social sciences can shed light on how residents understand the changes occurring in the place they live and what that may mean for the role the communities themselves will play in policy and restoration projects. In this regard, the nature of residents' attachment to place is important in how and what restoration decisions are made.

Place attachment is a useful tool for public land management. Considering what people think and feel is most important about place can inform us about the best way to use that place. Now more than ever, but not dissimilar to other parts of the US, Louisiana has its share of disputes over land use. Considering the tenuous nature of Louisiana's coastal ecosystem, land use decisions now appear more important in Louisiana than in relatively unthreatened areas. Disputes over land use usually arise over different meanings of a place: What does the place represent? How should it be used and by

whom? (Stedman 2003). The nature of residents' place attachment explored in this project can assist managers who should consider "public areas in terms of the overall community rather than parcels of land disconnected from the community" (Clark and Stein 2003, p. 875). Residents, who from a human standpoint stand to lose the most from coastal land loss, also benefit from exploration into the nature of their attachment as a means of helping them form their 'voice.' In short, place attachment can be useful to land use managers by using it to assess how to best address a community with land use proposals, as well as, helping a community to articulate desires for their community.

Local knowledge informs and shapes the adjustments residents make to the varying environmental changes that occur to place. As changes occur, the residents' understanding of particular alterations shapes their responsive action. Their responses and adaptations, if adequate, are the basics of sustainability. Humans have adjusted to environmental reordering throughout their existence (Tuan 1974) and likewise the residents of the coastal communities contained within this research have been adapting to change for generations. Reactions to environmental change result in a communal knowledge of how to live in and sustain the community. This community knowledge of sustainable practices shapes the meanings residents give to place as well as themselves (Newport and Jawahar 2003). The subjective meanings residents give themselves and place informs their actions towards place and is indicative of an indigenous and natural phenomenological philosophy.

To understand the meanings residents give land loss, we must first gain an understanding of the phenomena for ourselves. Therefore, in this chapter I will first give a brief overview of coastal land loss in Louisiana. To gain insight into how residents

might interpret this phenomena in relation to place, I will then follow with a theoretical discussion of place where the utility of examining the interaction between physical-natural environments and symbolic meanings is summarized.

Land Loss in Coastal Louisiana

Louisiana currently has 30%[4] of the nation's wetlands but accrues 90% of the country's wetland loss (Louisiana Coastal Area Ecosystem Restoration study (LCA) 2004; Louisiana Dept.of Natural Resources 2004). Since the turn of the twentieth century Louisiana has lost approximately 30% of its wetlands at an average rate of 34 square miles per year since the 1950s (Farber 1996; U.S. Dept. of Interior 1994; LCA 2004). Computer models estimate that an acre of land is lost every 15 minutes (LCA 2004; American Planning Association 1997). Considering current land loss dynamics and restoration efforts, the loss over the next 50 years is expected to be 500 square miles (Barras et al. 2003; LA Dept. of Natural Resources 2004; USGS 2005).

Estimates by the U.S. Geological Survey (2005) reveal "approximately 100 square miles of wetlands in the Mississippi deltaic plain were transformed into shallow open water by the hurricanes" (Working Group for Post-Hurricane Planning for the Louisiana Coast p. 13, 2006). Open water now appears where there once was emergent marsh, areas of unconsolidated shoreline, and floating aquatic vegetation. However, the scientists at the Working Group for Post-Hurricane Planning for the Louisiana Coast state that "it is premature to conclude that these wetland losses are permanent because re-growth from roots and rhizomes and re-vegetation of mudflats may occur during the next

[4] In 1950 Louisiana held 40% of the nation's wetlands. Substantial land loss has lead to the current level of 30% (LDNR 2004). It also should be noted that these estimates are prior to Hurricanes Katrina and Rita in late summer 2005. While it is doubtful that the storms significantly affected these bottom line estimates, significant land loss was incurred. NOAA estimates that 935 square miles of land was lost to open water by Hurricane Katrina (http://www.csc.noaa.gov/crs/lca/katrina/).

growing season or two, as was observed after Hurricane Andrew in 1992" (The Working Group… p. 13, 2006). While exact loss is unclear, it is certain that there is significant land loss as a result of the storms.

In addition to storms, human action to the environment is a major cause of land loss. A century ago the logging industry in Louisiana boomed as cypress was promoted as a building material (Gramling and Hagelman 2004) leaving cypress stumps to dot the backlands as the legacy of clear-cutting (Gramling and Hagelman 2004). The wide, deep roots of these trees no longer acted to hold the soil together. At about the same time as the logging boom, levees were built around the Mississippi River to limit flooding of populated and agricultural areas and to support interests such as navigation (LCA 2004). As beneficial to the local economy as this may have been, the levees also eliminated the seasonal flooding that naturally replenished the sediment deposits that built the Mississippi Delta. The natural subsidence that occurs from the loss of sediment deposits has since gone unchecked (Reed and Wilson 2004).

Along with leveeing the Mississippi River and cypress logging another resource extraction activity contributes to the state's land loss. The oil and gas industry was welcomed into Louisiana as a sort of economic savior beginning in the 1930s. There were unintended consequences resulting from mobile drilling rigs that left wide channels from canals that were dug for access, exploration, transportation and the laying of pipelines. An estimated 9,300 miles of pipeline zigzag across Louisiana's coastal wetlands (LCA 2004). These canals and channels let saltwater from the Gulf of Mexico into freshwater marshes, thus destroying vegetation (LCA 2004). Researchers generally agree that these canals are a major cause of wetland depletion and account for as much as 69% of all

wetland loss (Reed and Wilson 2004; Hecht 1990). In addition, runoff and pollution from exploration and extraction make the problem worse by killing vegetation, inducing chemical transformations, and altering sediment transport and the migration of organisms (LCA 2004; Hecht 1990).

Canals also create "spoil banks" – the dredged material placed adjacent to the canal. These banks create land much higher than natural marsh surface and alter the flow of water across wetlands: "Canal dredging, (most of which occurred between 1950 and 1980 – LCA 2004) altered salinity gradients and patterns of water and sediment flow through marshes and not only directly changed land to open water, and marsh to upland, but also indirectly changed processes essential to a healthy coastal ecosystem" (Reed and Wilson 2004).

Reed and Wilson (2004) state that natural forces of land loss did not change during the mid and late 20th century but that the accelerated loss during this time was due to human action upon the environment. Scientists concur that a major cause of all land loss is human induced (Barras et al. 2003; Penland, Wayne, Britsch, and Williams 2002). Natural factors include wave action, storm surge, eustatic sea-level rise, and geological compaction, which have not significantly changed during the past century (Reed and Wilson 2004). Most of Louisiana's land loss occurs inland as wetlands turn into open water. This differs from typical coastal loss that occurs at the shore such as the erosion that coastal California experiences (Penland et al. 2002; Hecht 1990). In addition, current forms of oil and gas mining is being linked to continual loss. Morton and colleagues' (2002; 2003) continuing research for the USGS find more and more correlation between the extraction of oil and gas and land subsidence.

Louisiana's loss of coast continues, but unlike in the past, not without acknowledgment by industry. Although seemingly not aware of the full ecological importance of this ecosystem, private industry and government are sensitive to the region's economic value. One hundred million tons of cargo are shipped annually through the waterways. The region is home to a fishing industry that contributes $2.8 billion a year to the state and national economies. Thirty-four percent of the country's natural gas and 29% of the nation's crude oil supply comes through or from south Louisiana (LCA 2004). Government and private industry have noticed the economic importance of the region and over the last decade, conservation and restoration plans have been proposed at an unprecedented rate (Reed and Wilson 2004; LCA 2004).

For urban centers like New Orleans, the coastal marshes and wetlands once offered protection from tropical storms and hurricanes (Bartell et al. 2004). A storm tide pushed inland by hurricanes falls a foot for every 3 miles of marsh it must cross (LCA 2004). But as the land disappears these storms retain much of their strength, moving further inland and inundating interior wetlands with saltwater from the Gulf of Mexico (LCA 2004). In some places New Orleans is 17 feet below sea level (LCA 2004). Hurricane Katrina and then Rita exploited New Orleans' vulnerability – its position below sea-level and its unprotected status due to cumulative land loss. Katrina and Rita have further exacerbated land loss by overcoming already weakened brackish wetlands with saltwater from the Gulf of Mexico. Indeed, NOAA (2005), USGS (2005) and the Working Group for Post-Hurricane Planning for the Louisiana Coast (2006) report that the storms eradicated nearly 100 square miles of coast. NOAA in particular conducted an "immediate post-storm assessment" of land loss most likely produced by the storm using

their coastal change analysis program (C-CAP) (NOAA Coastal Services Center 2005). Comparing post-storm data to data collected in 2001 as part of C-CAP, NOAA acknowledges that some of the land loss simply occurred over the four years, but most was due to Hurricane Katrina (NOAA Coastal Services Center 2005). What this means for New Orleans is that a category three storm, as was Katrina at landfall, has a greater impact because land had disappeared. In other words, the strength of a storm may be the same across time, but the increasing loss of coastal land means the impact will be greater.

However, prior to Katrina and Rita, coastal land loss had actually been on the decline in recent years. This deceleration of land loss may seem like a bit of good news, but this may be deceptive. David Chambers of the Louisiana Division of Environmental Quality says that decreasing loss is because the most vulnerable land is "gone, and there's nothing left to lose" (Hecht 1990; p. 40; Reed and Wilson 2004; Morton et al. 2002). It seems that R.A. Morton and colleagues' (2002) theory of diminishing returns is in play here. Most of the inland oil and gas has already been removed. Thus, fewer faulting events are occurring. These faulting events take place when existing geological faults are activated by lower underground pressure caused by the withdrawal of oil and gas. However, the Army Corps of Engineers report in the Louisiana Coastal Area Ecosystem Restoration (LCA 2004) that inland areas will continue to succumb to saltwater intrusion through a combination of storm surges, continued resource extractive activities, and subsidence.

The post-Katrina era presents a historic moment for acting; implementing projects can stave off further loss and replenish elements of the ecosystem (Morton et al. 2002; 2003; Reed and Wilson 2004). In rebuilding the wetlands, one of the top priorities is to

reconnect the river system to the marshes (Reed and Wilson 2004). The state is looking for substantial assistance and has developed a large scale plan to make their case at the federal level (LCA 2004). In 2004, the LCA or Louisiana Coastal Area Ecosystem Restoration plan (LCA 2004) was released by the U.S. Army Corps of Engineers and called for an ecosystem wide restoration project costing $14 billion. In a separate piece of coastal restoration legislation the Bush administration recommended $1.9 billion to focus on implementing 5 projects and studying 10 more over the next 10 years (Schleifstein, *The Times Picayune* 7/31/05). Late July 2005 brought slight relief for LCA proponents. The 2006 US Energy Appropriations Bill allows Louisiana to collect revenue from oil extraction occurring off its coast, revenue that the state was not allowed in the past. Louisiana, prior to Katrina and Rita, was to collect $540 million for restoration projects (Schleifstein, *The Times Picayune* 7/31/05). The five major projects that this collective funding would support are acknowledged by all involved as only a starting point. Projects include work along the Mississippi River Gulf Outlet, efforts for shoring up coastal Jefferson and Lafourche parishes, and the studying of a larger plan to redesign the mouth of the Mississippi River (LCA 2004). However, these projects meet with continued resistance.[5]

However, coastal scientists and environmentalists say the proposal is jeopardized by different land use decisions (Schleifstein, *The Times Picayune* 7/18/04). For instance, pre-Katrina and Rita, activities that undermined coastal restoration were allowed to continue largely

[5] These projects continue to meet with resistance. In October of 2006 the Coastal Wetlands Planning, Protection and Restoration Act Task Force – for the second time in a year – rejected continued funding for a project to divert Mississippi River water into Bayou Lafourche and build wetlands. Funding was rejected under criticism from representatives of the US Army Corps of Engineers (Wold, *The Advocate* 10/19/06).

unabated in southeast Louisiana. State and federal agencies continued to approve development for business, homes and recreational camps as well as other activities such as logging that intensified land loss in the very areas that the projects were designed to restore. John Day, chairman of the National Technical Review Committee, a group of scientists providing an independent review of the restoration program, says that the LCA proposal would not provide any significant restoration (Schleifstein, *The Times Picayune* 7/18/04). He said the projects that have the greatest chance of reversing land loss were left out of the proposal. Day added, "if Louisiana is serious about putting large resources into coastal restoration, it can't go around destroying the very resources it says it wants to preserve" (Schleifstein, *The Times Picayune* 7/18/04). Col. Peter Rowan, chief of engineers in the Army Corps of Engineers' New Orleans regional office, provided the counterpoint saying "this has got to be a balanced process. Why restore the coast if people can't live and work in it?" (Schleifstein, *The Times Picayune* 7/18/04). These differences in what coastal restoration is and how it should proceed highlight an ambiguous future for restoration of Louisiana's coast.

The post-Katrina era brings new awareness and consideration; however, questions about how much will change appear as uncertain as ever. Like most issues in our society, Louisiana's coastal land loss is a problem that is not easily rectified because it is multi-faceted and many people see land loss causes and solutions quite differently. Although land loss in Louisiana is, in large part, tied to economic needs and political decisions, these choices take on varying shades according to the perspectives of scientists, engineers, environmental activists, politicians and business leaders, and those favored by the media. What is left out of this milieu are the views of the region's residents.

Residents'voices are often overpowered and get lost under the weight of the economic, political and scientific discourse. Yet, in order for us to understand what residents have to say about their experience of land loss, we must grasp what that experience is.

The Place of Louisiana's Oil and Gas Economy and Coastal Land Loss

This section is an exemplar used to show the contradictions and ambiguities in a place as communities come to decisions about the use of place. The entry of the oil and gas industry into Louisiana provides a partial explanation to how coastal residents experience coastal land loss. The oil and gas industry is a large part of Louisiana's economy and it is also an activity immersed in the coastal wetlands making it a part of how residents experience the phenomena. Going back almost a century and contributing greatly to land loss, the industry serves as a key avenue through which residents experience their world. Freudenberg and Gramling's (1994) work on the dichotomous perceptions between Louisianians and Californians on offshore oil and gas drilling provide the historical, biophysical and social backdrop for which drilling was welcomed in Louisiana. Their analysis is useful here not only because oil and gas exploration plays a significant role in Louisiana's land loss but also because from an economic standpoint that oil and gas exploration has shaped the symbolic meaning residents have attached to place prior to and now in the midst of great coastal land loss.

Historically, Louisiana's oil development arose during the 1930s and 1940s, a period that was marked by an "unprecedented faith in technology nationwide" (Freudenberg and Gramling 1994, p. 75). Realizations of environmental destruction due to unabated technological expansion was still decades away. Especially in an area such as coastal Louisiana where the only other major industry was the harsh lifestyle of the

fisheries, industrialization and its promises of a better life were welcomed. Along with its gradual growth, the industry further established itself in the region by involving locals which gave residents a sense of pride during an age when industrialization and technological advancement were signs of great progress.

In addition to the oil industry's economic influence, residents' perceptions of place has been shaped by the biophysical environment. Most of Louisiana's coastal residents live somewhat inland; that is, they don't live directly on the coast as is likely of many other coastal areas in the US. Most coastal residents of the country can drive along the coast and view it directly. As a result, they view the coast as "both a resource and important recreational feature" (Freudenberg and Gramling 1994). On the other hand, most people don't 'see' the actual coast of Louisiana because the marshland hides it from view. There are few beaches and the ecosystem can be harsh to humans with "more mosquitos and alligators than spectacular visual imagery" (Freudenberg and Gramling 1994, p. 79). All in all, Louisiana's coastline, prior to the onset of coastal land loss, was low in social salience due, in part, to its inaccessibility to most of the land-based population (Freudenberg and Gramling 1994, p. 88).

Along with the historical and topographical components noted above, social elements in Louisiana's population fostered the fairly easy acceptance of oil and gas activity. First, Louisiana's consistently low educational levels, especially low in rural coastal areas during the 1940s, made entry easier for a large new industry promising to raise the standard of living. Also, there was little conflict or competition between the oil industry and the fishing industry, the other major extractive activity in the region. By contrast, when examining why Californians rejected and Louisianians accepted the oil

and gas industry, Freudenberg and Gramling (1994) noted that those residents involved in an extractive industry such as fishing, as opposed to those involved in manufacturing or service industries, are less likely to object to a new extractive industry such as oil and gas which does not seem to compete with the traditional activity. The likelihood of opposition in coastal Louisiana was further reduced because of the abundance of marshland. The marsh provided adequate harbor space for both industries as well as the unintended consequence that the oil rigs came to serve as artificial reefs around which fish gathered, natural reefs which Louisiana's coastal waters lacked (Freudenberg and Gramling 1994). A third social factor encouraging the acceptance of the oil and gas industry into Louisiana was interaction patterns. While many along the coast, and the state for that matter, did work in the industry, people who didn't were very likely to have friends and family who did, and still do, and this can be expected to affect their attitudes (Freudenberg and Gramling 1994).

Not only did the slow influx of the industry provide jobs, but it brought an incredible economic boom to the coastal economy during the 1970s and early 1980s (Freudenberg and Gramling 1994). This, coupled with the relatively small number of environmental accidents served to foster the perception that oil and gas presented low levels of risk.

The historical, biophysical, and social components noted above not only explain the ease of acceptance of the oil and gas industry into coastal Louisiana but also explain, in part, how those residents conceive of place. The favorable reception of oil and gas was influenced by the above factors that were shaped by the reciprocal social construction of these characteristics. These factors were a sort of feedback loop of mutually reinforcing

narratives between the oil industry and residents where the industry did not appear to present a risk and, in fact, brought visible gains to a place that was in need and held a ready-made acceptance of industry. The oil and gas industry, while not static, is a fairly fixed component of place and its evolution in Louisiana helps to explain how residents welcomed an industry that they would later learn produced a large negative environmental impact. Knowing the social construction of the oil and gas industry in coastal Louisiana helps us to better understand residents' current conception of place, their attachment to it, and the damage that emerged.

Background

There is a long history between place and coastal Louisianians. Humans have been a part of the coastal ecosystem for hundreds of years. Today, they continue to be active participants and their actions are predicated on past and current meanings they give to the ecosystem. These meanings are often indicative of the social attachment residents have in the place they live.

Theorists argue over whether people are attached primarily to the physical or social aspects of place. Much of this debate rests on how place is conceived. In this work, the argument that the physical, holding inherent meaning, primarily determines how we attach to place (Stedman 2002) is critiqued. Many theorists reduce place attachment to a dichotomy determined either by the social or the physical (Clark and Stein 2003; Stedman 2003, 2002; Hidalgo and Hernandez 2001; Cantrill 1998). However, a common position argues that the social and physical are symbiotically connected within an overall social milieu which creates meaning (Kroll-Smith and Couch 1993) to which we become attached. In an attempt to provide some explanation on the matter, a review of the

literature that finds significant effects on place attachment is presented. The theoretical debate over place attachment – social or physical – is then outlined. Moving toward what further clarification that place attachment is social yet mediated by the physical, the concept is placed within a larger social framework where the physical and social are not so easily separated.

Literature on Place Attachment

Place consists of the physical and social environments and the meanings we give to them (Tuan 1976). Meanings conferred upon place consist of our perceptions, values and attitudes, a micro view, generated from a larger worldview or macro cultural framework (Tuan 1976). Considering this conception of place, how do we develop an attachment to place? And what does that mean for how we interact with places?

But first, clarification of place attachment is necessary. Place attachment appears as a contested concept in the research literature and there is wide difference in how it is theorized and measured. For example, Stedman (2002) stands out as one of the most vocal critics in current analyses of place attachment. He argues that the physical environment has inherent meaning that plays a causal role in our attachments to place (Stedman 2002). However, I would argue that this conception fails to acknowledge that it is our historical and cultural meanings that constitute the essence to which we are likely to become attached. Place, in and of itself, does not determine our attachment as this 'inherent meaning to the physical' theory would have us believe. However, the argument (Stedman 2002) begins from substantiated ground by justifiably differentiating between meaning and attachment.

In other words, Stedman (2002) argues that meaning and attachment are empirically separable items that have not been treated as such in place attachment studies. Just because we give meaning to place does not mean we are attached to place. Meanings are descriptive and not necessarily indicative of attachment and thus meanings convey *what* a place means rather than *how much* it means (Stedman 2002, p.565). Indeed, discerning just what is place attachment is a current dilemma. Studies of place and place attachment represent an evolving field of research and, typical of a pioneering phase of theoretical development, lack some of the structures common to more well defined perspectives (Katlenborn and Bjerke 2002).

Attempting to form a more robust theory of place attachment, Stedman (2003) contends that there is too much focus on places as socially constructed phenomena. The assertion claims that the physical features of place determine its social construction. In his study of the effect of shoreline development on place attachment in the Northern Highlands Lake District of Wisconsin, Stedman (2003) found that more structural development shifts the meaning of attachment from 'escape from civilization' to 'neighborhood place.' As such, increased urban development does not effect attachment directly, but physical attributes, in this case development, do impact the meanings we give to place. Stedman (2003) states that "although social constructions are important, they hardly arise out of thin air: The local environment sets bounds and gives form to these constructions" (Stedman 2003, p. 671). While the physical does shape the meanings we give to place, those meanings are not inherent to the physical but are based on socio-historical meanings that change over time.

The “inherent meaning of the physical” argument is a response to most studies of place which attempt to distinguish between what people are most attached to – the physical or the social (Clark and Stein 2003; Hidalgo and Hernandez 2001; Cantrill 1998). Seeking to distinguish what this dichotomy of attachment might mean for land use planning, Clark and Stein (2003) surveyed two Florida communities, one rural and homogeneous and the other rapidly growing and heterogeneous. Clark and Stein (2003) sought to understand whether local residents involved in land use management were more oriented to place or community. Their study found that most residents identified with the social and cultural elements more than the physical-natural and that these socio-cultural meanings shaped the meanings given to place (Clark and Stein 2003, p. 874). It is common that people identify more with the social elements of place (Clark and Stein 2003; Hidalgo and Hernandez 2001; Cantrill 1998), but research findings of this nature give the impression of dismissing any influence of the physical.

As discussed above, Stedman (2003) suggests that analysis downplaying the importance of the physical-natural as a determinant of attachment is deceptive. Tuan (1974) arrives at a middle ground advising that the meaning of the physical-natural develops through a social process; that is, when we negotiate meaning to be conferred upon place it occurs socially. Even if constructing meaning occurs within the solitude of our own minds, the meaning of place is construed through a common cultural framework of social significance that becomes imbued with our particular experiences (Tuan 1974). Therefore, meaning given to the physical has a social basis that may lead to a stronger identification with the physical elements of place; in other words, meaning construction is a social process mediated by the physical. For example, most of us think of mountain

ranges as places of pristine beauty. Even though the symbolic meaning of the physical elements of a mountain range are equated with beauty and may seem to be 'a-social', it does have a social basis. This conception developed through a historical and cultural framework (Tuan 1974). Most people are likely to define mountains as beautiful and express attachment through elements of spirituality, tranquility and/or recreation precisely because mountains have shared social meaning. In this sense, the mountains themselves are integral to a place attachment construct, but the individual identifies with the physical through social meanings that might lead a researcher to believe that the essence of one's attachment is solely social while discounting the interactive meaning-making process of the physical and social. Thus, the physical is important because of the socially constructed meaning that underlies it.

Likewise, stating that the social (some level of interaction) is more important than the physical can be misleading. The physical may play a prominent role in attachment but researchers may mistake that attachment as being primarily social due to the fact that we relate to the physical in a social manner whether that be through discourse or direct experience. At the same time, to say the physical plays a determinant role in place attachment is misleading for this same reason. The physical determines attachment because of particular socially constructed meaning for the physical and this may be transmitted in a way that appears to be socially based because of the social method by which all human meaning is created. In short, we may play up or down the subjective importance of the physical-natural in our attachments to place but only because the primary way we experience the world is social.

However, the physical-natural does come to the fore of attachment in many instances. Clark and Stein (2003) found that many stakeholders were oriented to the physical-natural aspects of place and chose to live in a locale due to its connection with nearby natural areas. Familiarity and attachment with these natural areas made it more likely that they would demand a greater say in the specifics of managing the area (Clark and Stein 2003). Although this appears to indicate a physical determination of place attachment, it is the socially constructed meaning of these areas that plays the salient role. Noting the lack of reference to the physical dimension in many operationalizations of place, Hidalgo and Hernandez (2001) incorporate the physical into a behavioral measurement of attachment. Adding to the popular definition of place attachment as an affective bond between person and a specific place, they analytically include the behavioral dimension created by the individual's physical "closeness" to the attached place (Hidalgo and Hernandez 2001). Social attachment was greatest across all dimensions, but subjects were attached to the social aspects of the home and the physical aspects of the city (Hidalgo and Hernandez 2001). Alluding to a physical determination of place attachment, they found that attachment develops in different degrees for different spatial ranges – higher attachment to home and lesser attachment to city. While true that the physical informs our attachment, it is the social that gives essential meaning to the physical which then informs the elements of our attachments. The confluence of the social and the physical of place attachment, but where the social informs both, is evident here. First, our physical experience with place shapes, but does not necessarily determine our attachment. If we have less direct experience with a place, we are likely to be less

attached; however, affective meanings themselves remain socially constructed.[6] Second, it appears that social constructions of what the home is (a place of refuge and emotional support) spurs meanings with strong social attachment. Third, physical elements of the city can influence attachment in at least two ways that are socially based. For one, people might be attached to physical structures in the city, but these attachments are due to symbolic meaning that a structure may have. The Statue of Liberty or a local coffee shop are examples of physical urban attachment. The source meanings of attachment for these structures are social. However, the way we create meanings for these places through cognitive mapping or our own physical activity can lead us to identify with them in a physical sense. In addition, the city as a physical locale is likely to prompt place identification and lead to a stronger physical attachment than that of the home.

Place identification is a socially constructed component of identity where a person may identify himself as, say, a New Yorker although he may not feel attached to New York City. Still, he might identify as a New Yorker due to collective social constructions for how he communicates elements of identity to others. In short, the physical nature of the city as a place of identification is a social construction. As Hidalgo and Hernandez (2001) point out, when we form an attachment to place the social and the physical "generally come together, and become a general affective feeling toward the place of residence, in its physical as well as its social dimension" (p. 279).

To be sure, physical elements do shape how we construct meaning and distinguishing how the physical informs our attachments is important. The meanings that we have historically constructed and continue to construct for places give symbolic form

[6] Attachment can occur through non-physical means. For example, someone may become deeply attached to a rainforest through activist activities without ever visiting the place.

to the physical. It is from here that the physical sets the bounds that shape the meanings we confer upon place. Tuan (1974) shows how the landscapes of different places determine the way our perceptual senses develop and in turn how this helps to shape the meanings we give to place. However, those meanings are given impression in a social context. Tuan (1974), through historical analysis, shows how specific mountain ranges have changed meaning from places of foreboding danger to places of spirituality, absolute beauty, and adventure. This is not to favor the social over the physical in an either/or fashion, only to say that meaning is not inherent to the physical. So it appears that elucidation of place attachment is necessary because clarification of how the formation of attachment and its physical and social components takes place holds importance not only for how we think about place, but for what we as communities and societies do to and in place. The following section shows the interconnections of the social and physical elements that make up a continuously shifting attachment to place.

Attachment, Changes to Place, and Behavior

Because place attachment theory is used to predict environmental values and has the very real implications for how land is used, refinement of theory and measurement is important. In spite of the poor predictability of both socio-demographics as indicators of different environmental attitudes and measuring use frequency to gauge attachment, theoreticians continue to use these items to explain attitudes and level of attachment. However, in the case of measuring environmental valuation, place attachment has proven to be a healthier indicator of environmental attitudes than socio-demographics in that one's attachment to a place can better predict environmental valuation than age, race, or

gender (Vorkinn and Riese 2001; Hidalgo and Hernandez 2001).[7] And while frequency of use, in and of itself, has been found to be a poor measure of attachment, high levels of direct experience with a place and the perception that a place is under threat can increase feelings of attachment (Katlenborn and Williams 2002).[8] The fact that one's attachment is heightened due to a threat and thus attachment becomes indicative of environmental values suggests that attachment to place may be a component of identity. Indeed, more scholars are examining place attachment as being related to place identity where the physical and social interconnections of place are considered. These researchers also

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[7] Socio-demographics including such factors as class, race/ethnicity, gender, and age tend to be less precise predictors of environmental values. Place attachment has been found to be a much better predictor of environmental valuation (Vorkinn and Riese 2001; Hidalgo and Hernandez 2001). Vorkinn and Riese (2001), looking at attitudes toward a proposed hydropower development in a Norway community, found that place attachment predicted attitudes toward the development better than socio-demographics. Citing Brown and Perkins' (1992) assertion that people are largely unaware of the level of their attachment to place until an environmental disruption forces acknowledgment, Vorkinn and Riese (2001) claim that proposed environmental disruptions force an awareness and accentuation of attachment.
While socio-demographics may provide insight into the different intricacies of meaning that are conferred upon place, there is likely a common framework of meaning from which we develop place attachment. Common meanings we give to places like the home are likely to trump class, race, gender and cultural variations when place is significantly disrupted (Tuan 1974). Yet differences like gender do shed light on some variance in attachment and meaning that help explain such things as who stays and who leaves place. Studies have found that females are more likely to feel restricted and constrained in rural places and, thus, places take on gendered meanings. In studying rural adolescents and young adults' attitudes about their communities, Gledinning, Nuttall, Hendry, Kloep and Wood (2003) found that young women and men were likely to see rural places as "good places to live" but young women were more likely to see rural communities as intrusive and constraining (Glendinning et al. 2003). Young people in general thought that rural communities offered them few opportunities but were good places to be an adult (Glendinning et al. 2003). This mattered more for young females than males. Rural communities, having more homogenized human activity than urban areas and more likely to be traditionally and associatively male, may limit the roles of women.
The restrictions that women may feel in rural areas produces gendered social constructions of place. Pettersen (2000) noted the changing nature of opportunities in rural fishing communities and the constraints that were more strongly felt by women. As fishing grew more professionalized it became less a "way of life" based on family and household and developed into more of a large scale industry based on formal contractual relations. For men, this meant more challenging opportunities; however, for women this meant exclusion from a place-linked industry that previously was family based (Pettersen 2000). In these studies on gender the women were more likely to consider leaving. Feeling constrained by what one can do in a place might affect the nature of one's attachment and the quality and frequency of their interactions with a place.

[8] Vorkinn and Riese (2001) found that high levels of use increased attachment as well as opposition to change that they perceived as negative. People attached to specific areas, as measured through use, that would be affected by a proposed hydropower plant were more likely to oppose it while people attached to the municipality were more likely to support the proposed plant.

realize the malleable nature of place attachment and what form attachment takes may rest on situations such as the historical moment and who has the power to influence perceptions (Brown, Reed Harris 2002; Katlenborn and Williams 2002; Katlenborn and Bjerke 2002; Bonaiuto, Carrus, Martorella and Bonnes 2002; Alkon 2004).[9]

[9] In studying the level of attachment as a determinant of priorities among locals and seasonal residents (tourists) in Femundsmarka National Park in Norway, Katlenborn and Williams (2002) define place attachment as a psychological variable where place attachment is more closely associated with place identity. In Katlenborn and Williams' (2002) study, both locals and tourists with high degrees of attachment gave priority to natural landscape features and socio-cultural elements. Locals and tourists gave significantly less priority to more use-oriented features of land management (hunting, fishing, agriculture) with the least desirable being commercial tourism. This is different from previous studies which found that tourists value the natural more than the social while longtime residents value the social over the natural (Cantrill 1998).
Brown et al. (2002) also observed the link between valuation and interaction with place, and they looked at the implications of environmental values for planning in Chugach National Forest, Alaska. They found that the closer people were to the forest the higher their valuation which translated into human use of the landscape (recreation, aesthetic and therapeutic values), and the further away individuals were the more likely they were to convey passive values (intrinsic, future and life-sustaining values) even though their valuation of the area remained relatively high. Both Brown et al. (2002) and Katlenborn and Williams' (2002) studies suggest that the social and physical-natural experiences of place work in concert and perhaps inform one another to produce levels of attachment that affect land management preferences.
Building on the link between attachment and environment, Katlenbnorn and Bjerke (2002) studied Roros, Norway, the same region as Femundsmarka. Roros has a long cultural history based on diversified resource extraction and at the time of the study faced landscape transformation from development. Katlenborn and Bjerke (2002) found that strength of place attachment predicted landscape preference, and strongly attached subjects preferred the more natural landscapes of their region. Katlenborn and Bjerke (2002) claimed that place attachment is a personally experienced social construction made up of a range of environmental meanings that collectively form an attachment to place (p. 394).
Katlenborn and Bjerke's (2002) subjects see development as a threat while Bonaiuto, Carrus, Martorella and Bonnes' (2002) respondents view proposed natural areas as hazardous in the case of two proposed Italian national parks. The researchers acknowledge that how environmental transformations are framed matters since change can "affect people's identity and affective relations with places because of the different and often conflicting decision-making levels involved, and because of the strong group and 'territorial' implications of such decision making processes" (Bonaiuto et al. 2002, p. 636). Believing they would lose something substantial, many locals in Bonaiuto's et al. (2002) study viewed the park as a threat to business and economic activities. Bonaiuto et al. (2002) note that if changes are perceived as threats by residents and they feel a loss of control, then an increased sense of place attachment is likely. The other studies mentioned here reflect this malleability.
The historical moment plays a role in what characteristics of place are most relevant. In the context of place disputes, particular characteristics of place are highlighted in response to challenges using opposing viewpoints. Alkon (2004) shows that when changes to place are proposed, structural forces play a role in how stories about place arise and are contested. For instance, a sense of loss becomes a possible target for those seeking to influence the debate in a particular direction (Alkon 2004). In other words, the path of a land use debate can be influenced by steering the argument toward a sense of loss for those who hold an attachment to place. Thinking about a contemporary example, traditional western ideas of the natural world are being contested using both local and global notions of identity. The normalized Judeo-Christian ideology that the natural world exists for human use contends with ideas positing that unabated use is not practical for long-term sustainability. These ideas are contextualized within stories that play on emotional associations with place. In this way, place issues are framed as progressive, advantageous, or threatening

Just as place attachment is a component of identity that influences perceptions about places and what should or should not occur there, any changes to place produce alterations in the nature of place attachment. As places change, whether due to our own actions or not, our conceptions of place also change. Places, natural or built, are not static. They undergo change especially as we decide how or if to use them at all. Our attachments, derived from the symbiotic relationship between the social and physical of place, play a vital role in the decision making process.

Importantly, Stedman (2002) found that "people not only identify with places that take on important symbolic meaning to them but also with places they perceive to be under threat" (p. 575). And Stedman's (2002) findings suggest that we are more likely to engage in place protective behaviors when we perceive places that we are attached to as being threatened. So it appears that the meaning of a place combined with the sense that a place is vulnerable to some outside force fosters identification with that area. Writing about how meaning translates into attachment, Greider and Garkovich (1994) outline how meanings are socially constructed and can serve as the basis for attachment to place when such meanings take on added significance for us, such as when believing a place is threatened in some way. These meanings are complex and understanding the nuances of place meaning and attachment are important for understanding land use conflict. Two

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and appropriated by publics. Different environmental uses may then be viewed as diminishing or enhancing identity.

In fact, what the above research has in common is the possibility of loss among those who hold a strong attachment to place. Perceptions of loss revolved around such situational components as level of attachment, frequency of use, the historical moment, and power dynamics. Possible changes to place mean that something residents are attached to will be lost and, the way they see it, not for the better.

people, for instance, may have a strong degree of attachment to a forest, but one may believe the forest is a place to make a living while the other believes the forest is a pristine wilderness that should be untouched. This has implications for preferred uses and policies, for as Stedman (2003, 2002) asserts, people are more willing to provide input to management processes and engage in place protective behaviors when attachment to place is high and satisfaction low (the place is flawed in some way). Stedman (2002) also suggests that place protective behavior is especially likely to result when attachment and satisfaction are based on favorable meanings that are threatened by potential changes. Differences between settings and the varying ways people interact with those settings (whether through occupation, recreation, etc.) provide predictable differences in meanings, evaluations, and place protective behaviors (Stedman 2003).

In an attempt to find predictable behavior, Uzzell, Pol and Badenas (2002) theorize that "socially cohesive communities that have a strong sense of social and place identity will be more supportive of environmentally sustainable attitudes and behaviors compared with those communities in which social cohesiveness and place identities are weaker" (p. 28). Again, it appears that a sense of loss plays a role in perception and subsequent behavior. Uzell's et al. (2002) findings suggest that the more one identifies with a place the more likely they are to engage sustainable attitudes and practices. They stand to lose more by not taking this course, most notably a part of their identity. In addition, Uzell et al. (2002) noticed that people are more likely to follow a more sustainable path when they believe others are engaging these attitudes and behaviors. In the case of embracing sustainable ideas and practices, collective or group characteristics of place attachment are key ingredients to understanding environmental attitudes and

behavioral change (Uzzell et al. 2002). A common precursor to action appears to be the perception of loss, and uncovering the nature of place attachment underlying this perception is fundamental. Yet it is exactly how, when and why people garner this notion that varies; that is, in what conditions, ways, and degrees place attachment constitutes itself.

The Theoretical Refinement of Place Attachment

Researchers and practitioners agree that discovering the phenomena of place attachment is core to land use of all sorts; however, there is confusion over just what place attachment is. This chapter attempts to present a clearer picture of the concept of place attachment by illustrating the connections between the social and physical components that make up the construct. However, clarity of place attachment does not end with whether the concept is determined socially or physically. There is also confusion between the concepts of *sense of place* and *place attachment*. Thus, the ongoing perplexity leads to all sorts of ways for measuring the concept. For one thing, the measurement of place attachment is conducted in ways that may not capture the full nature of attachment. Some studies lump many elements of the larger concept of *sense of place* into *place attachment* while others attempt to tease elements out in different ways.

In much of the literature, there is considerable overlap of factors that are associated with place attachment. Terms such as emotional bonds, affiliation, behavioral commitment, satisfaction and belonging are often used to measure sense of place and then linked to attachment. Pretty, Chipuer, and Bramston (2003) and Hidalgo and Hernandez (2001) point out that this leads to a lack of accuracy in operational definitions of place as well as such concepts as place attachment, place identity and place

satisfaction. For example, Cuba and Hummon (1993) identify emotional ties and affiliation as elements of place identity; whereas, Altman and Low (1992) see these factors as associated with place attachment. Brown and Perkins (1992) see behavioral commitment and emotional bonding as indicative of attachment, and this parallels the emotional connection and fulfillment of needs identified by McMillan and Chavis (1986) as being affiliated with sense of community (Pretty et al. 2003).

Different indicators are measured alone or combined and are said to constitute place attachment, but there is wide variance in how this is done leading to inaccuracy in defining the concept. It is not only what indicators are taken together but *how* they are measured in combination with one another that is important. Linking emotional bonding with behavioral commitment can create an accurate descriptor of place attachment, as shown by Brown and Perkins (1992). Separately these concepts don't produce an accurate gauge of place attachment, but taken together they may. Occupation represents how one may be committed to place but not attached in the affective sense. For example, take Stedman's (2003) study of a rural lake region in Wisconsin. He shows that someone might be committed to retaining their vacation home due to mitigating factors such as proximity of occupation and permanent residence (their home may be only a few hours drive away and their job a short distance beyond that) in addition to increased value of the property for resale. This is a type of place attachment by default and is less than what we are seeking when we want to capture someone's true attachment to place. Also, someone may be committed to their occupation and that results in a commitment to place for no other reason other than their job is located there. However, if we use emotional bonds as constituting place attachment, it does become possible for someone to become

attached to place through occupation in so far as part of how we define ourselves is through work.

Our self-definitions hold affective elements. And if place is intricately connected to our job -- fishing, farming, community service, or being a tour guide -- then we develop attachment to place *through* and *with* our work and not merely because we are attached to a job. Thus, measuring behavioral commitment to place does not, in and of itself, constitute place attachment.

Paralleling the ambiguity of place attachment is the fact that it is not uniformly studied. The above is an example of how the concept may become confused with elements that actually measure something else. Therefore, I wish to distinguish between what is being measured in this study and what is not. This study explores how subjects understand environmental change (coastal land loss) through their attachment to place, not simply what they *know* about land loss.

Place identity is a "self-definitional attitude towards a place" (Pretty et al. 2003, p. 274). It serves as a self-categorization process that gives the self a socially constructed locus through geography. Place identity answers "Who am I?" by answering "Where am I?" (Pretty et al. 2003; Cuba and Hummon 1993). However, this does not accurately indicate place attachment. To say one is an American, a New Yorker, or from Brooklyn, NY does not necessitate an emotional bond or attachment with that place.

While place identity deals primarily with geography, people develop a sense of community through perceiving that they belong to a social environment. When a person feels that they belong, they expect to receive resources from that social community, and they are ready to reciprocate in kind (Pretty et al. 2003). Although a sense of community

might be linked to physical features of the built environment (Plas and Lewis 1996) this is primarily a communal concept. Place identity is driven by the social environment, and it is due to the social that there may be a link to the physical. A sense of community involves an attachment to people and the meaning given to a group, but it is not place attachment. Unlike holding a sense of community, place dependence is associated with people's views of how well a geographical place meets their needs. The concept is oriented around a place being able to satisfy goal-directed behavior (Pretty et al. 2003). Someone may be satisfied with a certain place and feel that it adequately meets different needs without having an affective bond with that place. As Mesch and Manor (1998) argue, "it is possible to be satisfied with where one is and not be particularly attached to place" (p. 509). Place dependence is when a geographical location can meet identified needs that people identify as necessary for their existence; it is not a measure of place attachment.

Place dependence, place identity, emotional bonding, and behavioral commitment along with place attachment are indicative of a sense of place – a salient relationship with a particular place. Analyzing a sense of place we can tease out what is most important about place – which one of the above concepts in relation to place is most significant for individuals? However, these terms are not what constitutes place attachment.

The essence of place attachment encompasses cognition, feeling, and behavior. Accepting this tenet of the theory, scholars debate the salience between the social and the physical of attachment. While empirically differentiating between the two is important, it is also, I believe, a very narrow view of place attachment.

As scholars choosing between the physical and social we have appropriated the very systems that we attempt to transcend. The Judeo-Christian ideology positing that the natural world exists for our use draws a clear dividing line between human and natural worlds. This appears to parallel our academic enterprise of separating the physical and social in place attachment study. It seems that publics, from which we wish to coerce a confession, resists being forced to choose. New and growing cultural schemas like 'co-existence with the natural' are growing and competing for space with prevalent cultural schemas like 'consumption of the natural.' The coexistence of cultural ideas indicate a porous public mindset.

Non-traditional schemas like 'co-existence with the natural' are finding increasing space in society, in part, due to increasing threats to places. There is growing sentiment that the physical-natural and social elements of attachment to place may be symbiotic components. The fluid nature of place attachment and the influence of differing cultural schemas make trying to separate the social from the physical more problematic. Clarification of the concept may not rest so much on figuring out if place attachment is more social or physical, but rather may depend on distinguishing how the two shape each other.

Place Attachment Theory: the Physical, the Social, and the Ecologic-Symbolic

For theoretical purposes, place attachment includes cognitions, affective meanings, identity, attitudes, and behaviors (both existent and potential) (Stedman 2002) that are malleable and in part depend upon the historical moment and the amount of time an individual is associated with a particular location. Place attachment exists in

gradations and the concept can be thought of as residing on a continuum where positive indicators are definitive of higher degrees of place attachment.

While we may or may not be attached to a place, we do identify with particular places. The self, as George Herbert Mead (1910) argued, is social and arises out of the field of experience to develop an identity or core self. The self incorporates place, a geographic location that includes the people, objects, practices, and meanings of that place (Harvey 1996; Casey 1993). The concept *sense of place* comes out of human geography and is generally agreed to be a salient relationship with a particular location. What is most relevant about a particular location may be reflected in value preferences or how that particular place is construed in discourse (Cantrill 1998, p.303).

Value preferences and discursive representations of place may also indicate our connections to place. We develop a connection or attachment to place when a felt significance is conferred upon the environment through learned perceptual practice of intimate interaction with place shaped by time-geography and structuration in a particular historical moment (Relph 1976; Tuan 1979; Pred 1983). Time-geography means the amount of time an individual is associated with or inhabits the place in question, that particular geographical locale. And structuration means that all practices and activities take the form of concrete interactions in a particular space contextualized within a particular time (Pred 1983, p. 45). The development of a felt significance with place through time-geography and structuration is referred to as *place attachment*. It is a bond of people to a physical environment based on cognition and affect (Tuan 1976; Relph 1976; Altman and Low 1992; Greider and Garkovich 1994).

The bond is produced through accrued biographical experience (Altman and Low 1992). In describing this biographical connection with place Gieryn (2000) notes that experiences that generate attachments are “fulfilling, terrifying, traumatic, triumphant, secret events that happen to us there” (p. 481). These events help to shape identity and so facilitate the social construction of place.

The social construction of place is composed of the built, natural and social environments. It is the meanings we attach to the different elements of place that constitute its social construction. As Kroll-Smith, Gunter and Laska (2000) point out, places *do* exist independently of us, but we can only observe them in relation to ourselves, and therefore, places are socially constructed. Similarly, Kroll-Smith and Couch’s (1993) ecological symbolic perspective on human conception of environments is useful here in that it assumes that ‘the environment is physical’ and ‘the environment is symbolic’ are two intertwined and inseparable ideas (Kroll-Smith and Couch 1993). Taking this perspective into account, studying attachment to place becomes more about obtaining the interaction of the physical and symbolic in human interpretation than about distinguishing between the salience of social and physical connections.

Shaping the physical and symbolic are both macro and micro cultural frameworks, and particular self-definitions coalesce to form individual constructions of place. In construing place it becomes imbued with symbolic meaning according to the values and beliefs embedded in the self-definitions of individuals (Boyer 1994; Greider and Garkovich 1994) that are, in part, extracted from the larger culture. Residents of a particular locale in the U.S. are likely to feel similar to other Americans; however, it is also probable that they believe they possess some characteristics specific to the region

that makes them different from many other Americans. This should not be surprising and was evident in Freudenberg and Gramling's (1994) work presented earlier on the differences of place that are facilitated by the acceptance of the oil industry in Louisiana and not in California. Individuals may have similarities in their senses of place, but they also have differences according to sub-cultural definitions that are shaped by the symbolic and the physical.

Not only are self-definitions shaped by the interaction of the physical and the symbolic, but conceptually, the physical changes as it is converted into the meanings we give it. Transforming the physical environment and any changes therein into symbolic environments through self-definitions yields social constructions called *landscapes* (Greider and Garkovich 1994; Berger and Luckman 1967). Again, the natural environment is independent of our interpretation of it. However, our interpretation transforms the natural environment into "meaningful subjective phenomena" or what we can call landscapes (Greider and Garkovich 1994, p. 2). In sum, landscapes are reflections of ourselves in that we see place through the characteristics, beliefs, and elements that we see in ourselves.

Landscapes are a useful tool in uncovering the nature of place attachment. Taking the whole environment into account, landscapes allow us to explore the symbolic meanings that give cognitive form to the physical and social of place and in turn reveal not only *what* we are attached to but *how* we are so attached. It should be noted that while Greider and Garkovich's (1994) work on landscapes takes the symbolic as its main focus, it does tend to overlook "what might be socially and culturally interesting about the non-symbolic" (Kroll-Smith, Gunter and Laska 2000, p. 9). Taking this oversight into

account, the work undertaken in this dissertation utilizes their concept while keeping an eye toward the exchanges between people and their environments.

It is here, at the intersection of the physical, the social, the *how*, and the *what* of place attachment, that the concept of landscapes is the most useful. The ecological-symbolic perspective (Kroll-Smith et al. 2000; Kroll-Smith and Couch 1993) provides some more insight on the symbiotic relationship of the physical and natural that the concept of landscapes can account for.

Kroll-Smith et al. (2000) point out that from a human perceptual field, physical environments and social structures are interdependent. That is, unless we make a conscious effort to separate the two, we perceive of the social and the physical as elemental to one another. Recall the point made earlier that in trying to distinguish between the social and physical as the cause of attachment the physical can be mistaken for the social and vice versa. This confusion of what constitutes attachment appears to call for analyzing the interconnectedness of social and natural-physical elements. Although not directly assessing attachment to place, the ecological-symbolic literature on disasters is useful for understanding the reciprocal influence of the physical and the symbolic or social. This perspective starts from the assumption that our experience of environmental degradation is mediated by our understanding of what type of environment is damaged (Kroll-Smith and Couch 1993). Within this research, disasters, in their social and environmental relations, are affected by both the nature of the disruption and humans' understanding of them (Kroll-Smith 1993). What occurs is a social process between the two elements. In sum, the ecological-symbolic perspective can serve how we

look at place attachment by apprehending how both the social and physical interactively contribute to its constitution.

In fact, our understanding of disasters may begin from our attachment. Brown and Perkins (1992), studying the effects of natural disasters on attachment, find that these catastrophes tend to produce a heightened awareness of place attachment as the perceived permanence of place is made ambiguous. Human appraisals of disasters develop from the nature of attachment and, as Brown and Perkins (1992) suggest, have a reciprocal impact on attachment. Thus, disasters usually produce a drastic change to place that in turn produce a change in the nature of attachment. And this change in attachment is due to a change in the meaning of place.

When changes in the environment occur, as is the case with disasters, landscapes (transforming environments into symbolic ones through self-definitions) change (Greider and Garkovich 1994). As changes in the environment arise, Greider and Garkovich (1994) suggest that conceptions of ourselves also change "through a process of negotiating new symbols and meanings" (p.2, 4). As change occurs, self-definitions and landscapes change. Kroll-Smith and Couch (1993) support this stating that there is "sufficient empirical evidence" that a change to the environment (in those authors' work, environmental contamination) produces a change "in the organization of personal qualities each of us attributes to ourselves" (p. 55). And Brown and Perkins (1992) aptly show how people are largely unaware of just how much they are attached to place until that place is somehow disrupted. Above we saw this change in the nature of felt attachment with proposed changes that were viewed as threatening to place (Katlenborn and Bjerke 2002; Bonaiuto et al. 2002). In particular, Brown and Perkins (1992) note that

the unpredictability and uncontrollable nature of disasters causes a heightened awareness of place attachment where previously taken-for-granted emotions and benefits of place are realized. Many times this recognition of attachment is not only hard for the researcher to obtain but difficult for the subject to articulate because it is only realized in retrospect – after a loss due to disruption (Brown and Perkins 1992). An advantage to this study of coastal Louisiana residents is observing their attachment in the midst of the loss which, as Kroll-Smith and Crouch's (1993) ecological symbolic approach to studying environmental disturbances suggest, is shaped by both the physical nature of the disruption and the meanings they attach to it.

Louisiana's coastal residents take into consideration the ongoing changes to place and, as will be shown, their landscapes change. Because of changes to place and the acute awareness of attachment brought on by a disaster or disruption, a re-negotiation of our landscapes occurs (Brown and Perkins 1992; Greider and Grakovich 1994). As part of the response to the disaster, the depth of one's place attachment intensifies as people consider the tenuous nature of place. Buttressing this stance, Philips and Stukes (2003) argue that "disasters bring about a re-negotiation of place, throwing location and identity into question" (p. 17; Brown and Perkins 1992). In short, disasters affect "the place ties that define the self and community" (Philips and Stukes 2003, p. 17).

Looking at disasters from the ecological-symbolic perspective and noting Brown and Perkins' (1992) idea that place attachment becomes heightened post-disaster, it seems likely that place attachment establishes itself by social means that occur through and within natural-physical elements rather than from one more so than the other. Thus, if place attachment occurs through accrued biographical experience, it is likely that one's

place attachment develops in a social context that occurs within a natural-physical milieu that is intrinsic to the social. So the natural-physical and the social become conceptually symbiotic. Reifying this idea Norton and Hannon (1997) state, “the content of true place-based value must be a cultural artifact of local interactions, a dialectic between a culture and its natural context” (p. 230).

This is not to say that the social and the physical of place attachment can’t or shouldn’t be separated. But the subjective meanings that individuals are conveying to us may be more than an either/or proposition. If we claim to know residents’ meanings on their terms, we must examine what they are trying to tell us. Place attachment theories appear to urge us to take the social and physical together (Tuan 1974; Greider and Garkovich 1994), yet measuring place attachment often occurs in inconsistent ways that fail to encompass the entirety of the attachment process. As much of the literature indicates, measurement yearns to force a separation of social and physical elements from respondents who appear to be trying to tell us something we refuse to hear.

A qualitative phenomenological method can assist in mending this split. This study takes residents’ landscapes into account without the premise of trying to separate social, physical, or other elements out. In this way, this study builds on the ecological-symbolic work by acknowledging the reality of Louisiana’s coastal land loss while realizing that the phenomena becomes important for humans only when people symbolize its relevance (Kroll-Smith and Couch 1993; Kroll-Smith et al. 2000). Place attachment as a symbolic construct becomes ultimately useful because it acts as a primary component of identity from where residents interpret what is occurring to their environment. This work falls under the rubric of Greider and Garkovich’s (1994) theory of landscapes by

looking at how environments are transformed into symbolic environments through self-definitions. Landscapes demonstrate the affective through the cognitive and so recognize not only the symbolic but the affective and thus attachment. And like the ecological-symbolic approach (Kroll-Smith and Couch 1993), this study takes the whole environment into account, not just the natural as Greider and Garkovich (1994) do, but the entirety – the natural, the physical, and the social, thereby extending the concept of landscapes. There are no assumptions of separation, and the aim is to understand how residents combine and/or separate their worlds. The concept of landscapes urges us to move closer to a focus on what people consider their attachment to be. In the context of a changing environment, people are more aware of their attachment (Brown and Perkins 1992) making it easier for them to construct, deconstruct, and verbalize their attachment to us, the researchers.

Yet the meaning of change is often complex. Change requires a mulling through process on the part of the person and community that is affected by that change. However, this complexity of meaning can be assembled through narrative construction. Constructing a narrative itself can serve as part of figuring out the meaning of an environmental change and its relationship to place. When putting together a narrative about place, the narrator uses structuration of meaning generated from identity to produce what is most salient about place. So a story about place is constructed through the subjective and interpretive process of the narrator where different levels of meaning are put together to convey a particular story.

Considering the subjectivity and self-definitions of the narrator, some clarification is needed about the relationship between identity, the self, and place. Since

environmental change such as land loss causes changes in place meaning, corresponding changes to the self come to fruition in altered self-definitions as Greider and Garkovich (1994) point out. The self revolves around ever-shifting conversational thoughts we have about ourselves (Mead 1938) and in describing what he calls self-stories, Denzin (1989) suggests that the self positions itself at the center of the story and isn't necessarily focused on shared meanings or experiences. Self-definitions on the other hand, although a part of the self, are more fixed and make up identity. Self-definitions are meanings that make up identity. Identity is built around meanings and experiences that can be shared, but identity doesn't necessarily place itself at the center of the story (Denzin 1989; Burke and Harrod 2005).

Thus, when using landscapes and its constitutive self-definitions, it becomes necessary to focus on, in this study, how coastal land loss impacts identity, because as attachment to a place forms, coastal land loss changes place and in turn impacts identity. Defining oneself in relation to place becomes "an enduring and changing process related to the construction and maintenance of identity in a changing social and physical environment" (Katlenborn and Williams 2002, p. 191; Giuliani and Feldman 1993, p. 268). Furthermore, in studying environmental change and place attachment there is that part of identity that forms around a direct attachment to place but there are also those elements of identity such as parent, sibling, neighbor, fellow resident of the community, and farmer that are all examples of self-definitions that are indirectly related to place (Brown and Perkins 1992). And as Brown and Perkins (1992) point out, changes to place result in changes to identity, particularly as many self-definitions such as parent, sibling, etc., are part of the total package of identity. When there is a significant bond forming a

salient attachment between the identification of individual and place and then there is a negative change, then identity is negatively impacted directly and indirectly.

What appears to be going on here, as will be evident, is that Louisiana residents strongly identify with place. That is, part of their self-definition is that place is part of who they are. This is more than mere identification with a particular locale. It is an affective identification that no doubt has taken on a heightened sense in response to the changes in place, yet it nevertheless has become an integral part of an identity which is reacting to that change. As environmental disruption occurs, identity suffers due to a changing yet enduring attachment that has developed over time. This attachment manifests through cognitions, affective meanings, identity, attitudes, and behaviors that are contextualized in the historical moment. Thus, thinking about environmental change, attachment to place and landscapes result in some guiding research questions.

- Which elements best characterize respondents' landscapes?
- How is change to place conveyed and understood?
- What role does coastal land loss play in respondents' narratives?

These questions are interdependent. Using these questions to look at narratives reveals a picture of place where meaning is generated from identity to convey significance, in this case about the environment, and disclose the symbolic meanings that make up landscapes.

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Chapter 3 – Methods: Phenomenology, Narratives, and Place Attachment

Introduction to Methods: Phenomenology and Personal Narratives

This chapter explains the phenomenological research method and qualitative approach to gathering data employed in the research. Phenomenology focuses on individuals' interpretations of their experiences. The spotlight is on the knowledge of the subject. A primary way we as societal members transmit *our* knowledge and meaning is through telling stories, and we do this through the routine telling of our daily lives in casual conversation. This everyday way of telling stories is called narratives (Denzin 1989). Denzin (1989) calls this "personal experience narratives" (p. 43), and it is in this way that the concept is employed here.

Narratives reveal how, as Schutz (1967, 1970) states, "The life world[10] is produced and experienced by its members" (Gubrium and Holstein 1997, p. 39) and this study operates from this phenomenological perspective. Narratives, as Denzin (1989) points out, are stories told about personal experience. They have a beginning, a middle, and an end; they have a storyline and a plot that, while personally constructed, "exists independent of the life of the storyteller or narrator" (Denzin 1989, p. 41).

Likewise, phenomenology, based in personal experience but not necessarily in individuals, is interested in how societal members continually interpret their social order and thus reproduce and construct knowledge (Smith 2004; Gubrium and Holstein 1997; Creswell 1997). As such, the aim of this study is to gain insight into how subjects experience and understand coastal land loss. Since land loss is a place embedded process, phenomenology, which suggests that our perceptions and interpretations give place meaning, is the best means to understanding how residents view land loss issues.

[10] The "life world" is reality as it exists through our perceptions and experiences.

What becomes relevant is both conveyed and found in the clusters of words people deploy to situate their bodies and selves in the story of coastal land loss. In narrative form, interpretations involve characters that are portrayed in a particular fashion, oriented to a type of structure (drama, tragedy, suspense, humor, etc.), and usually attempt to convey a lesson or moral (Shanahan 1999, 407). Denzin (1989) even suggest that "every narrative contains a reason or set of justifications for its telling" (p. 41). In short, there is a point to telling a story. Stories say something about who the storyteller is. The point of a narrative communicates what the storyteller feels is important and by so doing reveals elements of the teller's identity.

Narratives, as they are employed here, also remake group values and memories (Denzin 1989). They reflect identity and consist of general commonalities based on a shared culture, geographic locale, cultural definitions of gender, class, race, and occupation, as well as a particular historical moment (Cantrill 1998), while at the same time conveying differences according to the myriad of ways these and other elements manifest within individual circumstances. Narratives focus on experiences that can be shared and do not "necessarily position the self of the teller in the center of the story" (Denzin 1989, p. 44). Narratives are stories that the teller believes the listeners can empathize with in some way. Thus, they are often "based on anecdotal, everyday, commonplace experiences" (Denzin 1989, p. 44).

The phenomenological method employed here encourages residents to tell their story through asking them about their common, everyday experience of place. They then subjectively construct narratives that reflect the narrators' similarities and differences through the very telling of their anecdotal, everyday experiences. And by telling stories

about place respondents reveal the symbolic meanings that make up *landscapes*: they transform the physical environment into symbolic environments through self-definitions (Shanahan 1999; Cantrill 1998; Greider and Garkovich 1994). Landscapes usually disclose common themes both within and among different narratives.

A general and common theme of a narrative may be a person's attachment to place through work. Some common occupations of Louisiana's coastal residents are fishing, education, service work, and oil industry related work, but here fishing will be used to illustrate how one's landscape and attachment to place is characterized by their occupation. A fisher's landscape may be characterized by elements of fragility expressed in terms of paucity and/or abundance depending on costs of the occupation, regulations, environmental factors, and the nature of a particular fishing season. The narrator may understand and communicate an environmental change through the impact it has on their occupation, as well as, the cultural and ecological effect so the narrator's intention is to show how an environmental change not only affects them through occupation but in other spheres of their lives. The salience of the change depends upon the significance he/she gives to that change within their place attachment construct. Self-definitions' and their connection with place identification are integral components of how a respondent may construe environmental change. Thus, the focus here, as it is with phenomenology, is on how the respondent tells their story (van Manen 2002; Creswell 1997) and how their self-definitions are used to interpret and express environmental change. Our self-definitions play a role in how we decide to construct our narratives by guiding the points we aim to illustrate in telling our stories (Shanahan 1999; Greider and Garkovich 1994).

Self-definitions, like that of occupation and community member, shape how we understand our environment (Greider and Garkovich 1994). The concept of landscapes becomes a tool for discerning the complex relationships within narratives. While quantitative measures can be used to obtain the significance we confer on place, here it is suggested that qualitative interviewing is more adequate. The rest of this chapter will outline the rationale for using a qualitative phenomenological method, describe the sample, and present the data. But first, for clarification purposes, a reiteration of some conceptual definitions.

Definitions

- Place attachment is the development of a felt significance with a particular location through time-geography and structuration (Relph 1976; Tuan 1974). A felt significance is a bond based on cognition and affect. Accrued biographical experiences foster attachment through associative cognition, affective meanings, identity, attitudes and behaviors (Altman and Low 1992; Greider and Garkovich 1994). Place attachment is malleable and is contextualized within the particular historical moment.
- Landscapes are the social constructions of place where symbolic meaning is attached to a particular location. The values and beliefs of the self give meaning to place. In other words, self-definitions, components of identity, shape what a place means. Landscapes then are our interpretations that transform place into meaningful subjective phenomena (Greider and Garkovich 1994).
- Phenomenology focuses on the subjective knowledge of the individual by describing "the meaning of the lived experiences for individuals about a concept

or phenomena" (Creswell 1997, p. 51). Interpretations of experiences are of primary concern as opposed to the actual experiences of people and their lives. This method fixates on the constructed meanings of societal members (Gubrium and Holstein 1997).

- Narratives are stories told by individuals about a particular subject or phenomena based on experience (Gubrium and Holstein 1997; Denzin 1989). Narratives are stories with a plot and a story line; however, they "exist independent of the life of the storyteller" (Denzin 1989, p. 41). Narratives focus on experiences that can be shared and are likely to be based on "anecdotal, everyday, commonplace experiences" but are not mandated by a group and "do not necessarily position the self of the teller in the center of the story" (Denzin 1989, p. 44).

In this study individuals are encouraged to construct a narrative about place. Within their narratives respondents communicate their place attachment constructs by doing the constructed meaning of landscapes. The phenomenological method is employed to highlight what the environmental phenomena of coastal land loss means to individuals and their attachment to place.

Alternative Method

Instead of a qualitative phenomenological approach, this study might have addressed the relationship of coastal land loss to place attachment using the more common quantitative survey method. To do this, a social-psychological method that elicits feelings about loss, i.e. fear of change, would have needed to be employed. Or a survey method similar to that of the environmental valuation typology employed by

Brown, et al. (2002) could have been used. However, doing so, would have called for the construction of a theoretical hypothesis such as:

> *H1: The environmental change of coastal land loss effects residents' <u>feelings</u> about place varying by one or more elements of self-definitions associated with place (occupation, place identity, spatial range, length of residence, etc.).*
>
> or
>
> *H2: The environmental change of coastal land loss effects residents' valuation of place varying by values associated with self-definitions (economic value, subsistence value, therapeutic value, spiritual value, aesthetic value, intrinsic value, etc.).*

The hypotheses also indicate that the survey method would assume separation between place and coastal land loss. The survey would automatically assert that place, coastal land loss, and individuals are distinct items where coastal land loss acts upon place and resident in a separate manner.

However, using a qualitative phenomenological method makes no assumption of separation between subject and place. Residents are given the freedom to establish this for themselves. Asking an interviewee to respond to questions about feelings or values causes the respondent to assume a cognitive distance between themselves, place and environmental change. Researchers who develop surveys find it extremely difficult to both coalesce and separate items of self, place and change. Respondents would not be able to establish their own criteria for separation and collusion, but by allowing coastal residents to construct their own division or union, a more accurate picture of how they interpret experience is revealed. Also, a survey method would only yield a sense of the effect of land loss on residents' attachment. This study is not examining feeling or level of valuation. What is being studied is how subjects construct meaning from the

experience of coastal land loss through their conception of place. A phenomenological method is employed here that allows subjects to establish their own significance, valuation and feeling. Surveys do not adequately capture this.

Qualitative Over Quantitative

The overwhelming majority of place studies are surveys (Vorkin and Riese 2001; Pretty, Chipuer and Bramston 2002; Stedman 2003, 2003, 2002; Kaltenborn and Williams 2002; Clark and Stein 2003; Brown, Reed and Harris 2002; Kaltenborn and Bjerke 2002; Hidalgo and Hernandez 2001; Bonaiuto, Carrus, Martorella and Bonnes 2002; Glendinning, Nuttall, Hendry, Kloep and Wood 2003; Uzzell, Pol and Badenas 2002). Survey methods are a valuable asset in learning about environmental attitudes including how people are oriented to place. However, surveys only provide one type of knowledge. This research goes further than surveys in that it seeks the essence of the experience of coastal land loss. This study emphasizes the "intentionality of consciousness," the point of people's stories "where experiences contain both the outward appearance and inward consciousness based on memory, image and meaning" (Creswell 1997, p.52).

Using respondent constructed narratives has advantages over attitudinal surveys because they capture ideas about place and the environment. Narratives encapsulate issues that are usually kept separate and apart in attitudinal instruments (Shanahan 1999, 417). Also, this approach allows for different nuances of perspective on different topics; whereas, attitudinal questions, for the most part, only capture a general perspective chosen by the researcher (Shanahan 1999, 417). While both an attitudinal and narrative approach encourage respondents to be reflexive, the narrative approach, being

phenomenologically based, allows the respondent to choose what story to tell and how to tell it (Gubrium and Holstein 1997, 153). Even the most extensive attitudinal test would not allow respondents to convey the full range of thoughts they may hold about particular issues.

Phenomenology explores the *how* of the ambiguous and contradictory elements of human nature (Silverman 2001, p.112). Most studies of place (cited above) take a phenomenological approach; however, within qualitative interviewing, we can question respondents further about their conflicting ideas. Attitudinal surveys assume what is explored and restrict how and what the respondent responds to (Kvale 1996). In phenomenological open-ended interviewing, the narrator or subject is able to freely develop his or her own saliency of issues. The phenomenological approach to narrative solicitation allows the subject to describe his/her place as *they* perceive it to be (Kvale 1996, p.52). Interviewing individuals and obtaining narratives about place allows insight into how subjects construct and reproduce knowledge (Creswell 1997). Simply put, respondent constructed narratives can better illuminate the full nature of place attachment. This type of respondent directed narrative is what Husserl (1931) calls adequacy or fulfillment of meaning. In turn, this can better inform how we quantitatively study place.

The Research Questions

The research questions for this project reflect the intent to explore the nature of place attachment, and this section explains how they are addressed. To reiterate the questions guiding this research are:

- Which elements best characterize respondents' landscapes?

- How is change to place expressed and understood?
- What role does coastal land loss play in respondents' narratives?

The questions that inform this inquiry are phenomenological. Furthermore, for the reasons stated above, a qualitative form of data collection was deemed most appropriate to fully answer these questions.

The first question addresses the nature of respondents' landscapes. The interview guide establishes what the environment means to the narrators by asking questions about personal history in place. Residents are asked about childhood, family life, work, and school. One item asks respondents to talk about what places they consider important. They are then asked to explain why the named place(s) is important. These questions encourage respondents to contextualize the physical within an intimate narrative of place. Subsequently, in the analysis of these narratives, any passages that entail discussion of the physical elements of place are viewed as contributing to respondents' landscapes.

The second research question addresses how respondents' understand change. Dr. Pamela Jenkins, my advisor and the director of this project, and I constructed specific questions for the interview guide that asks subjects to explain changes in their environment as they see it. A series of items in the final third of the interview guide request respondents to speak about changes to place. The first item in the sequence is open-ended and asks what changes they have observed since living there. Subsequent items address explanations of changes in the oil industry, fishing industry, and the physical landscape, whatever they may take that to mean. This last item is as close as the interview guide gets to directly asking about coastal land loss. How respondents frame change is key to understanding how they view change. Framing is also elemental to

respondents' landscapes because frames attach particular meaning to the changes they perceive. The interview guide asks residents to express subjective meaning about specific and non-specific changes through the framework of landscapes. Again, since respondents are not asked about coastal land loss these questions are intended to give residents the phenomenological freedom to explore the issue of coastal land loss on their own terms (Smith 2004). In short, the aim is to obtain the symbolic meanings given to the physical elements of change.

The third research question condenses the first two into the more specific interest of this study - residents' conception of coastal land loss. The open-ended nature of interview questions coupled with not directly asking respondents about coastal land loss lends a high degree of reliability to the phenomenological methodology of this study. The salience of coastal land loss to place attachment is established here; that is, 'Where in their narratives do respondents broach the subject? Do they bring up the issue at all?'

Approaching land loss at the beginning of their narrative, when talking about childhood, is an indication of some significance toward the issue. If land loss is left unaddressed until the latter part of the interview, when speaking about physical changes to place, then the issue is considered to hold much less importance for the individual. Where coastal land loss is brought up in narratives, how it is framed, context, and amount of time given to the issue (is land loss a running theme throughout a subject's narrative or do they bring up the subject once and then forget about it) all coalesce to reveal the role the issue plays in residents' narratives of place, as well as, the relationship between land loss and place attachment. Inevitably, this occurs within the concept of landscapes where

the symbolic meaning given to land loss reveals the significance it has for residents' place attachment.

The Sample of Coastal Communities

This study is part of a larger project for which fellow colleagues and I chose the communities from which to sample. The project of which this study is a part is *The Coastal Communities Project*, conducted by the Center for Hazards, Assessment, Research, and Technology (CHART) of the Sociology Dept. at the University of New Orleans. This study differs from the larger project in one major way - this research focuses specifically on residents' understanding of coastal land loss which is but one element of the larger, more ethnographic whole of *The Coastal Communities Project* conducted by CHART. That project takes an ethnographic focus on the communities where, in addition to land loss, CHART's research looks at the totality of respondents' lives from community and family history, to present lives and culture. This dissertation takes only the interpretive experience of land loss and the subsequent impact on identity as its primary focal point. Although sampling procedures for data collection were the same for both projects, the data set for this research – residents' discussion of coastal land loss - is only a part of all the data for *The Coastal Communities Project*. *The Coastal Communities Project's* data set includes much more personal, familial, and place history along with much richer descriptions of the circumstances of respondents' lives which is indicative of an ethnographic approach.

Six parishes (counties) were chosen for *The Coastal Communities Project*. Either one coastal community or a small cluster of communities within each parish was chosen as the source for a sample. In some instances, we chose a small cluster over just one

community in order to accomplish a more robust sample from that parish. In some instances, however, linear community development along bayous and rivers made the selection of a cluster of communities practical. Many of coastal Louisiana's rural communities have developed in an interdependent, linear fashion displaying a mix of activity from fisheries, to agriculture, to oil and gas extraction and related industrial activity (Gramling and Hagelman 2004). For example, oil and gas may dominate one community while manufacturing parts for oil and gas extraction may stand out in the neighboring community. Supplementing the industrial activity, fishing, which supplies seafood to the other communities, may be primary to the next community. For the sake of greater reliability, linear development of this nature made sampling residents from a cluster of communities as opposed to just one necessary.

A degree of dependence between towns is also important to the maintenance of a sense of community for these areas. In St. Bernard, Terrebonne, and Plaquemines, where clusters of communities were sampled, this linear development helps to "maintain a distinct identity, fostered by kinship and friendship networks" (Gramling and Hagelman 2004, p. 17). Considering the overall coast and the amount of time allotted for data collection (one to one and a half years) we decided that sampling from six parishes was attainable and would also provide a comprehensive picture of Louisiana coastal residents who face land loss.

Collaborative meetings among a variety of scientists played a large role in community selection. Coastal geologists, a coastal geographer, two political scientists, two sociologists and an urban scholar all played a role in choosing communities for study. Dr. Shea Penland, a coastal geologist and director of the Pontchartrain Institute of

Environmental Sciences at the University of New Orleans, and Dr. Shirley Laska, a sociologist, director of CHART, and the initiator of this project (also at the University of New Orleans) were invaluable due to their work in this area over the past twenty years.

Our first goal was to identify parishes as coastal. Variables were established for how coastal parishes were to be defined and considered for study. We used the 'coastal zone boundary' as defined by the Louisiana Department of Natural Resources (Figure 1) as a guiding framework from which to work.

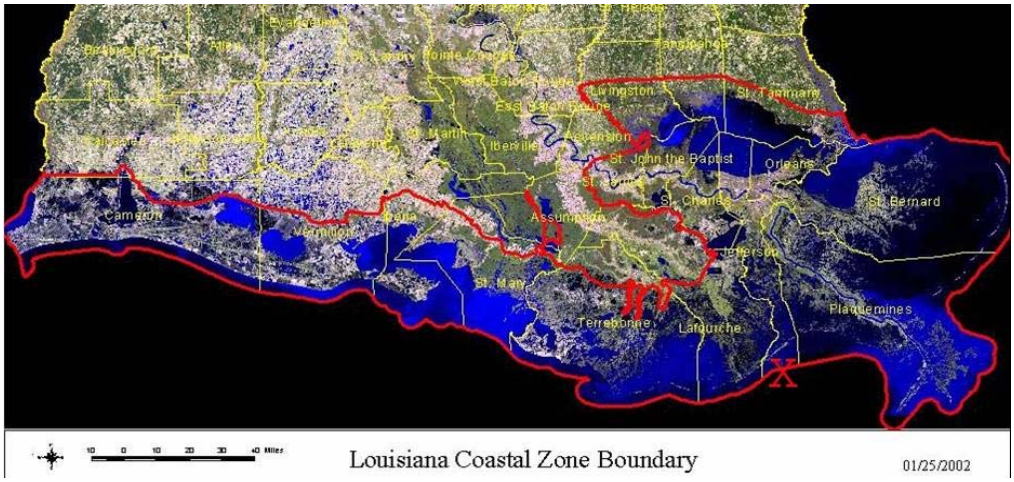

Figure 1

The primary variables for parish selection were physical factors (significant land loss), coastal related economic activities (oil and gas activity, fishing industry), and social/cultural (coastal occupations and recreational uses of the coast), all of which helped us get a sense of the importance of the coast to the communities' populations. We then analyzed various data sources of Louisiana parishes. We looked at census data and various other Louisiana data sources including data from the Louisiana Dept. of Wildlife and Fisheries and the Louisiana Dept. of Natural Resources. We reviewed data on population, occupation, fishing licenses (commercial and recreation – both fresh and salt

water distributions), and ethnicity/race. Our goal was to achieve a sample that was distributive across the coast. Even though much of Louisiana's coast is generally culturally and demographically homogeneous, we obtained a sample that broadly represents the differences across the southeastern coast of Louisiana using one central coastal community for comparison.

Based on the criteria described above, we chose six locations that had a prominent relationship with the coast. The parishes we chose to locate the study within are Jefferson (specifically the community of Grand Isle[11]), Terrebonne, Plaquemines, St. Bernard, Orleans, all in the southeastern region of the state. We also conducted research in the community of Delcambre that sits on the border of Iberia and St. Mary's Parish in the south central region of the state. The southeastern region experiences significantly more land loss than any other region of the state and this led to some regional differences in narratives that are illustrated in the "*General Findings"* chapter.

Once the parishes were chosen, we began to think about which communities within the parishes to study. We analyzed block data from the chosen parishes and reviewed data just as was done for parish selection but with added variables. These additional variables included local land use (i.e., residential, commercial, zoning, protected areas, private and public fishing), community infrastructure (school, places of religious worship, city government buildings), geographical maps and tables (total land and water area[12]), social characteristics (language, marital status, education), economic

[11] We didn't necessarily choose Jefferson Parish so much as we chose the incorporated community of Grand Isle for its unique relationship to Louisiana and the coast - discussed more in this section.
[12] A community that is somewhat inland could be considered for selection due to the nature of southeastern Louisiana's land mass. The area is comprised of wetlands that have many bayous and inlets which would make it likely for residents to view themselves as 'living on the coast' despite not being literally situated on the Gulf of Mexico.

characteristics (labor force, place of work, occupation, income), physical characteristics of housing (number of rooms, telephone, vehicles, farm), and financial characteristics of housing (value, rent).[13] Based on observed differences in this data, we chose communities and then conducted searches of newspaper articles to get an idea of current and past issues within each community. Prior to entering a community, we conducted a secondary analysis (academic, historical, and mass media). This analysis solidified the choices of communities from which to sample and gaining access to the communities was then begun.

Snowball Sampling and Community Residents

Dr. Pamela Jenkins of the University of New Orleans, a community sociologist and director of *The Coastal Communities Project*, accessed informants, established initial contacts, and led the research team in gaining entrée into different communities. Informants provided us with the names and phone numbers of residents (Singleton and Straits 1999, p. 339, 348) and in some instances, researchers involved in the project acted as informants and provided contacts.[14] In other instances, links to other researchers in CHART, the Pontchartrain Institute, area universities, civic personnel, and other acquaintances served as informants and provided resident contacts in communities. We established a list of contacts for each community and, from there, compiled lists of possible interviewees. Also, in the case of Grand Isle and Terrebonne, Dr. Pamela Jenkins and Dr. Shirley Laska conducted informant interviews with community contacts. Informant interviews of contacts provided further entry into communities and served to

[13] We did not have a strict pre-defined criteria for community selection but looked at these characteristics to attain community variation and similarity.
[14] Contacts were residents provided through informants who had a broad knowledge of the community and its residents.

gain specific 'on the ground' information about the communities (Singleton and Straits 1999, p. 339, 348). These initial interviews preceded fieldwork in a community. In cases where contacts were interviewed prior to entering a community for informational purposes, they were re-interviewed during data gathering and included as part of the data set.

During the data gathering period, I would continually report to Dr. Pamela Jenkins on the progress of the data collection.[15] Residents' names were obtained, they were contacted, and interviews were arranged. This marked the building of a snowball sample for interviews within communities. Using snowball sampling to gather data involves a process of chain referral: when members of the target population were located and interviewed, we asked them to provide names and phone numbers of other members of the target population, who we then contacted, interviewed, and solicited more names from, and so on (Singleton and Straits 1999). In this way, we established a range of contacts in each community which provided us with a more robust sample that would "represent a range of characteristics in the target population" (Singleton and Straits 1999, p.163). In order to preserve the integrity of establishing the salience of coastal land loss to place attachment, we told community informants and contacts that we were researchers wishing to study life in coastal towns.

Although snowball sampling carries the danger of a homogeneous sample, we tried to achieve class variation within our sampling, an effort which resulted in a sampling population that ranged from poor to upper middle class residents among and within communities. We had less success achieving variation by race. Many of the

[15] I was the lead field researcher and conducted most of the interviews; however, three other researchers were part of the interview team (see acknowledgments), and as a whole they conducted about 30% of interviews.

communities are mostly white and entry into nonwhite areas was difficult; however, we did achieve some racial variation which is discussed in more detail below in the "Data" section which outlines the progression of fieldwork in the various communities.

Community Fieldwork

The community of Grand Isle, Louisiana (Figures 2 and 3) was an obvious starting point for the project. The island sits off the southeastern coast and is the only human occupied barrier island in Louisiana. The island has a renowned history and is a popular recreational fishing site. Grand Isle's popularity and geography often make it a focus of the news media for its popular annual fishing rodeos and its position as a bell-weather for coastal erosion and storms.

Figure 2
Grand Isle, LA
Map courtesy of CityData.com

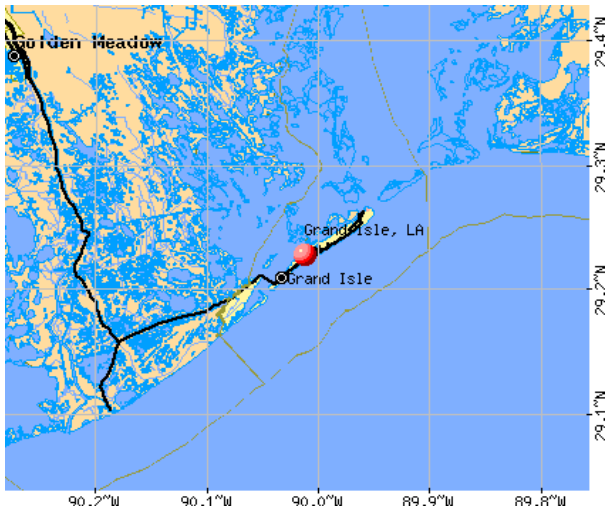

Figure 3
Grand Isle, LA
Map courtesy of CityData.com

A secondary analysis, including a study of media and historical data, was conducted prior to fieldwork in Grand Isle, as it was done for each of the communities under study. A professor at Central Iowa University is a native of Grand Isle and was the initial informant. His parents, who live on the island, were contacted, interviewed, and they provided names of other residents. Another avenue of contact was through the head of the island's Nature Conservancy, also a resident. She was interviewed as a community informant and then again as a resident interview to be included with the data. She also provided names of other interviewees. Dr. Joanne Darlington of the University of Louisiana at Lafayette, and I established contact with local residents and obtained other avenues to interviewees through spending time at a local diner and the library. This method of gaining a range of interviewees was replicated in the other communities. Employing this method out of necessity as much as out of the need to gain reliability in the sample produced nineteen interviews comprising twenty-four respondents from Grand Isle. The research in Grand Isle lasted from June through August 2002.

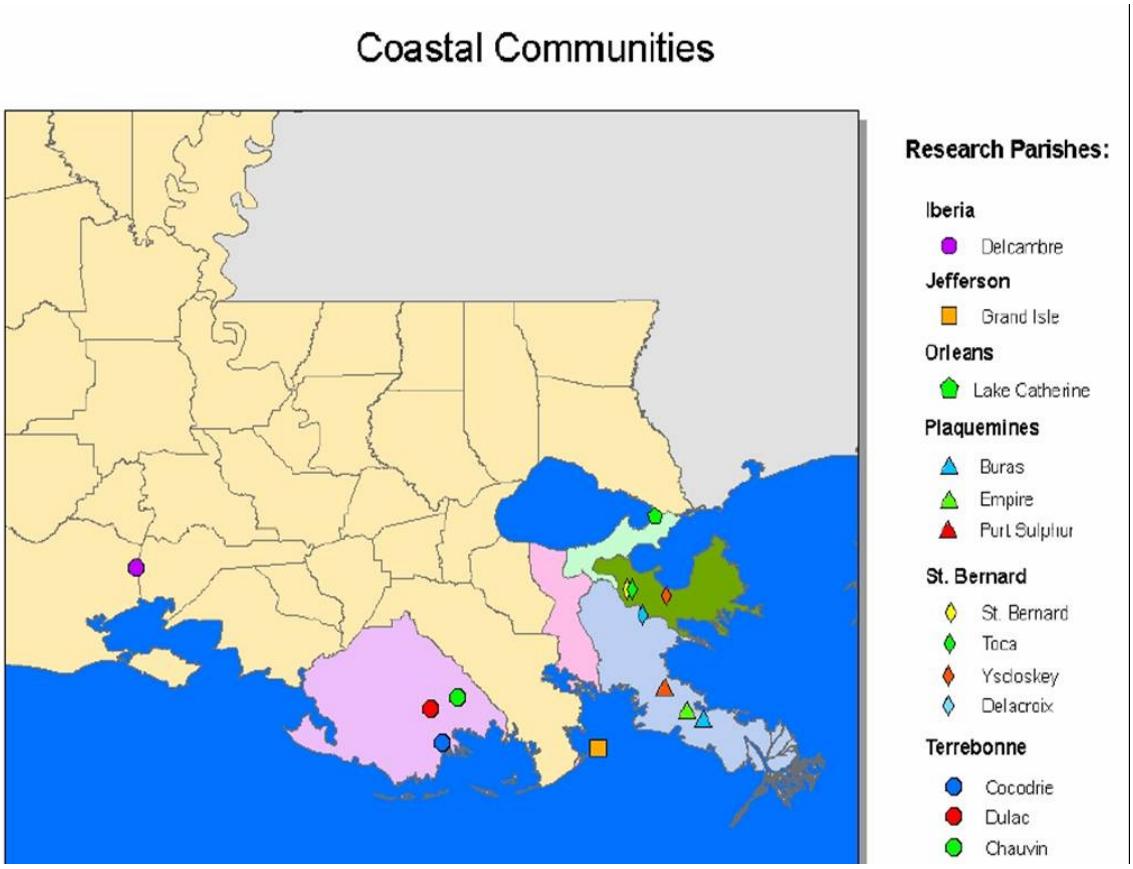

Figure 4

Coastal communities chosen for study in *The Coastal Communities Project* for CHART of the University of New Orleans
Map courtesy of University of New Orleans Dept. of Geography

In September of 2002 a small cluster of communities in southern Terrebonne Parish (Cocodrie, Chauvin and Dulac – a Native American community), west of Grand Isle in Figure 4, were chosen for study. Two tropical storms, Isidore and Lili, hit the area within the span of a week in late September and early October of 2002. Due to the

storms, ethical questions as well as questions of reliability and validity caused research in southern Terrebonne to be postponed until the communities could recover.[16]

We then turned our attention to eastern St. Bernard Parish (Figure 4) which sustained little damage from the storms. This portion of the parish is rich in Spanish history and juts in an easternly direction into the Gulf of Mexico. A fellow researcher in CHART, Dr. Monica Teets of the University of New Orleans, grew up in the area and served as an informant providing the names of some residents in St. Bernard. Also, a parish historian at St. Bernard's Nunez Community College served as a contact. Using these contacts as well as the methods mentioned above yielded thirty interviews from St. Bernard where research lasted from December 2002 through April 2003.

In July of 2003, fellow researcher Traber Davis and I returned to the communities of southern Terrebonne Parish. These communities lie at the southernmost part of the parish, are close together, and are spatially set apart from the more inland and suburban, residential areas of the parish. Dr. Shea Penland and geologist Dr. Denise Reed, also of the University of New Orleans, served as informants and provided names of contacts for the area. Contacts were made and names of residents were obtained. Spending time in the area and at the Louisiana University Marine Consortium in Cocodrie where we were housed provided us with the opportunity to establish other contacts and interviews. Twenty-three interviews were obtained in southern Terrebonne where research lasted from July through August 2003.

[16] The storms provided an opportunity to return to Grand Isle which was not hard hit and only sustained minor damage. I returned to Grand Isle two weeks after the storms in mid-October and reinterviewed eight interviewees. The research team thought this would provide a good comparison to residents' original interviews about place that occurred in a state of normalcy to a post-disaster interview of place. The post-disaster interviews are not included in this study.

Research in Plaquemines Parish (Figure 4) began in May of 2003 but halted that summer for extended visits to Terrebonne. Ms. Davis and I returned to Plaquemines in September and research lasted through October of 2003. The parish is geographically unique in that it is a peninsula extending in a southeasternly fashion into the Gulf of Mexico where the mouth of the Mississippi River widens. Demographically, Plaquemines is generally similar to the other parishes but does hold some variation. In addition to its largely white population, the region has substantial populations of Asian immigrants and African Americans. Beginning the fieldwork, two social workers, who worked in the area and who were known to Dr. Pamela Jenkins, served as informants. However, the snowball sampling process was slower in Plaquemines than in other communities. Interviewees agreed to interviews but some were reluctant to provide names of other interviewees. Some said they simply didn't know anyone with whom we could talk or expressed that they didn't know anyone "worth" interviewing. Possible explanations will be discussed later. Thus, I spent much time in local diners, the library and the like trying to establish contacts and relationships; nevertheless, in the end, twenty interviews with twenty-one respondents were gathered.

Delcambre, the only community not in southeastern Louisiana, is located in the center of Louisiana's coastal zone on the border of Iberia and St. Mary's Parishes (Figure 4) and was chosen for comparison to the communities in the eastern region. A member of the research team, Dr. Joanne Darlington, is from the region, and in addition, the community was deemed accessible from a spatial standpoint. Dr. Darlington's family members acted as informants, and she then further identified interviewees by spending time in the community. Another reason for choosing Delcambre was its similar

demographics to other communities. The total population is 2,168, most of whom identify themselves as white, while only three hundred twenty-seven identify themselves as African American. Fifteen interviews and twenty respondents were obtained in Delcambre where research took place during June and July of 2003 and then again in January of 2004.

Finally, the community of Lake Catherine in Orleans Parish (Figure 4) served as a community with urban connections. The community is thirty-five minutes from downtown New Orleans and minutes away from the eastern part of the city. The community exists on a coastal land bridge that lies between three lakes, two of which serve as entries into the Gulf of Mexico. We established contact with the community through a UNO graduate film student, Amy Sanderson, who was working there on a documentary. We also gathered names of potential interviewees from an online community newsletter. Nineteen interviews were produced in Lake Catherine where research lasted from November 2003 through January 2004 and was the final community in the data gathering process.

Data

The unit of analysis is the individual resident of a Louisiana coastal community. This dissertation aims to understand how an independent variable (coastal land loss) impacts respondents' attachment to place. Part of the data gathering process was aimed at gaining insight into the individual's environment – their place; thus, studying the social history of place became an integral part of the research procedure. We conducted extensive historical studies of each of the research communities providing ourselves with

an analytical context for conducting interviews. A synopsis of each historical study is provided below in the section entitled "Community History."

Researching the history of the communities set the stage for 126 interviews with a total of 141 respondents[17] that were collected through snowball sampling. The sample consist of 82 males and 59 females. Historically, many ethnicities have contributed to this region; however, the communities that the sample was drawn from are largely self-described as white (US Census 2000).[18] As a result, 121 out of the 141 respondents are white. South Terrebonne Parish has a significant Native American population and six Native American respondents were obtained there for a total of eight Native American respondents overall. Plaquemines Parish has a significant Asian/American population where four respondents were obtained producing five Asian/American respondents overall. Plaquemines also produced five African American respondents for a total of seven overall. The socioeconomic makeup of the communities is largely working to middle class, and while there is a broad representation in socioeconomic status among respondents, the majority of respondents reflect this demographic.

Interview Schedule

The place attachment of the array of residents sampled was assessed by the interview. The interview guide was oriented to place through personal history and this instrument asked the respondents two types of questions. One type was an inquiry into

[17] Some interview sessions consisted of more than one respondent but are counted as a single interview.
[18] The parishes chosen show more ethnic diversity than was gathered in the sample; however, I am focusing on 'coastal' communities. Many of these parishes are largely urban. The communities I focus on are on the outlying areas of the parish and areas that respondents perceive as being 'on the coast.' These communities are largely white. A parish such as Orleans has a large African American population who reside mostly in New Orleans; however, the focus here is on the community of Lake Catherine which is described by residents as an 'inner coastal community.' The community is almost entirely white. The data set of Lake Catherine has one black resident out of nineteen respondents. The rest are white.

personal history, and the second was an inquiry into thoughts about change in the respondents' community. What resulted was a constructed narrative of identity and place.

When contacting a potential interviewee and meeting the individual, interviewers presented themselves as researchers from the University of New Orleans studying life in coastal communities. This presentation communicated the general nature of the larger project while not revealing the exact nature of my study or the aims of the *Coastal Communities Project* which include perceptions of coastal land loss, thus taking care of any glaring issues of social desirability (Silverman 2001). In social research, the subject always has a perception of what the researcher is trying to achieve. The research team agreed that if we were to directly ask respondents about land loss, subjects might have tried to fulfill some expectations of what they thought we wanted to hear about land loss. Thus, we would not get an accurate feel for the role environmental change plays within their place attachment construct. Even if we were to place a question about land loss within a set of questions about other changes to place, we believed that we would get a biased description of what they knew about the issue. And because it would be framed as a problem, their response would inevitably be reinforced by recent media attention. Subjects would automatically express concern, but this would hardly be an accurate portrayal of their true thoughts on the issue. Using a phenomenological framework, a more accurate portrayal of the meaning of respondents' experiences would be obtained by allowing subjects to broach the subject themselves. We reasoned that 'if it is important to them, they will bring it up.' With the interview guide in hand, interviewing commenced.

We taped 126 interviews lasting from thirty minutes to three hours, but most were about one hour.[19] Upon completion, we made copies which were then sent to be transcribed. Interviews were conducted in respondents' homes, business, or a local diner and field notes were taken which took note of any outstanding or unique circumstances about the interviewee or the interview. Field notes primarily revolved around elements of the respondents' narrative that the interviewer wanted the respondent to elaborate on later in the interview. Respondents were not asked to expound on a particular element upon first mention of that element so as to not interrupt *their* narrative. This delayed form of follow-up questioning allowed interviewees to retain their continuity for framing narratives about place in their own terms while still exploring the objectives of the research. After the interview, field notes other than follow up questions were included on the interview information forms.

Phenomenology is not Ethnography

Allowing uninterrupted narrative construction to interviewees reflects a phenomenological methodology, but before moving on into how the analysis was conducted, it is necessary to distinguish between phenomenology and ethnography, two methodologies that share much in common and may be confused. Both methods attempt to gauge an individuals' subjective meanings and experiences; however, phenomenology seeks to illuminate *the meaning of a lived experience* (van Manen 2002) while ethnography is about people: "Ethnography is a method of studying and learning about a person or group of people. The ethnographer attempts to get a detailed understanding of the circumstances of the few subjects being studied" (Miraglia, Law, and Collins 1999).

[19] There is a log of interviews both on tape and transcription that is maintained and may be accessed to check the validity of the data.

While ethnography is about the *circumstances* of individuals (Hammersly and Atkinson 1995), phenomenology focuses on the meaning which individuals give to their experiences (van Manen 2002; Creswell 1997). In other words, ethnography is about people, and phenomenology is about the experience. Thus, for this study, the interview guide and analysis took shape through trying to uncover what it is like to experience the particular phenomena of coastal land loss in Louisiana.

Experiences, the Interview Guide, and Categories for Analysis

The interview guide prompted the respondent to build a narrative of place through personal history. Narratives were constructed around experiences of place and this produced categories to build an analytical framework, for example, family, work, childhood, experience with storms, and land loss, the category of primary concern for this research. Categories were established and continually reformulated until all data were incorporated. Specifically, place attachment theory (Altman and Low 1992) and the theory of landscapes (Greider and Garkovich 1994) informed interview questions which shaped the major topics respondents talked about, except for that of land loss which no interview question addressed. The theories and subsequent interview questions then constituted analytic categories that were revised in analysis until all the data fit into the categories.

So, categories, for the most part, came from responses to interview questions and these came from theory. Accrued biographical experiences that account for place attachment and the self-definitions that account for landscapes led to questions about personal history and place. The concept of landscapes states that when change to the environment occurs, people negotiate the meaning of that change and this idea led to

questions about change in the interview guide. The categories that resulted from the actual interview process are referred to here as themes. Again, the focus of this dissertation is on the analysis of residents' understanding of coastal land loss and what that means for their place attachment constructs. So, for instance, narration by interviewees about land loss was categorized as the theme *land loss*. All land loss data was extracted from the larger interviews and upon analysis of those extractions sub-themes emerged from within the primary theme of land loss (Creswell 1997). Sub-themes were named in accordance with the different meanings respondents conferred upon the experience of land loss and so reflect the analytical framework.

Analytical Framework

I incorporate elements of *interpretive phenomenological analysis* (IPA) as outlined by Smith (2004) into the analytical framework. IPA is the science of meaning and meaning-making and this reflects the idea that our experiences exist for us through the meanings we give them (Smith 2004). When we interpret an experience, that interpretation is meaning-making and meaning-making is a transformation of the experience. It is not the experience itself; whenever we reflect upon an experience, it is transformed in some way (Smith 2004). Narrative production through interviews is exactly this (van Manen 2002): an embodied *meaning*, what this study attempts to capture – how subjects construct meaning from their experiences by developing a narrative.

Nevertheless, while the procedure of IPA is concerned with the perceptions of individuals, it also acknowledges the role of the analyst in interpreting meaning respondents have given to experience (Smith 2004): "The participant is trying to make sense of their personal and social world; the researcher is trying to make sense of the

participant trying to make sense of their personal and social world" (Smith 2004). Taking this process into consideration IPA consists of three basic elements - inductive, idiographic, and interrogative (Smith 2004). The inductive and idiographic are employed in the in-depth analysis which makes up the body of this dissertation and the concluding chapter touches on the interrogative.

IPA is inductive in that it allows for unexpected themes to arise, and the data collection method reflects induction because it elicited a narrative about place that did not address coastal land loss. However, telling a story about place led respondents to talk about what is important to them about place and, as it turned out, for most this involved addressing land loss (Smith 2004).

Thus, looking at the primary theme of land loss as a whole in relation to a narrative of place attachment constituted the first phase of analysis. What resulted was a general picture (presented in table form, chapter 4) of where coastal land loss was brought up in a narrative, its context, and whether it was a "running theme" throughout the interview.[20] Induction occurred again in the idiographic phase as sub-themes emerged from the primary theme of land loss (Smith 2004).

In the idiographic phase of analysis, the theme of land loss was examined for each case, reaching a point of closure about each unit before moving to the next. This was usually done with a very few subjects, but since this sample is rather large, a general examination and point of closure was reached on respondent discussions of land loss

[20] For this phase of the analysis, a theme was defined as "running" if a respondent broached land loss in each 1/3 of the interview – i.e. during the history of place portion of the interview guide (the first 1/3), experience with storms (the second 1/3), and/or change (the last 1/3). This has limitations because a respondent might talk about land loss a great deal in the first phase of the interview, but not bring the issue up in the remainder of the interview. This is compensated for in the idiographic phase of the analysis.

(Smith 2004). Using Atlas.ti analysis software, the summary examination and point of closure was connected to the land loss theme for each respondent.

After this stage of analysis, I went back into the primary theme of land loss and separated statements of meaning and grouped them according to commonality. Creswell (1997) calls these meaningful statements by respondents "meaning units." In these "meaning units," it was found that coastal land loss was illuminated by the concept of *landscapes* – the symbolic meaning of land loss. Grouping statements about land loss according to common elements of meaning created natural sub-themes. These sub-themes are inductive because the respondents themselves create them through their intended meaning.[21]

Inductively discovered sub-themes are described in detail in chapter five, the analysis chapter, where meaning is extracted and described in an interpretive phase. Then, moving back to the general, I extrapolate a "unifying meaning" from the data (Creswell 1997) which is illustrated in the "Essential Meaning" chapter, chapter six. This chapter describes the 'essential,' common meaning, and how the common experience of land loss and its relationship to place attachment is derived (Creswell 1997; Smith 2004). The reader will come away with the "essential, invariant structure" of experiencing coastal land loss – in short, what it is like to live with this disaster (Creswell 1997; Smith 2004).

Gaining this understanding holds value: moving closer to the particular brings us closer to the universal (Smith 2004). By delving into what the experience of coastal land loss means for residents, we can understand how we are similar to people who we believe

[21] These sub-themes of the major theme of *land loss* arose from how respondetsa chose to talk about land loss and are not the result of prompting or probing by interviewers.

to live very different circumstances from our own. Experiencing coastal land loss also carries indications for understanding the meanings many brought into Hurricanes Katrina and Rita. Understanding how land loss is experienced provides a context for Hurricanes Katrina and Rita and, universally, how we might deal with corresponding situations (Smith 2004).

After this detailed interpretive phase of analysis, the concluding chapter moves into the interrogative. This last chapter places this study within the context of the existing literature. The chapter outlines what the findings of this dissertation mean for current coastal restoration policy, especially in light of the hurricanes of late summer 2005, as well as, more general policy where place attachment is part of the decision making process.

Policy makers need to know more about how publics think, especially in the realm of disasters. In this way, the qualitative phenomenological approach employed here is useful in that it allows respondents to develop a composite narrative of place. More than that, the phenomenological instrument developed for this project allows subjects to broach coastal land loss on their own terms.

Validity and Reliability

Although the validity and reliability of this project can be discerned from much of the above discussion, some clarification is needed. In qualitative research, validity pertains to whether or not the research being conducted accurately measures what it is claiming to measure. Reliability refers to "the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions" (Hammersley 1992, p.67). But first, validity is considered.

A qualitative phenomenological method is the most appropriate way to determine how subjects understand the phenomena of coastal land loss. Knowing how respondents subjectively understand coastal land loss using in-depth interviewing does this better than survey methodologies. During community/interviewee research, respondents believed the researcher was only interested in their lives as Louisiana coastal residents. This allowed respondents to broach land loss on their terms and to develop their own relevance. In this way, we compensated for "social desirability," a common validity problem in qualitative research where responses may be an element of what the respondent believes the researcher wants.

Also, the number of parishes chosen to sample from and the number of interviews, 126, provide a broad and valid sample of coastal residents who are exposed to land loss. Snowball sampling was used beginning with several different contacts who provided more respondent contacts. Interviews with subjects who ranged in sociodemographics were purposely sought out. Seeking an array of respondents further ensured the validity of the sample and also increased reliability during analysis.

Creswell (1997) suggests that qualitative research should prove reliability by determining the accuracy of analysis and findings. For this analysis, accuracy was achieved by corroborating through inter-coder reliability. In other words, verification was achieved by using two coders for each set of interviews. A fellow graduate student, Traber Davis, who was also an interviewer for this project coded a series of interviews. Atlas.ti, a qualitative analysis software program, was used, and Ms. Davis and I employed the same set of analytic codes. I then compared our coding of identical

interviews and then Ms. Davis and I discussed and reworked discrepancies until inter-coder reliability was achieved.

Also, in the interest of further reliability, the presentation of findings will be in the form of long extracts from interviews and in all instances will provide the question used to provoke the responses. Quotes will be presented in an uninterrupted manner and any interruption by the interviewer will be included in the presentation of a response. While taking these measures ensures the validity and reliability of this project, putting the communities under study into their respective historical context, as is done in the following section, not only benefits the reader, but provides an important part of the data collection which the research team used to prepare themselves for interviewing residents about their *place*.

Community History

This synopsis of historical overviews is best placed in the "Methods" chapter because it is part of the data gathering process. Historical analysis was a primary goal for the larger objectives of *The Coastal Communities Project* and important for this analysis because it situates resident narratives in a historical context. In fact, the historical analysis of each community was the first step in data collection. To gain an adequate understanding of residents' conceptualization of environmental change contextualized in place, we thought it essential to understand the historical context under which change occurred. It was of utmost importance that before we began interviewing in a particular community that we have an understanding of the current and historical nature of that community. In short, the historical overview is data that situates place within the current historical moment.

Grand Isle, Louisiana

Existing within Jefferson Parish, Grand Isle sits off the southeastern coast and is the only occupied barrier island in Louisiana. The island community also has a unique history and has been a popular resort destination since the 1850s.

The island was settled in the eighteenth century by small Spanish outposts. The island is famous for its beginnings as a buccaneering community headed by Jean Lafitte; however, after the Louisiana Purchase and an American takeover in 1803, the US Navy terminated Louisiana's coastal privateering in 1814 and ended this period in the island's history (Reeves 1985). The island then shifted to sugar production and a plantation economy. Following the Civil War and the elimination of slave labor, the economy moved more toward resort development made possible by a growing national trend in leisure travel and the construction of a railroad to the island making it more accessible to New Orleanian elites who looked to escape the summer disease outbreaks and the heat of the city (Steilow 1981; Reeves 1985).

This era, the mid to late 1880s, are often referred to as the Golden Age of Grand Isle, and it is this period that Kate Chopin and Lafcadio Hearn celebrate in American literature. This Golden Age came to an abrupt end in 1893 due to one of the deadliest hurricanes in Louisiana history, a storm which destroyed most of the island's structures (Davis 1990; Meyer-Arendt 1985; Reeves 1985; Steilow 1981).

After the storm, the island's permanent residents reestablished their livelihoods through the traditional methods of fishing and farming. From then until World War II, tourist development on the island was piecemeal. Following World War II; however, tourism began to grow steadily accompanied by a period of industrialization mostly due

to oil exploration, a boom that lasted until the 1980s. A bridge from the mainland was completed in 1934, and post- World War II tourist expansion centered around the development of summer homes along the shore, which contrasted to the islanders' preference for more protected wooded areas located toward the center of the island (Meyer-Arendt 1985). Along with the more traditional fishing, locals and the newly arrived took advantage of the wave of industrialization which was concentrated in the oil business, and by 1962, 134 oil wells were operating on the island block (Steilow 1977).

But the boom was not to last. In the 1980s, the island suffered an economic decline due to an oil bust (Gramling and Freudenberg 1990). Following this economic collapse, localities throughout south Louisiana began emphasizing tourism by promoting the uniqueness of the local Cajun culture (Ancelet 1989).

The 1990s brought a resurgence of tourist activity to Grand Isle. New growth had been stimulated by the completion of a waterline to the island and yet even though Exxon retained a refinery and business operations on the island, few locals were employed there and all drilling was moved further offshore. In addition, commercial fishing has been in steady decline leading the local economy to rely largely on tourism (Thompson 2002).

According to the latest Census, Grand Isle has 1541 residents and, like all the communities under study, is defined as rural (US Census 2000). The dominant ethnic heritage is Acadian, but also includes French, Portuguese, Spanish, Italian and Filipino settlers from its buccaneering and plantation days.

Along with its unique cultural features, Grand Isle holds a geographical quality distinctive from the other communities under study. Grand Isle, a barrier island, is on the front line of storms. However, the island is above sea-level. Thus, while it experiences

significant damage during storms, water recedes quickly. Such appears to be the case with Hurricane Katrina as the island suffered extensive wind damage even though the island was not totally devastated and the water receded quickly.

South Terrebonne Parish

While Grand Isle was chosen because of its unique history and geography Cocodrie, Dulac, and Chauvin, in southern Terrebonne Parish, is a small cluster of communities that share a geographical and socially interdependent space. Choosing this geographical cluster of communities was preferred over selecting just one of the communities to gather a more accurate representation of the coastal area of the parish and a more precise picture of Louisiana coastal residents overall.

Immigrants from Asia, Africa, the Carribean and Spain shaped this area's history. But beginning in the 19th century two groups became dominant: exiled French Acadians from Nova Scotia who came to be known as Cajuns, and Houma Indians who had been pushed southwest from Mississippi and Alabama. Yet today, Chauvin and Cocodrie, with a combined population of 1,723, are self-identified as white (US 2000 Census). Dulac's population hovers around 2000 and is almost 60% Native American, the other 40% being white (US Census 2000).

South Terrebonne's environment is not as diverse as its population. With more than 90% of Terrebonne Parish being wetlands, these communities are in the midst of a true wetlands environment, and so, "traditional vocations in Terrebonne Parish are fishing, hunting, trapping, sugarcane farming, boat building," and since the 1920s, oil and gas production (www.rootsweb.com/~laterreb/today.htm). But during the 1980s Cocodrie, Dulac, and Chauvin, like the rest of the state, suffered from the oil and gas

bust. While not having any wells or refineries, the communities still have a substantial number of residents employed by the industry.

These communities also endured setbacks from Hurricane Andrew in 1992. While recovery had been substantial, structural effects of the storm lingered, in part, due to the decline of the fishing industry where commercial fisherman watched a steady drop in price for their crop over the last twenty years. Despite these setbacks the parish accounts for 25% of the state's seafood production, ranks first in Louisiana in natural gas production, third in oil, and rebuilt its shipbuilding industry from the demand for gambling boats (www.rootsweb.com/~laterreb/today.htm).

Gambling boats bring tourism and while the that industry has never been a part of Dulac or Chauvin, over the past twenty years tourism has become an increasing element of Cocodrie's development. Another unique element to Cocodrie is a large marine and coastal research, education, and public service institution – the Louisiana Universities Marine Consortium (LUMCON). The organization, formed in 1979, joins thirteen state universities and higher education management boards. The institution has become a magnet of sorts for the local communities providing assistance to fisherman and holding year round educational programs for schoolchildren from across the state.

LUMCON and the communities of south Terrebonne felt the western brunt of Hurricane Katrina and the far eastern edges of Hurricane Rita. As with most storms, including weaker ones, southern Terrebonne experienced significant flooding and wind damage, but it didn't encounter widespread devastation. And although much of its housing stock was damaged and federal help was slow to come, residents returned quickly and began repairing as they could.

Eastern St. Bernard Parish

Unlike residents of south Terrebonne, many of the communities of eastern St. Bernard were obliterated by Hurricane Katrina. Katrina dealt St. Bernard Parish a devastating storm surge which destroyed key levees. The eastern portion of St. Bernard is the most rural and coastal making it vulnerable to storms. Its geographical position is also one of the reasons it was chosen for study. St. Bernard is adjacent to New Orleans and extends in an eastern direction to the Gulf of Mexico. Looking at a map, the bulbous portion of the parish is all wetlands and communities begin just inland of this. Archeological findings of Native American complexes along the parish's ridgelands trace the parish's social history back 2000 years. However, for reasons unknown, they had abandoned the delta prior to the arrival of the Europeans (LSU AgCenter 1998).

On February 2, 1699 Iberville, Bienville and the first French settlers landed on the Chandeleur Islands on the eastern shore of the parish. However, they did not remain, and it was not until 1778 and the Spanish Colonial period that St. Bernard began to be settled by Europeans. Many land grants were given to Spanish families who identified themselves as "Islenos," and numerous descendents of these families still reside in St. Bernard (LSU AgCenter1998).

The Spanish settlers rooted the parish in agriculture which gave great support to New Orleans. Fishing, fur trapping and farming, especially of sugarcane in which Italian immigrants specialized, were the major modes of resource extraction. To this day much of St. Bernard is populated by French, Spanish, and Italians (LSU AgCenter 1998).

St. Bernard is also the locale of significant American military history. In 1814 Andrew Jackson, with a ragtag band of regulars, volunteers and pirates defeated British

troops who had invaded from Lake Borgne and the eastern end of the parish. And on April 12, 1861 P.G.T. Beauregard, a native of St. Bernard, gave the order to bombard Ft. Sumter plunging the North and South into civil war (St. Bernard Parish Library; LSU AgCenter 1998).

Despite the parish's active military role, it remained agriculturally based until after World War II, when the oil and natural gas industry became dominant. As a result, while commercial and sport fishing are still major elements in St. Bernard, farming is greatly diminished. By 1970 the oil and gas industry had become the primary employer in the parish, and the growth of the industry along with the parish's proximity to New Orleans facilitated great suburban growth continues to move eastward toward the more rural areas of the parish (LSU AgCenter 1998).

In 1965 the state finished construction of a man-made canal that cut through the entirety of the parish to serve as a short cut for shipping from New Orleans to the Gulf of Mexico. The canal, the Mississippi River Gulf Outlet (or as commonly referred to, Mr. GO) all but put an end to the parish's fur production as it destroyed freshwater marshes caused by increased salinity brought in by the canal (LSU AgCenter 1998).

Mr. GO has been a source of controversy since its inception. The conflict between the Port of New Orleans Dock Board and St. Bernard officials began as the decision to build Mr. GO was reached by the Dock Board, a decision in which St. Bernard felt they had little representation. St. Bernard believed the canal was forced on them, and officials have been trying to have Mr. GO closed since its opening. The Port of New Orleans Dock Board and the Army Corps of Engineers who make primary decisions continue to argue for the canal as a way to ease shipping even though the canal is often not open at full

capacity due to the frequent need for dredging. The parish government and residents are constantly fighting the US Army Corps of Engineers and the Port of New Orleans Dock Board claiming that the canal has brought no economic progress as promised and has only caused residential flooding and coastal land loss (LSU AgCenter 1998).

Residents and parish officials alike feared their communities were more vulnerable to land loss and storms due to Mr. Go. Their fears came to fruition on August 29, 2005 as the communities of eastern St. Bernard fell under the eye-wall of Hurricane Katrina. The communities included in this study were almost completely annihilated; at this point, although the future remains uncertain, rebuilding is slowly occurring.

Lower Plaquemines

Plaquemines, the southern most parish in Louisiana, is a ninety mile long peninsula stretching out from the southeastern portion of the state as the Mississippi River spills into the Gulf of Mexico. Small communities revolving around resource extraction sit along two strips of high ground bordering the river of this delta region. Citrus, sulphur, oil, commercial fishing and fur trapping have been the primary industries of the parish. In 1946 orange growers and parish officials organized the first "Orange Festival" which, despite decimation from freezes and hurricanes, has nonetheless grown into the popular "Plaquemines Parish Fair and Orange Festival" held annually in December (Louisiana Collection – UNO Library).

Plaquemines' citrus festival is but one example of the social history that evolved out if its resources. The parish, like that of St. Bernard, dates back more than 2000 years and the earliest known culture is the Tchefuncte. Europeans first traversed the region in 1682 as Robert Cavalier de La Salle proclaimed the whole of the Mississippi Valley as

property of the King and Queen of France. Eighteen years later, in 1700, Iberville built the first French fortification along the Mississippi River in Plaquemines (Louisiana Collection – UNO Library). But like the rest of southeastern Lousiana, the French were not the only migrants to gain a foothold in the region. The parish's cultural history comprises French, Spanish, Slovenian, Dalmatian, Chinese, Filipino, African American and since the 1970s Southeast Asians.

While Plaquemines may have diverse cultural influences, its political history is more singular. From 1920 to 1980 the parish's political structure was dominated by the Perez's and their now notorious family patriarch, Leander Perez. Although his official position for most of his career was district attorney, he wielded great power. Perez considered lawmakers "superfluous middlemen. He simply drew up laws and inserted them into the minutes of the parish police jury and commission council. He concluded that honest elections were more trouble than they were worth and made sure none was made in his bailiwick" (Jeansonne 1995, p. xiii, xiv). Plaquemines' marshes were found to be oil rich in 1933, and Perez set up corporations to lease the public land from the parish which then leased the land to oil companies. Perez was paid by both the parish as a district attorney and the oil companies as landlord (Jeansonne 1995). He became an oil tycoon worth millions who wielded unparalleled power in Plaquemines, power used for his own advancement while socially, economically and environmentally pillaging the parish. In 1980 the parish redistricted and in 1982 the state attorney general superseded the local district attorney (historically a Perez) handling of oil leasing, thus, bringing the sixty year political dynasty of the Perez's to an end. (Jeansonne 1995).

With the decline of the Perez's power, the communities of Buras and Empire received an influx of Southeast Asian immigrants who were drawn to the fishing industry in the late 1970s and 1980s. Slovenians and Dalmatians, who traditionally engaged in the large oyster harvesting of the parish, were now joined by Southeast Asians which resulted in increased competition and some ethnic resentment.

As of late, the oyster industry has become the source of controversy. Oyster harvesters leasing land from the state brought lawsuits against the state for damages to their oyster beds by siphons used for coastal restoration. While some claims were legitimate, many appeared questionable due to some of the land never being used or harvested. Many plaintiffs have also been accused of leasing oyster beds upon hearing of the impending lawsuit. A large decision in favor of the harvesters by a St. Bernard judge threatened to cost the state $700 million and lead to the view that the suits were undermining the coastal restoration process (*The Times Picayune* 5/04/2003). The ruling by the St. Bernard judge was appealed by the state and in May of 2005 the U.S. Supreme Court rejected the awards to the oysterman essentially ending an 11 year dispute (*The Times Picayune* 5/24/05).

But the courts couldn't stop Hurricane Katrina, and although the storm hurt the 2005 oyster harvest significantly, the yield produced more than what many had projected. Even so, the communities of lower Plaquemines, like those of St. Bernard, were completely wiped out by the storm. The parish's southern communities are slowly beginning to rebuild, progress is piecemeal and there are preliminary plans to consolidate community services into one municipality that will serve the southern region of the parish.

Delcambre

Such controversy around coastal land loss or restoration does not exist for the community of Delcambre. This community of about 2000 sits on the border of two southwestern Louisiana parishes – Iberia on the east and Vermillion on the west. The community developed, as the region did, primarily through the influx of Acadians who were expelled from Nova Scotia by the British. The French also settled in the area. First arriving in the early 1700s while the region shifted to Spanish rule in 1762, it retained a strong French influence (Iberia Parish Tourist Commission).

These settlers established the community's traditional industries including fishing, hunting, trapping and farming. Sugarcane farming came to dominate the area and still has a strong foothold. The natural gas and oil industry is also a major business here but like the rest of the state has seen a substantial decline in oil and gas investment. Facilitating that decline was a disaster in 1980 at the Jefferson Island salt dome when nearby Lake Peigneur was drained by a gas rig puncture of the salt mine nearly killing several workers. Since, the parishes have sought court injunctions to keep oil and gas companies from resuming drilling near the salt mine (*The Advocate* 8/25/1994).

Commercial fishing in the community has also greatly declined. The area comprises less wetlands than does the other communities, and farming has always been more prominent than commercial fishing. Likewise, considerably fewer coastal restoration projects have been implemented here than in the southeastern region of the state where land loss occurs at the highest concentration (*The Advocate* 10/25/1996).

Interestingly, despite Delcambre sitting on Louisiana's central coast west of Hurricane Katrina's landfall, it still experienced significant flooding which was

compounded by a fierce blow by Hurricane Rita. The extent of the damage was widespread and many remain displaced, but rebuilding is finally gaining some ground.

Lake Catherine

Lake Catherine suffered a similar fate from the storms of 2005. This community on the eastern shore of Orleans Parish is surrounded by Lake Borgne, Lake St. Catherine and Lake Pontchartrain. Unlike the other southeastern Louisiana communities in this study, it is not directly connected to the Gulf of Mexico. Lake Catherine resides in the midst of Bayou Savage National Wildlife Refuge thirty minutes from the New Orleans city limits.

Like the Refuge, Fort Pike is another treasure of this community. Fort Pike, completed in 1826, was joined by nearby Ft. McComb as part of a large scale coastal defense system along the Gulf and Atlantic Coasts. These forts were designed to help protect ports from land or sea invasion (www.lastateparks.com/fortpike/fortpike.htm) and while Ft. McComb is now gone, Ft. Pike still remains as a state historic site and a popular attraction for those visiting New Orleans.

While the forts represent a federal interest, Lake Catherine has largely been under private control for most of its European and American history. First granted to Gilbert Antoine de St. Maxent in 1763, Lake Catherine remained under single ownership for the next 200 years. During that time the land came to be owned by several prominent New Orleanians. Throughout, small homes and fishing camps were built on land leased from the owner.

CSX Railroad was the owner in the 1980s but in 1989 decided to sell the land rather than install a sewerage system required by the state. The railroad sold the land,

divided into four parcels, to the residents, and they organized as the Lake Catherine Land Corporation. The land sold for about $2.5 million. The company leases the land to its shareholders – the residents. The company was formed because residents were not able to gain title to their land until a state approved sewerage system was in place for the community. The state demanded a full scale treatment plant for the community but did not want to pay for a large scale system itself. The residents argued that if the state would not fit the bill, then they should be allowed to install individual treatment plants. Thus, fourteen years of dispute later, the Lake Catherine Land Co. began to lease land to its shareholders, the residents, when the Louisiana Department of Health and Hospitals (LDHH) finally approved permits for residents to install individual sewerage treatment plants on the land (*The Times Picayune* 4/21/2003).

But land disputes for Lake Catherine do not end with this issue. A parcel of land called Brazilier Island is in even greater conflict. Former owner, Remington Oil and Gas Co., sold the land to Ken Carter, district assessor for Orleans Parish and an attorney for the oil company. When he bought the land in 2001 for an undervalued sum of $150,000, residents claimed there was an agreement with the oil company that they would get first right of refusal to buy their land if the company decided to sell. They didn't get that right. Ken Carter proposed building an upscale gated community which would likely damage the wetlands which comprised most of the disputed land and would displace most of its current residents (*Times Picayune* 2/12/2003). Prior to the storms of 2005, the dispute remained in litigation.

Due to Hurricane Katrina, however, Ken Carter may not have as much competition from residents as from other real estate speculators. Hurricane Katrina brought total devastation to Lake Catherine, and its residents remain displaced.

Conclusion

These communities, like many, have their share of challenges and their various histories continue to shape them today. Most relevant are Hurricanes Katrina and Rita. A common element that they all share is the geographic history, including Katrina and Rita, that has molded the social history of the region. Lives built around water and sediment rich earth has fueled an attachment to place that persists in spite of problems. The biggest difficulty they all shared prior to the 2005 hurricanes was land loss which threatened them with displacement. At the time of this writing, many residents are still displaced due to the storms. The extent of the damage is significant and widespread and what is most certain is that land loss was greatly exacerbated by the storm.

These communities, situated in the coastal wetlands that used to serve as protection, cover the majority of southeastern Louisiana which faces great environmental change due to land loss. The findings from these communities provide insight into the nature of place attachment and how it is effected by environmental change. Yet, because of the most recent changes, history is all that some may have left.

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Maps

Figure 1 – Louisiana Department of Natural Resources. 2004. http://www.dnr.state.la.us/

Figure 2 & 3 – City Data.com. 2004. http://www.city-data.com/city/Grand-Isle-Louisiana.html

Figure 4 – John Adams and David Burley. 2004. John Adams is a geography graduate student at the University of New Orleans

Chapter 4 - Findings: Resident's General Perceptions of Coastal Land Loss

Respondents generally said that land loss is an urgent problem that needs addressing no matter who or what is responsible. Land loss is a salient issue for them. And most of the respondents are only the latest in a line of generations experiencing the problem. Many say land loss means the loss of not only land, but a certain way of life while many say it has become a political issue with little real action. For all of whom the issue is most important, land loss causes acknowledgment of their strong attachment to place.

Many respondents discussed land loss at great length during narrative construction. The interview guide served as just that – a guide that shaped respondent narratives around place. The interview was composed of three major parts, the first of which addressed personal history in place with questions about childhood, school, parents, grandparents and adulthood. The second portion addressed experience with storms and the third addressed experience with changes to place. However, being a phenomenological study, respondents chose what story to tell and how to tell it (Gubrium and Holstein 1997). Thus, some respondents steered their narrative in a different direction from that suggested by the interview guide. For instance, some respondents directed their narrative into discussing their experiences with storms during the first portion of their narrative instead of personal history in place. The reader should take this into account while reading the description of the data below.

The General Picture

Location in Narrative Where Respondents First Introduced Land Loss

	First 1/3	Second 1/3	Last 1/3	Not at All
Grand Isle	10	3	5	2
St. Bernard	16	7	2	5
Terrebonne	13	8	2	0
Plaquemines	2	5	4	9
Lake Catherine	7	6	3	2
Delcambre	3	3	1	8
Totals	51	32	17	26

Table 1: Frequency of where respondents first brought up coastal land loss in their narratives.

Coastal Land Loss as a Running Theme in Place Narrative

	1st and 2nd	1st and 3rd	2nd and 3rd	All 3 Parts
Grand Isle	1	5	3	4
St. Bernard	1	2	3	12
Terrebonne	2	0	6	10
Plaquemines	0	0	4	3
Lake Catherine	1	0	3	6
Delcambre	0	0	3	1
Totals	5	7	25	36

Table 2: Frequency of respondents who discussed coastal land loss across all major portions of the interview.

Even though we did not bring up the issue of coastal land loss, respondents did, and the tables above provide some initial information about its salience for respondents. In 126 interviews, land loss was introduced and discussed 51 times (40%) during the first 1/3 of a narrative and 32 times (25%) during the second 1/3 of a narrative (Table 1). As stated above, the first portion of the interview guide addresses personal history in place and the second portion speaks to experience with storms. The final third of the interview addresses changes to or in place and land loss was approached in the last third of 17 (13%) interviews. As stated in the methods chapter, we believe that if respondents had not approached land loss by this point in the narrative, it would be less likely that they would at all. The low number, 17 out of 126, as compared with the first two phases appears to be indicative of this assertion.[22]

Out of 126 interviews, only 26 respondents or 21% failed to raise the issue of land loss. Seventeen of these respondents came from either Plaquemines Parish (9 respondents) or the community of Delcambre (8 respondents). However, for residents of the other communities, land loss was a prominent issue. Forty-six of 91 residents, or 51%, from Grand Isle, Terrebonne, St. Bernard and Lake Catherine introduced land loss during the first 1/3 of their narrative and only 9 of 91 or 10% didn't bring up the issue at all.

In fact, land loss is so significant that it constituted a consistent or "running" theme throughout 36 narratives. For the purposes of this study, a running theme is where

[22] The interview guide elicits a narrative of place. Discussion of place provides respondents for whom land loss is a significant issue with an opportunity to talk about what they think is an important problem for them and their place. If they haven't introduced land loss by the final third of the narrative, then the issue is likely to hold less salience than it does for those who discuss it in the first two thirds of a narrative. In this way, having less salience for a respondent and not being asked to discuss the topic, an interviewee is more likely to <u>not</u> introduce the topic at all.

a respondent brings up coastal land loss in all three portions of the interview. Of the 100 narratives where the issue was discussed by respondents, it was a running theme in thirty-six.[23]

Along with the pervasiveness of land loss throughout narratives, another 37 residents discussed the issue at length during at least two portions of their narratives. Respondents, again and again, discussed the issue at length when talking about their childhood, their occupations, their homes, recreation at fishing camps and favorite fishing spots, storms, development, as well as, when talking about science, policy and politics. In all, 73 of 100 respondents who broached land loss discussed the issue through *at least* two thirds of their narratives.

In giving us a story about their lives and the place they live, residents wanted us to know about an important event that shapes their lives - coastal land loss. Respondents were eager to discuss the issue even when not asked. And when asked to talk about the place they live, land loss was something respondents wanted to talk about. Clearly, the issue had salience for residents.

General Examination of Land Loss Theme

As was outlined in the "Analytical Framework" section of the methods chapter, a first phase of idiographic analysis was conducted where a general point of closure, or the main idea of a respondent's narrative of land loss, was reached on each respondent. There

[23] While this finding is significant, its relevance is slightly limited because in 3 of the 36 narratives, I or other interviewers were probing a respondent. If a subject broached an issue such as land loss while they were discussing another topic, interviewers would wait to probe so as not to disrupt the flow and construction of the respondent's narrative. Thus, an interviewee may have introduced land loss in the first phase of their narrative; however, the interviewer may not have had an opportunity to probe until the next portion of the interview. After searching each interview that constituted land loss as a running theme, 3 of the 36 were found to be probed by the interviewee in subsequent portions of the interview (second and/or last third). These consisted of one interview of a couple from Grand Isle, one from Terrebonne, and one in Lake Catherine. That being said, these respondents talked about the issue at length and returned to the issue after moving into other areas of their narrative.

is a point to respondents' discussions of land loss. This point is a particular way of understanding land loss that they wish the researcher or readers of the research to know (Shanahan et al.1999).

Respondents communicated their particular understandings of land loss by what they said and how they said it. As described in the methods chapter and as outlined in IPA, a general point of closure was reached on each resident's discussion of land loss. This point of closure is based on what a respondent said about land loss. Thus, it is in this chapter that what residents said is described and the next chapter will constitute how they said it. In coming to a point of closure, some common themes arose. These themes are *substantive units* and names have been ascribed to them based on what respondents said about land loss.

The substantive units are a *way of life, politics of restoration, the physical-natural world, uncertainty,* and a unit where respondents are ambivalent, yet seek to explain the phenomena: *ambivalent and explanatory*. Each substantive unit is defined below and brief illustrative text from respondents' narratives is added. In their narratives, many respondents presented a two-part general substantive framing of land loss. For example, many viewed land loss through the *politics of restoration* while also saying that the future was *uncertain*. I also give a frequency count of the most common substantive units in table form (Table 3). In the presentation of narrative text, a pseudo-name of the respondent will be followed by an abbreviation of their respective parish: (GI) – Grand Isle, (T) – Terrebonne, (SB) – St. Bernard, (P) – Plaquemines, (LC) – Lake Catherine, and (D) – Delcambre.

The following section represents the idiographic phase of analysis. Thus, it is only descriptive, not analytic; the substantive units are a useful way to categorize what respondents are generally saying about land loss.

Substantive Units Defined and Illustrated

Substantive Units for Land Loss Theme

	Way of Life	Politics of Restoration	Physical-Natural	Uncertainty	Neutral and Explanatory	Other	Totals
Grand Isle	6	4	6	1	2	1	20
St. Bernard	2	14	11	9	2	5	43
Terrebonne	4	13	4	13	2	3	39
Plaquemines	2	6	3	1	1	4	17
Lake Catherine	4	3	0	3	1	8	19
Delcambre	0	3	7	0	2	0	12
Totals	18	43	31	27	10	21	150

Table 3: Frequency of substantive units within respondent narratives about land loss.

Politics of Restoration

Respondents say land loss is a political issue. They talk about the different public and private agencies that are involved either in causing or correcting land loss and these include local, state and federal government institutions, politicians, scientists, civic associations, and commercial institutions. Forty-two year old Cheyenne (SB) worked as a nurse and now runs her own resume service. She introduces land loss while talking about her experiences with storms, and in the excerpt below she speaks about a shipping

channel built in the 1960s that travels through St. Bernard to New Orleans. The shipping channel, the Mississippi River Gulf Outlet, otherwise known as Mr. Go, is known among St. Bernard residents as being a major cause of land loss.

> Interviewer: *When do you remember first hearing about it [land loss]?*
>
> Cheyenne (SB): Probably about five to seven years ago. The residents didn't want the Mississippi River Gulf Outlet in the first place because we thought it would have the effect that it's having. And being that we are surrounded by water anyway, we didn't want all the problems that could occur with that, the traffic and just it being there and the wakes of the water. It wasn't well planned out. We just didn't even see the urgency or the need. Instead of following the whole peninsula the way they did, couldn't they have just come in from the side and got the same results? It's political.

Cheyenne believes land loss has been greatly exacerbated by a manmade structure that was implemented because of political and economic influences. She states that it was ill-planned and pushed through without much analysis due to political agendas, and she goes on to say that land loss cannot be repelled unless the channel is closed.

Another example of the *politics of restoration* substantive unit is provided by Albert (GI), 34 years, who grew up on Grand Isle and married his high school sweetheart, Sissy (GI), also 34 years. Albert, Sissy and their new family moved to Houston for a couple of years to pursue careers; however, missing their home, they moved back and have taken over management of Sissy's fathers' supermarket, the only grocer on the island. They are involved in a new, upscale marina development on the eastern end of the island where they say bureaucratic problems are frequent. In this passage we hear from Albert:

> Albert (GI): And that's the biggest problem [Sissy had just commented that bureaucratic agencies exclude community and local knowledge] because the [Army] Corps of Engineers say that when you buy waterfront [property], you

> actually own up to the 1929 water line. And they say, "Well, you get waterfront." The corps has to give you a permit, no questions asked, for two acres of land to do what you want, from your property out- two acres- what you want to do with [it] - you know it's an open permit. Well, then you have [Dept. of] Wildlife and Fisheries that says "no," and this other agency that says "no." And when I bring it up and I say, "Why are y'all worried about this? Y'all have so much marshland, which y'all studied that y'all put out that says that we're creating a football field of marshland every forty-five minutes." And they agreed with me. So I said "Why don't y'all take care of that instead of worrying about what I'm messing up, which is private?"
>
> Interviewer: *They're creating or they're losing a football field?*
>
> Albert (GI): No, nature's doing it- because its erosion.
>
> Interviewer: *Replenishing it or-* [A: no] or washing away?
>
> Albert (GI): It's just washing away and when it comes off of the land, to me it's marsh because it's not going to be deep; it's going to gradually come off what they consider marsh. So I say, "Why don't y'all worry about that?" You know. And then they want you to mitigate, and they want you to keep it up for twenty years. Well, I tell Corps, "Well, why should I keep it up for twenty years; you have kept up what y'all did?" I said, "There's stuff that I can point out that y'all have done, that y'all haven't messed with, so where's my tax money going?" Well, nobody can answer it. They don't want to talk about it.

Albert says that the agencies that are charged with coastal restoration should hold no authority over private land. He believes land loss has become a bureaucratic issue where agencies act hypocritically and conflict arises between agencies as well as between agencies and residents.

Albert (GI) and many others describe land loss as being politicized by the agencies charged with alleviating it. Their alienation from and mistrust toward restorative efforts is a recurrent theme in their narratives.

Physical-Natural

In this substantive unit, respondents talk about the physical and/or natural elements of land loss. Physical features include built aspects of the environment such as

homes, businesses, restoration/freshwater diversion projects, canals, etc. Respondents also talk about the natural elements of land loss, i.e. its affects on the non-human ecosystem such as flora and fauna or its relationship to storms.

PJ (GI), 64 years old, with his wife, Jenny (GI), 58 years old, runs a bed and breakfast and is a retiree from an oil company. He is a good example of respondents who talk about the physical-natural phenomenon of land loss while not politicizing it:

> PJ (GI): One thing they are saying the fishing here is better than it's ever been. But they are saying that's good now, but in the long run it's bad because as the marsh erodes, it produces bigger food chain for the fish and so forth. But then after a while, if you lose your marsh, then you have open water. Then that way you don't have breeding grounds anymore for the fish eggs and larva and so forth. And there's some people with the [Army] Corps of Engineers that say, "All the islands are going and there's nothing we can do." Well, they are partly at fault for dredging and leveeing off the Mississippi River. And they keep dredging it. Now there's a peninsula (Plaquemines) going so far out; all your silt is going out over the Continental Shelf. It doesn't have a chance to come back here. Well, now with the fresh water diversion, that's going to help some. But they need to cut some big openings in that peninsula they built up in the mouth of the river.

PJ says land loss is having profound effects on the ecosystem. He also says that human actions and structures affect the region. Although PJ adds his opinions about the direction of projects, he and others who use the *physical-natural* substantive unit do not attach political meanings or judgments to their discussion. He does find fault with the Army Corps of Engineers, but this is not the focus of his passage. He restricts his dialogue to the process of land loss and subsequent restoration projects; PJ's focus is what projects do and what happens to the land.

Fifty-two year old Cedric (T) operates a small gas station/grocery and hardware store with his wife (not a respondent). Along the back of the store, which has been in his family for three generations, a bayou runs where small fishing vessels can fuel up. His

and his wife's home is adjacent to the store and besides operating the family business Cedric is also an offshore production operator for an oil company. Cedric brings up land loss at the very beginning of his narrative and says the loss of land is the biggest change he notices from when he was a child. In doing so, he talks about his memory of having to abandon his birthday plans to evacuate for hurricanes:

> Cedric (T): It seems like every year that I had a birthday, for my birthday we were leaving and we had to take the cake with us. That's the biggest change from when I was a kid to now. Coastal erosion, you hear that all the time now. Everywhere you go you hear people tell you "coastal erosion, coastal erosion." It's a major problem in this area. It's changing the area because of that. You've got saltwater intrusion now which is killing everything. You just go down the bayou and look at the trees. You see nice oak trees that's dead. Saltwater is killing them. There's nothing to stop or restrict the saltwater from coming in. With that goes everything else hand and foot.

Cedric says erosion is "killing everything" in the ecosystem, and he describes the cumulative effect that saltwater intrusion has on a region meant to thrive on brackish water. He also says that land loss is increasing the impact of storms:

> Interviewer: *Can you talk a little bit about the last storm a couple of weeks ago, [Tropical Storm] Bill [a small tropical storm in early June of 2003]?*
>
> Cedric (T): There wasn't much. But it did cause some damage, as small as it was. It was a storm. If it would have been a hurricane, it would have been a lot worse. But that too, there's no more protection. If we have a major hurricane come through here and follow the path of Bill, that would be major destruction. Because there's nothing to buffer the surge. When the tide gets two feet above normal, everything is open to the Gulf, where before it wasn't. So Bill, as small as it was, let us know it was there. I'm still making preparations for the next one. 'Cause Bill caught a lot of people by surprise. They didn't have much time to really get prepared. And maybe that's why it caused some of the damage that it has done. But the thing is, there's no protection anymore. So if we have anything major, we are going to have major damage. Like I said, I'm still getting prepared for the next one.

Cedric says the lack of protection due to disappearing land is causing more damage from storms that may catch people off guard. Much of the talk of land loss by respondents is of the impact of storms. Storms both create land loss and have a bigger impact because of the continuing depletion of land that assists in weakening storms.

Uncertainty

Respondents using this substantive unit say that land loss makes life and the future tenuous. What they say about the uncertainty that land loss brings tends to be framed, as expected, negatively. Often there are strong emotional elements connecting themselves and community to land loss which, in turn usually leads respondents to make appeals for protection in their discussion. Consequently, this substantive unit often displays a heightened sense of place attachment.

In this passage we meet Tina (T), a 29 year old homemaker with two young children, who has lived her whole life in Terrebonne Parish except for a brief period in her late teens and early twenties. She married at 17 and moved with her husband to North Carolina for three years due to his military career. Tracy's extended family has owned a fishing camp in the lower part of the bayous for three generations. They have always had to protect the land from the natural processes of erosion. However, she now says the situation is much more dire:

> Interviewer: *Is there anything that you think needs to be changed?*
>
> Tina (T): …You bulkhead and you bring in oyster shells to try to save the land around the camp. But you feel like you are fighting a losing battle. We bring cement out there, oyster shells by the baskets. It seems like you are not winning. There is still a camp out there that my uncle used to own. He's on high ground. The people that own that camp now, the kids get to run around and play horse shoes. But where we are at, which is only three camps down, there's nothing. It seems like everything is opening. And even like going out there with my grandfather and him getting turned around, and he didn't know [where he was due

> to loss of land]. He grew up there as a child [and now he is] in his late 70s. And when he got turned around, that's what scared me. I didn't know. That's not a route that I'm used to taking. But I knew that there was oyster reefs around there. It's scary. I know there are other important things that need to be taken care of around here, other communities. But if people don't start doing something about the wetlands, people need to stop talking about it and just do something. They do have little programs out here where you can go out and clean up. They go out to Last Island and clean up in other areas around here. But we need to do something. The marsh is going fast. There's not going to be anything left when my kids become that age where they could be bringing out their kids. I don't see that there will be anything to go to. And that's what is sad and scary because I know how much I enjoyed growing up and enjoyed taking my kids. There will be nothing if something is not done. And I don't even know where people would start to try to get something done.

Tina continually mentions how “scary” land loss is, connecting it to her personal life as well as to her larger family and community. She contextualizes the uncertainty that land loss brings by relating it to her grandfather who, she implies, used to know the land and waterways quite well, but now he becomes disoriented due to land that has disappeared into open water. Throughout this passage, Tina speaks of the urgency to alleviate land loss and salvage the place she is connected to.

Jared (SB) is a 45 year old special education teacher who recently obtained his law degree and flies small aircraft as a hobby. Jared, unlike most who hold this substantive unit, is more objective in his talking about the uncertainty brought on by Louisiana’s coastal land loss. In his narrative he shows an attachment to place; however, he is more detached in his analysis of land loss:

> Jared (SB): It's a difficult call of what to do here. It really is. Other places have different types of soils. They talk about coastal erosion in other places but they live in a coast that's rock. It doesn't erode like an alluvial coast like we have that's part of a delta. It's a different thing. We are on a very rapidly changing coastline here. Here we have this big center of commerce in New Orleans. This place was picked because of the influence of the Mississippi [River] and Bayou St. John and the lakes and all these different things and the ability at that time to pile a small

> boat and run small flat boats back and forth on these rivers, and we are really not in the best place. [Further on in Jared's narrative while talking about the inundation of family land by saltwater]: We have messed with the river levees and with all these canals. It's a mess. Where do you start to fix it? And if you fix it in one spot, what's the spin- off somewhere else. I think that's one of the big awarenesses today, that a lot of people are beginning to have is that no matter what you do, there's no short-term solution to it. And any solution that you start on one thing is going to end up maybe creating new problems and the whole solution to the problem is going to be centuries to figure out how we are going to do this. And is it worth the doing? Or is it worth it just letting this retreat into the sea and just heading a little bit further up the road. Which has happened all over history. How many places do you go around the world where there's the sunken city of this. It's nothing new.

Jared questions the viability of restoring the coast and continued human habitation in the region. He wonders if restoration, in addition to its positive intent, will have equally negative impacts. He contextualizes his analysis with the fact that Louisiana's coastal land loss is different than most other regions, thus presenting another issue that causes much uncertainty. While Jared shows less emotion than most, his statements could display what many residents may not verbally consider, but nonetheless, are very real considerations that they may be revealing in more anxiety filled passages such as Tina's (T).

Way of Life

Respondents who employ this substantive unit make comparisons between land loss and life. They say that the loss of land means the loss of a certain way of life, culture, and people associated with the land and region. Discussions of land loss are contextualized within its impact on interviewees' attachment to place through such

elements as memories, livelihoods, and emotions.[24] Jerry (GI) is a 63 year old judge in New Orleans who grew up in Terrebonne and spent much time at his family's fishing camp in Grand Isle where he retains a camp which he visits often.

> Interviewer: *You mentioned coastal erosion. When did you first learn about coastal erosion?*
>
> Jerry (GI): About the time I was six years old, my father was, my father was extraordinarily in-tuned to it. He was on several commissions himself. Uh, anecdotal-- he would tell me every year because he had like a map for a mind. You know, it's hard to explain. I'm talking about-- when I say every square inch, I'm not being, uh, hyperbole. He just had that kind of mind. This is-- he would tell me, and we'd go to places we hadn't been in ten years. This is washed away; this is happening; this is really a problem. We have-- there'd be islands in the middle of Lake Delta. They're all gone now, in my lifetime, gone. The last time in Isle Denieres, various parts of it were completely altered and, and washing away. We had a-- it was a large canal where we had our house boat. It's all gone, really, and it had moved inland because it was all gone, washed away. So you're seeing a whole way of life there with these islands disappearing. So from a very early age-- and some of them would, would try to be made to bring this to the congressmen, etc. But it never really caught on. It's finally-- now that it may be too late-- catching on because this is truly a unique area. I know if you travel through from Grand Isle and the saltwater marsh into the saltwater marsh in Lafourche and Terrebonne and then the freshwater marsh, you'll see.

The *way of life* substantive unit has similarities to the *uncertainty* unit. Statements from both units express many of the same elements such as instability, vulnerability, and urgency. And both display a strong attachment to place. However, the overall substance, or <u>what</u> people say, as seen in Jerry's passage, is about the loss of a particular way of life. This unit, as opposed to the *uncertainty* unit, speaks in more certain terms of the land and a *way of life* being "gone" and "disappearing."

Adam (T), a 34 year old port captain, grew up in the bayous of southeastern Louisiana. Like Jared (GI), Adam expresses concern about the future.

[24] Many of the other substantive units make correlations to place attachment, however, talking about place attachment is an essential feature of the *way of life* substantive unit.

> Adam (T): It used to be a sportsman's paradise. Right now it's a horrifying nightmare. If I had to leave, I wouldn't know where to go because there's no other place I would want to live besides down here. That's why something needs to be done to try to protect it. I don't know if my kids and their kids will be able to see what we grew up in. And I hope they can find jobs out here and live their lives here like we are trying to do right now.

The family fishing camp, in the family for three generations, is deep in the marsh and only accessible by boat. Especially vulnerable to storms, it has had to be rebuilt a few times due to destruction from hurricanes. Here he speaks of making his children aware of the land and their families' connection to it.

> Adam (T): We bring them to what's left of the island. We go bring them and show them what they got. They do scrap books. We get together with them, and they do scrap books. When we were growing up to what they've got now, and they can see a big change in the land. But the family loves it out there. At one time we were at nine families in this camp here. When we lost it for Andrew, the families kind of split apart, and they bought camps across from us and built other camps. And then we built this one here with my mom and dad and my brothers and sisters. Everyone still goes. It's a beautiful thing to go out there.

Again, the *way of life* substantive unit is close to the *uncertainty* unit. And while Adam is uncertain about his kids being able to live in the region, the overriding substance of his narrative and this passage is the existent threat to his family's connection to this place. Adam's family "loves it out there," but the loss of land is "a horrifying nightmare" that will make the area inhabitable and cause the loss of tradition and connection to the land.

Ambivalent and Explanatory

Respondents in this unit lack any strong thoughts about land loss. They don't take any definite positions and often vacillate in their consideration of the issue. While they may be neutral about land loss, it is obvious interviewees know a good deal about the issue due to their often detailed technical and/or descriptive discussions.

Jerry (D) is a 25 year old geographer for a federal agency who grew up in Delcambre, in south central Louisiana.

> Interviewer: *What's your take on things? Like overall on what's being done in Louisiana with the problem.*
>
> Jerry (D): Well, what's funny about the problem is that it's not everyone considers it a problem. Further east from here, there's major marsh loss. We are not affected by the marsh loss as badly as they are over in St. Bernard, Plaquemine, Terrebonne. Those places are losing ground so quickly. Here, we are not feeling that as dramatically as they are there. So yes, there's oyster reefs being lost, but most people don't fish at those anyhow. I fish there. My dad fishes there. There's a couple of other guys who fish there. But oil and gas which is pointed out for a lot of the problems because of their alteration of hydrology, canal digging, and then there's the major problem of the navigational channels being maintained in the [back] of the levees preventing sediment from getting here and there. We're not as directly influenced by that. And we are also very dependent upon the oil and gas economy to maintain jobs and stability in town. So it's a really difficult issue. You've got to have an economy in order to have a reason for people to be here and to have people using the marsh. So if you don't have people making money, then there's no reason to be out in the marsh and there's nobody who is going to be there. And so the problem is how do you bring these all together? The fishing industry is big for us. Shrimping industry is really big. But is it the coastal marsh loss which is hurting the shrimping industry now or is it imports from Brazil, from Panama, from Thailand? Is it our own local production? Because we have a good idea of how to work with oil and gas here now. And we know what the problem is. And now we need to move forward with trying to fix the problem. So are we still focusing on the right problem?

Joseph's *ambivalence* is obvious and this may be due to his belief that his community is "not affected" as much by land loss as other areas. He balances his assessment of land loss and the need for ecological restoration with a need for economic success. So he is indecisive about the effects of land loss on both the environment and the economy. Joseph's ambivalence might also be caused by the physical distance from the immediate effects of land loss, and that may lead to discussions which are detached and lack the conviction that most others express. Interestingly, Delcambre did not display a disproportionate number in this unit. Of the ten respondents in this substantive unit, only

two came from Delcambre with an almost even distribution among the other communities.

Other

The *Other* category contained a total of 21 interviewees. It includes a number of miscellaneous substantive units that usually paralleled one of the more numerous units described above. Those of note include a unit called *agency* where respondents talk about the personal actions they have taken or actions that need to be taken by the community or government to combat land loss. Six interviewees used this substantive unit. Another unit of note is *self-interested*, where interviewees talk about the toll that land loss and/or restoration projects have taken on them personally. Five respondents fell under this unit, one of which talked about how saving Louisiana's coast was unlikely due to the self-interest of too many different groups of people.

The remaining ten interviewees under the *Other* category fell under six different substantive units. Of note, two respondents said land loss is *invasive* and is perpetuated by humans through such things as oil companies. Two more characterized land loss *metaphorically* as "eating away" at the land. More detail on the respondents in the *Other* category is electronically attached to their interviews on Atlas.ti software.

Conclusion

A general picture of respondents' depictions of land loss reveals the salience the issue has for the residents of these Louisiana communities. For many it is an emotional issue that leaves them bewildered. For many it is an issue that is part of living in the region that needs addressing, no matter who or what is responsible. And many think it is a desperate issue that is played out by a distant group of actors around issues of power.

Throughout all of the respondents' portrayals, except for a very few, is a strong attachment to place; however, these substantive units represent only an overall description of respondents' narratives of land loss. They don't, by any means, encompass the full range of meaning illustrated by residents.

This chapter emphasized a general picture of *what* respondents said about land loss, but this constitutes only a part of the idiographic phase of analysis. Chapter 5 is both idiographic and interpretative. Sub-themes, called *meaning units* (Creswell 1997), are outlined. *How* respondents speak about land loss is described and the different elements of meaning they express in their comments on land loss are extracted. These different meanings reveal the symbolic meanings respondents attach to the event. It is from here that we get the *experience* of land loss.

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Chapter 5 - Analysis: How Residents View Coastal Land Loss

The findings chapter pointed out *where* respondents spoke of coastal land loss and *what* they said about the issue. The previous chapter described in general terms what interviewees said about land loss. However, presenting respondents' discussions of the political nature of land loss, its physical and natural attributes, and the ways in which it affects their lives only gives an overview of residents' understanding of the phenomena. The findings section sets the context for the deeper meanings of land loss.

How respondents speak about land loss reveals the symbolic meaning they give the experience (Smith 2004). A respondent may state the *what* by describing the physical attributes of land loss from the leveeing of the Mississippi River to damage caused by oil companies and hurricanes, but a respondent's understanding is revealed by statements such as "and the land just rolled up like carpet," referring to damage caused by hurricanes. The comment falls under the *physical-natural* substantive unit; however, the intended meaning emphasizes the damage caused by the storm described as a metaphor. This representational meaning reveals residents' *landscapes* (Greider and Garkovich 1994) and, phenomenologically speaking, this intended symbolic meaning is how we come to understand what it is like to experience coastal land loss in Louisiana.

Meaning Units

In this chapter the symbolic meanings of respondents' discussions of land loss using *meaning units* (Creswell 1997) are presented. Meaning units are specific statements within narratives of *how* land loss is characterized by respondents. As was outlined in the chapter on methods, the meanings of statements were derived by reading, rereading and reflecting upon statements in the context of the original interview transcription passage

(Smith 2004; Creswell 1997). Meaning unit categories that emerged are: *links to place, restoration, damaging consequences, human degradation, uncertainty, political,* and *change*. Meaning units are presented in order of the most common to the least common. Theoretically, meaning unit categories could be broken down into subsequent units teasing out ever finer structures of meaning. However, due to the large sample size (N=126), this was not feasible. It is the *essential* meaning of each unit that is presented. This is not to say that only one representation of a particular unit's meaning is presented. Several shades of meaning are presented; however, due to stated constraints only meanings that were commonly expressed across interviews are given.

The example above -- "and the land just rolled up like carpet" -- falls under the *damaging consequences* meaning unit. The respondent speaks about the dramatic strength of hurricanes and their ability to eradicate land. Land loss is a damaging consequence of storms. Thus, the meaning unit *damaging consequences* is representative of this narrator's *landscape* (Greider and Garkovich 1994).

Meaning units are part of the interpretive nature of this chapter. Induction is employed to develop meaning unit categories and the intentions of statements, and it is also idiographic in that rich descriptions of meaning units are presented. Respondents' intended meaning is transmitted by the symbolic ways they talk about the phenomena of land loss or, in other words, what is presented here is respondents' landscapes (Greider and Garkovich 1994) of land loss. In turn, I am interpreting *how* respondents talk as having symbolic meaning for the event, the place they live, and for their definitions of self (Clayton and Opotow 2003; Greider and Garkovich 1994). This interpretation is a

result of respondents' intentions, and it is in this chapter that these interpretations reveal the meaning of experiencing Louisiana's coastal land loss.

The intention of a respondent's passage was established by identifying a clear link between land loss and other elements in their passage. Again, it is the essential meaning or primary intent that is determined. This was done by looking at the words people used and the context they chose to put those words in. In other words, this is an examination of how respondents talk about land loss. So, looking at what else they talk about while talking about land loss produces the speaker's intent. For example, in the quote above, "and the land rolled up like carpet," the speaker employed metaphorical language to communicate his intent of the damaging consequences of storms. As a further example, in the links to place unit presented below, respondents talked about land loss in the context of their connections to place often infusing themselves, their emotions, fond memories of the physical/social landscape, etc. into their discussion.

The remainder of the chapter will proceed as follows. Each meaning unit will be defined and then presented with rich description using interview data and analysis. A detailed description of the experience of land loss will follow.

Defining Meaning Units

Statements that have common meaning were grouped and those groups were named according to their respective meanings. Each meaning unit is briefly described below and they are presented in order of the most commonly occurring to the least common. The units themselves are non-repetitive and non-overlapping (Creswell 1997). However, the data (specific statements) that are grouped into particular units are often

times neither mutually exclusive nor exhaustive; that is, a narrator's particular statement(s) may have more than a single intended meaning.

The most common meaning that respondents' accounts illustrated is captured by the meaning unit *links to place*. This unit includes statements where the narrators connect coastal land loss to their attachment to place, or in the rare occasion, the lack of attachment. Additionally, *links to place* comprises social links to place – family, childhood, parents, grandparents, ancestors, heritage, history, occupation, organizational links, cultural links, recreation, etc. This unit also includes narrators' statements about the natural history of the region as it pertains to coastal land loss. Expressing insider knowledge is also a way of differentiating others as outsiders who, from the perspective of the respondent, are not connected to place. So the *links to place* unit establishes social and natural/physical connections to place primarily but is also used to convey insider/outsider status.

While *links to place's* concentration is on what binds the narrator to place within the context of land loss, the *damaging consequences* meaning unit focuses on the negative impacts of coastal land loss. Respondents incorporating this unit talk about the resultant damage of the past, present, and future. They speak of direct and indirect damage from land loss and of personal, local, regional, national, and even global consequences. Within these elements, their accounts refer to natural, social and economic costs. They also may discuss the damage that certain restoration solutions or projects might create. Because this unit focuses on the damage caused by land loss, fatalistic meanings also fall under this unit as some respondents state that there is a limit to what humans can do to alleviate the problem. In sum, when speaking of *damaging*

consequences, residents illustrate not only the personal ramifications but also, the larger ecological-social impacts of land loss.

Although the *damaging consequences* unit focuses on negative impacts, the *restoration* meaning unit contains all statements that pertain to the past, current, and/or future restoration of coastal areas. The meanings of statements revolve around concerns for eliminating or at least significantly slowing coastal land loss. Meanings may range from restoration as an ideal, abstract construct to specific ideas for regional restoration. Respondents use the *restoration* unit to air their beliefs and opinions of how humans can fix a place that they believe humans have methodically destroyed.

Narrators' discussion of the human role in land loss is contained in the *human degradation* unit. This meaning unit focuses on destructive actions of the past, present, and future as a means of placing responsibility on general or specific groups or institutions. Statements about oil companies, other private interests, agencies, governments and individuals are all categorized in this section.

The *uncertainty* meaning unit, unlike that of *human degradation*, is exactly that – expressions of ambiguity and confusion. This unit focuses on personal, regional and societal concern about the future in relation to land loss. Whereas as a substantive unit, *uncertainty* revealed respondents' beliefs about the future, the *uncertainty* meaning unit contains statements of anxiety and worry about the present as well as the future. Questions about what should be done to alleviate land loss, often posed in a detached sense, are also categorized in this meaning unit.

Something that might add to respondents' uncertainty is the politics of land loss. As a substantive unit, *politics of restoration* refers to the policies and the public and

private agencies involved in Louisiana's coastal land loss. On the other hand, the *political* meaning unit comprises respondents' statements about how land loss is not only a natural process, but how this natural and human phenomena has come to symbolize the politics of the times. Much like the other meaning units, representations of land loss from the personal to the global are contained in the *political* unit.

The *change* meaning unit is different from the others in that it is more objective. The *change* unit symbolizes land loss through the difference of the landscape from the past to the present and from the present to the future. Whereas in the other units the phenomena is cast negatively, the statements in the *change* unit employ neutral language.

Meaning units encapsulate the significance of what residents say about the phenomena of land loss. Interviewees define their experiences through the lens of their self-identifications. Respondents then communicate that meaning to the researcher as *they* wish the researcher to understand their experience of coastal land loss. Next is an interpretive description of that meaning encapsulated as a description of *landscapes* (Greider and Garkovich 1994).

Discussion of Meaning Units

Links to Place

Links to place is the most commonly occurring of the meaning units as residents statements fell into this unit more than any other. Respondents used specific language to establish the bond between themselves and place and they placed this connection to place within their discussions of land loss. A common way that people display a connection to place is by using the pronouns *we, our,* or *us* when speaking about community or a place they identify with.

> Alicia (LC) a 54 year old hairdresser: We just keep losing it [the land].

> Thomas (P) a 63 year old restaurant owner: When I was a kid, I remember riding on my dad's oyster boat. We used to have two or three feet of banks on both sides of the canal and like five, six feet of mangroves. Now there's nothing out there as far as the eye can see.

Respondents self-identify with place and use language to convey that attachment. However, as stated in the theory chapter, the use of these pronouns by themselves does not indicate place attachment. It is the larger context of meaning that constitutes the level of attachment. Where residents of other places use language and context to self-identify and imply attachment, these respondents, in addition to verbalizing attachment in conventional ways, connect to the loss of place.

> Jeppa (P) a 36 year old commercial fisherman: Like if something is missing in your house. When you get in shallow water and throw the oysters up on the boat. Over the years it seems like places I keep going to, the water just keeps getting deeper and deeper. So what that tells me is that it's sinking.

> Jared (SB) a 45 year old educator: And of course the swamps are retreating, and the Gulf [of Mexico] is coming towards us. So it's made us wetter. I've never had the sense of being wet like we do now. We just feel wet.

> Paul (P): a 42 year old commercial fisherman: Because if the land dies, a part of us dies.

These residents purposely self-identify, not only with place, but with the effects of coastal land loss.

Self-identifying with place in a way that expresses such a strong degree of attachment develops, in part, from a significant history with a particular place (Tuan 1974; Greider and Garkovich 1994; Altman and Low 1992). Natives, as well as non-natives who have lived in the region for a significant time, contextualize their discussions of land loss within narratives of family and history. During interviews, respondents are

asked about these place-related issues and they discuss land loss within that context. In this way, respondents reveal how land loss is a critical element that impacts the whole of their lives.

> Susan (GI) a 30 year old graduate student: He (grandfather) taught me my first ecological lessons. You know, you save the [oyster] shells and put them back there [in the water], so the oysters have something to latch on to. It's gone. That part of the island has been eaten away so much.

> Lester (SB) a 49 year old commercial fisherman: It has changed 80% from when I was a kid growing up to now. Because like I said, the habitat is being lost; not only the seafood industry [but] the ducks and the geese. When habitat is lost, you lose everything. This was a natural fly way for ducks and all that. And as a kid, I remember seeing ducks by the thousands, which you don't see that anymore.

> Leroy (P) a 63 year old retiree from the oil industry: I remember quite a few years ago when I first started trawling, they had a few little islands. Like during the 4th of July. We used to go out there and have a little picnic. Take the family out there. Some of my relatives from New Orleans come down, my cousin with his family. And we'd go out there and catch a few fish. We even cook out there. But as years go by, that all started washing away. They had three or four islands out there. And they used to have a lot of people out there doing that. On the 4th of July, that was a good thing to do. Get in the boat and go out there on the island and have your little picnic. It was real neat. But, you know, eventually those little islands just washed away. We used to do that. When my kids were small, we used to go out in the bayou all the time and catch some shrimp. We'd fry them out there. Take our little crab boil and go out there. My wife and my cousin's wife get out there and fry the food. Fried seafood and drinking cold beer. The kids had a good time. Play in the water until they get tired. Take a little break and then go play again. It was real nice. Mid 70s and early 80s, we used to do a good bit of that. But after everything started washing away, we didn't have anymore islands to go on.

These passages illustrate the strong degree of attachment these respondents have to place through a coupling of natural features with memories and the disaster that threatens those memories.

Many respondents' passages include memories that include important others, thus infusing place with symbolic associative meaning. The memories that form attachments

have more salience when interaction with place occurs among significant others (Altman and Low 1992). Attachment to natural places occurs in this same fashion (Kals and Ittner 2003), and it is in this way that respondents purposely reflect their landscapes, or self-definitions, in relation to the natural elements of place.

> Joseline (T) a 47 year old research scientist: It's obvious to us having lived here so long that the erosion of the land and the barrier islands is allowing the water to maybe move faster and come higher. And it's very unnerving. This is our home. My children are here. So it's a very serious concern to us that in years to come, I think it's going to get worse.

> Soren (T) a 56 year old research scientist[25]: It's (home) just three miles up the road. But the importance of my home has started changing lately with the realization that this area is living on borrowed time. The land beneath my house will not be dry land in the not too distant future. And that affects my whole -- it's hard to get attached to something that's not going to be around for long. And that's what's happening to me and my family right now.

Joseline and Soren are not natives, and as scientists, they are influenced by a technical perspective that informs their outlook. As a consequence, their attachment is more precarious than most respondents. Their landscapes – tenuous characterizations of place derived from the self-definitions of connected community members and scientists – are in question. Soren states that his attachment is in disarray and that this is "happening" to his family. Consistent with other research (Clayton and Opotow 2003), the passages from Susan, Leroy and Lester show how the environment helps to inform people about who they are. In addition, the accounts of Joseline and Soren point out how that part of identity is threatened causing personal, familial, and social instability.

The sense of instability that residents experience also extends to traditional occupations that revolve around natural elements of place. Residents come to define themselves through these place-bound occupations and jobs -- such as those in the fishing

[25] Soren and Joseline are married. They were interviewed separately.

industry, agriculture, or tourism which cannot be separated from other social ties to place because of generational and community overlap. These occupations constitute a livelihood, not merely work.

> Charlie (LC) a 33 year old wholesale seafood distributor: Growing up on the water really means a lot to people. You get some of these old timers, and a lot of them grew up out here trapping. That's what they did their whole life. I've got crabbers, some of them never had a job in their life. All they did for a living was fish. They don't know nothing else. They're really good at what they do. They catch crabs. They know where they are moving at certain times of the year, where to put their traps at, where to pick them up, and when to move them. It means a lot to those people. If this dies out, they are going to have problems. They never had another job in their life but fishing.

Charlie communicates an attachment to an occupational lifestyle that is being threatened. "Growing up on the water" displays how this is not just a job, but rather a livelihood which has become an integral part of identity formation. There is a symbiotic relationship between the people and the land exemplified by the "problems" that will arise if the ecosystem "dies out" due to land loss. As this "dying out" becomes an increasing reality, the people of the region must consider how to act.

> Theodore (T) a 47 year old Native American and manager in an oil related industry: As a tribal leader, we met at the beginning of the year, and we did a little brainstorming through all our groups. We determined what would be important issues that the tribe would be facing in one year, three years, five years, ten years. This right here, this is the location (Theodore shows the interviewer pictures of tropical storm ravished Isle de Jean Charles – an isolated Native American community on a finger of land at the southern end of the parish). In the next few years, this is the track of land that we are looking at. We know they are not going to be able to stay there forever. As tribal leaders, we are looking into the future. We are going to need a place for our people living in this area to come inside the levee system. Because all of that is sacrificial land, we are going to have to invest in land. That's the only way that these guys will have a future. Somewhere to go to. In the old days, the tribal leaders, they kept up with where the animals went, found new lands for them to migrate to. They had the summer land and winter land. All this had to be worked out. What we are seeing now is we are at that point in our history where we have to make a decision about which way we go

> from where we are at now. And obtaining land is one of the key elements that we feel that will enable our tribe to stay strong and stay together.

Theodore's thoughts draw on an idea of interdependence between past, present, future, people, community, and the natural world. He speaks of a certain amount of "sacrificing" that his people will have to do to retain its strong community ties, but he also acknowledges that part of retaining community ties means retaining land ties. Thus, they must obtain land in the region through present day means.

However, Theodore's planning for displacement accepts the very real threat to identity, and many share in this sense of menace to their self-definitions. Most respondents convey a degree of identity anxiety because of the threat to place; however, many also speak about actions they take that serve to retain place identity in the face of this disaster.

> Sylvan (GI) a 63 year old judge in New Orleans: Both my brother and my sister-in-law, his wife – she's on several committees [that deal with coastal land loss]. They're committed to this because – why? Well, they grew up and, like myself, exposed to all that. We understand its beauty and uniqueness, and we love it. It's like loving the mountain; it's like loving the desert.

> Vivian (GI) a 50 year old educator: [Interviewer] *So when you look at the rest of your life, what do you think of for yourself?* [Vivian] I'm moving to Thibideaux. I'm gonna live in Thibideaux, Louisiana. It's still French speaking. They still have some French speaking people there, and they're not going to be beachfront property for fifty years, so I'll be gone by then. I was gonna move to Lafayette, but its too far away I think. So Thibideaux. [Interviewer] *But you're not going ' til it's gone?* [Vivian] Oh, right. Until you can't go anymore. Well, sure! I'm the history of the island. [laughter] I have to be here.

Sylvan and Vivian's sense of who they are is connected to place. Vivian views herself as an ambassador of Grand Isle, and therefore, her attachment is so strong that it limits her options as to where she can move. Sylvan, on the other hand, notes the unique quality of

place that built such attachment through the social means of “exposure.” He simultaneously acknowledges the commonality of experience that facilitates a deep connection with other socially defined unique places (Tuan 1974). Accordingly, as place is thrown into question, so is identity. The activities Sylvan and Vivian speak of – serving in coastal restoration organizations and relocating to a similar locale - are ways of actively reifying place identity. In so doing, they make their landscapes anew, renegotiating what place and identity mean within the context of ongoing, drastic change (Greider and Garkovich 1994). Like Theodore’s actions of developing relocation plans for his community, these measures are ways of gaining psychological control and thus mitigating the threat to definitions of the self.

A sense of identity relative to a particular locale develops, one which is mediated by socially constructed interpretations of meanings and interactions. These interpretations feed into an identification with place that occurs through extended interaction with that environment. Most respondents’ accounts of how they learned about land loss consist of being educated by parents or community elders during childhood and through personal experience over time. Avenues of learning such as “working with” a place leads to what one feels is an intimate knowledge of that place. At the very least this insider knowledge is indicative of, at the very least, a connection with place and often a strong degree of attachment.

> Rocky (P) a 54 year old commercial fisherman: All the biologists and whatever, not to put them down, scientists, but you really have to live the life on the bayou to really know what the bayou is all about. Where they had land before, I can take this boat and go right over it right now.
>
> Liane (T) a 38 year old Native American community organizer: Because when we were kids, we grew up around Last Island area. We've got film when we were young and how much beach. That wasn't just a little strip. Now it's nothing. And

> where I used to go fishing at, that land is gone. This place in Lake Pelto, we used to call it Bird Island. It's gone. How the hell could that go? It was so huge. And you go down to the island and all that, every time I go fishing, it's gone. Between Hurricane Lili and Isidore (early fall of 2002), not so much Isidore. And [Hurricane] Bill. When [Hurricane] Lili came by the game warden's camp, you could see that was land. After Lili came, you could see spots, like chunks of land just gone. When Bill came, it's open. People think I'm stupid, but I cry when I see land [gone]. And when I can catch black mullet, flounder and sharks inside, the way I've been catching them, that's sad. Because that means more salt [water] is coming in [from the Gulf of Mexico]. More land is going to be gone. And that's how I look at it when I see things like that. When I catch fish that I know is supposed to be offshore, because I grew up fishing offshore, that's an offshore fish. [You're] Not [supposed] to have that inside. And that's more salt coming in. It bothers me to see that.

Insider knowledge, as Rocky (P) states, can only come from direct and extensive experience with "the bayou." Taken even further, Liane's (T) display of insider knowledge conveys the subtle drama of land loss and the emotional impact this has had on her.

The place attachments that develop on Louisiana's coast are constructed, in large part, out of experiences with the natural environment. Thus, landscapes and self-definitions that arise are connected to those natural features. Susan Clayton (2003) states that "the natural environment thus seems to provide a particularly good source of self-definition, based on an identity formed through interaction with the natural world and on self-knowledge obtained in an environmental context" (p. 51). Experiences within the natural/human context of coastal Louisiana become incorporated by the self and, in turn, inform respondents such as Liane and Rocky about who they are. They view themselves as holding a special knowledge and relationship with place that they consciously relay through their statements.

Respondents use their insider knowledge in juxtaposition to what they view as outsider knowledge. Respondents who see themselves as holding insider knowledge are

skeptical of outsiders who they believe are claiming to have more authoritative and credentialized knowledge. Below are the statements of a resident who occupies both of these spheres. He provides an objectified view of locals (insider knowledge), as well as, scientists and engineers (outsider knowledge).

> Art (P) a 52 year old government employee in conservation services: [Interviewer] *How are the scientists who implement a lot of these [restoration] projects received?* [Respondent] Well I think sometimes they are received well, and other times they are not received well. A lot of them spend time in the communities and in the field with people in the field, and I think people respect that and they see that they are genuine, trying to research. So I think they appreciate that. And then on the other hand, sometimes they come up with findings that local people find hard to believe. They are not listening to the accumulated knowledge of generations of people that live out here. But they are forming opinions on some data they've collected that might not be relevant. So it goes both ways. But I think, by and large, people respect [the science]. I think that they know they are bright people and that research needs to be done. Finances need to be found. I think a lot of time they (residents) wish they (scientists and engineers) would listen to the local people a little more. And there may be a feeling among some scientists and academicians that they know more than the local people. And I think that's dangerous sometimes. But they are bright people, and they are doing a good job.

Art presents the disconnect that arises between locals and those with a more technical knowledge. Art's self-definition is both local and scientific, hence his landscape seeks to rectify the antagonism between insiders and outsiders. Many respondents do in fact say they are trustful of scientists and engineers while many show complete distrust and opposition. However, what occurs most often is a healthy skepticism offset by a need to trust. The likelihood of believing in the technical knowledge of outsiders is diminished by what many feel is a lack of respect for community and the "accumulated knowledge" referred to by the passage above.

> Lester (SB) 49 year old commercial fisherman: Once again when we were talking to these people, when this fresh water diversion was going [to be constructed],

these are people that are light complected.[26] They wear suits. These people never had any idea about the environment that they were looking at other than what they could figure out on a computer. They had no knowledge of the area. People were telling them this wasn't going to work. But they insisted it was. I don't know how much that thing costs, a few billion. The only difference with us, we see it with our eyes. But they had like old maps. I had looked at certain bays that's in the Gulf [of Mexico]. They had one small opening to get in. You put a map against it today, there's just little strips of land, if any are still left dividing them small bays.

Tyronne (SB) 40 year old commercial fisherman: We went to all kinds of meetings and tried to explain it to them. 'Cause I live down here all my life. I can see the difference. It's just eating it up more and more. It looks like they don't want to hear it, I guess. I've been working in certain areas all my life since I was a little kid. I used to go with my grandpa and my daddy. Then I had my own boat since I was a teenager, and I've been doing it and I can see how much, just in the last few years since they put that [freshwater diversion in], how much it's been hurting.

Alfonse (GI) 68 year old retired police officer: But the engineers, they're too smart; they went to too many colleges and never come and looked at, you know, [tapping the table] not on the book, no, come and see the climate itself. Come do it. Like, not what you read out of the book. But, uh, I guess they get paid not to spend too much money. . . . . They're spending taxpayer's money. They're smarter than me; they've got all kinds of papers to prove that they've got a degree on paper. But to me, they're -- I'm not gonna say that they're dumb, but they've never been to Grand Isle, and they're gonna tell me how to protect Grand Isle?

These men indicate the attachment they have toward place, and the disrespect and condescension they perceive from outsiders. While sentiments such as these are widely felt by respondents, fisherman such as Lester and Tyronne are the most vocal. The fishermen's heightened antagonism is most likely due to the conflation of attachment with occupation or livelihood in their landscapes. The fishing industry is the most immediately affected by restoration initiatives such as freshwater diversion projects that bring freshwater from the Mississippi River into saltwater saturated marsh areas in hopes

[26] This places the scientists and engineers as outsiders who spend time inside as opposed to locals who have more contact with the land and thus are more dark complected.

of restoring it to its previous brackish or fresh state and, thus, rebuilding deteriorated marshland.

The ongoing coastal land loss threatens not only the place respondents live and earn a living but their own identity. As this threat to identity is increasingly recognized, anxiety builds and is transmitted through pieces of narratives that hold an emotional edge.

> Adam (T) 34 year old port captain: It used to be a sportsman's paradise. Right now it's a horrifying nightmare. If I had to leave, I wouldn't know where to go because there's no other place I would not want to live [anywhere] besides down here. That's why something needs to be done to try to protect it. I don't know if my kids and their kids will be able to see what we grew up in. And I hope they can find jobs out here and live their lives here like we are trying to do right now. Nothing is being done to help protect the land. . . . .[Then, during a reply to being asked to describe his community to an outsider] If I was them, I wouldn't even consider moving here. I would try and find another area. But where are you going to go? There's nothing. I wouldn't live up north. So I guess when this is going to fade away, I'll fade away with it.
>
> Lila (T) a 47 year old Native American counselor: Even though it's not the cleanest place in the world, or even here in Louisiana, even though the boat wrecks are still in the bayou[27] and there's a lot of litter, it's still a special place for me. When, I saw that map (of projected land loss for coastal Louisiana) and saw that it was no longer going to be here, that saddened me and that brought it home to me; the erosion problems are bigger than what I ever gave it before.
>
> Susan (GI) 30 year old grad student: We shouldn't accelerate the process [of land loss by humans], and part of Louisiana's uniqueness is its seafood industry, and you need the marshes. You need Grand Isle. We are important. Just because we are a small community doesn't mean that we don't perform an important function. And to shit on us because you can -- I get very upset about this.

Just like Liane (T) who cries when she sees land disappear, these respondents reveal the disruption to identity. Residents' responses' range from resignation about the loss of place to "fad(ing) away" along with place to anger and frustration that lends itself to a sort of lashing out at those perceived to be at fault.

[27] At the time of interview, there were still many capsized boats in the water of Isle de Jean Charles as a result of Tropical Storm Isidore and Hurricane Lili during the fall of 2002.

While the loss of a place that people are connected to can cause anxiety, survey data reveals that people rate natural settings as the most conducive for personal restorative processes (Kaplan and Kaplan 1989; Herzog et al. 1997; Korpela et al. 2001 – in Clayton 2003 p. 49). Likewise, these respondents often speak of the advantages of living in a rural, natural region, and their identities and attachments take on highly valued social constructions from the natural region. In other words, when people define natural places as being regenerative, the decimation of those places is simultaneously the erosion of their own self-definitions.

Despite the bleak outlook that most respondents acknowledge, they remain hopeful. This hopefulness may stem from generations of community resilience in the face of natural, economic, and social hardships. Toward the end of interviews, residents were asked about their hopes and dreams for the community.

> Jenny (GI) 54 year old who works in public relations: I hope that the government continues to do what it does so well right now -- lobbying Congress and the state for the help to preserve us, physically, as well as our history -- because when Grand Isle is gone, New Orleans will be gone. Thibodeaux will be gone. And there's an awful lot of us that will lose a lot of heritage. Right now we're losing marsh. We're not losing people's homes and their families. But eventually we will if, if we erode away. If the marsh is all gone and there's just a thin ribbon coming to Grand Isle, that means that there'll be water in our neighborhoods and Golden Meadow (community a few miles inland) will be underwater. New Orleans will definitely be underwater. So [as] Grand Isle goes, so inland goes because when we're gone, they're gone.

> Susan (GI) 30 year old graduate student: I think -- and this is the dream -- I think the people of Louisiana are incredible people and I think that one day they are going to get tired of this and actually start getting together and working to see to their own interests rather than the interests of the oil companies or chemical plants.

> Chuck (T) 36 year old commercial fisherman and oil field employee: My hopes? I'd like to see this place, something get done around here, protection wise. Stop studying these things. Do what you need to do. Whatever it's going to take to

> protect us, save our land, our industry, our fishing industries. If it's not done, it's going to be all gone for us. You can dream about many things.
>
> Art (P) 52 year old government employee in conservation services: My hopes and dreams for the area that I live in -- and that goes for a lot of the surrounding areas and coastal areas -- my hope and dream is the people will decide on a plan of action. I think just making a decision on what needs to be done and what they are willing to accept is going to be the biggest step. I think whatever we decide on probably can be done. Some things might not. If you're asking too much, it might not be accomplished. But if reasonable people decide on a plan of action, know what they are going in for, knowing that there might be some disruption but can accept it, if that decision can ever be made, I think we are going to be okay. My worst fear is that that decision will never be made. There will be no consensus. That's my best hope for the area.

Respondents are hopeful for the preservation of place. Their views range from the idealistic to the pragmatic. Yet even those who express a 'rational' view realize that their outlook remains a hope and not necessarily a reality. Still, the hopes of residents reveal a high degree of attachment to place that is tweaked into awareness by ongoing coastal land loss.

Respondents' identities are wrapped up with place in a way that is seemingly inseparable. In fact, it is what they intend for us to understand. They express a melding of the natural and social. This has developed over generations of reciprocal interaction with and interpretation of place. They are in the midst of a disaster and this causes, as Brown and Perkins (1992) point out, an acknowledgment of previously taken for granted emotions concerning place. During times of relative normalcy, attachment to place resides in the background of consciousness. Post-disaster, attachment rises to the front stage of conscious thought about what has been lost or what could have been lost (Brown and Perkins 1992). Louisiana's disaster of coastal land loss is slow, incessant, continuous, and foreboding. Residents live with this disaster daily, and it has the potential of

becoming dramatic with the onset of a powerful storm.[28] As a result, this heightened awareness of attachment is never far from the foreground of consciousness due to the continuous loss of land and the threat of immediate devastation from storms. Respondents' narratives lend credence to this idea through emotion, intimacy, and conflation of identity with place in relation to the current threat. That is, the threat to place produces anxiety among respondents which they present through their discussions of how much place means to them.

> Sissy and Albert (GI) married couple both 34 year old and supermarket managers: [Sissy]Well, we've survived the storms. [Albert] We're tryin'. [Sissy] That's the only thing we think we can't be in control of, you know. [Albert] But that's what makes you appreciate it, is fearing the storms, so you know in the back of your head that, yeah, it can be wiped out, so enjoy it while you can, you know, while it's here.

> Carmen (T) 38 year old office supervisor: [Interviewer] *What is something that you have learned in your life that has stayed with you?* [Carmen] Never take for granted that the land that you are on will always be there. Never take it for granted. It disappears in an instant. Never take for granted that you can put something in one spot and, when you come back [in] a couple of years, it will still be there.

> Edmund (T) 76 year old retired mechanic: [Interviewer] *What places are important to you and how are they important to you?* [Edmund] This is my home. The whole thing is important. There's nothing that's not important. Because everything relates to the other. If one goes, so does the other. Like I tell you, the islands went. They are trying to build them back. Before they could build them back, we paid for it in the inside. [Interviewer] *What would you say is good about it and what needs to be changed?* [Edmund] The only work that needs to be done is our coastline protected. That's what sustains everything down here. If the coastline goes, then everything else is in bad shape.

[28] Indeed, this foreshadowing came to fruition with Hurricanes Katrina and Rita. But even before these devastating storms, respondents expressed a post-disaster acknowledgment of attachment.

Damaging Consequences

"What's land today is water tomorrow." Theodore (T)

"It used to be a paradise. Right now it's a horrifying nightmare." Adam (T)

After *links to place*, the most common sentiments are from the *damaging consequences* meaning unit. While connections to place run throughout this meaning unit, the main intent of the passages is the damaging consequences of land loss.

Damage to ecosystems and livelihoods play an important role in the *damaging consequences* component of respondents' landscapes.

> Roger (D) 47 year old commercial fisherman: [Interviewer] *Do you remember that (dead vegetation washing ashore and floating in marsh) being present when you were a child?* [Respondent] Oh, yea. It's always been. And it's just the marsh breaking up. And just vegetation that's probably years and years old. Or 'flotons,' which is just a piece of the marsh that breaks off and just kind of floats around. Those trawlers will catch them in their trawls sometimes. And it's a big mess. Just a big chunk of marsh that just breaks off, and it floats around, not on the top, on the bottom. That's where the term 'coffee grinds,' that's where it's coming from. Just a little Cajun name we got for it.

> Celestine (SB) 71 year old former homemaker and commercial fisher: I hate to see these sea gulls. I hate to see them by Wal-Mart. [Interviewer] *Why?* [Respondent] Because you know what's happening in the marsh. [Interviewer] *What?* [Respondent] They don't have nothing to eat. They are coming further. You see these white egrets all over walking in the yards. They belong in the marsh. You see the brown pelicans in our bayous. They belong out in the marsh. They had trees where they could shelter under, and they don't have any more like that.

> Sylvan (GI) 63 year old judge in New Orleans: I mean the islands around the marsh is totally -- every, every uh, summer, it's substantially different. So, coastal erosion is a big, big problem. It's gonna be a big problem for the city (New Orleans); it's a giant problem for the state and in a way for the nation because we have such a tremendous seafood. Grand Isle is probably one of the ten best fishing spots in the world because you have tremendous bluewater fishing. Uh, you have great inside fishing. You could fish in the soil; there's life everywhere. I took my staff there, just recently, a few days ago. They saw more dolphins than they'd ever seen in their life. Birds everywhere, you know, seabirds. Uh, it's just a

> terrific area. And, then the shrimp that come down the estuary area from Grand Isle, Barataria, onto LaFourche and Terrebonne, it's unusual. So, it's in peril.
>
> Lester (SB) 49 year old commercial fisherman: [Interviewer] *What do you think the impact is and will be to lose the habitat?* [Respondent] It will be devastating for the state because we were one of the number one seafood industries in the world. Louisiana supplied more seafood than any other state they have. But in the future it will be, I'm just imagining, all open water. No more small areas for hatcheries. It's just going to be one big gulf in time to come, I would assume.

In these passages land loss takes on the symbolic meaning of injuries caused. Residents use various elements of their attachment to impart a particular understanding of damage. Roger uses localized cultural imagery to describe pieces of land that float away. Celestine employs her insider knowledge of the ecosystem to explain the collision of the natural and the urban. Sylvan paints a vivid picture of "fish(ing) in the soil" because "there's life everywhere." This abundance of life is "in peril," thus having great ramifications locally and nationally. Likewise, Lester notes the impact that occurs to spawning habitats and, subsequently, to fisherman and large scale economic processes.

Of the various ways interviewees discussed *damaging consequences,* the loss of trees was a particularly popular method for respondents to communicate the harm caused by land loss. Gebhard, Nevers and Billmann-Mahecha (2003) suggest that through the attachment of subjective meaning to external objects, the self and object become "mentally intertwined," thus, explaining how external objects contribute to identity. They go on to suggest that "the reciprocity between anthropomorphic interpretations of nature and physiomorphic interpretations of self" come together to inform notions of ourselves and natural environments (Gebhard et al. 2003, p. 105). In this way, over time humans have come to identify with trees and view them as an integral part of healthy selves and environments.

This cultural identification with trees (Somner 2003) is reflected by their prominence within respondents' landscapes. The loss of trees is not only a literal clue to saltwater intrusion and land loss, but also a symbolic representation of the land loss.

> Roger (D) 47 year old commercial fisherman: There's no trees hardly left on them [strips of land]. It's sections that's just marsh right now. Once upon a time that was a tree line over the whole thing. It was all live oak trees. Especially from Weeks Island going back towards Avery Island towards Intracoastal City, on that section.

> Becky and William (LC) Becky is 69 and William 70, both retirees: [Becky] No trees. Nothing. [William] Fishing camps on Oak River. Big live oak trees and St. Augustine grass lawn. All those oak trees are gone. There's no more oak trees. Not even the dead trees anymore. It's all dissipated. The bayous have dissipated. [Becky] It was. It was really thick like a forest. And now you go there and it's like skeletons. [William] It was wooded half way between St. Bernard Highway to Violet Canal and Lake Borgne. It was all trees, cypress trees, oak trees and whatever. And there are no trees there today. It's all open. If you come down the highway, you look and see some silver dead trees up there. That was from saltwater intrusion.

Dorothy (SB) 59 year old project coordinator: In fact, one of the things that was noted when we had this tour several years ago for the Smithsonian [Institute of Science], we pointed out all these cypress trees with the saltwater and freshwater intrusion and all that, and how all these trees are gone. They are dead because of the fact of Mr.Go (Mississippi River Gulf Outlet - notorious shipping channel built in the 1960s) and so forth. Really it's a sad situation because even on the property that I bought, we hate to cut trees down because you figure that tree took maybe 50, 60, 70 years to grow and that's a lifetime and you are going to cut it down. I moved to the country to have these wonderful things, not to cut it down. Well the same thing holds true with all of these beautiful cypress trees that are now being killed because of these environmental disasters.

They are gone. And they are hardly to be replaced. It's too bad that we can't do something like the state of Georgia does. When they cut trees, they also replant those trees. Those are the things we need to do.

> Kyle (T) 56 year old Native American educator: [Interviewer] *How did you first learn about erosion and land loss?* [Respondent] Just being out. I've always been in the areas. Where I'm from, Bayou DuLarge, there was a ridge of land that ran from outside of the bayou, and it went to a lake. There were huge oak trees there when I was young. And in my teens, these huge oak trees cast such cover that you were in the shade from one end of that ridge to the other. You went there, and you wouldn't see the sun except through the leaves. And by the time I was 30, you saw the trees starting to lose leaves. The next thing you know, the trees are dying. All of a sudden, those huge trees are falling over. Everything was dying. And now there are no trees there. And there's been settling.

Trees signify and become metaphorical to the land loss. Somner (2003) theorizes about the aesthetic, social and psychological ways that trees contribute to a sense of self, and he states that our attachment to trees takes on spiritual and nearly ineffable meanings. In respondents' landscapes an abundance of trees reflect an ecosystem that is healthy and vibrant, or as Sylvan says, where "life is everywhere." The diminishment of trees signifies the unhealthy state of the ecosystem. In this way, the demise of trees also signifies the damage to the identity of individuals and community. Dying trees are a visual cue of land loss, and along with our socio-cultural identification with them, it is no wonder that so many residents chose trees to express the damage of land loss.

As mentioned earlier, people report the restorative milieu of natural settings (Kaplan and Kaplan 1989; Herzog et al. 1997; Korpela et al. 2001 – in Clayton 2003 p. 49), and Somner (2003) further references the restorative effects that trees have in self-report and physiological studies. Thus, if we identify with trees and they symbolize a healthy state, they add to our own sense of health. And when we are ill, they contribute to a sense of

recovery (Somner 2003). Accordingly, it follows that when trees die in a place with which we identify and to which we are attached, we lose that sense of healthiness of place and in some sense we feel ill. This unhealthiness of place can be a symbolic sense of illness where our self-definitions are diminished and "sick." Residents' comments in the *links to place* meaning unit reveal this sickliness, and this is carried over here in their talk of trees where, as Kyle notes, there is a loss of a sense of protection where trees look like "skeletons" dotting the once "thick forest(ed)" landscape (Becky).

While dying trees indicate gradual land deterioration, storms magnify and multiply that damage within a short time period. Memories of the "big" storms of the past and sporadic small storms served as continuing reminders that very quickly there could be an immense and possibly irreversible amount of destruction.[29]

> Lynda (GI) 49 year old educator and Allie (GI) 51 yo homemaker: [Allie] Because I think if they had something further out there, it would break the waves from coming in. Because when a storm gets in that Gulf [of Mexico], we see some terrible waves. You can just see it eating away. I mean, the levee breaks right in front of your eyes. And I think if they had something out there to break that [wave] action. . . [Lynda] And New Orleans has to watch out. Because if we are gone, what's going to happen to New Orleans? They are going to be in deep trouble.

> Art (P) 52 year old government employee in conservation services: [Interviewer] *Did you notice anything about these past two storms in the fall,[Hurricane] Isidore and [Tropical Storm] Lili?* [Respondent] Subsidence is a factor. Everything is sinking. Coastal land loss is causing more of the water to build up. So it's striking how fast the tides come up and how high they get. Even the wind damage is pretty severe. Even when you get a glancing blow from the storm because Lili hit more the Lafayette area than us, but we had a lot of damage. A lot of high tides. A lot of erosion. We noticed after the storm when we were able to return back out into the marsh areas and bay areas that a lot of land had disappeared. Old landmarks that you used to see were gone. So it's quite evident.

[29] The knowledge of what might be lost was given more urgency and nearly realized with Hurricanes Katrina and Rita. Remember that these narratives were given two to three years before Hurricanes Katrina and Rita. Even before these storms, however, respondents were well aware of potential disaster.

> Every time a storm passes, you lose more and more land and you feel more vulnerable.

> Cedric (T) 52 year old oil field employee and small businessperson: If it [Tropical Storm Bill in June of 2003] would have been a hurricane, it would have been a lot worse. But that too, there's no more protection. If we have a major hurricane come through here and follow the path of Bill, that would be major destruction. Because there's nothing to buffer the [tidal] surge. When the tide gets two feet above normal, everything is open to the Gulf, where before it wasn't. So Bill, as small as it was, let us know it was there.

Anthropomorphic representations of storms like these are not unique. However, there is an experiential element that appears to be unique to this region. Art says that the passing of each storm continuously builds a feeling of vulnerability. This is contrary to most natural disasters where people feel a high degree of susceptibility immediately after the event that slowly recedes into a more secure sense of normalcy (Brown and Perkins 1992). Cedric buttresses Art's idea that each passing storm adds to a growing sense of insecurity by noting how smaller storms, such as Tropical Storm Bill in June of 2003, are more cause more damage than in the past due to increased loss of land that used to serve as protection. In turn, amplified damage from smaller storms adds to the personal sense of vulnerability due to the meanings and identification residents have for place. Further, respondents such as Lynda warn that their susceptibility is not unique to their community. Lynda follows the dramatic image painted by her friend Allie of "the levee break(ing) right in front of your eyes" by alerting New Orleanians to their false sense of security, a vulnerability that the city-dwellers are now fully aware of. But while Lynda looks to warn New Orleanians of impending danger, respondents' experience with storms also serve as another source of insider knowledge increasing their sense of intimate knowing.

This knowledge is used to convey not only the destructive capabilities of storms, but also a sense of ultimate danger that storms potentially pose due to coastal land loss.

The following passage took place on the interviewee's front porch. She wanted to show me how high the floodwaters had risen during Huirricane Lili and Tropical Storm Isidore in the early fall of 2002. Her home is built 12½ ft. off of the ground.

> Cheyenne (SB) 51 year old seafood distributor: When you build a house, you expect your house to last 50 years. You are going to pass your house down to your kids. But if they don't do something about the erosion, this will not be here in 50 years. Because if that was a field where my husband used to play right across that cement road, and it's marsh land right now. If it wouldn't be for that cement road, my yard would be marsh. They have a certain type of grass that grows in the marsh, it doesn't grow in people's yard, and I have it in my yard. So that's saying my yard is marsh land. It's kind of depressing. And now when we built our house, you had to build 12 1/2 feet above sea level. When now you have to build 14 feet above sea level. The houses are so high now. The water table is coming up. And we don't know if the water table is coming up or the land is sinking or both. But for some reason every storm, the water gets higher. Because that was the most water I have ever seen before I came up. And these storms didn't even hit us directly. When I built my house 20 years ago, I would have never thought that there's a chance that it's not going to be here. Not that it's going to go off, but if they don't do something about the erosion, it's going to be just water. Because that's water right there. That used to be hard land. They had pecan trees, they tell me, when my mother-in-law was a kid, like 45 years ago. She said there was a big pecan grove. It's swamp right now. That's all the proof I need that 50 acres a year are going off in erosion.[30]

Cheyenne echoes the personal nature of the damage caused by land loss. It is happening directly to her home. She makes clear that this damage is compounding over time, reiterating the comments of Cedric (T) and Art (P). Cheyenne speaks of the encroachment of the disaster in real terms as with the land turning to marsh across the

[30] Cheyenne's passage was also coded for *links to place*. However, it seems clear that the primary intent of her passage is to convey the *damaging consequences* of land loss over her making a point about the degree of her attachment to place. The thread of damage that she weaves through her passage makes clear her intent. This thread is evident in statements like "if it wasn't for the cement road, my yard would be marsh," "because that's water right there. That used to be land," and solidifying her intent by summing her passage with "That's all the proof I need that 50 acres a year are going off in erosion."

street and the disappearing pecan tree grove while also conveying the impact it has on her sense of home and well-being.

Although coastal land loss is slow onset and can be somewhat hard to detect on a daily basis, it has a tangible feel for residents.

> Cedric (T) 52 year old oil field employee and small businessperson: [Interviewer] *How did you first learn about erosion?* [Respondent] You can just see it. It's so visible. It's so easy to see. You can just go out in a boat. Just ride down Highway 57 between here and Dulac and you will see. You will see the erosion going on just by the trees that are dead. And the water will start to beat up against the roads. If you have any kind of common sense, you'll know that something is happening. You don't have to have a high school or even a college education. You just go down this highway, and [you will] say, "I can't believe it was like this 20 years ago." Anybody knows that. Just look around you. You'll see it. It's so obvious. Just look across here. You can see like you can see now. The trees are all dying. So now you can see for miles across. Before, all it was, was just a big old ridge of trees. You could just see the trees. That's it. Now you can see for miles out into the marsh. It's just so obvious. Anybody can see that.

Cedric's perception is more than just noticing the visual damage of coastal land loss. The doggedly deterministic feeling of his passage implies that there is someone who isn't "seeing it." There is a sense of desperation in his call for "seeing" the "obvious" damage before it is too late.

The following four passages echo Cedric's (T) sense of desperation through metaphorical language. Many residents use 'death' to convey the seriousness of coastal land loss and the threat they believe it poses for the near future.

> Tara (LC) 43 year old homemaker: That's a shot gun looking at New Orleans. Before you didn't have that and they had a lot of filtering for that big surge to come through that marsh, you had a filter. It was like slowing that water down. But now you got a rush of water. Once that hurricane takes that top soil, it's gone.

Beginning this set of passages, Tara comments on the danger land loss crafts by extrapolating the gruesome ramifications New Orleans faces from a powerful storm due to the continuous loss of protective land.

> Tina (T) 29 year old childcare employee: [Interviewer] *How did you first learn about land loss?* [Respondent] I think seeing it for myself. Going out that one time. Knowing that it took a pirogue to get through that little area in front of the camp. And now a boat [can get through]. Even in front of my mom and dad's place, that's eroding. Further up from there, there was a Mr. Ellen Duplantis; he passed away about two months ago. He had put some pilings in the front of his house. I guess with the intentions to bulkhead. And now the bulkheads are here, and the land is close to the road because he didn't do it in time. It's not just down in Chauvin, in Houma, too. They get the water. Dularge, Montegut. Everything is washing away. And even being a young teenager and hearing people saying, "there's not going to be anything left. We are going to be under water some day." And now actually seeing, someday we will. If something is not done, we are going to end up under water.

Tina chooses a deceased community member to talk about his failed attempt to save his land that now deteriorates as the water seizes it in his absence. Many residents bulkhead their property, but Tina chooses this example in order to paint a certain image for the researcher. She goes on to imply that this death that once seemed distant is now upon her and her community.

> Adam (T) 34 year old port captain: It used to be a sportsman's paradise. Right now it's a horrifying nightmare. If I had to leave, I wouldn't know where to go because there's no other place I would want to live besides down here. That's why something needs to be done to try and protect it. . . . If something is not done to protect the land, the industries are all dying in this area. But my parents had water in their home sometimes. Each time we would go to our camp after a storm, you can see the difference in the land loss. The land is sinking every day. Bayous are now huge canals. The bays and our lakes, where there used to be land, it's all open water. And in the 34 years that I'm on this earth, there has been a big change in this area. As far as land gone, there's nothing left. I've been up in an airplane once in my life. And that was 6 years ago. When I flew over the area, I couldn't believe what we were living on.

Adam references his strong degree of attachment, notes the morbid nature of place, says of the land, “there is nothing left,” and connects this to an economic downturn where “all the industries are dying.” When able to see a bird’s eye view of the area, he is in disbelief. The next passage takes employs the death metaphor in a relatively lighter fashion.

> Christian (SB) 42 year old commercial fisherman: Now there's no grass, and there's no more reefs out there; the only reefs is the man made reefs that we have built ourselves out there which I'm sure [the] Corps of Engineers and stuff would never approve of us doing which I think is silly. But [the] Corps of Engineers also don't want us to put a load of dirt on the property. Which is silly, but that's another whole story. It [the land] has, it's decreased. This lake used to be so alive.

On the lightest side of these last four passages, Christian digresses from talking about what he feels is the frivolous bureaucracy of land loss to point out that a place that “used to be so alive” is now dead. Respondents display a sense of urgency brought on by their anxiety and a sense of helplessness illustrated by passages such as these. This is more than a concern for the place they live. How they choose to talk about this ongoing disaster reveals a fear they have for a place that is connected to the core of who they believe themselves to be.

> Walter (T) 51 year old facility superintendent: I don't believe it's [the region] going to be here much longer. It's going to recede back up to Baton Rouge. They talk about this 100 year event. That's it. You are not going to have anything left, the changes you see going through this marsh area which looks almost solid. You can go up in the tower and see how Swiss cheesy it is. It's full of holes. It's broken up. Between major storms, you can see a difference. You can see more open area, more open water. It makes the tide coming in and out quicker. I had asked a scientist from UNO (University of New Orleans) one time. The locals kept talking about the higher tides look like they are coming higher and the lower tides look like they are lower in the winter time. He said that's probably true because of your barriers. You don't have the barriers to slow that tide down. So it's an easy flush up and down. A lot of people are moving dirt into their property down here, trying to elevate it, keep it dry. What happens is once it becomes wet for the majority of the year, you start getting marsh grass growing. It's a little harder to cut with your push mower.

Walter's statements, like the tone of his entire narrative, are somewhat rational and objective. He employs a conversation with an 'expert' to confirm locals' perceptions of the increasing degree of land loss. He indicates the sense of vulnerability by noting the lack of protection. [31]

The *damaging consequences* meaning unit communicates what results from coastal land loss. The meaning of this unit is that the damage to place is also damage to identity. There is the loss of a nurturing ecosystem from fisheries and birds to trees and land. This damage is transmitted through respondents' landscapes. The self-definitions of residents have specificities that bond with their shared identification with place. As a result, the damage to place that they speak of reflects damage to their sense of identity; they feel desperate, unprotected, and anxious. The harmful consequences are not only to the land or even to their livelihoods, but to who they are.

Restoration

"Everybody has to build up their ground." Claude (T)

Restoration is the third most frequently referenced meaning unit. Respondents discuss how the damage can be stopped or at least diminished. Many respondents have conflicting and ambivalent views about the restoration process, but most urgently wish something done. And while almost all heed the burning nature of the problem, some see the issue negatively, some positively, and many fall in-between. But again, their meanings are contextualized within an attachment to place.

> PJ (GI) 64 year old former oilfield supervisor: They (governmental agencies) put rocks and they pumped in the beach and some areas. Industry has bulk headed,

[31] And now Katrina and Rita have proven his sentiment about "the 100 year event," an echo of many coastal residents' warnings about the potential damage of land loss.

> filled in the back (north bay of the island). The (US) Coast Guard put rocks all the way around, and all (along) that end of the island is built up and the Caminada Pass side, they've done the same. They put rocks and sand and shrubbery and built that in. We are in a lot better shape now than we were in the early 50's.
>
> Conrad (D) 49 year old educator: [Interviewer] *Have you kept up with any of the state's proposals on the restoration projects?* [Respondent] A little bit. I can see, not far from up there, they are damning it up with rocks, both sides of the Intracoastal (Canal). It damned up the mouth of the Avery Canal which we call the Delta Canal. It's not as wide as it used to be. You can only get one fishing boat through there. I know they're doing some work out at the Coastal Canal, and I think they are planning on doing some work on part of the Oaks Canal.

In both passages these men frame restoration in a positive light and connect themselves to place through a display of insider knowledge. Conrad speaks of land building along different navigation canals and how one "can only get one fishing boat through there" as opposed to many others who say the canals have widened over time. PJ similarly displays his localized knowledge and self-identifies with this recovery process saying "we are in a lot better shape than we were." The meaning of recovery implies previous illness, a sense that was aptly conveyed in the *damaging consequences* meaning unit.

Although some say positive things about the restoration process, most respondents have negative perceptions of restorative efforts. Even those who say positive things about projects such as Conrad (D) and PJ (GI) also have negative perceptions of restoration issues.

> Tyronne (SB) 40 year old commercial fisherman: And they got that canal right in front of the house. You can go fishing, and we've been riding in boats a little. Before they put that siphon in Caenarvon; they used to have a lot of clear saltwater used to come in. You used to see dolphins in the bayou in front of the house. We used to go water skiing. We did a lot of swimming and skiing in the summer right there in the canal. But now they got -- I don't feel the water is safe no more since they put that siphon in. They got the river draining in here, and that's polluted. You can feel it when you get in the water. We get in the water to work on our boats to change a propeller or something. We jump over and do it

> ourselves. And it actually burns your skin. You can feel it. [Interviewer] *When did they put that siphon in Caenarvon?* [Respondent] I don't know exactly the date. [Interviewer] *How many years has it been?* [Respondent] It must be at least seven or eight years. They run it sometimes. Then they cut it off certain times of the year and stuff like that. I don't think it's really helped it (the land). I think it's really hurting. That water ain't too good. We get in it all the time. I got a swimming pool in the back yard for my kids. I don't want to swim in that. And we grew up in that. We were raised in that. It was all saltwater. You can see a difference. The dolphins used to come in the canal. You don't never see nothing like that no more. They not going to come in that river water.

Here, Tyronne critiques one of the major restoration projects, the Caenarvon Freshwater Diversion Project designed to divert freshwater from the Mississippi River into the marshes of St. Bernard in order to rebuild land and restore a brackish water state to what is now primarily saltwater. Tyronne implies that the canals and bayous were naturally saltwater while he was growing up. Although the saltwater state was a result of land loss, he juxtaposes the previous saltwater nature of his community with the polluted intrusion of a failed human endeavor to improve the land. The southern Louisiana section of the Mississippi River is widely known as a polluted waterway due to runoff from the oil, gas and chemical plants that line a section of the river notoriously known as the "chemical corridor" or "cancer alley." Incorporating this community knowledge, a less personal form of insider knowledge, Tyronne communicates that the Caenarvon Project isn't just not working but further damaging his environment. He symbolizes the damage by the "burning" of the water and the lack of both fish and popularly and positively anthropomorphized mammals – dolphins. He adds further weight to his criticism of the restoration project by stating that the waterways of his home are now something he must protect his family from. Next, Jeppa (P) continues the critique of restoration projects while also pointing out the absence of community participation in these endeavors.

> Jeppa (P) 36 year old commercial fisherman: [Interviewer] *What are your hopes and dreams for the community?* [Respondent] I hope that we can really get some people in government that really knows, or try to at least figure out, how to save our coast. They need to get with the people who work out there and live out there to really get a feeling on what's really happening. As far as the fresh water diversion, I think that's a waste of money. I don't know how many millions and billions of dollars we've spent. Why not just build the land back up. Get some old maps. Just build it up. I think that would be the best thing because that's like a rebel with a sword too. Who knows what the future holds?

Jeppa echoes Tyronne's aversion to freshwater diversion projects while pointing out the disconnect of those who would fix the problem with those who live the problem.

> Tara (LC) 43 year old homemaker: [Interviewer] *Do you think that's (coastal restoration) possible*? [Respondent] No. I don't know. It wouldn't be a hard thing to do. Because if you shrimp and crab here, what's the difference of going out to the open water? But I'd like to see somebody do it, though. But they're not. They just gonna let it go and go and go until it's too late again to do anything. And it may be now; I don't know. I don't know how the -- I know that the Lake Pontchartrain Foundation has built a few man made reefs with the Christmas trees and stuff. I don't know how the progress is.

Tara is more ambivalent than Jeppa and Tyronne. She takes note of a piecemeal measure where discarded Christmas trees are gathered and used to build land while she also views government and its related agencies as dragging their feet. Tara believes no significant action has been taken, and it already may be too late.

> Robert (GI) 61 year old retired educator: In fact, back in the 50s the government came by and said we're going to help you. And they were going to improve the property. They were gonna pump the channel in the back of the island, and the mud they were going to pump out of there, pump into the marsh area and make it high ground, so they put a levee up and they put it all up and of course it destroyed the marsh.

Robert reiterates the negative consequences of good intentions expressed in the three passages prior to his. Robert's comment points out that the attempts to protect a community from flooding also served to "destroy[ed] the marsh." Interestingly, as respondents show below and later in the *political* meaning unit, it seems that the

alienation that Jeppa perceives -- where outsiders inflict projects on an undervalued and disrespected public -- may be a contributor to restoration aversion.

While some respondents express disdain for agencies charged with coastal restoration, sacrifice is the intended meaning of the next two passages. Many respondents acknowledge that some sort of capitulation on the part of communities will be in order if the coast is to be saved. Currently, commercial fisherman appear to be sacrificing the most as restoration diversion projects change the current state of the ecosystem in ways such as transforming brackish waterways into saltwater systems. However, some fisherman don't see sacrificing as an option. There was a controversial lawsuit filed and originally won by oystermen of Plaqumines Parish against the state of Louisiana that, through what many saw as egregious monetary awards, threatened the feasibility of future funding for coastal restoration. Louisiana appealed and eventually won against the original decision in favor of the oystermen.

> Larry (GI) 36 year old restaurant owner: [Interviewer] *What is Davis Pond? Can you tell me?* [Respondent] Davis Pond Diversion is a siphon that they built on the (Mississippi) river and it's, um, it's around Avondale. And it's on the north side of the Barataria Estuary. And it's going to just flood a lot of fresh water and sediment from the river into the upper Barataria Estuary. And I don't think that one's going to be enough. I think it needs more. I know you start effecting people's livelihoods -- oyster fishermen, things like that -- but I mean, I think you got to look at the big picture. You know, if it keeps eroding away there won't be any oyster fishermen anyway. So I mean, if they got to move further south -- You know, 50, 60, 80 years ago they wasn't fishing oysters there anyway. So I mean, I think that's the only way they're going to be able to do it, you know. Right now between Grand Terre and Lafitte you not talking about a whole bunch of land, and there's hardly any left. When Baratarria Island is gone and a few more of these little small islands on the north side -- 10, 11 miles from here -- there's nothing left. You know, I mean -- and I don't know what they're going to do. I think they need more siphons, you know.

> Saro (SB) 57 year old land surveyor: [Interviewer] *I hear a lot about the Caernarvon siphon and I hear probably more people than not that have a problem with it.* [Respondent] Well the thing is that the fishery industry in St.

> Bernard Parish has developed around a deteriorating wetland. And their practices, their equipment, the areas that they lease for oyster bedding have evolved into a process that really depends upon that deterioration. Now we come here and we say, "Well, we are going to stop the deterioration." We are going to reverse the process when all the practices, equipment, leased areas and all that become obsolete. And they (fisherman) don't like that. They want to be able to continue practicing the fisheries as they always have for as long as they can remember, which is two generations. And that's about as far back as the practice goes. The sad thing is if we continue to allow it to deteriorate, they are going to find out they are not going to have any fisheries at all. That's going to be many years down the road. So how are you going to tell a guy today that's making money, say in oyster fishing, we've got to disrupt your business so that 50 years from now, 100 years from now, they will still be able to do oyster fishing. Well he'll say, "Fifty years from now, I'm going to be comfortably dead. So I don't care about that. I would prefer to have my money and make it now." So it's a natural and understandable human reaction.

As Saro and Larry see it, the current condition of the inland bayous and canals is anything but natural as Tyronne (SB) implies. Larry refers to the lawsuit and suggests that an inability to sacrifice will exacerbate an urgent land situation. While not indicative of a willingness to make sacrifices, in May of 2005 the U.S. Supreme Court rejected the awards by the Louisiana courts to the oystermen and essentially ended the 11 year dispute (*The Times Picayune* 5/24/05). Saro echoes the idea of necessary sacrifice but is more empathetic about the fisherman by noticing how economic structures propel people to act in a self-serving manner.

Commercial fisherman in Louisiana are in the midst of tough economic times. With regulations, the increased cost of insurance, fuel and boat maintenance, and competition from aquaculture imports driving down the price distributors pay for a catch, many claim it is harder than ever to sustain a living. Thus, since the agencies that are in charge of coastal restoration are viewed as another obstacle by many fisherman, some of their frustration may be projected on to the restorative process.

Rocky (P) 54 year old commercial fisherman: [Interviewer] *You think the scientists and the biologists today, they talk to the people like yourself?* [Respondent] Yes. They have meetings. They come meet all the time down here, but they don't listen. So why not go where the problem started, where the land started to wash away years ago? Build it back up there.

Paul (P) 42 year old commercial fisherman: [Interviewer] (The following question by the interviewer comes after a discussion by the respondent about the frustrating nature of coastal restoration) *Do you find that the various things that they are studying and the projects that they are trying to implement as far as coastal erosion and saving the state and the coast and all that, do you find that they are taking the knowledge of the people of the communities more?* [Respondent] No. They take them less. And what's actually happening is they are going bigger and grander. What used to be seven billion is now fourteen billion. It's this big grand push to get the huge federal dollars. I don't like the attitudes and the philosophy of the institution of coastal restoration at all. Because at first, we went to them looking for support. Then something organizes. And then it grows into this big permitting process and this big arena of studies and millions of dollars being wasted on these studies. When dang, just go do something. Quit studying! It's a constant battle. And then to be used to drum up their support, to be federally funded to support their little network. And also this little network is turning into this big conglomerate. Now they're stepping on us. That's kind of how it feels. I don't have an active voice in it anymore. I should go, and I still do what I can with what time I have to give trying to earn my living. I don't get paid (in giving time to restoration issues). Most of them people are paid because that's their job. And they sit around talking about it all day. I'd rather pick up a shovel and carry some sand on my back and do something, so to say. And it's just frustrating when you are trying to present this philosophy, this project and you're standing before these guys who have never been out there. And they kill it, for whatever reason. I can understand their position to have limited amount of money and stuff like that. But they just don't see; we see the importance.

Lester (SB) 49 year old commercial fisherman: Nobody ever went out to the person that does this (fishing) on a daily basis and said, "what do you think when the wind blows this way, what's the best way to go?" Nobody did that. They all said they had statistics and all this scientific findings. But it's like anything scientific findings. They are confined to a 4 by 4 tank in a lighted room out of the elements, and they give you the outcome. Where you take somebody that's not a lab rat and give them the real run.

Adam (T) 34 year old port captain: They (agencies) see what's happening. We all try to voice our opinions on things that can be done to help save it. But we don't see anything happening. Nothing is being done. They tried different things, but it doesn't seem to work. And all that is another drop in the hat when it comes to things like that. We can voice our opinion but nothing gets done about it. They do what they want.

The frustration and alienation is resonates throughout these passages. With this division being the meaning that these residents attach to coastal restoration, it is not surprising that many of the coastal restoration projects are met with community opposition. Consequently, communication between agencies and communities spirals into conflict. The result is far less than what should be done to adequately begin repairing Louisiana's coast. It seems Paul expresses his resentfulness and disaffection the most poignantly. In the past, he gave much time to cooperating with scientists studying coastal land loss, even continuing to maintain a close friendship with a local university researcher. However, he believes it is no longer about community cooperation. He now thinks that he and his community are only "used to drum up support" for self-serving agency projects, and he feels as if "they're stepping on us."

A large part of respondents' resentment and alienation stems from their strong attachment to place. They consider themselves a part of place yet perceive being shut out of its recovery process. Taking into account the damage to the ecosystem and their identification with that damage, it becomes easier to understand that not being allowed to be engaged in the restoration process causes them to think they are shut out of recovery. However, some residents take remediation efforts into their own hands.

> Jackie (LC) 51 year old fireman: [Interviewer] *Why won't diverting the river stop erosion?* [Respondent] Because I don't think diverting the river is going to do anything to stop the influx of water from the Gulf onto the land. That's what needs to be done. You have to build the land back up. And I don't think the river is going to put that much silt to build that land up quick enough to help anything. . . . . If it wasn't for the people out here who do fill in and put mud in and put "wash out,"[32] if they wouldn't do that to the land out here, this island wouldn't be here

[32] Mitchell (LC) 52 yo shipfitter: [Interviewer] *Mitchell, explain wash out.* [Respondent] You order a load of concrete. The truck comes out, he dumps the concrete and forms it up. When that truck goes back, you've got to wash that concrete out of that big container. What they'll do is they'll hose it all out of there and then dump that out on the ground. It doesn't have as much to guard the line then so it's not true

anymore. It would be washed off. But it's from the people living out here who have taken care of the land and doing this and that, to improve that land and build it back up. . . . [Interviewer] *Do you think the different groups are going to be able to stop or at least stave off the land loss?* [Respondent] I think it's up to each individual landowner to do it. I don't think the groups have anything to do [with] it. I don't think the groups have the control of what an individual person does to our land. It's up to that person to put filling up or bricks or rocks or whatever they may decide once it starts eroding. Because you may have somebody who owns a piece of property, and I've met quite a few of them. If they wouldn't have put rocks or bricks or something down years ago when they were living there, now there's some people that's dead and gone off this island. Because they did it (filled in land) in the past, the land will still be there.

Adam (T) 34 year old port captain: But you can see the difference in the land. [Adam is showing interviewer family photos of camp dating back three generations] And then in 93 we started building this one here. We finished in 94. Right now the water level is even with the marsh. What we do now is put a bulkhead along the bank, and we haul oyster shells and rocks from our house out there to try and protect what's left. It's helping but you can see in the background it's eroding from the back side now. So we are going to have to soon start doing something back there unless another storm would take the camp.

Kyle (T) 56 year old Native American educator: I went into education and really got into a lot of community things, environmental things. Right now I serve on the Coastal Zone Restoration Committee for this parish. And other organizations that try to stay on (top of) what's going on- familiar with what we are facing. . . . [Interviewer] *Do you think anything will be done (to save Louisiana's coast)?* [Respondent] I believe something will be done. Now there's a lot of projects. Now the big topic, every time you pick up the paper, the politicians are talking about doing something about it. And there's a lot on the national level now. As we are talking to get federal dollars, we have taxed ourselves. The taxes passed a couple of years ago to help match local dollars needed to get the federal dollars. And no sooner than those dollars are already accumulating. The next thing you see on national news as these bills are starting to come up, CBS, CNN are all talking stories about coastal settling.

Part of the meanings that a significant number of respondents attach to coastal restoration is that of their own agency. Jackie, who continues the thread of skepticism projected on to institutionalized projects, symbolizes the recapturing of land through individual and community responsibility and action. The research of Austin and Kaplan

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concrete then. What happens is it dries up and hardens up on the ground. And then they eat it up with a big piece of machinery, scoop it up and throw it in the back of the truck. Well it's almost like a concrete. It gets hard after a long time. And it's a pretty good stabilizer.

(2003) shows how actions that restore one's damaged habitat also serves to repair a part of identity injured by environmental damage. In this way, Jackie also renegotiates the communities' and his own self-definitions in regards to place (Austin and Kaplan 2003; Greider and Garkovich 1994). Jackie even credits land preservation and the continuation of place to those who are deceased. Likewise, Adam notes his family's battle to save their land while reifying his attachment to place through the display of photos.

Kyle, on the other hand, is involved in a more formal manner with coastal restoration, although still at the community level. His belief in community transfers into his hopeful meanings and intentions. The other respondents in this group of passages also show faith in community; however, Kyle believes that formal self-taxation will show commitment by community and thus lead to commitment and exposure at the national level. And while Kyle is committed to more prescribed modes of restoration, Gerry (T) takes a very hands-off approach.

> Gerry (T) 46 year old Native American educator: [Interviewer] (The following question follows Gerry discussing land loss and the unlikelihood of the future) *What do you think about all the talk and efforts about saving the coast and stopping land loss?* [Respondent] It's all talk. I just look at it as being all talk as long as the oil companies are there and those refineries and those companies are still alive to be out there. You've got to leave the earth alone for a while to let it heal on its own. And as long as those few people are still out there cutting and butchering and dumping, it's not going to heal. They do talk a good talk. I've always seen one attempt that looks like half-way decent work. It was involved with Save the Lake Foundation, saving Lake Pontchartrain. And I remember when there were no pelicans in the lake. I helped work in putting lake grass back in, introducing cypress trees back in a certain marsh. And I was at the museum in Kenner (town in Metropolitan New Orleans area) one day and I was doing a lecture and I stopped dead in my tracks. And this was about 8 years ago. I looked up and there was an endless line of pelicans coming from the coast into Lake Pontchartrain. After I got 250, I just stopped counting. And I went, "my God, if they leave it alone, it will heal." And that's what they did. They left the lake alone. And the only way they are going to do that is to do the same thing. Leave it alone. Stop dumping crap into it and stop these companies from doing the stuff that they are doing and control the amount of whatever goes into that lake. You

> are going to have it done. Man is not going to do it. Man will do it if he leaves it alone. The earth will take care of it itself. You are going to lose a lot of coastline. But I think the way the earth moves is that you lose some, but I think the rivers will reroute, the water will work, and eventually it will get to a point where it's going to stop. A lot of times man thinks he can do anything. You can't. I mentioned one day, I would love to see if everybody pulled out of New Orleans for ten years and you never came back in those ten years. You could walk in, there would be a rainforest, because the earth would take it over. That's all they've got to do. Leave it alone. I think a lot of it is lip service.

Gerry's landscape is unique; nonetheless, elements of his definition of coastal land loss are common. Like other respondents, he blames powerful economic actors for the deterioration of the region, and he expresses a wish to see the land and community preserved while noting a skepticism that it will actually occur. However, Gerry's landscape consisting of a desire for the absence of human action upon the land is different from most respondents' meanings. Although his perspective is unique, Gerry's passage holds elements that are similar to many others and thus warrants inclusion here. He thinks that mainstream cultural norms have led to a hubris which leads humans to think and act toward nature as a passive, submissive object – humans can harm their environment while they can also, by force of will, make it well again. Gerry believes the environment has the agency to recover and thrive independently of humans and he goes on to use an example of ecosystem revitalization to give credence to the meanings within his landscape.

Although no other respondents express the depth that Gerry expresses about restoration or ecosystems, many do allude to this sort of belief system. Many state that human selfishness has produced the current degraded conditions, that society must cease all negative actions upon their environments, and that restoration may only be empty rhetoric. Gerry's meanings and others who vaguely imply such thoughts develop from an

attachment to place where residents have watched a steady deterioration of their environments.

In other parts of Gerry's passage he reveals his detachment from the region. He doesn't live in a coastal area and hasn't for some time. Considering his strong feelings about what restoration means and the almost impossible reality of such an idea system, it is no wonder that he is detached. On the other hand, those who only allude to such sentiments and operate within the mainstream cultural schemas of human intervention within natural systems, it is also no wonder that they express a sense of urgency about restoring the region.

> Rachelle (T) 61 year old chef: [Interviewer] *You think anything can be done about it [land loss]?* [Respondent] Probably. If they would start doing something with their surveys instead of doing another survey. I'm all for surveys. Don't get me wrong. But once you find out what you need to do, get out there and do it. Don't drag your feet until you need another survey. It's just wasting money and time, valuable time.
>
> Alfonse (T) 65 year old retiree: [Interviewer] (This question follows a Alfonse's discussion of what he believes is the inevitability of some community displacement) *So everybody here now would have to move?* [Respondent] On the other side of the river, where we are at in Chauvin now. You see where we are at now, we are inside the levee. Pretty soon it's going to be like New Orleans. Every time it rains you get water. But I believe that something needs to be done to protect what they got left. I wouldn't worry about all those islands now. That's too far gone.
>
> Tina (T) 29 year old childcare employee: We see that where we are now. You bulkhead and you bring in oyster shells to try to save the land around the camp. But you feel like you are fighting a losing battle. We bring cement out there, oyster shells by the baskets. It seems like you are not winning. . . . But if people don't start doing something about the wetlands, people need to stop talking about it and just do something. They do have little programs out here where you can go out and clean up. They go out to Last Island and clean up in other areas around here. But we need to do something.

Respondents have been experiencing coastal land loss for generations, but it is only in the past 10 to 15 years that it has begun to enter the popular consciousness. It is common to hear that there is too much "studying" of the issue and too little action. Everyone has opinions about how restoration should proceed and considering the alienation respondents feel from the institution of coastal restoration, it is not surprising that many are skeptical of the efficiency and reliability of current projects and what seems like a never ending stream of robustly funded studies. Alienation from institutional processes and the futility of individual mitigation efforts add to a sense of urgency within respondents' landscapes. As respondents watch a place that they are deeply attached to disappear, their experience of coastal land loss takes on added meanings of anxiety expressed in Tina's statement when she says that we need to "stop talking about it and just do something."

The *restoration* meaning unit intends to convey an understanding of the different ways respondents experience the process. Restoration holds positive and negative meanings and involves sacrifice and conflict within individual landscapes. Saving Louisiana's coast takes place within the context of an attachment to place where those who have an intimate relationship with place feel dismissed, undervalued, shut out, alienated, and distrustful towards those charged with alleviating coastal land loss. The restorative and mitigating actions that individuals and fellow community members engage in serve to offset these negative feelings. These individual efforts help them regain some sense of autonomy, and reestablish a sense of self in relation to place (Austin and Kaplan 2003) that is damaged not only by the disaster of coastal land loss but from the human process of coastal restoration.

Human Degradation

Respondents' statements fall into the *links to place, damaging consequences,* and *restoration* meaning units the most. For each of the next four units, there are about half as many statements as each of the previous three. However, the passages within these remaining units display the profound meaning of experience no less than the other units; there are only fewer of them.

As we have discussed, respondents hold humans responsible for a large part of coastal land loss. Although those meaning units may hold obvious references to how respondents apply responsibility, it is the clear intention of residents in this meaning unit to confer responsibility for degradation on the actions of humans.

Most respondents talk about the larger, popularized human causes of land loss – oil exploration, the levees around the Mississippi River, and so forth -- but many also give very localized meaning to the human influences of the disaster.

> Alysha (GI) 46 year old librarian: [Prior to this passage, Alysha says much of the erosion on Grand Isle is inevitable due to natural wave action and goes on to say the following] But, uh, another thing I'm always on people about, you're only supposed to go across [to] the beach, across the levee, on the boardwalks. And people will build a camp and then they'll go cut down the grass and then they'll make their own little cross over and they're not supposed to do that. And they're not supposed to drive four wheelers and golf carts and stuff like that across the levee. If there's no plants on the levee holding the sand together, that's the first place it's going to erode, and the people don't understand that. Of course, it's just weekend people and their camps are insured so they usually don't care. The people who live here know.

Alysha, who spent her childhood in the Midwest, views herself as an attached insider who is a steward of place attempting to alert outsiders to their detrimental actions. As has been common among respondents, Alysha displays an identification with place which holds a self-perception of stewardship juxtaposed against uncaring outsiders. Let me

reiterate a function that these passages serve for respondents: by intentionally conveying this understanding to the researcher and verbalizing her actions, Alysha reifies her identification with and attachment to place, possibly even self-fortifying it.

Residents view themselves as being 'insiders' with a certain amount of environmental expertise. As Opotow and Brook (2003) show, respondents perceive government agencies and special interest groups like environmentalists and developers as outsiders who are disrespectful and dictatorial. In addition, most of the communities studied are undergoing an influx of upscale suburban development that intuitively goes against coastal restoration. Development of these areas requires wetlands to be filled in for building, an issue which Phyllis (SB) tackles here.

> Phyllis (SB) 47 year old office administrator: Just like the houses (development), these people that come in and knock the trees down, to me that's another thing that takes away from the land. [Interviewer] *Tell me about that.* [Respondent] At one time some of these things around here were like instead of wetlands, and all of a sudden, now you see some areas developing in and around those areas. So it's like a lot of the trees have died. [Interviewer] *Because of the development in these areas?* [Respondent] Yes. Some of the trees have died because, well, they either have to remove them or they have to fill in where these trees were. [Interviewer] *So they are cutting, too?* [Respondent] Yes. They'll say from this point on, this is where [logging stops]. The common people could never do nothing with them. But then again, I'm not going to mention names, but you get certain types of people that purchase this property. All of a sudden, the lines (of demarcation) move either across to the side or they move them back. And then this land that no one never could do nothing with before, it develops. Figure that one out.

> Alicia (LC) 54 year old hairdresser: (Alicia is discussing her conversations with someone in city government in charge of zoning, planning and development) He said, "First of all, you are the first person I've ever spoke to that didn't want to change our wetlands. Everybody that calls me wants to find out how they can get around [regulations] to be able to develop wetlands, or to use it." He said, "It's like a breath of fresh air."

In Phyllis' passage, trees again come to symbolize place degradation. Phyllis views powerful economic actors as influencing government to their own will; whereas, "common people" are restricted from using the land that she thinks is their right. Echoing the insider status, Alicia positions the self as a protective steward and others as manipulative degraders of the wetlands that she identifies with. These meanings figure into residents' landscapes of coastal restoration as the process comes to be viewed as less than virtuous. Human degradation of this sort also informs landscapes through symbolizing simultaneous damage and disrespect to the land and identity.

As development symbolizes place exploitation by outsiders, so too does the oil and gas industry as it has come to represent primary environmental degraders in the popular consciousness. However, this perception is offset by its role as a local economic developer.

> Roger (D) 47 year old commercial fisherman: They lived off the land. The whole family did. So I mean we are pretty much in tune with what it was and what it is now. They've seen it all. But the older people claim that the oil companies came in here even before the canals were dug. When they first started there was so much oil spillage. They claim that's why it's eroding now. Because it killed all the grass and then the bank just started eroding and it started from there. Back in those days, an oil spill, it wasn't nothing. They didn't have a DEQ back then and nobody was policing that. It was a money making deal. They weren't worried about the environment like they are right now.

> Christopher (LC) 38 year old small businessperson and former fisherman: The oil rig used to be 300 feet in the marsh. Now it's sitting out in the middle of the open water. There's no canals through there to take outlying canals. I'm sure you heard that one. They've got all these pipeline canals through the marsh. All that did was cut it (the marsh) up. It gives access to small boats to run even faster. So believe it or not, it should all fall back onto the oil company responsible for it.

> Lysha (D) 51 year old social worker: I mean we make these canals do things that we mess up. It's man who has done it. And it's destroying the land. We have

> progressed so much that we think we can do anything. But Mother Nature is going to turn around and show us we can't.
>
> Becky and William (LC) Becky is 69 and William is 70, both are retirees: [Becky] I think the oil companies ought to put something towards that repair. [William] They let all of that saltwater in, killed the trees and the vegetation. The oil company canal, they let all the salt in there and killed the vegetation. And then it just ate away. We used to go out to the Violet Canal fishing. That was all wooded back before the ship channel. We would go out the Violet Canal to Lake Borgne. I remember when they came and cut an oil company canal. We used to go into the woods in this new canal and fish freshwater there. Or we could go out the Violet Canal to Lake Borgne and catch saltwater. There's no woods there any more. The new highway from Judge Perez Drive that crosses the Violet Canal- you can look out there and see the few dead trees. That was like a forest at one time.
>
> Theodore (T) a 47 year old Native American and manager in an oil related industry: Could I be bitter at the oil company for coming here and wasting the land so viciously? No. They gave me a good living. The house you are in today was bought with oil money. The vehicle I ride in was bought with oil money. So, we are a product of our own demise so to speak. The opportunity was there; we worked it. We didn't see harm in it at the time. But now these many years later, hindsight shows we may have damaged the land where it is irreversible. We pretty much have to say we are going to draw a line in the sand and say, "this is where it stops." Will it stop there? Not with the earth and the damage.

The oil and gas industry occupies a curious area in respondents' landscapes. Theodore recognizes the damage that the industry has inflicted upon his environment while he acknowledges the economic benefits it has brought to him and his family. While he acknowledges the benefits of the industry, his use of the word "viciously" attaches a brutal element to his meaning.

The other passages of this set seek retribution for the damage incurred by the oil and gas industry. Roger's passage depicts an industry allowed to run amuck due to lack of regulation and the pursuit of profit. Roger places this depiction within the context of those who are firmly entrenched in place, with his family and a community of elders who

hold a special relationship with their environment; they are “in tune with what it was and what it is now.” Becky and William illustrate their insider knowledge by speaking about the loss of flora and, like Christopher, placing responsibility for the loss at the feet of the oil industry.

Like Theodore’s passage, Lysha’s words reflect some self-responsibility for some of the damage to the land. This community accountability for oil and gas damage was not universal among respondents, but it was not wholly uncommon either. Respondents constructing their landscapes in this way represent the industry as an actor who might have known the harm it was causing while they, the residents, were lured by economic gain. The temporary gain residents incurred may have come at the expense of what they believe is their special relationship with place. While many project the responsibility for rectifying the situation on to the industry itself, most, as Theodore and Lysha imply, believe this damage will be hard to remedy. In other words, many blame the oil industry but they also acknowledging their role in the degradation. In recognizing their function in land loss respondents realize, at least in small part, the damage that may have done to their own relationship with place.

In contrast, the Mississippi River Gulf Outlet, which runs through the whole of St. Bernard Parish, was rarely welcomed by the many residents. The outlet, completed in 1965, has been mired in controversy from its onset, and many view the canal as a primary cause for much of the parish’s land loss (LSU Ag Center 1998).

> Duke (SB) 53 year old small businessperson: You've got a whole lot less wetlands because of saltwater intrusion due to horrific federal projects like the Mississippi River Gulf Outlet. You've got the Houma Navigational Canal in Terrebonne. You got all the pipelines dug by the oil companies. So you got land naturally subsiding. You got saltwater coming in. The saltwater kills a lot of the

vegetation. The vegetation that required more fresh water, and things convert from marshland to open water. I forget the formula but its like for every mile of marsh absorbed a half of foot of tidal surge from a storm. The islands out there, the Chandeleur and Bretton Islands, slow down a storm surge.

Bear (SB) 45 year old historian: The other thing that has to be done in order to save the city from some catastrophe which I feel is definitely looming in the future is to close that Mississippi River Gulf Outlet. The MRGO had been a project which F. Edward Hebert and Judge Leander Perez and also Senator Allen Elleandar had supported. And it was felt that shortening the route from the Gulf [of Mexico] to the Port of New Orleans would enhance the value and enhance the effectiveness of the Port of New Orleans which was and is one of the major ports in our nation. So that's why the MRGO was open. Regretfully though, there was no awareness of what would happen as a result of channeling hundreds of millions of gallons a minute of saltwater into previously brackish and freshwater environments. So as a consequence that's just destroying everything. You can see it at Yscloskey when you drive down Yscloskey. There's a strand of dead trees near one of the gas plants. Even 20 years ago, that strand was green. Now it's dead. And that's what is going to happen all through that area if something isn't done to stop that use of MRGO. I think fortunately for us, the people who live here, it seems that the size of these ocean going vessels and these vessels engaged in international commerce is becoming so large that it's rendering the MRGO obsolete.

Theresa (SB) 36 year old administrator: [Interviewer] *How do you think the area has changed physically?* [Respondent] Physically, it's changed quite a bit. Like I said, as far as the development. The biggest impact on this community by far was what I mentioned before, the Mississippi River Gulf Outlet. It totally changed the landscape. We have lost a phenomenal amount of land. Just the amount of water in the area. The amount of cement now because of development. The population numbers. We are really closing in on a smaller and smaller land mass. So lots of change in that area. I don't look at physical changes, development here in Chalmette. I'm looking at it by landscape of the coastal community. I know there's a whole new area down there, Fort Beauregard or something they are developing. There's going to be swimming pools and tennis courts and all this cement that's taking the place of what used to be wetland area.

Christian (SB) 42 year old commercial fisherman: Going back to erosion- man made- we spoke about this earlier, about the Mississippi River Gulf Outlet. Here you have a man-made monster that they dug this channel in 1962, I think it was. I was only two years old. I always remember the channel. What I seen as a kid coming up with my little boat at 10 years old, I used to go up and down the channel and what I seen as a kid then and what I see now, some of the areas that I have been in, there's a quarter to three-eighths of a mile of land that ate up since the channel has been there. And you are looking at the lake on one side. I'm

> talking about the Shell Beach area. You have the lake on one side eroding, then you got the channel coming. You know, in some spots you don't have an acre or mile within the channel and the lake. The ship channel on an average is 38 feet deep. It's 42 in some places in the middle of the channel. You have ships that draw 35 to 38 feet. So they are touching the bottom. As a mariner, when I put my boat in shallow water what happens, the suction, especially going through some of these little bayous sometimes, you have got to slow down because you can't maintain control of your vessel and you sucking up. So you ain't making up no more time than if you slow down. It's a fact. These ships come through this channel drawing 38 foot of water in 38 foot. So they are touching bottom. They are dragging the bottom. When that swell sucks up, I'm not exaggerating. I have been there. I found a ship coming down a channel, and if he don't have an 8 foot suction along those banks, he has none, I seen it. And there are sections in that channel where they rocked off after the protection levee; it goes in at least 300 feet where they stopped rocking. The rocking did help slow down the erosion, at least 90%. There are sections in the channel they rocked. But it keeps sucking from underneath and the rocks sink down. But for what I see on the top of the land, wherever they didn't rock, it's ate up. If it ate up in 10 years, 300 feet what is it going to do in 20 [years]? And they keep digging and digging. It's just sucking that layer of mud or sand. They keep sucking that water and the land just keeps sinking. If you take from the bottom, it just eats out from the bottom and it, the top layer, just sinks.
>
> Hank (SB) 64 year old local councilman: What was back then is no resemblance of what's here today. And the MRGO has been the major factor. Subsidence is a natural thing that happens. But in this parish the Mississippi River Gulf Outlet is the main factor. If you want to talk about environmental terrorism, that's it. You are talking about degradation, death of a community. There's nowhere in the history of any community that the environmental damage that was caused because of the Mississippi River Gulf Outlet has ever taken place. This is it. . . . All there is is dead cypress trees. They stand tall like tombstones in a graveyard. That reminds me everyday of what things used to be and what people will do for money. Greed.

For the people of St. Bernard Parish, the Mississippi River Gulf Outlet represents environmental and community destruction by an alliance of government and business. It is viewed as being implemented by these powerful outsiders against the will of St. Bernard residents. Duke connects the “horrific federal” channel to the degradation by oil companies and the deterioration of land that leaves them increasingly susceptible to storms. Unlike most respondents, Bear is willing to grant the benefit of the doubt to the

purveyors of the channel but believes the channel must be closed to stave off a "looming" catastrophe that is made all the more likely by the continuous loss of land caused by the channel.[33]

Echoing Bear and Duke are Theresa, Christian, and Hank. Theresa not only sees the channel as causing the loss of a "phenomenal" amount of land to erosion and subsidence, but also as the harbinger of large-scale suburban development that is changing the entire coastal community. Christian uses his insider knowledge to give a detailed explanation of how the channel continues to cause damage through drag by large ocean going vessels and continuous dredging that is done to keep the channel operational. Christian says the dredging also serves to pull at the rocks that are meant to impede erosion. The "man made monster" that Christian speaks of is brought to a peak of symbolism by Hank who views the channel as an ongoing act of "environmental terrorism" bringing slow death and degradation to the communities and the land where the "dead cypress trees… stand like tall tombstones in a graveyard."

None of the interviewees viewed the Mississippi River Gulf Outlet positively. In fact, nearly all St. Bernard residents mentioned the channel, and all of those perceived it in a negative light. The channel occupies a large space in their landscapes of coastal land loss. It is a construction that many come into contact with daily, the ire not only of those in St. Bernard but those in the surrounding parishes as well. Many residents of St.

[33] Unfortunately, Bear's warning was not heeded and the storm surge from Hurricane Katrina used MRGO as a primary channel to travel. Levees were breached and almost all of St. Bernard and Orleans Parishes were flooded.

Bernard have wished the channel's closure for some time, and Bear's hope for the channel's demise resides in it being rendered obsolete by newer and bigger vessels.[34]

Those not in St. Bernard tended to view the outlet as another instance of human degradation in a long line of negative impacts upon their environment. As shown at the beginning of this meaning unit, the harmful actions by humans were reflected in very localized experiences, yet residents also viewed humans' impact on a larger level.

> Bubba (D) 27 year old recent college graduate: And I think it has everything to do with the control of the water flow over the years has affected -- we had a really bad problem. I think the marshes are meant to be -- Mother nature intended them to be brackish. And she controls them by allowing a certain amount of saltwater to infiltrate the marshes, and yes, it does kill certain vegetation. It allows certain vegetation to grow. In our marsh it used to be very brackish in nature, and so the marshes used to be strong and vibrant.
>
> Anastasia (GI) 27 year old education professional: [Interviewer] *Talk some about your perception, as you mentioned, of the mismanagement of the Mississippi (River). Talk some more about what that has meant for Grand Isle*. [Respondent] I should be looking more at the science of it right now to know exactly what's going on. But my perception has always been that when the Mississippi (River) has been managed to benefit the people of New Orleans and the oil companies, they cut canals through marsh without any concern about what kind of impact it's going to have. And eventually what's going to happen is the marsh is dying, and I remember, just in my lifetime, this beautiful green expanse between ground and the road being full of water. It used to be an actual living system.
>
> Phyllis (SB) 47 year old administrator: Man has made this water go where it goes and do what it does. Some problems that maybe should have been addressed 50 years ago, before this even started, weren't. And they jumped up 20 years ago and said we got to do it now, which it was already too late. So they killed off this to try and preserve that.

In addition to the meaning residents attach to their direct experience of the event, the experience of coastal land loss is given larger, more abstract meaning. Other than commercial fisherman, most residents do not see the direct causes of land loss such as

[34] However, at the time of this writing, the channel has not been closed despite calls by local politicians, the widely read local newspaper of metropolitan New Orleans, and the nearly unanimous feelings of residents. Its constructors, the Army Corps of Engineers, on the other hand, are its biggest advocates in lobbying for the continuation of the outlet.

canals cut by oil companies or land eradication by storms. They only see the indirect effects such as dead cypress trees and wild birds in urban spaces. Yet, these localized experiences are given meaning that is extrapolated to a larger disastrous event they view taking shape. They view this event as largely caused by humans who have tried to bend a vibrant living place to its own will.

Residents' view the phenomena of coastal land loss as largely being caused by human hands. They blame powerful outsiders but they also accept responsibility for their role. Many respondents believe that, in pursuit of better economic circumstances, they were willing participants in the cause of coastal land loss. However, in general, and possibly a result of the heightened anxiety many experience, they place blame on government and coercive economic actors.

Uncertainty

In large part, loss of control defines how respondents experience the phenomena of coastal land loss. In addition, the belief that the disaster is caused by outsiders and solutions that are ambiguous and piecemeal are implemented by disrespectful others produces uncertainty about place and identity. There were glimpses, sometimes substantial, of this uncertainty in the previous units. However, it is in this *uncertainty* meaning unit that the narrators convey ambiguity and insecurity.

> Susan (GI) 30 year old graduate student: I think I have a much better ability to ignore things. But when I came back, when it really hit me is when I came back from college. I walked on the beach and realized there is no beach. I have to walk in the water. It's scary. It kind of affects your sense of well being; it tests your sense of well being. All your life you are expecting the beach to walk on and run on, and you step off of the levee. It almost feels like you are stepping off of a cliff, a very short cliff when you grew up seeing sand you could walk on. I've had nightmares about just dropping off. There's nowhere to go, just down.

Susan's landscape illustrates the threat to identity that land loss has for her. She notes the affect it has on her "sense of well being" and then repeats the sentiment adding weight to its significance. Her sense of self, given solidity through place, is now thrown into question due to the disaster. In other words, she knows who she is because of where she is from. When that place begins to disappear, that sense of identity that was once secure is now uncertain, so much so, that the threat to identity has invaded her dreams.

The danger to identity that land loss poses is also demonstrated in narratives about what may be done to alleviate the disaster.

> Carrie (GI) 46 year old government employee: [Interviewer] *What do you think will slow down or stop the erosion process?* [Respondent] I really don't know what can be done because, um, I know like they put the rocks and stuff and that might help it here, but right up the road, when you're leaving the island, just take a look on the right hand side and its like every time I go up the road to go do some shopping and everything, I'm amazed at the amount of water that's there and there's no more land. I mean, you don't realize, but just the last several years -- I know it took years, but now when the tide is high, I'm like, it's really scary and when you get off the bridge, there was a lot of land and now when you get off that Leeville Bridge, there's water. They have some people that's come down and they haven't been down here for years and years and they got scared and turned around at the Leeville Bridge and said they couldn't believe there wasn't no land left. I really don't know what -- They talk about different things, different organizations or different groups and committees and stuff and getting -- I don't know, is it the silt from the Mississippi River and let it build in one area and so forth? I don't know if it's an ecology thing or whatever, but I don't know long term or whatever, because this is happening quick. I mean it's gone real quick. I mean, they say they losing. I've forgot exactly how much land per year and it's -- you could see it. I mean you could see it. Quick. It's going quick.

> Art (P) 52 year old government employee in conservation services: And of course, on the outside of the levee the coastal land loss problem is just inescapable. You see it in private life and me in particular, in my work life. It's incredible. I find a lot of people came to realize, and I'm talking about the average Joe in suburban New Orleans, they knew it was going on out there but a lot of them don't experience it first hand. But a few years back, you may remember, a lot of the local news channels and weather reporters went to that Doppler radar images for the weather forecast. And when they did, everybody knows that there wasn't much land left in the coastal areas. I've heard many people remark that it was scary to see those images showing just little strips of

> land left out there and large open bodies of water surrounding us. So that was funny that a lot of people realize it by looking at the weather show everyday.
>
> Claude (T) 37 year old commercial fisherman: This is going to be the Gulf of Mexico sooner or later, I guess. I don't want to see it happen. But I have a bad feeling that's what is going to happen.
>
> Tina (T) 29 year old childcare employee: There will be nothing if something is not done. And I don't even know where people would start to try to get something done.

In the *restoration* meaning unit people conveyed what they thought about solutions. Emblematic of the above passages, many respondents expressed uncertainty in the *restoration* meaning unit; however, the primary purpose of the passages in the *uncertainty* unit is to convey the insecurity within residents' landscapes of coastal land loss. For many, the uncertainty that the disaster poses is "scary." It may be that the incessant nature of the event causes residents to attach frightening, foreboding, and confusing meanings to the phenomena. Tina finds the situation somewhat overwhelming and solutions are unclear. Claude has a "bad feeling" that water will overcome place, and Art expresses the shock and fear of lay people in metropolitan New Orleans who are not aware of the severity of the problem. Consequently, place is viewed tenuously upon realization of the scale of land loss. In a somewhat similar fashion, Carrie uses the example of residents who, because of a period of physical separation from place, are frightened to the point of not returning. The intention here is to demonstrate the gravity of land loss. When respondents tell stories of outsiders or those who don't permanently reside in the area who are "scared" due to the amount of land loss, it is meant to give credence to the severity of the event. Respondents are in effect saying, "So, you can understand my fearful uncertainty."

Respondents' doubt about the future of place is brought on by experiences of place that were once familiar but are now rendered strange. The following seven passages illustrate the experiences that produce so much uncertainty. Place is no longer familiar. The places that respondents identified with in the past, the places that carry the elements of a constructed identity, have disappeared or are disappearing.

> Theodore (T) a 47 year old Native American and manager in an oil related industry: When you go out there and you running your boat and you remember seeing a piece of land one year and you go back and you say, "What happened here?" The landmarks that you used to use to navigate by are no longer there.
>
> Jackie (LC) 51 year old fireman: I used to fish down in Point a la Hache, a lot too, as a kid. And I remember just a few years ago, I went down to Point a la Hache fishing, and it was like I was in a whole totally different, like I had never been down there before.
>
> Lester (SB) 49 year old commercial fisherman: If the old people could come back now and you put them in the boat, they wouldn't know where they at. That's how much the marsh changed. There's places in the last couple of years I've got lost. It used to be land and bayous and now it's just open water.

Many respondents communicate an unfamiliarity of what was once known territory. Lester illustrates not only an identification with the land, but also that of an identity connected to past generations through place. This connection is now in jeopardy. Below, Chuck and Tina echo Lester's thoughts by relating the fear their elders experience and they share.

> Chuck (T) 36 year old commercial fisherman and oil field employee: My dad is 67, 68 years old, and every time we go to the camp, he won't get behind the wheel (of the boat) unless he has to. And he's been born and raised out there, practically his (whole) life. …Talking about having 20 feet of land right here. You put the PVC pipe on the end of the point. Come back a year later and that 20 feet is just about gone. It's weird. It's no way of stopping it that I can see.
>
> Tina (T) 29 year old childcare employee: It seems like everything is opening. And even like going out there [in the bayous] with my grandfather and him getting turned around and he didn't know. He grew up there as a child, and now he is in his late 70s. And when he got turned around, that's what scared me. I

> didn't know. That's not a route that I'm used to taking. But I knew that there was oyster reefs around there. …But we need some help from somebody. I don't know where you would even start.

Next, Rachelle inverts this theme of generational knowing.

> Rachelle (T) 61 year old chef: I went out in the beginning of June. I went out fishing with my son. Now I hadn't been on the water in about five years. And I used to get in the boat and I'd just take off and go fishing. And he says, "Momma, tell me a few good spots." I said, "I'll take you there." I get there and I don't know where the spot is. It has changed that much in five years. And I said, "I can bring you close to it. Like this one place right on the other side right here." I mean this was always good for a few specs (speckled trout) anyway. But it's eaten away so much, I did not know where the reef was. It's changed. It has totally changed. It's sinking. It's washing away.

Her inability to give her son, the next generation, her local knowledge deprives him of that connection with place, as well as, knowing something of who she is. These statements are given weight by her closing sentiments: "It's sinking. It's washing away."

Relating stories in this way is purposeful on the part of narrators. The point of these passages is for the researcher or reader to understand the uncertainty residents think about a place they call home. Home is a place we identify as a symbol of refuge; however, this sense of stability is being taken away from respondents. At the same time, the use of specific words like "scared" and narrative topics like generational connections are ways of expressing a deeper threat to identity through the disappearance of a place to which they feel intensely connected.

An interesting comparison with the last several respondents is the next passage from Sven, a Delcambre resident.

> Sven[35] (D) 33 year old commercial fisherman: Because I go the same route and I have poles marked in the same place, you can actually see it. You got to go out

[35] Sven of Delcambre is coded as not having talked about land loss because he brought up the issue after being asked by the researcher about the event. I have not included passages of respondents for whom this

> every year and we mark it. Where's it going to be? You can see it on low tide and north wind. When the water gets really low, you can see where it's at. But on a high tide you don't know. You've got to go out and figure out where it's at this year.

Sven's comments lack the gravity that the others give the event. His experience of unfamiliarity is minimal compared with other Louisiana respondents who live farther to the southeast. As coastal land loss increases, it may not be long before Sven's words echo the larger sense of loss and uncertainty conveyed by the other respondents in this selection.[36]

> Susan (GI) 30 year old graduate student: [Susan is speaking about her father and residents like him. Going to school out of state, Susan has not been a resident since high school] The feeling that everything is washing away and there's nothing to look forward to. There's no future. There seems to be a lot of nostalgia and a sense of sinking into the ocean personally. Just watching everything disappear and you can't do anything about it.
>
> Liane (T) 38 year old Native American community organizer: I don't know what to do about it. I don't know what anybody can do about it right now. I don't even know if it can be saved. To me this is an emergency. Just like a patient, the land is an emergency to people. That's their livelihood.

These statements by Susan and Liane give respondents' uncertainty a desperate element. It is more than not knowing what the future will be. And it is not only the land "washing away" but the people who, as these and other passages suggest, belong to the land that are like an "emergency patient" who is in grave danger. As Susan suggests, coastal land loss reflects an end to identity, a metaphorical death.

Brown and Perkins (1992) point out that it is only in retrospect, after loss, that people acknowledge the depth of their attachment to place. Residents of coastal

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occurred; however, I have included Sven's words here due to the relevance of comparison with those of Terrebonne residents.

[36] The residents of Delcambre may be only beginning to experience what residents of more southeastern parishes are feeling. And now, after suffering significantly from Hurricanes Katrina and Rita, realizations of land loss may have come to the people of Delcambre a lot quicker than they might have expected.

Louisiana are in the midst of this loss. They "see it" occurring slowly everyday, yet at the same time it is "quick" and deceitful. Because of the ongoing nature of the disaster, these respondents appear to be more continuously aware of their attachment. Carmen's (T) thoughts from the *links to place* meaning unit exemplifies Brown and Perkins' assertion as it relates to Louisiana's phenomena. Her statements are not post-event but during the extended event.

> Carmen (T): Never take for granted that the land that you are on will always be there. Never take it for granted. It disappears in an instant. Never take for granted that you can put something in one spot and when you come back, a couple of years, it will still be there.

Carmen's statements are a warning for others who are so attached as her and her fellow residents. She expresses the simultaneously slow yet instantaneous nature of the loss. What may take "a couple of years" to disappear might feel like loss "in an instant."

Respondents experience not just uncertainty of place but an uncertainty of identity, as well. They attach meanings of helplessness, anxiety, despair, and strangeness to the event. They do not limit these meanings to the event; they adopt these characteristics into their self-definitions as well. Greider and Garkovich (1994) state that when change to place occurs, a renegotiation of self and identity occurs in relation to the place change. The damaging meanings that are given to coastal land loss are also conferred on to identity and continue alteration as the event does. The continuation of the disaster renders a slowly emerging new identity.

Political

Uncertainty as reported by respondents solidifies as the political elements of coastal land loss are played out. Residents have watched this ongoing disaster over three generations. Yet it is only over the past ten to fifteen years that the event has gained

widespread political attention. Most residents are highly skeptical and cynical of this process, yet hold out some hope.

> Jenny (GI) 54 year old who works in public relations: I hope that the government continues to do what it does so well right now -- lobbying Congress and the state for the help to preserve us physically, as well as our history -- because when Grand Isle is gone, New Orleans will be gone.

Again, there is a call for a political response framed in warnings about the dire consequences that could come from land loss.[37] Even so, Jenny's warning is contextualized within her mostly positive sentiments; however, the assured and hopeful meanings Jenny gives to the political component of land loss was rare among respondents. While many more expressed a moderate degree of hope, it was usually offset by negative narrations of how politics is part of this ongoing disaster.

However, there were those, although relatively few, like Walter below, who took a more realist stance toward the political climate that those who experience coastal land loss face.

> Walter (T) 51 yo facility superintendent: What I see and the way things are going for funding to rebuild those areas, I think they are beyond repair. If they can slow it down, they'll be ahead of the game. The money it would cost to rebuild would be too much for the rest of the country to go along with. And we can't do it ourselves.

Walter's landscape posits that he and the people of his region cannot solve a problem that is "beyond repair" without large-scale political will. The political meaning he gives to the event is that it is widely viewed as a regional or state problem. However, he is not fatalistic; he employs a sense of realistic hope that the problem may be slowed. In the next two passages, respondents express a more dismayed sense of political obstacles.

[37] And as we now know, Hurricanes Katrina and Rita exploited the loss of protective coastal land and gave credence to the admonitions that Jenny and others sent out.

> Rachelle (T) 61 year old chef: [Interviewer] *Do you think they (government) will do anything about it?* [Respondent] I don't know. Give politicians something to work with and you know what happens. Because, I mean all these years, they have been talking about it, and they really have not done anything. Nothing has been done. They'll say they are trying something but it doesn't work. As long as they are trying, I'm happy. But then they hold another survey. And let it drag on again. So by the time they could do something, things have changed. So they need that other survey to figure out what to do again. It just keeps going.
>
> Liane (T) 38 year old Native American community organizer: I just cannot believe the government has watched this happen to our people. I just can't. It's not just our area, just a coastline. . . . And how our state government can sit there and our senators, Congress can just watch it go. I just don't understand it.

These respondents are more skeptical of the political process than Walter (T) and Jenny (GI). Rachelle's comments are pretty common. Many see politicians using the issue of coastal land loss for political clout, but no substantial work is implemented. This belief is projected on to the agencies that are charged with fixing the problem. Others, like Liane, express bewilderment about government's involvement or lack thereof. She gives weight to her puzzlement over governmental inaction by attaching herself and people to the land and regional coastline. In this way, her intention is to imply that the people and the restoration needs of the region are neglected by government.

While some think government is neglectful, many respondents also air frustration over the bureaucracy that has arisen around coastal land loss.

> Bettie (LC) 56 year old homemaker and local historian: But in order to put something down whether it's sheet pilings or it's concrete or it's trees you have to go through so much bureaucratic red tape that it stinks. … And this wasn't like I could call up on the phone and say, "Hey I wanted my forms sent out. Could you get them to me 'cause you know we're watching the water slowly come up to the front of the house." You're talking about 6 months, 8 months; you're into hurricane season. You're into another foot or two [of land] gone away. So know that if you put back more than what they told you you could put back then they come out and go, "Well you're gonna have to remove this because we only gave you permission to put four feet and you've got eight feet." "Well asshole it took you eight months to tell me, in the meantime we had two hurricanes." You know? "A lot of boat traffic so we lost another two foot while you were screwing off

someplace.” It's a bureaucracy. That's what it is. The shit you have to go through is phenomenal.

Bettie’s landscape consists of an attached insider and a detached bureaucratic outsider schema. She and her fellow residents are trying to sustain their homes and land while different government agencies not only do not help but obstruct their attempts to preserve land. In this way, coastal land loss takes on the meaning that outside political agencies add to the residents’ problems.

> Albert (GI) 34 year old manager: Because I had one fella [from the Army Corps of Engineers] tell me that they ought to take the money for erosion and put that to transplant the people, to move them. Instead, if your house goes, well, don't rebuild Grand Isle, rebuild it, just take them and move somewhere else. So I told the fella, I said, "Well, okay, that sounds --" I said, "I'll be there at your house tomorrow with a U-Haul." "Oh, for what?" "Well, I'm moving you and where I move you, you have no --" "Oh, there ain't nothing wrong with my house!" I said, "Oh, don't get upset. You just said you want to uproot me. So, it’s in good faith that I go move you wherever I want to move you, you know." Not just get you out of the place that you call home, you know. So its --
> [Interviewer] *Part of the stipulation is to maintain part of the marshland that you bought* [Respondent: Well, no] *for twenty years?* [Respondent] Well, whatever I mitigate, what I damage, I have to mitigate. Now, all of a sudden they've come up with a price tag on how much marsh, how much it's worth. And yet, when you turn around and say, "Okay," and tell them to play by their rules that they've made, they don't want to. I said "Well, all right, why don't you do that?" "Well, uh, we don't have the funding." "What do you mean you don't have the funding? So where's my tax money going?" You know, it's uh, we've fallen into that and seen the bureaucratic stuff that's just run around in a circle more or less because nobody wants to agree on anything, you know. [Interviewer] *How has that affected you guys as far as your ventures and stuff?* [Respondent] Well, uh, we're still going for it. Uh, unfortunately it’s made me bitter about Wildlife and Fisheries, National Marines and all this, organizations that nobody has, knows anything about this area, but yet they're going to tell you what to do, what you can't do to the area. But they don't know nothing about it. And it's, it's made me very bitter about it. That's like [Army] Corps of Engineers, you know it's like, they have stuff. They keep griping and he's (Army Corps of Engineers representative) telling me that if we dig into the island its going to mess it up and this and that. And I told him, "What about the east end of the island? It's about to be cut through by the state park, what you all gonna do about that?" The man flat out told me, "I don't want to talk about it." I said, "Well, why not? This is in relation to Grand Isle, and you can't tell me what y'all are gonna do about it?" I say, "I just want people to cut -- don't worry about people cutting through the

> island." In fact, that was the man that told me that we ought to just uproot everybody on the island instead of worrying about coastal erosion.

Albert's retelling illustrates the frustration he experiences with the government agencies, cast as outsiders, who he believes, are supposed to not only help restore the land, but assist community members, as well. Considering the strong identification respondents have with the land, it is no wonder that they assume that land restoration and community assistance go hand in hand. Albert's retelling shows that he believes that community involvement should be a part of coastal restoration; however, his experience is just the opposite, and thus, the meaning he gives to restoration is filled with conflict and distrust.

> Bettie (LC) 56 year old homemaker and local historian: [Interviewer] *What do you think could be done to stop the erosion?* [Respondent] I think if the Corps would just -- the (Army) Corps of Engineers are a bunch of assholes. They are total assholes. They are a bunch of educated asses that don't see what the factor is. It's like you sitting behind your desk and saying, "Well, I think the packaging of bread should be changed." Fifty thousand people have bought bread in that packaging for fifty years, but because you're sitting behind a desk, all of a sudden you decide it should be changed, it could be changed. They don't look at an overall picture. My husband deals with the Corps all the time because he's a machinist, because of the locks they work together a lot.

> Paul (P) 42 year old commercial fisherman: And then when you see the hypocrisy of the state regulators and their policies, you know for three generations, we've been fighting the coastal restoration effort and the political in our life. My uncle's got relatives from 1930s and 40s that he was talking about, "Ya'll better do something because it's going to progress." And I was telling him, "We are the outlaws and they are the experts." When it was (happening), we had been trying to bring this attention to all the devastation. The oil company was going out there and natural processes that were going over there. Because in the lands, it dies; a part of us dies. They don't seem to make that connection inside.

Respondents' definitions of coastal land loss hold a political component. Bettie and Paul's words, indicative of many residents' landscapes, reveal the assault to identity they experience from agencies like the Army Corps of Engineers. Respondents view

these agencies as politically motivated and mobilized. This politicization of land loss works against respondents' sense of well-being. While Bettie uses strong language to convey her experience, Paul thinks that through politicization, community members have been cast as the "outlaws," into criminals on the land. He contextualizes this statement within his strong place ties. At the beginning of the passage, he mentions his family's generations long battle against land loss, and he ends the passage by reiterating his community's strong connection to the land. He pointedly establishes how much this place is a part of who he and his fellow residents are. Establishing this strong bond and then contrasting it with the inability of bureaucrats/outsiders to grasp this, Paul gives significance to the battering of identity he experiences from government agencies.

Many respondents echo a political component of landscapes in which government is a collection of powerful and manipulative colonizing outsiders. In the next pair of passages, St. Bernard residents speak about the Army Corps of Engineers' Caernervon Freshwater Diversion Project which diverts freshwater from the Mississippi River into the marshes of St. Bernard Parish. The project is meant to deposit sediment from the river and build land.

> Phyllis (SB) 47 year old office administrator: I wanted them to explain to me how could people like us benefit by it like they were telling us it was going to do. Everything is a big lie. And people down here, they're not that stupid. You might get a handful of people that say the fresh water [project] was the greatest thing that ever happened. To me I can't see where. . . . They don't care. If you are Indian and they want your land, they go to the reservation. If they want your house, you need to sell it at the price they want to give you. The money's in the bank. The interstate is coming through. That's the way the government does it. Look what happened to the Indians. So what made them think that by saying fishermen -- This was a cultural thing, and they had to help save this because of the cultural purpose. They tried that route. It didn't work.
>
> Tyronne (SB) 40 year old commercial fisherman [Interviewer] *What do you think is going to happen, in your opinion?* [Respondent] I think they just eating up the

> land, washing it away. My opinion, I think it's all about money. They getting so much money to run that thing every year. So they showing whoever they got to show these pictures of the grass and tell them it's building land, and they collecting money for it to run it. And that's what it's all about. They really not helping the land. Somebody is making plenty money off of it. They had people from down here since they put the siphon, brought them guys that's controlling that siphon for a ride in the boat and showed them pictures of canals and how it was so many years ago and how much bigger it is now since the siphon and it still don't do no good. They just showed us this grass and made like it's filling up all kind of land. You jump in it, you go over our head.

The meaning Phyllis and Tyronne give to this major restoration project is deceit. Phyllis, married to a commercial fisherman, appropriates the eradication of Native Americans to convey the extent to which she believes government is imposing its will on their community. Tyronne suggests that marketplace processes and deception propels the bureaucratic business of coastal restoration. Again, the agencies and political processes that are supposed to be on the side of residents symbolize a disaster in and of itself within respondents' landscapes. The next interviewee reiterates the ideas above.

> JJ (T) 40ish marina owner: [Interviewer] *So what do you think is going to happen?* [Respondent] I think the bureaucratic world is going to continue to procrastinate, continue to talk, continue to use it as a platform to get elected. They will continue to use it as propaganda, as gossip. And from there they will continue to study. Because once they solve the problem, the money source may dry up. So they will continue to study, they will continue to procrastinate, they will continue to use scientific data, and money will float. It's the float of all the channels of all these people who are professing to solve it but are not really concerned about it. And money is going to continue to -- Until the money is put down in viable projects, in viable solutions, until the solutions are being solved. No matter how much money, no matter how much talking, no matter how much hoopla you get. It's good pretending, it's good news, it's good to write about. It's making everybody millions of dollars, but it's not taking care of the problem.

JJ attaches meanings of pervasive "propaganda" and bureaucratic profiteering to the political atmosphere of land loss. It was not only common for respondents to frame the government and politics negatively, but it was also common for environmental government agencies to be characterized in the same way, as propaganda machines for

the benefit of politicians and themselves, not citizens. In fact, respondents partnered those agencies with the political realm casting them all as being in cahoots with one another and working against coastal restoration and community preservation.

Although not as prominent as the first three meaning units, respondent's landscapes hold a strong political component that when expressed is profound. Not only does experience with the daily disaster of land loss affect communities' personal relationship with the land and definitions of self, but it is also colored with political overtones. While some are hopeful about the political process, they and most others see discrepancies that lead them to be highly skeptical about a process that may be their only hope for land and community sustainability. This section closes with a short passage that seems to sum up residents' general views of what they see as the political inaction of coastal restoration.

> Morris (T) 26 year old recent college graduate: [Interviewer] *What do you think is going to happen as far as that goes?* [Respondent] I don't know. Some more studies. The rocks (rock jetties) seem to be working well, but nobody wants to put rocks. They want to study it. It's too much politics and too little action.

Change

None of the above meaning units are neutral. Respondents may have different and conflicting meanings within their landscapes on a particular subject, but none hold impartial definitions of coastal land loss. This is not the case within this meaning unit. However, the passages within this unit, *change*, do not represent respondents who hold unbiased definitions of land loss. Nonetheless, when coding the interview data, some passages about coastal land loss had an air of neutrality or ambivalence that stood on its own, making these statements too ambiguous to fall into any other unit. These passages lack specific political or philosophical implications, as well as more emotional overtones.

Although when compared to the other meaning units the passages herein are few, there was enough data coded as *change* that it warrants discussion.

I will begin this last section with an illustration of what constitutes a passage being coded into the *change* meaning unit. Below are two statements by Mitchell and Jackie of Lake Catherine. They were interviewed together and their statements come from a discussion where they remembered land that has eroded.

> Mitchell (LC) 52 year old in shipping industry: Right up there where the little island used to be at the mouth of the Chef Pass. I remember 15 years ago that was an island.
>
> Jackie (LC) 51 year old fireman: You can look at a map of 20 years ago and look at a map now; you are going to see land loss. Not only noticing the outside coastal erosion but also the inside coastal erosion.

Mitchell's statements were coded into the *change* unit and Jackie's as *damaging consequences*. These passages are a good example of ambiguous change because it is not readily clear in which category their statements might fall. They both say the same thing – that is, land has disappeared. It is *how* they say land has vanished that gives different meaning to their statements. Jackie conveys the damage of land loss. He uses the words "loss" and "erosion." These are negative signifiers, especially in the rhetoric of coastal land loss. Jackie also charges the listener to "look at a map" to notice the land loss that has occurred on the "outside" and the "inside," indicating the large scale of the event. Jackie notes that "you are going to see land loss." His intent is for others to see the loss of land. This has negative connotations. Thus, these elements reveal Jackie's intent and qualify his statements as referring to the *damaging consequences* of land loss.

Jackie's statements call for the audience to see the loss for themselves whereas Mitchell's comments are more passive. Although Mitchell is actively remembering the

condition of an area, he is simply recalling what was once there. Mitchell's statement is too unclear to qualify for the *damaging consequences* unit or any other. The mere indication of loss is not enough to yield a primary intention of negativity or damage by the speaker. So, in passages such as these, it appears that the narrator's intention is unclear, ambivalent, and simply that *change* has occurred. These two passages also serve as a nice illustration because their statements occur in the context of a coupled interview. Again, the criteria is intent of the speaker, the meaning they purposely give to experience.

> Roger (D) 47 year old commercial fisherman: It's not that we don't have any good fishing. That's why I tell you I can't say if the erosion is helping or hurting. The environment's changing that much as far as the fishing and the fur and the game.
>
> Tara (LC) 43 year old homemaker: So I think the fish we catch, they come and they go now I think. Crabbing still seems to be good. It turns.

These passages display the ambivalence respondents sometimes express. Since Delcambre has not experienced the extent of coastal land loss that the other communities have, we might think that this could be a reason for Roger's ambivalence. Interestingly, this was not the case. While residents of Delcambre talked about coastal land loss less than the others, Delcambre did not show any more ambivalence than any other community when residents did speak about the issue. Tara, speaking of the effects of land loss on the fishing industry, is equally ambivalent, concluding that "it turns," implying that harvests are cyclical.

> Vivian (GI) 50 year old educator: [Interviewer] *Well, I have this question I always like to ask --what are your hopes and dreams for this community, in light of the fact that you don't think its going to be here?* [Respondent] Yeah. [laughing] It's not gonna be here. That's, that's how nature is. I mean, you know, volcanoes come and go and they destroy places. Well, we're an island. We're a barrier island, and we're just not gonna be here too much longer. . . . Well, there's nothing they can do. I mean, nature's nature and it's the strongest thing there is. There's nothing you can do. We've tried the rock jetties. That saved our sand, which is good, um, but up to a point. Now, it's started to erode.

Vivian provides a different sort of ambivalence on land loss. She thinks that change due to natural processes is inevitable. This component of her landscape consists of a sense of loss of place, but that change is largely natural, and humans are ill equipped to impose drastic change.

Next, Josh puts change from land loss in a human perspective.

> Josh (P) 44 year old in retail sales: As a human being, you don't notice gradual changes. You don't notice your hair getting longer and longer until one day you wake up and go, "I need to get a hair cut." Well, coastal erosion is the same thing. You don't really notice the small things until 20 years pass.

Josh illustrates the imperceptible subtlety of land loss. While his passage may have negative undertones about the disaster, the primary intention is as common as noticing that one needs a "hair cut."

> Thomas (P) 63 year old restaurant owner: [Interviewer] *What about personally, does it [land loss] affect you?* [Respondent] Well yeah. You hate to see nature change that much, I guess everything changes enough it stays the same.

Thomas' statement succinctly surmises the *change* meaning unit. He reveals a component of his landscape that acknowledges some objectivity. Thomas realizes that because he is a human attached to place, he 'hates' to see so much change. Although the end of his statement is somewhat unclear, his intention is not. He does not like change, but he thinks that change is a natural and necessary component of life.

Although the *change* unit has many fewer statements than the others, it is necessary to discuss. While no respondents who mentioned land loss had no opinion on the matter, there were passages or statements within their discussions on the issue where they gave wavering, unclear meaning to their experiences. Perhaps, these sometimes

wavering intentions are an understandable reaction to a disaster that residents live with on a daily basis.

Conclusion

Seven meaning units evolved out of interviewees' discussion of coastal land loss. In a general way, these units encompass the intended meaning that respondents give to their experience of land loss. The meanings reflect respondents' self-definitions. Sometimes intimately, sometimes detached, but meanings are always attributed to land loss through the self as it relates to place. The meanings respondents hold are their landscapes (Greider and Garkovich 1994).

Land loss here is analyzed as a personal issue that affects respondents' sense of who they are, their identity. In addition to the effect on identity, and perhaps, in part, because of it, land loss takes on many layers of meaning. Consequently, sometimes interviewees are unclear or waver in their thoughts. In other words, the event is not just environmental change occurring where they live. In addition to the personal elements that the land loss acquires, the phenomena takes on a political affect as residents directly or indirectly experience a diverse array of governmental organizations that, for the most part, leave them frustrated and resentful. Land loss is further politicized as they view governmental agencies using the event to build and employ political capital.

Respondents, feeling an intimate tie to and knowledge of place, construe experiences with government and expert ways of restoration as disrespectful and condescending. When resorting to their own methods of preservation and restoration, they meet with opposition from an array of seemingly contradictory organizations. Individual and community approaches serve to regain some sense of control, hence,

reifying connections between the land, home, and identity. However, land preservation and self-restoration is undermined by the wall of coastal restoration bureaucracy. This only serves to increase the conflict between communities and the agencies charged with implementing restoration projects.

Conflict with the governmental element of coastal land loss is viewed as a kind of social damage that aggravates the ecological and personal damage of the phenomena. Most residents hold a generations long connection to the region. Their identities are bound to it. Even non-natives express a strong connection and identification with place. Respondents express a post-disaster acknowledgment of their place attachment, a heightened awareness of their connection to the land and the region (Brown and Perkins 1992). However, due to the incessant, ongoing nature of this event, interviewees express this heightened awareness of attachment in the midst of coastal land loss. In fact, looking at the words of respondents, it is their intention to communicate such a strong and nearly inseparable attachment.

From such a strong attachment and identification with place, damage to their environment becomes injury to the self. Harm to a healthy and nurturing ecosystem is harm to the self and therefore to the components that make up identity. Decimation of their environment, realized by such things as dead and dying trees, come to symbolize the dire threat to identity. The peril identity faces causes the phenomena to be experienced through anxiousness, desperation and vulnerability. The potential of coastal land loss signifies the possible death of an integral component of identity.

A disappearing healthy environment along with an antagonistic political restorative processes, and suspicious business practices conspire to yield meanings of

great uncertainty about the future of this place to which respondents are deeply connected. However, it is not only uncertainty about place, but the sense of who they are that is bound up with place and thrown into question. As their landscapes take in new meanings in accordance to the fluid and changing nature of the event, respondents' self-definitions undergo constant renegotiation. Although, to some extent all of our self-definitions are fluid and changing in relation to changes in our landscapes, the renegotiation of respondents' self-definitions takes place negatively within the context of a continuous disaster that threatens place and identity with a slow extinction from seemingly irreversible land loss or immediate extinction from a powerful storm.

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Chapter 6 - The Essential Experience of Coastal Land Loss

Simply put, experiencing coastal land loss causes residents to express a sense of fragility. Respondents attach meanings of vulnerability to the phenomena and absent *change*, all of the meaning units communicate a sense of fragility about place and identity. Consequently, outsiders and the process of restoring place are also experienced anxiously.

In this chapter, short statements are presented that solidify the meaning respondents give to experiencing coastal land loss. Suffice it to say, the concise accounts presented here exemplify the meaning units presented in the previous chapter.

Loss, Place Attachment, and the Fragility of Identity

Residents speak of their strong attachment to place. They contextualize much of this attachment within their discussions of land loss.

> Neil (P): [Interviewer] *What did you used to do for fun when you were a kid?* [Respondent] I guess play ball. It was nice and dry on the bayou before they had water coming on the bayou. We played marbles. That's all we did.

> Sylvan (GI): [Interviewer] *You mentioned coastal erosion. When did you first learn about coastal erosion?* [Respondent] My father was extraordinarily in-tuned to it and (goes on to tell how his father taught him about land loss). …The last time in Isle Deniere various parts of it, were completely altered and washing away.

> Vivian (GI): [Interviewer] *But you're not goin until it's (island) gone?* [Respondent] Well, sure! I'm the history of the island. I have to be here.

> Liane (T): When I catch fish that I know is supposed to be offshore, because I grew up fishing offshore, that's an offshore fish. [It's] not [supposed] to have that inside. And that's more salt coming in. It bothers me to see that. . . . I cry when I see land gone.

> Lila (T): It's still a special place for me. When I saw that map and saw that it was no longer going to be here, that saddened me and that brought it home to me. The erosion problems are bigger than what I ever gave it before.

Two themes are presented in the statements above: attachment and fragility. Attachment is illustrated through community agency, insider knowledge, special reference to place, fond memories, and familial/land ties. Residents communicate fragility by connecting childhood memories and familial connections to land that no longer exists, having insider knowledge challenged by incongruent events, connecting historical identity to eventual displacement, and sudden awareness of "the problem."

Respondents see the loss of land. This loss symbolizes a slow eradication of a way of life that they view as dependent on place. It is not only their physical proximity, but respondents' cognitive closeness with place that gives them a sense of bearing eyewitness to a process that others only know in an abstract fashion.

> Randy (LC): So it's a never ending battle with the ground sinking. It's one of the things living here; you live with it.
>
> Alfonse (GI): I see it then and I see it now. It's -- the more they do (actions of agencies to alleviate problem), the more it eats away. . . . Our people used to tie their boats back there to go shrimping, and that's all gone.
>
> Alicia (LC): We just keep losing it [land].
>
> Polly (P): [Interviewer] *How did you first learn about land loss, erosion?* [Respondent] You can see it.
>
> Cheyenne (SB): [Interviewer] *How did you first come to know about erosion?* [Respondent] We see it.
>
> Lester (SB): The only difference with us, we see it with our eyes.
>
> Phyllis (SB): Down here, we are more aware of the surroundings. Where up there [in the more urban area of the parish] they are tunnel vision mall-runners and fast food people, unprepared.
>
> Christian (SB): [Interviewer] *At what age did you get involved, where you found yourself on a boat?* [Respondent] I was bred into it. I was on a boat in diapers. So therefore, I saw it [land loss]. . . . I see it every year that I have gone out. I can see a difference. There's some places that shallowed up a lot. There's some

places got deeper because you have more current coming through there. And that's a lot of erosion going on.

Kyle (T): [Interviewer] *How did you first learn about erosion and land loss?* [Respondent] Just being out, I've always been in the areas.

Chuck (T): [Interviewer] *How did you first learn about land loss, erosion?* [Respondent] By going out on the water. Every time you go out, it's totally different.

AJ (T): [Interviewer] *How did you first start to learn about the erosion and the land loss?* [Respondent] I've been thinking about it a long time. We [community and family] talked about it.

Edmund (T): [Interviewer] *What places are important to you and how are they important to you?* [Respondent] This is my home. The whole thing is important. There's nothing that's not important. Because everything relates to the other. If one goes, so does the other.

Joseline (T): [Interviewer] It's obvious to us having lived here so long that the erosion of the land and the barrier islands is allowing the water to maybe move faster and come higher [when storms arise]. And it's very unnerving; this is our home.

Jeppa (P): [Interviewer] *How did you first learn about the land eroding?* [Respondent] After being out there every day, you can notice things; like if something is missing in your house.

Residents attach the same intimacy to the disaster of land loss that they affix to place through familial, community and occupational ties. To experience land loss as they do is to "see it" firsthand, on a daily basis. They *know* this disaster intimately. This unwelcome way of knowing affects their sense of well-being and threatens the idea of home, a place imbued with meanings of safety and refuge.

The symbolism of a threatened home has very real potential. The danger is realized through the slow eradication of the land that supports the communities as well as

from its quick erasure from storms.[38] Residents were keenly aware of the threat land loss posed to place, home, and the ability to pass on identity to future generations.

> Cheyenne (SB): When you build a house, you expect your house to last 50 years. You are going to pass your house down to your kids. But if they don't do something about the erosion, this will not be here in 50 years.
>
> Rocky (P): I would definitely love it to have it for my grandkids. It's not because it's 200 years old that it's no more good; it's still a lot of life. I would never trade it for nothing in the world.
>
> Dorothy (SB): I'm not so much interested in money but to preserve that marshland that when he [grandson] gets to be a young man, that he can walk out to the marsh and see the sunset and see the animals that live in that habitat and to respect it.
>
> Soren (T): I really hope that, I want my son to have some place to come back to when he's older and say, "This is where I grew up."
>
> Tara (T): It's hard to see that everything is washing away. Something needs to be done. Not just for the ones that go out there and enjoy spending time out at the camp on the open water- for our kids.
>
> Adam (T): It used to be a sportsman's paradise. Right now it's a horrifying nightmare. If I had to leave, I wouldn't know where to go because there's no other place I would want to live besides down here.

To experience coastal land loss means to coexist with a disaster that may undermine identity through the severing of generational lines. Thus, respondents call for a halt to the loss of land. This call for action, as of yet unanswered, leaves them cautiously optimistic, bewildered, saddened, sorrowful and with a profound sense of loss, or in a word, fragile.

> Kyle (T): You have settling. That's reality. We are sinking. And also you have the increasing water level. So we are in a situation where it's going to be an ongoing process to preserve what's here.
>
> Liane (T): It's the whole entire coastline of this area. . . . And how our state government can sit there and our senators, Congress can just watch it go. I just

[38] The potential threat where the loss of land increases damage from storms was realized for many as St. Bernard, Plaquemines, and Lake Catherine suffered from Hurricane Katrina.

> don't understand it. Because it really hurts me. It touches me deeply when I see the land going that way.
>
> Paul (P): Because if the lands, it dies, a part of us dies.
>
> Adam (T): So I guess when this is going to fade away, I'll fade away with it.
>
> Carmen (T): [Interviewer] *What is something that you have learned in your life that has stayed with you?* [Respondent] Never take for granted that the land that you are on will always be there. Never take it for granted. It disappears in an instant.
>
> Morris (T): [Interviewer] *What would you say is good about it [community] and what needs to be changed?* [Respondent] The only work that needs to be done is our coastline protected. That's what sustains everything down here. If the coastline goes, then everything else is in bad shape.

Respondents conflate themselves and place. The line between themselves and the land, if they see one, is blurry and elusive at best. Experiencing land loss means being faced with the death of a significant part of identity. The rhetorical call for action is ongoing and because of the threat to identity that land loss poses this call reflects the fragile nature of identity. And while many times explicit, the call is also metaphorically implicit through such images as death and disappearance.

While the interview guide aims to elicit a narrative about place, it is when discussing land loss that their narrative ceases to be just a story about where they live. Their attachment to place becomes heightened, and they express a sense of anxiety where the importance of place and its significance to identity is communicated.

Perhaps, being asked to construct a narrative about place forces acknowledgment of the depth of possible loss, thus, causing respondents to broach the subject of land loss and to speak about it in such dire terms. In other words, through residents' own comments, we know that they are, more or less, always aware of land loss. Being asked to compose a narrative of place may cause residents to talk about land loss because of the

very threat it poses to that narrative. Residents' landscapes consist of a personal narrative that is framed by the natural and physical elements of place. Land loss threatens the very existence of that narrative and forces a renegotiation of self-definitions and meanings within landscapes where the loss of land is incorporated not just as another element to landscapes, but one that invades every element of their landscapes. This invasion renders identity fragile. As a result, to experience land loss means the possible loss of identity – past generations, future generations, and the general sense of who one is. This causes a heightened sense of anxiety expressed in calls for salvation both from within and without, explicit and implicit.

Damaged Place, Damaged Self

The anxiety and threat to identity residents express stems from the damage that they experience as a result of coastal land loss. Respondents "see" the damage to place and this makes them vulnerable. The threat from storms duly represents this susceptibility.

> Josh (P): [Interviewer] *Can you talk a little bit more about that issue?* [Respondent] It's number one on my list is coastal erosion. Because without any significant changes, this area won't exist. There'll be another hurricane that will come and strike, and it will totally devastate this area and devastate our marsh lands.
>
> Allie (GI): Because when a storm gets in that Gulf, we see some terrible waves. You can just see it eating away. I mean, the levee breaks right in front of your eyes.
>
> Jenny (GI): Because when Grand Isle is gone, New Orleans will be gone, Thibodaux will be gone. And there's an awful lot of us that will lose a lot of heritage.
>
> Sylvan (GI): It's all disappearing, saltwater intrusion. Cypress swamps, cypress areas just dying from saltwater. If you look at the Everglades, this produces so much more and provides, also, hurricane protection for the city.

Lynda (GI): And New Orleans has to watch out. Cause if we are gone, what's going to happen to New Orleans? They are going to be in deep trouble.

Rocky (P): There's nothing out there to stop the water [from storms]. We've got no more land out there. It looks like a tidal wave. To be honest with you, that's why we get hurt.

Art (P): You're looking at just a big ocean out behind the back levee. If all the marsh grass disappears underneath it, it's frightening. The water is right there at the door. So coastal land loss has been a major factor in hurricane vulnerability.

Theresa (SB): And so that's just something else that's in the back of my mind because when a hurricane comes, we don't have that buffer anymore.

Christian (SB): Then with all these hurricanes and your saltwater intrusion, it's just killing your vegetation for your marsh. . . . That's a shotgun looking at New Orleans.

Lester (SB): It (hurricane) rolled the marsh up like carpet. That's the best way I can explain it. It was one of the most devastating things I'd seen in my lifetime.

Walter (T): The rate that the water came up for this tropical storm (Tropical Storm Bill, June 2003) was faster than anybody in this area can recall. And that in itself is telling you that there's no barriers out there to slow it down, which they had before. It's just going to come up quicker and quicker.

Roberto (SB): [speaking about storms] And the problem we have now is that we don't have the land we had. . . . You realize how vulnerable we are.

To experience coastal land loss is to know one is increasingly vulnerable to unpredictable tropical storms and hurricanes. Water overtaking land symbolizes the onward march of this threat. Land turning to water signifies the loss of protection forcing a sense of weakness. Also, storms represent the possible immediate extinction of place. Thus, respondents caution unknowing others to heed their warning, again making an implicit call for action.[39] Residents' ties to place gives them a localized expert knowledge

[39] In light of Hurricanes Katrina and Rita respondents' cautionary words seem uncanny, but it shouldn't considering their intimacy with this ongoing disaster.

that is further evidenced by their predictions. In addition, their knowledge is informed by a sense of invasiveness that they get from the loss of place.

> Jackie (LC): It's washing it away. Like Mike says, even probably the pilings under the water that's going down into the ground from the bridge, it's got to be eaten away. Eventually erosion even gets to that.
>
> Leroy (P): [Interviewer] *What do you think is going to happen in the long run?* [Respondent] Well in the long run, it's going to keep on eroding. It's no doubt about it. Because if you don't do anything, it's automatically going to do the same thing. Maybe another twenty years if they don't try to do anything around here, Plaquemines Parish will probably be gone.
>
> Carmen (T): And you see these little two to three foot wide cuts you pass in now. That's all gone. There's nothing left. It's just water.
>
> Sven (D): It's gone now. You wouldn't know it unless somebody took a picture. So my older buddies sit there and tell me places where they used to go fishing you can't go no more because it's gone. You are not going to know until it's too late.
>
> Christopher (LC): The fishing is not as good in some spots ‘cause there's no place for them to get up in there and lay their eggs.
>
> Lester (SB): [Interviewer] *What do you think the impact is, will be to lose the habitat?* [Respondent] It will be devastating for the state because we were one of the number one seafood industries in the world. But in the future it will be, I'm just imagining, all open water. No more small areas for hatcheries.
>
> Kyle (T): This is where seafood life begins. Where all the shrimp are developing. And if we let it continue to erode away, eventually there won't be any place for the shrimp to lay their eggs and start their cycle. So it's crucial.
>
> Adam (T): As far as land gone, there's nothing left.
>
> Tara (LC): It (habitat) has, it's decreased. This lake used to be so alive.

Meanings of vacancy and foreboding are attached to the disaster. Respondents experience the loss of land as producing nothingness. Death is also an often used metaphor. It is not only land that fades into nothingness but life itself as the fisheries that have been the lifeblood of the region for generations also drift into this void. And the slow, incessant nature of the event causes respondents to project ramifications into the

future.[40] About the present, residents talk about habitat loss as a concrete way of representing the damage of coastal land loss. Trees, because of the social meanings we attach to them (Somner 2003; Ghebard et al. 2003), are specifically employed as a frequent signifier of loss and fragility.

> Theodore (T): The trees were all gone in just that short span of life. So land loss, you realize when you go out to fish, that it's no longer there.
>
> Roger (D): No, there's no trees hardly left on them (fingers of land). Once upon a time that was a tree line over the whole thing. It was all live oak trees.
>
> Becky (LC): But they had big old oak trees that hung over. And there is nothing, no sign of anything out there now.
>
> Charlie (LC): We used to have all these trees in the water. Now if you look over there, there's no more trees. They are just about gone.
>
> Bear (SB): All the oak trees were dying. There was no three corner grass. Because I can remember going out years before with my grandfather and seeing strands of oak trees, three corner grass, all those things that you would find in a freshwater marsh habitat. And it was very disturbing to me in the middle (19)80s to see that vanished.
>
> Kyle (T): All of a sudden, those huge trees are falling over. Everything was dying. And now there are no trees there.
>
> Cedric (T): You see nice oak trees that's dead. Saltwater is killing them. There's nothing to stop or restrict the saltwater from coming in.
>
> Hank (SB): All there is is dead cypress trees. They stand tall like tombstones in a graveyard.

Experiencing coastal land loss means watching the disappearance of a once healthy and vibrant ecosystem. Trees serve as a measurement of the disaster. As trees die, residents know their environment is dying. If healthy environments contribute to our own

[40] Residents' projections is an indicator of a sense of present fragility that was almost certainly enhanced by Katrina and Rita. Indeed, Leroy's comments nearly came to fruition. He said, "Maybe (place is going to be gone in) another twenty years if they don't try to do anything around here, Plaquemines Parish will probably be gone." But while much of lower Plaquemines was wiped out by Katrina, some areas are currently showing signs of rebuilding. Even so, much of the damage, especially to the land, is irreversible under current circumstances.

sense of well-being and can psychologically assist in restorative processes (Somner 2003), then the decimation of once healthy ecosystems may contribute to a sense of self that feels ill. This may be especially true of environments that people are attached to. Thus, if residents' identities are damaged and fragile, then it is not surprising that they make implicit and explicit calls for aid.

> Adam (T): If something is not done to protect the land, the industries are all dying in this area.
>
> Tina (T): We need to start looking at our wetlands. If something is not done, there is not going to be anything left.
>
> JJ (T): So it's getting to the point to where there's not much time left for this community to continue to be a viable community, fifty years maybe. What is fifty years when you look back.

Respondents' calls for assistance express the anxiety they experience as a result of their damaged environment and identity. Experiencing coastal land loss produces a sense of anxiety about a place that one 'sees' slowly dying. This anxiety is heightened due to the degree of attachment and the more immediate threat from storms. Because they "see" damage occurring to a place that frames and symbolizes who they are, this damage is not only external, but is internalized.

Restoration is Personal

Residents personalize the disaster of coastal land loss. Accordingly, the processes of restoration are also personal. Because of their attachment to place respondents believe themselves to be the primary stakeholders in whatever restoration might be undertaken. The insider status they hold with place, as opposed to the outsider status of those officially charged with alleviating the loss, propagates a sense of urgency about restoration.

> Sylvan (GI): If we don't do something, in big federal dollars, we're going to have a crisis. . . . There are plans that you can have like Davis Pond (River Diversion Project). There's ways to utilize the Mississippi [River] to where the nutrients go back in -- the jetties, the bulkheading -- a lot of things can be done.
>
> Lynda (GI): I wish we could get something to stop the erosion, so we could save Grand Isle. It's a wonderful place, and if we don't stop the erosion, there won't be any more Grand Isle.
>
> Kyle (T): [Interviewer] *Do you think anything will be done?* [Respondent] I believe something will be done. Now there's a lot of projects. Now the big topic, every time you pick up the paper, the politicians are talking about doing something about it. And there's a lot on the national level now.
>
> Christopher (LC): [Interviewer] *Do you think they (government and agencies) are serious? Do you think it's a good effort?* [Respondent] I think it's a good effort. They are making some improvements. They look like they are going in the right direction with it.
>
> JJ (T): We gave the Everglades $8 billion. If they would loan Louisiana $8 billion, just loan it to us, let's put it in a trust, and let's manage the trust, take out enough to manage the trust, and give Louisiana the interest generated from that trust to take care of it's coastline.

To experience coastal land loss is to experience the restoration process. The degree of attachment to place is likely to produce some hope about the potential of restoration. The slow, continual nature of the disaster combined with the ominous threat from storms is also likely to cause the experience to take on an air of urgency, a natural expression of fragility. Perhaps this takes on added weight as many respondents think they are exiled from the process. They believe little restoration is actually occurring, some of which they suppose is adding to the deterioration of the ecosystem.

> Cheyenne (SB): [Interviewer] *What do you think about the proposed way they say they are going to help to fix the problem?* [Respondent] I keep hearing that they are going to do it. I've been looking in the paper at the Breaux Act, so many billions of dollars, you know that's already appropriated for this project. But I don't ever see anything happening.
>
> Tara (LC): They just going to let it go and go and go until it's too late again to do anything. And it may be now, I don't know.

Saro (SB): Well the thing is that the fishing industry in St. Bernard Parish has developed around a deteriorating wetland. Now we come here and we say, “Well, we are going to stop the deterioration.” And they don't like that.

Lester (SB): My opinion of the [Canaervon] fresh water diversion was the biggest waste of money the government could have ever done. Because I see where it's building no land like they said it was going to do, plus it killed our inside hatchery because shrimp cannot live in freshwater.

Rocky (P): [Interviewer] *You think the scientists and the biologists today, they talk to the people like yourself?* [Respondent] Yes. They have meetings. They come meet all the time down here, but they don't listen.

Tina (T): [Interviewer] *Do you think anything will be done about it?* [Respondent] Well people sure talk a lot about what needs to be done, but it doesn't look like anybody is doing anything. People are trying to get petitions to try to get the things done because they feel like they [government and related agencies] are not hearing it.

Rachelle (T): [Interviewer] *You think anything can be done about it?* [Respondent] Probably. If they would start doing something with their surveys instead of doing another survey.

Adam (T): We all try to voice our opinions on things that can be done to help save it. We can voice our opinion but nothing gets done about it. They do what they want.

Paul (P): I don't like the attitudes and the philosophy of the institution of coastal restoration at all. . . . It's a constant battle. And then to be used to drum up their support, to be federally funded to support their little network. And also this little network is turning into this big conglomerate. Now they’re stepping on us.

Jeppa (P): They need to get with the people who work out there and live out there to really get a feeling on what's really happening. As far as the freshwater diversion, I think that's a waste of money. I don't know how many millions and billions of dollars we've spent.

Lester (SB): Nobody ever went out to the person that does this on a daily basis and said, “What do you think when the wind blows this way? What's the best way to go?” Nobody did that.

Restoration is part of residents’ landscapes. The restoration process, in large part, symbolizes inaction, disrespect, conflict, condescension, alienation and distrust of

government and its related agencies. Experiencing this disaster means seeing little done to solve the problem, while being disregarded, undervalued, pushed aside, and taken advantage of. Perceiving these elements from outsiders produces a robust distrust and skepticism among residents who are already fragile due to their significant intimacy with place. Thus, when agencies and residents come into contact, conflict is likely to arise. Conflict occurs as agencies propose restoration projects and increases as residents attempt to implement their own mitigation measures. Nonetheless, residents believe in their own agency.

> Jeffrey (LC): Right now, if we wouldn't have bulkheaded in the front of the place that we have, that 90 feet of land that was in the front of us is gone. If we wouldn't have built a bulkhead, the camp would be over water.
>
> Jackie (LC): If it wasn't for the people out here who does fill in and put mud in and put 'wash out,' if they wouldn't do that to the land out here, this island wouldn't be here any more.
>
> Linda (LC)[41]: We filled in the back of ours and started recapturing some of the land. But you can just sit and watch it go away. Every year it goes away. People need to put bulkheads up.

Based on the attachment of residents to place, the alienation from and perceived inaction of the restoration process, as well as, generations of community land loss mitigation, it seems reasonable that residents would take matters into their own hands.[42] Community members were aware of land loss long before any official restoration process, and they took action such as they could. The bureaucracy of preservation and restoration as well as the current scale of the disaster renders individual efforts almost

[41] Linda coded as not bringing up land loss because she was directly asked about issue at end of interview by interviewer.

[42] Many of the passages on individual and community agency came from Lake Catherine. The geography of the community lent itself to individual mitigation more than most other communities. However, while residents of Lake Catherine spoke of their own efforts, it was narrow in the sense that their efforts were only on their property and didn't take into account the land loss occurring just yards away from their homes. In this way, their accounts represent a sort of closing of the ranks from the larger disaster that encircles them.

meaningless, adding to their sense of fragility. Nevertheless, many engage where they can, on their property. These efforts provide short-term preservation, but there remains an awareness of the enormity of the disaster.

> Tina (T): But you feel like you are fighting a losing battle. We bring cement out there, oyster shells by the baskets. It seems like you are not winning.
>
> Vivian (GI): Well, there's nothing they can do. I mean, nature's nature, and its the strongest thing there is. There's nothing you can do.
>
> Sven (D): The gates are already opened. The horses are already out. Now you are trying to get the horse back in.

Living with coastal land loss means, at times, experiencing defeat and more often, alienation. Respondents face challenges on two fronts – from the disaster itself and from the restoration process. Dealing with defeat appears to wax and wane, but it does seem to contribute to residents' sense of fragility, urgency, and desperation for alleviating a disaster they witness on a daily basis, and that threatens not only place but the sense of who they are.

Production, Development, and the Demise of Identity

Faced with the dual challenges of land loss, residents are also confronted with the realization that much of this disaster has been caused by human actions on the ecosystem. Human actions are, at least in theory, readily controllable, and they provide an identifiable culprit. Combine this with respondents' anxiety and alienation from restorative processes and the degree of negative meanings toward human's role in land loss seems understandable.

> Sylvan (GI): [on father discussing land loss with him as a child] . . . One, not necessarily in order of importance. . . . Oil field canals allowed saltwater intrusion into the freshwater marsh especially and into some saltwater areas. Two, the Mississippi River being, not giving, not providing nutrients to the marsh.

Three, weather -- just the jilt to the marsh. Those were the primary things that we would talk about.

Roger (D): But the older people claim that the oil companies came in here, even before the canals were dug. When they first started there was so much oil spillage. They claim that's why it's eroding now.

Susan (GI): But my perception has always been that the Mississippi [River] has been managed to benefit the people of New Orleans and the oil companies. They cut canals through marsh without any concern about what kind of impact it's going to have. . . . It used to be an actual living system. And it's very, very short sighted.

Christopher (LC): They've got all these pipelines canals through the marsh. All that did was cut it up.

William (LC): The oil company canal, they let all the salt in there and killed the vegetation. And then it just ate away.

Duke (SB): You've got a whole lot less wetlands because of saltwater intrusion due to horrific federal projects like the Mississippi River Gulf Outlet. You've got the Houma Navigational Canal in Terrebonne. You got all the pipelines dug by the oil companies. So you got land naturally subsiding. You got saltwater coming in. The saltwater kills a lot of the vegetation.

Lysha (D): I mean we make these canals do things that we mess up. It's man who has done it. And it's destroying the land. We have progressed so much that we think we can do anything. But Mother Nature is going to turn around and show us we can't.

Christian (SB): [on Mississippi River Gulf Outlet] Here you have a man-made monster that they dug this channel in 1962, I think it was.

Diane (SB): [on Mississippi River Gulf Outlet] Because it's taken so much of the land away with the erosion. And this is rich property, I mean rich land. The soil is rich around here. This used to be Satsuma orchids and pecan orchids. We had three Satsuma trees for five years and couldn't get them to grow.

Hank (SB): [on Mississippi River Gulf Outlet] If you want to talk about environmental terrorism, that's it. You are talking about degradation, death of a community.

Theresa (SB): I know there's a whole new area down there, Fort Beauregard or something they are developing. There's going to be swimming pools and tennis courts and all this cement that's taking the place of what used to be wetland area.

> Becky (LC): [Someone they know] had seen plans where they were going to build these condos or apartments or something. If he [developer] goes in there and starts bringing in dirt and filling us and killing that marsh, he's planned canals in there. The whole marsh is coming out.
>
> Phyllis (SB): Man has made this water go where it goes and do what it does. Some problems that maybe should have been addressed fifty years ago before this even started weren't.
>
> Lester (SB): Between the saltwater erosion and the fresh water diversion, what was once a sportsman's paradise is dead. That's my opinion of it.

Respondents' landscapes consist of human hands scarring their environment. Those degrading hands are, for the most part, those of powerful outsiders who took advantage of the land and its resources, producing its present fragile state. Oil companies and projects such as the Mississippi River Gulf Outlet are demonized and viewed as rendering a once vibrant ecosystem infertile. Even projects meant to restore coastal conditions are considered to have contributed to the demise of place. Experiencing land loss means communities benefited little, were taken advantage of, and decimated for profit by powerful outsiders. And the metaphor of death is again employed to convey the effect this has had on place and identity. What is bewildering to some is that the land faces a new human threat in the form of increasing development. However, there are those that acknowledge their own community's complicity in the degradation of place.

> Jenny (GI): When we were growing as a state with the oil industry, you know, and people just didn't realize then the damage that was going to be seen further down the road.
>
> Theodore (T): So, we are a product of our own demise so to speak. We didn't see harm in it at the time. But now these many years later, hindsight shows we may have damaged the land where it is irreversible.

Realizing that at the time there was little if any opposition to oil development or housing development is humbling to those who acknowledge it. The exception is the

Mississippi River Gulf Outlet which did face strong opposition from its inception, hence, possibly accounting for its admonishment by residents. Yet, many don't acknowledge the role of community. Most believe they weren't aware of the damage being caused, and this may be part and parcel to the anxiety and fragility many exhibit causing the projection of blame.

Experiencing this phenomena means placing blame for the continuing disaster at the feet of government, oil and gas corporations, and other outside business practices. The harm inflicted on their environment and, hence, simultaneously to identity is exacerbated by an alienating and largely inactive restoration process. Just as a healthy ecosystem and trees are viewed as having restorative properties for ill humans (Somner 2003), increasing ecosystem illness and death in the midst of supposed restoration is likely to have further negative psychological implications for those attached to that ecosystem. Thus, residents demonize the human actors who have caused much of their environment's deterioration whether they, the residents, were aware of the consequences or not.

Uncertain Place, Uncertain Self

'Big' business and government provide a tangible culprit for those who experience fragility about identity and place. This fragility generates uncertainty about the future and sometimes the present. Respondents' degree of attachment combined with the threat from slow, incessant land loss that also carries the risk of immediate annihilation from a powerful storm, produce uncertainty about place and its related identity. Part of many residents' attachment is their intimate knowledge of the land, and

as this disaster of land loss “eats” away at the land, that knowledge is thrown into question.

> Sven (D): [on encroaching water due to subsidence and erosion] But on a high tide, you don't know.
>
> Roger (D): I've been to places I went shrimping every day as a kid a few years back. Nothing looked the same. It's completely different. . . . I don't see any solution to make it stop. Do ya'll have any idea how to stop it?
>
> Tina (T): It seems like everything is opening. And even like going out there with my grandfather and him getting turned around and he didn't know. He grew up there as a child in his late 70s. And when he got turned around, that's what scared me. . . . But we need some help from somebody. I don't know where you would even start.
>
> William and Becky (LC): [William] I had a problem finding my way through there. There was no bayous. [Becky] There's no markers anymore.
>
> Jackie (LC): I went down to Point a la Hache fishing, and it was like I was in a whole totally different -- Like I had never been down there before. . . . I don't know what the answer is because I'm not an engineer and I don't know.
>
> Art (P): We would return back to a fishing spot that you once went to or a point of land, and sometimes you'd lose your bearings.
>
> Tyronne (SB): They've got places that if I ain't been there in a few years, I don't even recognize no more. It ate up so much.
>
> Rachelle (T): But it's eaten away so much, I did not know where the reef was. It's changed. It has totally changed. It's sinking. It's washing away.
>
> Robert (GI): But yeah, I think it’s a good thing [restoration projects]. Overall, I don't know in a hundred years from now if we'll still be here, but hell, in a hundred years from now, a lot of southeast Louisiana's not going to be here.
>
> Alicia (LC): And somebody must know something because the federal government is trying to spend money to recapture land. Well, this must tell you they know something is going on because they are willing to put up millions to recapture it. . . . And if we let these developers, because they see dollars signs, ruin this, it's terrible.
>
> Charlie (LC): It erodes faster than what you think.

> Ryan (SB): A lot of land gone. Just eroding away. I don't know. It changes a lot of stuff. I don't know. A lot of land gone.
>
> Christian (SB): So I don't know what's going to happen [future of place].
>
> Maria(T): I don't know. The tides, the water, erosion. I don't know.
>
> Chuck (T): [on restoration and preservation] I hope to see it. I don't know if it will ever take place.
>
> AJ (T): The islands just disappeared. What's going to happen in a few years?
>
> Liane (T): I don't know what to do about it. I don't know what anybody can do about it right now. I don't even know if it can be saved. To me this is an emergency. Just like a patient, the land is an emergency to people. That's their livelihood.
>
> Claude (T): This is going to be the Gulf of Mexico sooner or later, I guess. I don't want to see it happen. But I have a bad feeling that's what is going to happen.

The common cry of "I don't know" signifies the uncertainty that this phenomena renders. Other accounts also illustrate the 'not knowing' and unfamiliarity of what residents used to know. This symbolic erosion of knowledge is a disturbing experience for respondents. Experiencing coastal land loss means literally watching the slow deterioration and weakening of place and, consequently, making the region more vulnerable to storms. Residents' landscapes also change with this corrosion and decline causing prior knowledge and knowledge passed down generationally to become irrelevant. These symbiotic elements produce the rise of uncertainty as an essential element of experiencing coastal land loss.

> Carrie (GI): I really don't know what can be done. . . . It's a scary situation. A lot of those people, that's their camp, but this is our home.
>
> Susan (GI): The feeling that everything is washing away and there's nothing to look forward to. There's no future. . . . There seems to be a sense of sinking into the ocean personally.

While these two quotes get right to the uncertainty and demise of identity, the others also express the doubt that the self experiences. It is here that residents communicate the fragility of identity through doubt about the future. Strong attachment to a place and watching it slowly "wash away," even though it could be prevented, and an inactive and alienating restorative process all combine to produce uncertainty about identity and place. Respondents define themselves in relation to place through generations of familial and community connections and even recent residents seem to quickly take on this affect. Their landscapes consist of a place that they view through a lens which encompasses a deep sense of who they are. As place changes and disappears and combines with the elements mentioned above, then identity undergoes renegotiation. Identity is redefined negatively as loss is incorporated. This renegotiation of identity is ongoing as respondents believe they are losing a sense of who they are. In this way, it appears that the refrain of "I don't know" is actually an expression of how they think about themselves.

The Political is the Personal

As identity is thrown into question and residents perceive that little is being done to alleviate the loss, respondents contemplate the causes for this continued neglect. They have witnessed land loss for the past couple of generations, and they have seen its stark increase over the past 20-30 years. In light of the massive deterioration, they believe the only reason for continued inaction must be lack of political will.

> Sylvan (GI): I think one reason (for belated attention to the issue) is Louisiana didn't have the right kind of leadership in the governor's office. Louisiana didn't have enough population; we just weren't environmentally in tuned. Like I say, if this had been California or somewhere in the West, we would have gotten much quicker attention.

> Theodore (T): And I think Washington, with our legislators we have in Baton Rouge now, have finally, I ain't going to say struck a nerve, but at least they pricked them, and they are realizing that they are starting to lose blood, even if it's a small amount.

Land loss has been familiar for Louisiana's coastal communities for some time. They believe that only in the past decade or so has the problem begun to receive serious attention from the state, and only in the past few years has it registered on the national radar. The lack of political attention fits well with their landscapes of a veiled restoration process. Thus, experiencing coastal land loss means a restoration effort that is highly political in the negative sense. That is, piecemeal restoration is due to conflicting influences and political rhetoric where the interests of the effected communities are publicly celebrated but, in reality, is given little heed.

> Susan and Anastasia (GI): [Susan]This has been going on for decades. [Anastasia] Who cares about poor people on the edge of the world? [Susan] But when the rich people's camps started falling into the Gulf of Mexico, that they cared (about).
>
> Becky (LC): And New Orleans has got something there that they really shouldn't let go. They are talking about losing wetlands and losing and everything now. They've got something that is not eroding and not going away as it stands. But they will lose it in that manner because of money and politics.
>
> Paul (P): And then when you see the hypocrisy of the state regulators and their policies -- You know for three generations, we've been fighting (for) the coastal restoration effort and the political in our life.
>
> Saro (SB): So they are doing some things to address that [land loss] now. . . . But it's nothing but a lot of problems, mostly political.
>
> Diane (SB): The residents didn't want the Mississippi River Gulf Outlet in the first place because we thought it would have the effect that it's having. . . . It's political.
>
> Phyllis (SB): I wanted them to explain to me how could people like us benefit by it like they were telling (us) it was going to do. Everything is a big lie. . . . They don't care. If you are Indian and they want your land, they go to the reservation. If they want your house, you need to sell it at the price they want to give you.

> The money's in the bank. The interstate is coming through. That's the way the government does it.
>
> Rachelle (T): Give politicians something to work with and you know what happens. Cause I mean all these years, they have been talking about it, and they really have not done anything. Nothing has been done.
>
> Liane (T): Now we have all these politicians, our governor: They are not doing anything about it. People have been knowing this has been coming, not just recently. It's been coming a long time, and nobody is doing nothing about it. They're building these million dollar levees, but they don't help anyone. They've got all these outsiders coming in to build these levees, and they don't know what the hell they are doing.
>
> JJ (T): I think the bureaucratic world is going to continue to procrastinate, continue to talk, continue to use it as a platform to get elected. They will continue to use it as propaganda, as gossip. And from there they will continue to study. Because once they solve the problem, the money source may dry up.
>
> Morris (T): [Interviewer] *What do you think is going to happen as far as that goes [restoration]?* [Respondent] I don't know. Some more studies. The rocks seem to be working well but nobody wants to put rocks. They want to study it. It's too much politics and too little action.

Upon renegotiating identity within the context of the physical changes to place, residents' sense of self coalesces the alienation of restoration with common cultural themes of political distrust and inaction. The suspicion and contempt for the larger world of politics is, justifiably so or not, projected on to the agencies charged with alleviating coastal land loss, those who are viewed as uncaring and alienating bureaucrats with their own political agendas. In this way, identity is defined with further uncertainty as it comes to see itself as essentially alone. Although the self, as it tries to reestablish identity, finds refuge through its relation to community. It considers itself cutoff from outsiders. Residents believe that even those that live in other parts of the region to be outsiders, like those in the more urban part of the parishes as well as those in New Orleans. Coastal residents view them as largely unaware of the depth of the problem. This perception leads

to respondents' warnings to these communities which doubles as a sometimes desperate call for action. These elements come together to increase the fragility of identity and place that residents experience.

Conclusion

Experiencing Louisiana's coastal land loss coalesces several elements producing a fragile sense of identity. Coastal residents are deeply attached to place, and this alone causes changes in their landscapes that have ramifications for identity. Add to this the damage they experience on a daily basis along with the looming threat from hurricanes, the negligence of mostly powerful outsiders for this damage, and an alienating, distrustful, inactive, and political restoration process and identity comes to be defined with uncertainty. When residents look at land loss, it is through these different yet symbiotic elements that the phenomena is defined and experienced. The monolith of coastal land loss comes to affect all parts of their landscapes.

The uncertainty that land loss renders adds to the identity anxiety that the self already experiences from the mere slow disappearance of place. Anxiety is often expressed as repeated verbalizations of "not knowing" what can be done, if anything *will* be done, one's previous but now lost geographical knowledge of place, and questions about whether or not place will exist in the near or distant future. As this anxiety is exacerbated by acknowledgment of their attachment to place, uncertainty becomes expressed more despondently. Death becomes a popular metaphor and calls for salvation take on an air of desperation. It is from here that identity appears most fragile.

Brown and Perkins (1992) state that disasters force an acknowledgment of place attachment. In times of relative normalcy, people are often unaware of the level of their

attachment. The authors state that for a period immediately after the disaster, a heightened awareness of attachment is experienced due to actual loss or the possibility of loss (1992). Building and extending this finding are Louisiana's coastal residents who experience a more constant awareness of their attachment to place. In other words, they are always at a relatively heightened awareness of place attachment. While it may be impossible to constantly be in such an aroused state, it most likely ebbs and flows, but because of the slow yet incessant nature of the disaster of coastal land loss and the different definitional elements that the phenomena takes on, they are more often than not aware of their strong attachment. This more constant awareness produces the anxiety, uncertainty, and desperation expressive of a fragile identity. If further psychological damage is rendered by an increasingly ill environment that one is attached to, then a more constant awareness of attachment is likely. Furthermore, as respondents tell us, the self "sees" the ongoing damage, thus, reinforcing the notion of their more constant awareness of attachment. It is the constant awareness of attachment due to a slow disaster that produces the fragility respondents experience. In fact, they experience a more constant awareness of attachment due to the nature of the meanings they give to place, and this awareness causes the fragility of place and identity that residents experience. So the question becomes, what can be done to lessen this anxiety and fragility?

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Chapter 7 – Conclusion: Saving Their Coast - Residents and Their Environment

Why should alleviating Louisiana's coastal residents' anxiety and fragility be a concern or goal? First, their anxiety and fragility leads to substantial conflict with agencies charged with coastal restoration. Further, and as a corollary to this conflict, residents often oppose coastal restoration policies before they ever get to the implementation phase. The onset of Hurricanes Katrina and Rita is unlikely to change this antagonistic relationship. It may even exacerbate it. If a disaster causes heightened awareness of place attachment and residents are already in a relative heightened state of awareness, then Katrina and Rita gave credence to their keen levels of place possessiveness. Residents generally view place and identity as further threatened by the storms, whose damage, they perceive as a result of the ongoing disaster, the slow-onset coastal land loss. Since some coastal residents believe that the inaction of government agencies has allowed the enhanced destructiveness of storms, it is unlikely that they will blindly accept new or additional proposals from agencies they deem untrustworthy and threatening to their place attachment constructs.

By no means does this suggest that residents are holding back the restoration of their ecosystem. On the contrary, their opposition is, at least in part, a result of the dismissal of their localized expert knowledge in favor of the institutionalized expertise of scientific knowledge. Secondly, alleviating residents' anxiety and fragility *is* coastal restoration. The people are part of the ecosystem and have been in an exchange relationship with that ecosystem for hundreds of years. Yet, they feel cut off from the possible recovery of their home. Ironically perhaps, scientists may treat residents as just another ecosystem species, consulting residents as much as they would the birds, fish or

fauna about the restoration of their ecosystem. Nonetheless, quelling the anxiety and fragility of residents is an integral part not just of Louisiana's restoration but of similar large-scale ecological restoration processes that will certainly take place in other ecosystems in the future. In fact, addressing the concerns of communities is part of restoration.

This chapter situates this study within the context of the existing literature. I also address what the findings mean for current coastal restoration policy as well as more general policy where place attachment is part of the decision-making process. To this end, I touch on how the residents of coastal Louisiana may gain a more active role in coastal restoration and the recovery of their home. The in-depth involvement of residents in decision-making processes appears even more imperative in the post-Katrina/Rita era.

Land Loss, Identity, and Place Attachment

This study has attempted to ascertain residents' understanding of a disaster through the concept of landscapes. It allowed residents to construct their own narratives and understandings and enabled them to reveal the nature of their attachment to place; the study allowed them to convey *what* they were attached to and *how* they were so attached. Residents were able to construct their own landscapes and transform the physical environment and any changes therein into symbolic environments through self-definitions (Greider and Garkovich 1994), without being prompted to distinguish between the social or physical. In addition, the study did not ask them about the disaster of coastal land loss until they themselves introduced the topic. Interviewers were always careful to allow respondents to establish what relevance the event had for them. Our careful elicitation of residents' landscapes allowed us to understand how respondents

understood this phenomena, how it effected their understanding of place and themselves, and how it effected their memories, their livelihoods, their families, their community, and their environment.

This study used the concept of landscapes to understand a respondent's place attachment as expressed in his or her statements about coastal land loss. Unlike most studies of place attachment which seek to establish what people are attached to -- the social or the physical -- the approach employed here found that these respondents didn't readily make distinctions between the social or the physical. While most studies of place attachment and environmental valuation seek to tease out the social from the physical, the ecological-symbolic approach taken by Kroll-Smith and Couch (1993) provides a perspective that accounts for how people construe disasters through apprehending the interaction of social and physical significance. Indeed, residents conflated the social and the physical. Respondents intertwined the two; they talked about land loss through constructing stories about, for example, familial memories that occurred on land that no longer exists. Their attachment didn't distinguish between being more attached to family or land. In many respects, they were the same thing. A statement from Paul of Plaquemines reifies this idea: "Because if the land dies a part of us dies." This comment summarizes what many residents communicated in their narratives. As was stated in the theory chapter, since place attachment occurs through accrued biographical experience, it is likely that one's attachment develops in a social context which occurs within a natural-physical milieu intrinsic to the social. In short, these coastal residents exhibit an attachment to place in which the natural-physical and the social are conceptually symbiotic. And this attachment shapes residents' identities.

As residents spoke about land loss, they illustrated identity through landscapes and purposely attended to the implications for identity. Since we see place through the characteristics, beliefs, and elements that we see ourselves, a resident's identity becomes symbolically enmeshed with place when attachment occurs. Respondents intentionally presented deeply attached identities and consequently, they were significantly affected by the disaster of land loss. In fact, there seemed to be a strong reciprocal relationship between identity and how land loss was viewed by respondents. That is, many self-definitions, or components of identity, were shaped by a relationship with place and as land loss occurs, place diminishes even while residents attempt to maintain those self-definitions. In fact, land loss gets construed through those self-definitions. Simultaneously, those self-definitions are altered by land loss. Identity, as it was construed though place, can no longer be defined in the same way since what it relied on for its meaning is drastically changing. This distorted identity appears to account for respondents' shifting thoughts, what I here call *uncertainty*;[43] a continual negotiation with what this disaster means. And as was evident in the *restoration*, *human degradation*, and *political* meaning units, the change to identity causes a hyper-awareness of the importance of place, especially as the event takes on human dimensions. In sum, this is an ongoing cycle where land loss is continually re-interpreted through self-definitions that are themselves changing under the pressure of land loss. The ambiguity of identity causes a heightened awareness of place attachment purported by these coastal residents and was reflected by the desperate calls for action and contributed to the skepticism, distrust, and resistance to agency-driven restoration processes.

[43] Recall that some respondents varied in their thoughts about, for example, their hopes for the future.

Alienation, Attachment, and Restoration

The alienation[44] that southeastern Louisiana's coastal residents feel toward the restoration process develops from an identity that is threatened. Their identity is wrapped up with place in a seemingly inseparable way. The slow loss of place has traumatized identity causing, in one sense, the identification with place to be intensified as a response to losing it, and in another sense, an alienation from restoration processes. As time goes on, experiencing land loss in this way accumulates. Residents become more and more skeptical of a political, bureaucratic, and what many see as a condescending restoration process. Meanwhile, the continual loss of land leaves residents feeling more anxious and vulnerable, and consequently, they draw further and further away from what they deem as an untrustworthy restorative process. Respondents exhibit their vulnerability by purposely self-identifying, not only with place, but with the effects of coastal land loss, as well. Again, Paul's statement about the conflation of and simultaneous death of the land and residents succinctly displays this idea. Since residents are not only identifying with place but with loss, agencies charged with alleviating coastal land loss and policymakers who serve the effected publics should listen. Residents express a vulnerability of identity, thus, their anxiety and alienation. And residents' alienation stems from feeling cut-off from the restoration process.

As the restoration process is undertaken, alienation is exacerbated. Residents derive a significant part of their identity from place, the coastal lands. This identity has evolved through interaction with place. Even if fewer people make a living through direct interaction with place than in the past (the fisheries for example) most people still directly

[44] I am applying the concept of alienation in the Marxian (1844) sense where residents are alienated, estranged, feel separated from self, community, process, and product. Here, product refers to actual restoration.

engage place through recreation or simply living within this region. Furthermore, their identity is a generational one derived from a long history of relatives who were a part of the land before them. Because they are unable to engage with the recovery of something that provides them with identity, alienation from the restoration process occurs. Residents experience alienation from restoration because it becomes a product that is being produced, not produced, or poorly produced apart from them. It is a process and product that is unfamiliar, about which they have been told that they know little about by bureaucratic agencies. In effect, they believe they have been told by "experts" that they don't really know much about the land which, for generations, they have actually known the workings of intimately. As a result, they feel dismissed.

Now, prevented from engaging with the recovery of that same landscape which provided them with identity, residents are left even more alienated. They are denied recovery-oriented interaction, activities with that which they believe gives them identity – the land. As residents are denied participation in the recovery of place, they are also denied the recovery of self and thus identity. Restoration comes to symbolize powerful others denying residents a particular sense of identity. As a result, resentment and resistance from residents arise.

While not having the expertise of scientific knowledge, coastal residents have their own expert knowledge. Their localized ways of knowing have developed over generations of intimate interaction with place. Learning these ways of knowing are part of what their identities have developed around. And alienation occurs as their knowledge is dismissed, and it is made to appear that solutions can only come from specialized technical procedures. Their expert knowledge is overridden and identity is threatened

even further. Consequently, residents become estranged from and come into conflict with a process that they think rebuffs them and then fails to restore a place they believe they know the workings of intimately. This conflict further impacts residents and restricts the possibility of recovery for the land and its residents.

Land Loss, Identity, and Policy Implications

The residents' alienation from the restoration process comes from a threatened identity, an identity negatively impacted by the ongoing disaster and compounded by the restoration process itself. Land loss is not just an environmental disaster occurring where these residents live. It is a personal issue that affects their sense of who they are. This profound identification with place and subsequent sensitivity due to land loss is what policy-makers and agencies charged with restoration seem to miss. Although policy-makers and agencies may give voice to the residents' connection to place, they don't actually include residents in restoration as an integral part of the restorative process. The U.S. Army Corps of Engineers' Louisiana Coastal Area (LCA) Study (2004) serves as an example. The report includes sections on the integral role of communities as part of the landscape and economic network of the region. And the report speaks of the communities' strong connection to the region, but it doesn't include them as holding valuable knowledge integral to restoration nor does it show the necessity of involving them in successful coastal restoration.

These agencies appear to see land loss as an environmental disaster happening where people live, not something happening to people in a way that is more than about occupation, economics, or history. These agencies no doubt have good intentions toward restoration and the communities restoration will serve, but it is also that residents are in

conflict with the governmental elements of coastal land loss. This conflict is a kind of social damage that aggravates the ecological and personal damage of the disaster. The threat to identity incurred by the disaster results from a strong attachment and identification with place. And the damage to the ecosystem serves as damage to the self and, therefore, the components that make up identity. A disappearing, once healthy environment combined with an antagonistic and dismissive restorative process yield meanings of great uncertainty about the future of place. However, it is not only uncertainty about place, but the sense of who they are that is thrown into question for residents.

It is this identification with loss that policy-makers should consider. The current animosity between residents and coastal agencies will impede the process further. However, perhaps, the current restoration practices need to be questioned. It shouldn't be taken for granted that current restoration proposals are sustainable. What is certain is that for any regional and sustainable restoration to take place, the residents and communities need to be actively engaged in the process. When community members identify with the loss from a disaster like coastal land loss, alleviating the physical damage must grant them the necessary work of engaging with the restoration process so they can also recover identity. If not, restoration is in jeopardy. And the experience of Louisiana's coastal residents should serve as a learning tool for communities and agencies that will address similar concerns in the future as they seek the restoration of their own places.

Conclusion

It will be difficult for communities to become an integral part of restoration because of the institutionalized, professionalized, and positivistic nature of ecological restoration. Timelines would be vague and open to change, and many will judge the possibility of failure as high. However, we must consider what it is that is at stake. First, is remediation of ecological problems sustainable in areas where communities have an entrenched stake in place like that of coastal Louisiana? Second, are current remediation efforts in Louisiana's coastal zone too alienated from the human communities to succeed? Third, what does success entail? Does success mean a healthy ecosystem which can sustain its human communities far into the future? If this is what success means, then it is evident that Louisiana's coastal communities must be a part of that remediation effort.

The voices of residents appear to be calling for the salvation of their environment and, in a sense, themselves. They feel helpless and confused. It appears that the way they can reclaim place and identity is through direct involvement in the restoration process. As was mentioned in the introduction chapter, just as returning to rebuild after Hurricanes Katrina and Rita is an act of identity recovery, involvement in coastal restoration would be a necessary element of restoration for those damaged by the disaster of coastal land loss. Furthermore, while involving communities in restoration would be difficult, it could also relieve some of the pressure from government and its agencies. Some of the weight of full responsibility for success or failure would be lifted. So, policy-makers and agencies should listen to the voices of residents, and communities must organize themselves and lobby for insertion into the process. This will mean organization and

acting regionally, as well as, more locally in individual communities. No doubt this would be an often painful process. But as the global climate changes and environmental disasters become larger and more frequent, sizeable, government-funded restoration projects will become more prevalent. This means it is likely that future restoration projects will face the same challenges that Louisianian's confront.

These challenges are in many ways challenges to the sense of who the residents are. In coastal Louisiana, place plays a dominant role in overall identity. In addition, I would venture that place plays a much larger role in identity there than in more modern, suburban places in which attachment to place is more tenuous. At the same time, there are many regions and locations around the globe where community and culture are as entrenched in place as in coastal Louisiana. The extent of Louisiana's environmental degradation is certainly not unique to the region. These issues should be seriously considered not only for coastal Louisiana, but for the future restoration of all places suffering environmental damage.

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Vita

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