Riding out the risks: an ethnographic study of risk perceptions in a South Louisiana bayou community

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RIDING OUT THE RISKS: AN ETHNOGRAPHIC STUDY OF RISK PERCEPTIONS IN A SOUTH LOUISIANA BAYOU COMMUNITY

A Thesis
Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Master of Science in The Department of Environmental Studies

By
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B.A., Louisiana State University, 2001
August 2005
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ABSTRACT

This ethnographic study explores the risk perceptions of a small unincorporated coastal community in southeastern Louisiana. This community has experienced social and environmental change due to events including tropical storms and hurricanes, erosion, subsidence, oil and gas activities, development, and the impact of global seafood markets.

Many global risk perception studies have focused on the perception of risk to human health and property connected with natural and technological disasters, but few have explored the issue of minorities and small at-risk communities. To explore this theoretical and methodological gap, this study uses a variety of qualitative ethnographic methods to examine a small at-risk community of minorities. The central question of this research asks: Why does a marginalized community with few resources choose to stay in an area that they perceive to be burdened with environmental and social threats?

Findings suggest that geographical displacement is a greater ‘risk’ than living in an area burdened with continual environmental and social threats. As Meda states:

“...if we follow the same traditional ways of evacuating for a storm that our fathers and grandfathers did, we pack up and go to our boats. Traditionally that’s what we do, that’s what we know, that’s how we keep ourselves safe. But the land has changed...the land standing between us and the storms has diminished because of erosion, subsidence, and all of these other things that came into play. Now when storms come, we get flooded with greater frequency and with higher tides and the porosity of the currents that come through, its stronger and stronger...so, those safe harbors will no longer be safe harbors and our traditional ways of evacuating, we will have to find somewhere else to go. Because they will no longer be able to sustain us and its something that we know and its something that we are going to have to face, but because of who we are and because of...our ties to the community...life at all costs is better than anything that I can think of. But we do stay and we fight for what we have and risk is part of it.”
CHAPTER 1: INTRODUCTION

This ethnographic study explores the risk perceptions of a small unincorporated coastal community in southeastern Louisiana, called The Bayou. This self-identified “Native American” minority enclave of fishers confronts the slow onset threat of land degradation as well as the acute fast onset threat of seasonal storms, flooding, and water contamination from the oil and gas industry. In addition to the community’s unstable environmental condition, it perceives that it is threatened by the region’s socio-economic dynamics. Residents of The Bayou claim that parish and state governments marginalize their way of life. From their accounts, public utility services after storms are delayed compared with quick responses to near by affluent communities. They also report that most 911 calls remain unanswered and that other parish assistance rarely occurs. And the community, which has long supported itself by fishing, is now threatened by competition from larger and more well-equipped commercial fishing boats.

Despite all these challenges facing the region and the people, the community chooses to stay. This investigation aims to clarify the following perplexity: Why does a marginalized community with few resources choose to stay in an area that they perceive to be burdened with environmental and social threats, as opposed to relocating to an area perceived as less risky? In other words, why do these already vulnerable people have such a strong attachment to a place that compromises them even further?

Global studies on risk perception focus on human health and property damage attributed to natural disasters and technological hazards (Kunreuther et al., 1978). However, these studies examine risk perception across a population rather than in terms of the experiences of specific

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1 Overall, the community self-identifies as descendants of Houma and Atakapa Native Americans. However, others independently self-identify as French, Acadian or Hispanic heritage.
2 “Fishers” is a common term used to describe people that harvest marine wildlife for their primary source of income or sustenance.
3 Land degradation results from such activities as over fishing, silting, canal cutting, erosion and subsidence.
individuals (Elliot, 2003). Most risk perception studies are based on attitudinal surveys such as the psychometric paradigm designed by Slovic, Fishchoff, and Lichtenstein (1979), or functionalist perspective models such as cultural theory created by Douglas and Wildavsky (1982). The psychometric risk studies have tried to identify and develop a general framework of ‘attributes’ of risk shared among individuals, which are thought to play a role in their assessment of the risk (Langford et al., 2000). In contrast, cultural theory views social responses to risk as being determined by cultural belief patterns based on an individuals grid/group pattern (Douglas and Wildavsky, 1982). These research methods are further discussed in section 3.2 (see p. 20).

Although these studies extend the understanding of risk, they fail to reflect the unique histories and experiences of individuals, especially those considered on the margins of society that do not easily fall within predetermined categories. Elliot (2003) suggests using a more productive strategy of ‘active engagement’ and ‘listening’ to determine how individuals perceive and evaluate risk. Further, he contends that qualitative methods like these facilitate effective communication by refocusing the dialogue between experts and laypersons to solve specific problems instead of just documenting them (Ibid). Field research methods have also been distinguished as most appropriate for the study of small sub-cultures that may not be accounted for by survey methods using random sampling (Babbie, 1998). Taking this latter qualitative perspective as a starting point, this study employs an ethnographic approach through participant observations, intensive face-to-face interviews, video ethnography and focus group techniques to determine how this marginalized coastal community perceives risk.

What emerged over one year of interviews and observations is that the concept of risk, in this case, was broadened beyond its common definitions—property damage, personal injury, and loss of life—to include the loss of cultural identity and way of life. Findings suggest the
community holds a strong spiritual belief and cultural connection to the land and way of life. Self-definition is directly linked to the community’s conceptualization of and attachment to place. Further, the threat of loss of property, personal injury, or even loss of life pales in comparison to the risk of losing cultural identity. Thus, geographical displacement is a greater ‘risk’ than living in an area burdened with continual environmental and social threats.

The paper is organized in the following manner: a background history of this unique coastal community along with the present hazards it confronts; a review of both the “risk perception” and “place attachment” literatures and how they apply to this study; a detailed description of the qualitative methods; analysis and findings; and a concluding discussion about this study.
CHAPTER 2: A UNIQUE SETTING FOR RISK PERCEPTIONS

The community has a distinctive topography, cultural and socio-economic history and is subject to extreme natural and anthropogenic hazards. This chapter presents key observations and technical information about the community based on the accounts of residents and researchers. The residents’ accounts emerged from participant observations and oral history interviews, methodologies that will be further explained in the methods chapter (see p. 47).

An ethnographic researcher is, in an integrated way, engaged in describing and participating in a process of change, rather than merely observing and describing an existing setting (Creswell, 1995). Rather than analytically studying the environmental problem, this study demands a holistic contextual attitude toward the problem area; therefore, this chapter considers the environmental and socio-cultural context. The following sections describe the setting from a participant point of view rather from an observer. This description allows the reader to get a clear understanding of the community’s perceived risks. The following is a brief overview of this community’s unique setting, its people and its present challenges.

2.1 GEOGRAPHY AND TOPOGRAPHY

The community is located in the coastal wetlands of Plaquemines Parish (County) in the southeastern tip of Louisiana, approximately 50 miles south of New Orleans and 40 miles north of the Gulf of Mexico. The red star on Figure 1 represents the area where The Bayou community is located. It is situated outside of the lower levee that shields Louisiana Highway Twenty-Three (LA HWY 23) from Gulf storms. The unintended consequence of the lower levee is that the community is more vulnerable to flooding, hurricane winds and storm surges, subsidence, and coastal erosion. Section 2.3 explains the unintended consequence further (see p. 11).
The community is situated in the Barataria basin and is officially categorized as ‘brackish marsh’: a mixture of salt and fresh water, which among other things sustains oyster beds. This basin has experienced the highest level of erosion along the coast and is the most in need of protection by the barrier shorelines of Louisiana (Grambling and Hagelman, 2004).

The bayous of the community feed into Bay Sanbois about two miles south, which flows into Grand Lake and eventually into the Gulf of Mexico. According to residents, air, land and water species that populate the immediate area include sea gully, marsh hens, ducks, pelicans, nutria, muskrat, otters, trout, drumfish, sheephead, gar, sanddiggers, crabs, shrimp, oysters, catfish and redfish.
2.2 HISTORY, CULTURE, AND PEOPLE

The present residents of this community trace their ancestry within this region back between two and three hundred years. They are self-identified as a cultural mix that includes Acadian, French, Hispanic, and Atakapa and Houma peoples, historically recognized Native American tribes indigenous to this South Louisiana region (Kniffen et al., 1987). As with the Houma tribe in Louisiana, this community does not have Federal tribal recognition.

According to the community, which is comprised of 65 residents, they personify Christian beliefs that generally direct them to abstain from drinking, smoking, swearing and gambling. Their faith, indigenous roots, and long history as fishers in South Louisiana translate into a strong connection with the land and a commitment to preserving their unique heritage. The relationship between the land and the people is further explained in the findings (see p.76).

The languages spoken among residents include English, Cajun French, and Spanish.

Figure 2. Pictorial description of residents. (Picture taken by Kris Peterson)

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4 This number is according to Census 2000 data. This number may not be reliable because: (1) the Census data incorporates ‘seasonal camps’ within The Bayou (these individuals are not part of the community), and (2) through participant observations residents report that many community members have relocated.
From their accounts, their ancestors were living on land in the coastal plain of Louisiana that they did not own. They claim that in order to make way for the exploration of minerals and other valuable resources, their original land, which included tribal mounds, was appropriated by the Louisiana Land and Exploration. In exchange for moving from their original land, they were given ownership of their current location by the developer. This historical social disruption from outside the community planted the seeds for a deep mistrust of outsiders that continues to present day. The mistrust of outsiders is further explained in the findings (see p.70).

As with any coastal area in Louisiana, this community is intimately embedded with the biophysical environment, with water being a central feature of this environment (Grambling and Hagelman, 2004). Consequently, understanding this culture requires a deep knowledge of the human relationship with the water (Spitzer, 1985; Grambling and Hagelman, 2004) and way of life (Tidwell, 2002). This relationship is further discussed in the findings (see p.76).

Figure 3. Pictorial description of The Bayou’s relationship with water. (Picture taken by John C. Pine)
The traditional economic foundations of the community are shaped by the natural resources that abound along the coastal wetlands. Present residents report that their ancestors, dating back to the 1900s, traditionally planted vegetables, hunted, trapped and extracted various types of seafood from the local waters. The women educated the children and tended to the domestic animals and gardens. Residents recall the rice fields and fruit orchards that surrounded their local church in the 1930s. Since the region was only accessible by waterways, some present-day residents remember the community as being an idyllic place isolated from mainstream society. As a result, their fishing boats are as important a cultural asset as their homes.

Some residents claim that when extensive oil exploration began in the region in the 1940s, The Bayou paradise began to deteriorate. Oil exploration resulted in channelization and dredging projects (Tidwell, 2001; Grambling and Hagelman, 2004). According to residents, one negative impact of this historical event is that the community’s sustenance activities eventually narrowed to include only marine harvesting, since the arable land had eroded to a fraction of its former size. This land loss has been accelerated by a complex combination of natural and manmade impacts over the last century (Laska et al, 2004; Grambling and Hagelman, 2004). Environmental and manmade threats are not the only obstacles this community has had to face, however; residents claim that social and economic inequalities have also left their mark.

As a minority group living in an unincorporated area, the community’s socio-economic and environmental situation can best be framed by the issue of ‘Environmental Justice’: disadvantaged minorities and the poor are discriminated against by having to shoulder a disproportionate share of the impacts of environmental hazards (Schwab, 1994; Roberts and Toffolon-Weiss, 2001). As Schwab comments on Houma peoples living along the coast, “they
live in an area that is suffering most from the coastal erosion wrought by advancement in oil exploration, agriculture, and flooding and hurricane levee projects conducted by the Army Corp of Engineers. Flooding and saltwater intrusion will gradually kill the vegetation, including trees, that now hold back some of the floods [storm surge from the Gulf]” (1994: 232). Oil exploration leads to ‘canal cutting’ and dredging. When canals are created, they are open to wave action, which leads to increased erosion (Ibid). According to residents, these canals are not restored by the institution that created them, even in the face of land degradation. These interactions with modernity have further deepened The Bayou’s skepticism towards the outside world.

Figure 4. Pictorial description of several canals.

According to Schwab (1994), sharing a disproportionate share of environmental impacts is not the only social inequity experienced by the region. “Well into the 1960s, the state’s [Louisiana’s] segregated educational system was so…. racist that it simply did not accommodate Native Americans beyond the eighth grade” (Ibid, p. 230). This may explain the reason why some of the people in the community do not have education beyond primary schooling. Another
factor in low levels of formal education is that many residents begin work alongside family members as shrimpers and trappers at a young age. As a result, residents have not considered the need for higher education as that relevant. Even so, through participant observations, residents have shown that many are very articulate, well read, and have a strong foundation of local knowledge about their rich history and the fragile ecology of the region.

In the present era, the majority of the community is comprised of shrimpers, crabbers, oyster harvesters, and trappers. These activities are regulated by government licensing and cyclical conditions. For example, the shrimp season lasts into the early fall. In the winter, it is common that a shrimper will trap local game for consumption and trade, much like with the traditional patterns. However, according to residents, consumption and trade patterns have changed with the advent of government regulations (i.e., the endangered species list), fur activists, and the driven capitalist market for seafood. Residents have also incorporated non-traditional economic means outside The Bayou in the service sector of greater Plaquemines Parish. For instance, many of the women in the community work during the day at grocery stores, daycare, or at various construction job sites while their children are at school.

In the past ten years, many residents have chosen to relocate outside The Bayou community, as far as Tennessee. According to some residents, relocation is due to the ever-increasing cost of gasoline for their boats and extractive activities, stiff competition in the fishing industry that includes foreign imports and higher yield commercial boats, and the increasing costs of regulatory demands placed on local fishers. For example, the Federal government established a law that mandated large shrimp boats use Turtle Excluder Device (TED) nets to protect endangered sea turtles (Crowder et al., 1994). These nets, according to residents, reduce shrimp yields. Without having large boats with many deck hands, as does the competition, some
residents are skeptical of their ability to remain economically viable in their traditional role as shrimpers.

Figure 5. Pictorial description of shrimping boats. (Picture (A) was taken by John C. Pine).

The changing nature of the community’s means of sustenance makes some residents skeptical of their future economic prospects and thus their ability to preserve their culture. To preserve their way of life, the community in February 2003 organized a non-profit organization which they hope will work with experts and policy makers to help “save their heritage and land” for future generations. The non-profit is further discussed in the methods chapter (see p. 36).

2.3. COMMUNITY AND HAZARDS

Rivers and bayous carry sediment load that they eventually deposit, creating wetlands, estuaries, barrier islands, and natural levees (Grambling and Hagelman, 2004). Because the Mississippi River flows southerly, the natural levees that bisect the Deltaic Plain run north to
south, and it was these landforms that led the first human inhabitants southward into the wetlands (Ibid). For centuries, the human inhabitants were protected from Gulf storms by the barrier islands that acted as the “first line of defense” for the sensitive wetlands behind them (Ibid; Laska et al., 2004). Years of land erosion and subsidence, coupled with the fast onset threat of tropical storms and hurricanes, have eliminated a number of barrier islands, thus increasing the risks encountered during seasonal storms in the community as well as other communities living along the coast.

**Storms:** Louisiana’s Gulf Coast is threatened by tropical storms and hurricanes that develop in the Atlantic and Gulf of Mexico. From 1900 to 2004, Louisiana has experienced twenty-seven direct hits, either as tropical storms or hurricanes (NOAA, 2005). Twelve of those have been major storms (Category three –five). Hurricane season in the Atlantic and Gulf regions typically lasts occur June through November. According to residents, the season of 2002 and 2003 took them by surprise and saturated their community with water. In October 2002, many of the homes in the community were flooded twice in one week by Tropical Storm Isadore and Hurricane Lili. Eight months later, Tropical Storm Bill flooded the community with up to three feet of water, ruining homes, many of which have not been repaired from previous storms. Due to lack of resources, residents are unable to afford infrastructure improvements or the mitigation measures needed to restore their community.

According to the Federal Emergency Management Agency’s (FEMA’s) flood study, the community’s base flood elevation is sixteen feet (FEMA, 1993). This means that residents on the water line should build homes one foot above that base elevation. None of the homes in the

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5 It is suggested that Global warming is increasing the volume and intensity of Hurricanes in the Gulf of Mexico, due to increases in temperature (Collier and Webb, 2002).
community meet this criterion. In fact, most homes are not elevated and lie near or on the water line and therefore experience seasonal flooding.

Figure 6. Pictorial description of destroyed home. (Picture taken by John C. Pine)

The community is situated west of the Mississippi River’s western levee, and thus it is in no immediate threat from river flooding. However, the lower levee to the west of the original levee, which was built to protect Louisiana Highway Twenty-Three (LA HWY 23) from Gulf storms, creates an unintended consequence for the area. During a storm, there is initial flooding. The water surges through the community, hits the east levee, and reflects back onto the community, resulting in secondary flooding. The Bayou is consequently more vulnerable to flooding, hurricane force winds and storm surge, subsidence, and coastal erosion because of this lower levee. Below is an aerial photo depicting the community and its surrounding environmental setting. The arrows in the picture represent the direction or location of the community (the scattered houses can be seen), the Mississippi River, the lower levee that protects LA HWY 23, and the Gulf of Mexico—located approximately forty miles south.
Environmental Risks: Along with storms, the community faces other environmental risks: coastal erosion, subsidence, oil company activities, water pollution, fish contamination and saltwater intrusion. Two well-documented threats are erosion and subsidence—commonly grouped together and referred to as wetland loss. Coastal erosion and subsidence are historical processes that were originally offset with natural sediment deposits from seasonal Mississippi river flooding. However, the vital sediments, which had originally created and then sustained the coastal wetlands, have been diverted by levees into the Gulf of Mexico. Lacking the annual replenishing of these sediments, the wetlands have been slowly sinking and washing away.
Figure 8. Image of land loss trends (LA Coast, 2005). The red coloration represents the areas that have experienced the most land loss. The Bayou community lies within this area.

Additionally, oil company channelization, dredging projects, and boat traffic that support oil exploration and extraction leaves the existing marshland susceptible to subsidence and erosion (Grambling and Hagelman, 2004). Oil was discovered in the region in the 1900s (Ibid). The shallow topography of coastal Louisiana initiated the movement of petroleum exploration and extraction activities, which moved from shallow marsh lakes to deeper bays and to offshore (Ibid). As a result of improved technology, today there are almost 50,000 oil and gas wells and approximately 10,000 miles of networked pipelines, half of which are in open water with the other half crossing wetland marsh (Laska et al., 2004). This extensive infrastructure leaves the community vulnerable to land degradation (Ibid) and toxic residuals from oil production which
negatively affect The Bayou water quality (from personal communication with a resident of the community under study, 2004).

Figure 9. Digital image of pipeline canals. (Prepared by John C. Pine and Mary Lee Eggart)

Water pollution also threatens the community. Pollution includes untreated waste, oil spills, and mercury contamination. Untreated human waste (fecal coliform) accumulates in the community because many homes in this unincorporated region do not have septic systems. Waste flows directly into the marsh, polluting the canals and oyster beds and thus threatening the community’s livelihood. Additionally, oil spills from refineries, pipelines, and offshore
platforms have compromised the fragile wetland’s ecosystem (Laska et al., 2004; Grambling and Hagelman, 2004).

In addition to fecal coliform and oil residuals, high levels of mercury threaten the water species (DHH, 2004) that the community relies on for dietary consumption. According to the Environmental Protection Agency’s (EPA’s) 2003 Toxic Release Inventory (TRI), 4,521 pounds of mercury were released to the air and 64 pounds discharged into the water by all ‘reporting’ industries in the state of Louisiana (EPA, 2005). Recently, the Louisiana Department of Environmental Quality (DEQ) reported that more than 130 water bodies in Louisiana have fish samples that exceed 0.5 parts per billion of mercury. This report includes the long stretch of Gulf Coast where the community is located (Dunne, 2005).

Elemental and organic mercury in Louisiana comes from the following sources: emissions from coal burning and other fossil fuels, chlor-alkali plants (Louisiana has two), other industrial plants such as paper mills, vehicle exhaust, meters which measure natural gas, and previously used mercury-based fungicide (Ibid). Mercury from these sources are eventually deposited into waterbodies, where bacteria on the lake streams and bottoms break the elemental and organic mercury into methylmercury, which is absorbed by the smallest aquatic life and moves up the food chain (Ibid). Aquatic bioaccumulation eventually enters into the human body when we consume fish and other water species.

The EPA (2005) reports that children born to mothers exposed during pregnancy to high doses of methylmercury exhibit cerebral palsy-like symptoms and are late to develop their walking and talking skills. EPA (2005) also reports at lower doses children exposed to methylmercury had delayed “startle” responses, and subtle neurological effects that result in reduced ability to learn and to process information. The Department of Health and Hospitals
(DHH) report that the general area where The Bayou community is located does indicate mercury contamination (See Appendix). Because of the community’s traditional way of life and lack of financial resources, residents have depended on the wealth of nature as a staple of their diet, thus making them particularly vulnerable to these environmental threats.

In addition to their main food source, their municipal drinking water is threatened by saltwater intrusion. The area uses surface water for drinking water because the delta’s geology precludes using groundwater for human use (Laksa et al., 2004). Saltwater seeps into surface water in two ways: (1) when droughts create low levels of stream flow or (2) when strong winds blow from the Gulf (Ibid, 2004). Both of these occurrences may push saltwater north through the eroded coastline and up navigation channels, thus posing a threat to the community’s drinking water supply.

In summary, because of the community’s unique topography, socio-economic history, and the natural and anthropogenic risks it encounters, it provides an interesting ethnographic addition to the risk perception literature. The following section is a review of the “risk perception” and “place attachment” literatures and how they apply to this study.
CHAPTER 3: LITERATURE REVIEW

In the following literature review, the historical evaluation of risks perception is outlined and the intellectual lineage behind two distinct paradigms of risk is explored, one based upon the primacy of individuals (psychometric theory) and the other on the primacy of groups (cultural theory). Next is a review of research on anthropogenic hazards and natural disasters in different cultures and those studies that look at gender and race. Following is an overview of research that examines risk perception to the health and productivity of natural environments. Then, “place attachment” literature is discussed.

3.1 HISTORY AND THEORY OF RISK EVALUATION

The study of risk draws upon contributions from both the natural and social sciences. Historically, hazards and risks have been highly contentious concepts in many social and scientific contexts (Oliver-Smith, 1996). Risk studies began by collecting injury and mortality data for diseases and other natural hazards for insurance companies, health care planners, and safety engineers (Krimsky, 1992). Traditionally, engineers, health physicists, statisticians, and epidemiologists defined risk probability as “real” risk, a hazard determined scientifically and objectively, and “perceived” risk, as false or irrational (Oliver-Smith, 1996). The construction of risk theories began when hypothetic-deductive modeling of risk events were introduced into toxicology and engineering (Krimsky, 1992). From these disciplines, frameworks and models were constructed with the anticipation that they would reduce the adverse consequences of technological innovation. The theories then turned their focus to societal understanding of risk aimed at informing policy makers about the social dimensions of risk (Ibid). Social scientists raised questions, such as, ‘why is it that lay people often fail to follow the advice of experts in responding to the risks of modern life?’ Such questions led to public opinion polls, attitude
surveys, and case study analysis. Krimsky suggests, “early empirical studies help to frame the boundaries of the phenomena in question and highlight the growing disparity between experts and the popular culture” (1992: 5). Therefore, broad public attitudes about risks urged social scientists to search for patterns of meaning and explanation associated with risk that are today the hallmark of social theory construction.

The early natural hazards researchers were interested in understanding why people continue to live in flood-plain areas and ignore warnings (Krimsky, 1992). Advanced theories and hypotheses were made by economists, geographers, and psychologists in the 1940s and 1950s to account for the irrationality of certain population groups (Ibid). Two of the most salient theoretical contributions in the social studies of risk are (1) cognitive explanations embodied in the psychometric paradigm, and (2) functionalist explanations such as cultural theory (Ibid). The latter approach, cultural theory, tends to emphasize non-probabilistic approaches by conceptualizing risk in its socio-cultural context. This anthropological framework and its conclusions are closely connected to this research approach.

3.2 PSYCHOMETRIC PARADIGM, A CRITIQUE, AND CULTURAL THEORY

There are two leading approaches towards evaluating risk perceptions: the psychometric paradigm and cultural theory (Plapp, 2001; Bronfman and Cifuntes, 2003; Lai and Tao, 2003). Much of the literature evaluating risk perception has used surveys based on the work of Slovic et al. (1979). The psychometric paradigm concentrates on a multitude of risk characteristics to explain the sometimes ‘irrational’ perceptions of ‘laypersons’ (Slovic, 1987; Plapp, 2001). Using survey methodology, respondents are asked to quantitatively assess their current levels of risk associated with diverse hazards. These then construct a hazard scale, comprised of dimensions that have been hypothesized to account for risk perceptions—newness, catastrophic
potential, dreadfulness, knowledge, and controllability (Slovic et al. 1980; Plapp, 2001; Bronfman and Cifuntes, 2003). Then, factor analyses are used to extract from the correlations (among these characteristics) a set of higher-order characteristics or factors (Slovic et al. 1980; Plapp, 2001; Bronfman and Cifuntes, 2003). For example, from eighteen characteristics (voluntary, catastrophic, potential, etc.), Slovic et al. (1985) using factor analysis, were able to condense these down to three factors ‘dread’, ‘unknown’, and ‘exposure.’ The authors found that perceived risks of various unsafe matters are associated with the rating given to these ‘psychometric’ factors for the issue of concern (Lanford, 2000). For instance, the higher the ‘dread’ factor rating, the higher the perceived risk (Ibid). These quantitative psychometric surveys certainly provide knowledge about various risks, but they do not reveal how individuals anticipate, make sense of, and deal with risk.

A hybrid perspective by Sjoberg (2000) navigates between the psychometric paradigm and cultural theory. He proposed a theoretical synthesis to better understand the risk perceptions among Swedes because in isolation the psychometric model and cultural theory do not completely account for the empirical variety of risk perceptions. His model proposes using attitudes, risk sensitivities, and specific fears in combination to explain the dynamics of risk. However, this model was based on quantitative methods, which necessitate a large sample. The model did not include open dialogues to capture the qualitative antecedents of risk, how it is processed, and how it is dealt with.

In contrast, functionalist perspectives like cultural theory place social ways of life and corresponding worldviews in the center of their livelihood concept of risk perception (Douglas and Waldavsky, 1982; Krimsky, 1992; Oliver-Smith, 1996; Plapp, 2002). The term functionalist refers to a class of explanations developed in social anthropology, particularly the study of
culture and institutions (Krimsky, 1992). This methodological approach frames social phenomena as parts of wholes by examining how the former supports the coherence, unity, survival, interests, or values of the latter.

Douglas and Wildavsky view risk perception from the functionalist perspective as primarily a sociocultural phenomenon affected by social organization and values that guide behavior and affect judgments about what is to be considered “dangerous” (Oliver-Smith, 1996). Douglas and Wildavsky developed cultural theory on a grid/group pattern. An individual or groups way of life derives from the intersection of two dimensions of social life: grid—the degree to which an individual’s life is confined by a formal system of externally imposed hierarchical and procedural prescriptions or individual freedom; and group—the degree of social boundedness (Douglas and Wildavsky, 1982). This perspective argues that different ways of life (cultures or social structures) determine the evaluation of risk. The risk that endangers the value orientations behind the individuals’ social ways of life is defined as the most harmful risk (Ibid). The grid/group variables are represented as a pair of orthogonal axes that produces four quadrants, each one corresponding to a cultural standard defined by the strength of its grid and group characteristics (Landford, 2000). Douglas and Wildavsky deduced four ways of life/biases: hierarchist—fears concerning attacks on the social order; individualist—fears of social regulations; egalitarians—fears about the environmental risk and social equality; and fatalist—afraid of almost everything (Douglas and Wildavsky, 1982; Plapp, 2001).

Douglas and Wildavsky looked for the reason why particular kinds of danger are selected for attention. The authors claim there are three peculiarities to considering risk: (1) the disagreement about the problem of risk is widespread in the Western world; (2) different people worry about different risk (natural hazards, toxic chemicals, war, etc.); and (3) knowledge and
action are out of sync (Douglas and Wildvasky, 1982: 1). They state, “since no one can attend to everything, some sort of priority must be established among dangers; otherwise, merely counting risky objects would leave us defenseless” (Ibid, p. 3). No one person has total knowledge, or awareness, of the risks faced. The author’s state, “risk should be seen as a joint product of knowledge about the future and consent about the most desired prospects” (Ibid, p. 5). They argue, “when addressing questions of acceptable risk you must also consider people’s social aspects or we could be addressing the wrong problems” (Ibid, p. 6). Cultural theory of risk perception sees the social environment, the selection principals, and the perceiving subjects as one system. Douglas and Wildavsky state, “once the idea is accepted that people select their awareness of certain dangers to conform with a specific way of life, it follows that people who adhere to different forms of social organization are disposed to take (and avoid) different kinds of risk to alter risk selection and risk perception, then, would depend on changing the social organization” (1982: 9).

Selected awareness of risk can possibly be explained by understanding how people perceive involuntary risks versus voluntary risks (Douglas and Wildavsky, 1982). The authors note, “there is a prima facie plausibility in assuming that individuals make a strong distinction between risks that they undertake knowingly and risks that are imposed on them” (Douglas and Wildvasky, 1982:16). Involuntary risks are those that are imposed by the larger society. Douglas and Wildavsky (1982) suggest ‘involuntary’ activities differ in that the criteria and options are determined not by the individuals affected, but by a controlling body. Such control may be in the hands of the government agency, a political entity, a leadership group, an assembly of authorities, or ‘opinion-makers.’ For example, The Bayou community protests the involuntary risks of erosion and oil and gas activities, which they do not control. Another
important note is that people often take on some risks for other benefits. People can choose to live in areas that are prone to natural disasters, but accrue the benefits of living in these areas because it provides them with a comparative advantage. For example, The Bayou community has voluntarily chosen to live in an area that is prone to seasonal hurricanes because this same area is the source of their sustenance and cultural heritage. It is their tradition, part of their identity, to anticipate, confront and survive seasonal storms.

In summary, because of the community’s unique topography, socio-economic history, and the natural and anthropogenic risks it encounters, it provides an interesting ethnographic addition to the risk perception literature. It is important to document how and why they reconcile the risks they encounter and their efforts to reproduce a distinctive culture connected to this unique place.

The preceding sub-section is a review of recent work based on empirical studies that are exemplary of the methodological approaches summarized above. Following is an overview of literature on risk perception connected to culture, gender and race, and then ecology. Next is a literature section with a treatment of place attachment. This chapter concludes with an evaluation of the research question.

3.3 RISKS AND CULTURE

Empirical experiences of risks and how individuals frame them are determined by the culture within which individuals exist (Douglas and Wildavsky, 1982; Plapp, 2001). According to Plapp, “…there are several factors which influence risk perception: the characteristics of the risk source itself, worldviews or values, ethnic-cultural and socioeconomic background, and personal variables such as profession” (2001:3). Many researchers argue that risk perception is a socially constructed process (Douglas and Wildavsky, 1982; Plapp, 2001; Lai and Tao, 2003).
Because risk perception is socially constructed and dependent upon an individual’s culture or society, it is important to understand research done in different cultures. This section reviews recent empirical studies on risk perception within different cultures.

In their Hong Kong study, Lai and Tao note “adaptation and response to environmental risks—whether behavioral or cognitive—are determined jointly by aspects of the risk situation itself and the characteristic ways in which an individual approaches, thinks about, and interprets these kinds of situations” (2003: 669). The researchers employed the widely used psychometric paradigm or cognitive map, but adjusted the questionnaire to the context of the local culture (i.e., listed destruction of feng shui). The researchers conclude that since they investigated a different culture, it was necessary to create a list of hazards that were more relevant to their Asian location. Further, they explain that individuals who share similar life experiences, attitudes, and values might have the same perspective on natural phenomena (Ibid). Lai and Tao state, “consequently, these individuals will be more likely to arrive at similar evaluations of risk than their counterparts in different cultures” (2003: 670).

The Hong Kong sample included 167 participants distributed across different age, sex, and educational groups. The survey consisted of three different parts. The first inquired about the degree of threat at the local and the global level for each of the twenty-five predetermined environmental hazards. The participants were asked to rank the degree of threat from ‘1’, being no threat at all to ‘7’, which is the most extreme threat. The second part of the survey examined six risk characteristics for each of the twenty-five hazards, which were further divided into six sections. Again, participants ranked each characteristic using the seven-point scale. The final part of the survey gathered information on the participants’ age, sex, education, and other
demographic dimensions. All of the ratings were put into a statistical model to rank the results by the appropriate means rating.

Lai and Tao found that the participants perceived car pollution at a mean score of 5.69, radioactive fallout from nuclear power plants with a score of 5.33, chemical waste at 5.30, and second-hand smoke with a 5.25 score. These were the factors that most respondents felt posed the highest threat to the ‘local environment.’ The top four threats to ‘global environment’ were radioactive fallout from nuclear power plants with a mean score of 6.16, chemical waste at 5.86, car pollution at 5.51, and finally, germs and microorganisms at 5.39. The researchers concluded that Hong Kong residents are inclined to perceive environmental hazards as only a ‘moderate threat.’

Moreover, the researchers discovered that the “less educated in the current study perceive a higher threat level to the local environment, probably due to the stronger influence of news media on the perception of this group. More educated individuals may base their judgments on objective knowledge and reliable information on local impact of environmental risks, [and]…older individuals tended to judge that hazards are more threatening than did the younger group” (Ibid, p. 681). In their discussion, Lai and Tao reiterate, “culture plays a crucial role in providing a collectivity of individuals with a system of meanings including symbols, rituals, norms, and values so that what is threatening and not threatening can be identified” (2003: 683).

In another study, Bronfman and Cifuentes (2003) conducted research evaluating risks perception in Chile. They note, “the more a country develops, the greater becomes its population’s concern about hazards and the greater the demand for their control and regulation” (Ibid, p.1271). They characterized the risk perceptions in Chile based on the psychometric paradigm, “…assuming that what individuals subjectively understand as risk may be influenced
by a range of psychological, social, institutional, and cultural factors” (Ibid, p.1272). The researchers explain that one of the problems with applying the psychometric paradigm is that one can only analyze aggregated data, which is not distinguishable between individuals and groups of individuals.

This Chile study’s goal was to reduce the gap between the understanding of personal risk and social risks. In order to achieve this, they developed a survey in which subjects were to quantify sixteen attributes and three risk constructs for fifty-four hazards. They employed the most common hazards referenced in the literature in addition to adding hazards that relate to the Chilean situation, such as cocaine, ozone layer depletion, and cellular phone transmission antennas hazards. They used the seven-point scale in four questionnaires. Two of the questionnaires also included a ten-point scale to rate personal and social risks and benefits. They selected their subjects using convenience sampling and contacted them personally, either going to their home or workplace. They concluded that there was an ordinal continuum of risk among Chileans, with the highest social risk being forbidden and addictive substances, followed by natural disasters, social ills, and environmental hazards. However, the highest personal risk was environmental hazards—ozone depletion received the highest score—transportation hazards, natural disasters and social ills. The authors concluded that there were limitations of the study. First, they used convenience sampling, which does not represent the entire population. Second, the majority of their sample had a relatively high educational level, which might have influenced the ratings.

Although the Hong Kong and Chile studies adopt cultural factors into their surveys, they both fail to document clear understandings of why people rate risks the way they do depending on their cultural make-up. Such cultural findings were not documented, because respondents
were given quantitative surveys instead of being asked open ended questions that lead to a more in-depth understanding of risk perception. According to a study by Langford et al. (2000), participants of a risk perception study, which used a mixed methodology, commented on how difficult it is to express their opinions clearly in questionnaires.

Additionally, despite the significance of these studies’ findings, their credibility may be limited by the fact that intracultural comparisons have not been carried out in either study. For example, in the Lai and Tao (2003) only the city of Hong Kong was surveyed, and since risk perceptions studies and yet to be done throughout the country, the authors had no other provenances to compare their findings with.

### 3.4 RISKS, RACE, AND GENDER

There is a sizeable difference between how risks are evaluated among different races (Flynn et al., 1994) and how men and women perceive risk (Ibid; Lai and Tao, 2003). Flynn et al. contend, “there are few data regarding how people of color perceive the risk to which they are exposed” (1994: 1101). Because of the emergence of “environmental injustice” issues, the researchers conducted a study looking at the effects of race and gender on the perception of environmental health risks. The data for the study came from a national survey in the United States in which a random sample of 1512 English-speaking persons where interviewed by telephone. The objective was to obtain information on people’s attitudes, perception, knowledge, and beliefs about environmental risks (Ibid).

Overall, the study found that non-white females had higher mean risk ratings than that of white females; white and non-white males differed significantly on four-fifths of the twenty-five items in question; and females had higher mean ratings than males. In conclusion, they found that non-white males and females of all races are much more similar in their perceptions.
regarding risks. Also, white males are distinct in regards to attitudes towards risks. The results led the researchers to alter the gender framework toward a more sociopolitical one. They state, “perhaps white males see less risk in the world because they create, manage, control, and benefit from so much of it” (Ibid, p.1107). These findings echo a previous study by Savage (1993), which concluded that blacks felt more threatened than whites by a variety of hazards and that women perceived themselves as threatened more than men.

Gender was also an issue in the Hong Kong study by Lai and Tao (2003). The researchers concluded that “women are in general more concerned about environmental issues than are men, and have a stronger belief that environmental quality would have important consequences for the well being of human kind” (Ibid, p. 681).

In summation, research shows that there is a sizable difference between risk perception among different genders and races. The current study looks at a marginalized minority that is confronted with both the slow onset threat of land degradation and the fast onset threat of seasonal storms and oil and gas spills. However, the study does not look at white communities living in the same area, and thus does not allow for an analysis of the ways in which race shapes perceptions of the area’s risks. Furthermore, there is no comparison of how men and women within The Bayou perceive risk, and thus no analysis of risk perceptions based on gender. Future research should be aimed at doing more in-depth comparison studies to possibly explain why there are gendered and racial differences regarding risk perception.

3.5 RISKS AND ECOLOGY

The following literature evaluates perceptions of risk towards ecology and environmental conditions rather than concentrating on people’s health or property. Axelrod et al. (1999) evaluate lay perceptions of risk to the health and productivity of natural environments associated
with natural hazards. The researchers state, “actions to prevent a natural disaster (e.g. building levees) or reduce the impact of a disaster (e.g., reinforcing structures against earthquakes) can greatly reduce perceived risk” (Ibid, p. 32). People who live in areas at high risk from natural hazards learn to live with the risk (Burton and Kates, 1964). The Axelrod et al. (1999) investigation employed the psychometric risk perception framework to determine whether natural hazards are perceived to be a risk to the ecology. Through factor analysis, sixty-five items were attributed with the appropriate mean score. The items included natural hazards (i.e., drought, volcanoes), technologies and human practices (i.e., driving automobiles), specific human beliefs on social systems (i.e., capitalism) and ecological concerns (i.e., habitat loss, global warming). One factor analysis found that people regard the ‘loss of animal and plant species’ to have the most impact on nonhuman species. ‘Infringement on the rights of species’ and ‘amount of animal/plant suffering’ followed respectively. Another factor analysis found that natural hazards like earthquakes and drought were perceived by people as posing the highest risk to human health but posing little risk to species loss. Deforestation, clear cutting, and untreated sewage disposal were rated as the highest risk to species loss.

Moreover, the researchers conducted a series of focus groups comprised of a wide range of people, from technical experts to 11th grade high school students. The focus groups were conducted to understand the range of events that people associate with ecological risk, and data from them showed that natural hazards are perceived as a risk to human health as well as the health of other species.

Another study, conducted by Langford et al. (2000), explored public perceptions of the possible health risk of polluted coastal bathing waters in the United Kingdom. The researchers applied cultural theory and used a mixed methodology of quantitative analysis from survey
interviews and qualitative interpretation from focus groups to understand how different cultural solidarities view certain issues. The questionnaires were completed by 197 individuals living in a city of 200,000 inhabitants. Those interviewed were chosen systematically (every third house) from a structured sample based on areas of different housing types. The study employed four focus group discussions, which incorporated individuals with similar age/sex mixtures but who were at the extremes of the four cultural theory scales (i.e., hierarchists, egalitarians, fatalists, individualists). The authors concluded, “reservations were expressed about the unrepresentativeness of small focus groups, but participants also commented on difficulties in expressing their opinions clearly in the questionnaire” (2000:701).

Both the Axelrod and Langford studies used mixed methodologies, but each found that the focus groups were most insightful. This suggests that more qualitative approaches should be adapted in the risks perception literature. Additionally, although risks perceptions perspectives tend to consider culture, they give very little attention to place. The following is a review of the relevant literature on “place attachment” that treats the issue of location directly. Understanding a community’s attachment to place may give insight into why and how they perceive and process risk.

3.6 PLACE ATTACHMENT

The concept of place attachment is a cultural phenomenon that lies between the concept of panhuman tendencies and landscape affection (Riley, 1992). According to Riley, “the idea of landscape attachment as culturally determined is, chronologically and evolutionarily, a logical step beyond biological universality, as the landscape itself becomes more and more affected by, and finally mostly made by, human culture” (Ibid, p. 15). Place attachment is the symbolic relationship between a people and the place it occupies. It is formed by giving culturally shared
emotional meanings to a particular space or piece of land that provides the basis for the individual’s or group’s understanding of and relation to the environment (Low, 1992). Place attachment consists of a variety of parallel ideas, including genealogical linkage to the land through people’s history or family lineage (Ibid), linkage through land loss or destruction of community (Ibid), community identity and symbolic placement (Hummon, 1986), and attachment through life course (Rubinstein and Parmelee, 1992). The following is an overview of several place attachment concepts as they relate to The Bayou.

In the community under study, there is evidence of an overwhelming genealogical attachment to place. This variant refers to a correspondence between people and place based on family and historical ties that are encoded in languages and cultural practice (Low, 1992). People find attachment to the linkage of people and land through historical identification and between place and family or community in their particular geographic location (Ibid). In The Bayou, residents trace their indigenous roots back two to three hundred years, a phenomenon reflected in both the collective community memory and in nearby native burial grounds.

Collective social attachments to places are especially salient during times of relocation, upheaval, and environmental disasters (Altman and Low, 1992; Oliver-Smith, 1996; Hummon, 1992). When a loss or destruction of the land occurs—through resettlement or disaster, for example—the impact evokes emotional reactions that are very similar to bereavement, mourning and grieving (Low, 1992). For example, Oliver-Smith’s (1986) study of the aftermath of the 1970 massive earthquake in Yungary, Peru, demonstrates evidence that ‘place attachment’ disruption is associated with the destruction of land. The people in this community grieved the loss of their land and strongly resisted relocating to a safer place. Brown and Perkins suggest,

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6 Resettlement is a symbolic destruction of place in that the particular place no longer exists within the cognitive framework of the individual or community.
“[the] study of disruptions in psychological processes can provide insight in their [victims’] pre-disruption functioning as well as the disruptions themselves and their consequences” (1992: 279). Brown and Perkins (1992) note that involuntary relocations often follow natural forces, such as hurricanes or human actions like toxic contaminations. In the case of the community under study, both these natural and technological forces threaten to involuntarily relocate them.

Disruptions like the ones mentioned above threaten self-definitions or identity—individual and communal—which are integral to understanding place attachment (Ibid). Brown and Perkins note that “physical settings and artifacts both reflect and shape people’s understanding of who they are as individuals and as members of groups…negotiating one’s place in society requires both individual and communal aspects of identity” (1992: 280). Evaluating people’s subjective perceptions of their environments, Hummon states, “sense of place is dual in nature, involving both an interpretive perspective on the environment and an emotional reaction to the environment” (1992: 262). Whatever the balance of cognitive and emotive components, sense of place involves a personal orientation toward place. An individual’s understanding of place or feeling about place is formed within the context of environmental meaning (Ibid). Some scholars theorize that people-place relationships are created in distinct environments. Through the interaction of technologies and resources, people adapt to the constraints and opportunities of their setting, impacting all aspects of human habitation (Low and Altman, 1992). Altaman and Low suggest that “…there is evidence that environmental factors are incorporated into cultural strategies through narratives and symbols, rather than being direct deterministic influences” (1992: 8-9)

The symbolic and material interactions with place that construct attachment occur over the lifetimes of individuals and communities. Rubinstein and Parmelee (1992) suggest that
attachment behavior begins early in life. The authors explain that as individuals develop, place attachment reflects current experiences and memories of past ones. These exist within the larger context of life course events and how they are interpreted in order to maintain a coherent sense of self over time. In their study, they found that place attachment is especially significant for older people because: (1) feelings about one’s experiences in places may be an important part of remembering one’s life course and thus of organizing a lengthy life span; (2) attachment to a current place may be a way of strengthening the self; (3) attachment to a current place may be a way of representing independence.

Place attachment literature is relevant in this particular study because the community being researched is intimately embedded within its location. There is overwhelming evidence of genealogical place attachment in The Bayou. The residents find identity in their livelihood, history, way of life, and land. Moreover, residents that have involuntarily moved out of the bayou, go through a mourning period from “disruption place attachment”, as was the case in Oliver-Smith’s (1986) study of Yungary, Peru. To better understand risk perception and place attachment, this study employed ethnographic approaches for more in-depth exploratory findings. These methods are discussed in chapter 4 (see p.36).

3.7 RESEARCH QUESTION

The literature offers an array of frameworks that focus this investigation. The psychometric paradigm suggests that individuals can understand and rank risk. Cultural theory suggests that different social orders determine the varying ways individuals perceive and respond to risk. The many empirical studies based on these perspectives deepen our understanding of how different regions and demographic characteristics determine risk perception. The Place Attachments literature adds a local dynamic based upon the genealogical, place disruption,
identity and life course associations that bind people to particular geographic environments.

Combining the risk perception and place attachment frameworks to understand how residents perceive and respond to the varied risks facing the community today, this study focuses on the following research question: Why does a marginalized community with few resources choose to stay in an area that they perceive to be burdened with environmental and social threats, as opposed to relocating to an area perceived as less risky? In other words, why do these already vulnerable people have such a strong attachment to a place that compromises them even further? The research question was answered using an ethnographic approach through various qualitative methods. The ethnographic approach allows this research to get a more descriptive understanding of how the community perceives and deals with the various risks it endures.
CHAPTER 4: METHODS AND DATA

The methodology employed in this study does not consist of ‘mental models’ as described in the psychometric paradigm that employs survey methods. Nor does this study use the grid/group cultural theory analysis to understand the residents social order, which is theorized to determine their perception of various risks. Because this study is evaluating the individual and group accounts of a small close-knit community, the ethnographic approach of exploratory methodology was preferred. The ethnographic methods employed were: participant observations, qualitative interviews, a video ethnography, and a focus group session on risk. This combination of ethnographic techniques allows for a more descriptive and complete account of individual and group memory with regard to risks and strategies. As opposed to having a pre-planned survey of questions, this open-ended format encourages subjects to brainstorm, reflect and freely comment across many dimensions.

The advantage of doing qualitative research is that it allows for a rich description of the social dimensions under study. Oral histories, intensive interviews, and focus group techniques give detailed information that is constructive in developing an accurate portrayal of human activity. However, qualitative data is usually abundant and can be hard to categorize. Therefore, longer periods of analysis are required to obtain themes from qualitative data and summaries are difficult to create.

This chapter is set up in the following manner: a description of the ethnographic approach; a depiction of the research setting, population and sample; a portrayal of the interviewee demographics; an overview of participant observations and qualitative interviews; an ethnographic depiction of video ethnography; a detailed narrative of the focus group on risk; and a review of the method used in the analysis.
4.1 ETHNOGRAPHIC APPROACH

Ethnography is a qualitative methodology that seeks a thorough description of a particular stratum of the social world by “telling the story of how people, through collaborative and indirectly interdependent behavior, create the ongoing character of particular social places and practices” (Katz, 1997: 414). The culture-sharing group “…is the unit of analysis for the ethnographer as he or she attempts to understand and interpret the behavior, language, and artifacts of people” (Creswell, 1998:245).

The history of ethnographic research can be divided into five ‘moments’ (Denzin and Lincoln, 1994; Atkinson and Delamont, 1999). The first, 1900 to 1950, is associated with the positivistic epistemologies of the Chicago school. The ‘modernist moment’ from 1950 to 1970 is associated with the second Chicago school, led by Hughes, Geer, Becker, Strauss, and Gusfield. The third moment begins in the 1970s, an era of ‘blurred genres’, where a reaction against positivism emphasized interpretive methodologies. In the mid 1980’s, the fourth moment espoused a new awareness of ethnographic writing where field notes were viewed as open works to be reinterpreted and reflexivity was taken seriously. The fifth moment, or postmodern challenge, brings us to the present, where various competing theories and methods compete.

The classical Chicago school drew upon anthropological ethnography to develop participant observation as the underlying method of fieldwork (Ambert et al., 1995). In this technique, the researcher manages ‘entry’ into the world to be studied, establishes ‘rapport’ with key informants or ‘gatekeepers’ and successfully acquires ‘access’ to places, people and interactions over the time period required. The ongoing debate over participant observation revolves around the degree of access the researcher should obtain. Positivists agree that knowledge of a culture can be drawn through simple observation without much interaction, while
the ‘new ethnography’ (Becker, 2001) requires the researcher to possess an extensive knowledge and expertise of the culture, which requires more participant rather than just observation.

Field notes are the participant observer’s main tool. There are two perspectives that can be employed in the study of a cultural system. They are ‘emic’ observations of a specific culture and informants’ actions. The ‘emic’ perspective focuses on the intrinsic cultural distinctions that are meaningful to the members of the group or given society. The researcher gets an ‘insider’ or ‘native’ interpretation of the customs and beliefs. Concluding the data collection phase, the researcher initiates an ‘etic’ process of analysis and explanation in an attempt to portray deeper significance (Jackson, 2004). The ‘etic’ perspective relies upon the extrinsic concepts and categories that have meaning for scientific observers. In other words, the ‘etic’ is the external researcher’s interpretation of the ‘emic’ customs or beliefs. The debate over the editing of post-field notes typifies the recent dilemma over the legitimacy of ‘interpretive’ ethnographic writing and film/video presentations.

Through using the ethnographic approach method, this study was able to understand and document—both visual and oral—accounts of risk perception in a community besieged by environmental and social threats. These accounts emerged from the relationship formed throughout this investigation. The relationship between the residents and the researcher, allowed for an emic interpretation of the community. The emic understanding could only be accomplished through gaining legitimacy and earning trust in the community. The trust allowed the researcher to be a participant rather than just an observer.

4.2 RESEARCH CONTEXT, POPULATION, AND SAMPLE

Research Context: This study is part of a National Science Foundation-funded project that started in January 2004. The project aims to use a Participatory Action Research (PAR)
method to work with a small coastal community in southeastern Louisiana who formed a non-profit organization to “save their heritage and land” for future generations. The community lacked the expertise and networks to accomplish their goal so they agreed to work with a team of experts. The experts consist of a cross-institutional and multi-disciplinary team employing the PAR method, which consist of six universities and several local experts including officials working in fisheries, disaster recovery, economic development, leadership development, housing issues and coastal erosion.

PAR methodology promotes the involvement of a variety of disciplines and expert knowledge levels in order to generate benefits for both the academics—funding, publishing and professional networks—and the community—funding, leadership building, political networks, and the preservation of their local heritage (Park, 1992; Reason, 1994; Stoecker, 1997). The expert-layperson resident collaboration reflects the recent widespread adoption of bottom-up participations as opposed to top-down modernization approaches (Sillitoe, 1998). The experts of this project hypothesized that by sharing knowledge and networks around a common cause of understanding, the community might fulfill its cultural goals.

The research for this risk perception study began in April 2004, when the researcher joined the already-active NSF-PAR project. There have been twelve interviews, which took place either in the community center, a resident’s home or boat, and one interview was completed at a nearby donut shop. However, the majority of the data was gathered in the setting of the community center. There have been seven group meetings in the community center where researchers and residents discussed the PAR project. Descriptive ethnographic field notes were taken on each account. The following is an account of one of the seven group discussions to describe the setting.
On the first visit, a group of researchers and myself arrived at the community center located in the bayou (see Figure 10A) and were welcomed—in fluent Cajun French—by a few of the residents. After a bayou boat tour around “the village,” (see Figure 10B) our research team and residents assembled in the community center, where we held a focus group discussion on the community’s socioeconomic and environmental situation.

Figure 10. (A) Pictorial description of the community center and (B) view of The Bayou.

The group included six community members and seven researchers ranging in fields from civil engineering, community planning, environmental studies, sociology, and one faith-based practitioner who works in communities threatened with disasters. Lasting several hours, the meeting covered the present social and environmental hazards facing the community. For the most part, the residents spoke and the experts listened and took notes. Occasionally, an expert would ask a clarifying question. The engineer inquired into the “building structures” and disaster preparation before storms (i.e., boarding up windows); the community planner asked about the effects of recent hurricanes—the impacts of wind, flooding, debris on the marsh, and damage to land and homes; an environmental scientist asked about their procedures for securing FEMA disaster funds; the sociologist asked for a history of how the community came to live in the area.
The community members answered each question and elaborated. These accounts are documented through ethnographic field notes, which have been coded and analyzed in the findings section (see p. 68). The seven PAR group meetings were similar in setting and content of discussion was always based around social or environmental risks.

**Population and Sample:** This ethnographic study explored the individual accounts of risk perceptions, by a culture-sharing group besieged with various risks. Furthermore, the study aimed to understand how individuals of the community prepare for, deal with, and recover from risks. These accounts would not have emerged from a structured one-time quantitative survey. However, by using qualitative methods the community produced a rich ethnographic understanding of how this culture anticipates, evaluates, and deals with various risks. In order to understand the community’s evaluation of risks, personal trust bonds had to be created between the researcher and the subjects. Over time, as these bonds of trust were established, the researcher observed, documented and interviewed a select group of community knowledge keepers.

The first two interviews were arranged at a community meeting. This led to a third interview and then a fourth. There have been total of twelve interviews out of the reported sixty-five that live in the community. Five have been male and seven female. For the purpose of this study, only nine interviews were used for risk analysis. This is because the other three interviews were geared towards obtaining an oral history instead of risk perception. However, the accounts from the three oral history interviews were used and incorporated in Chapter 2. Of the nine interviews that were used for risk perception analysis, five were female and four were male. Some residents have moved out of The Bayou for lack of resources. However, these residents routinely visit, and two interviews were conducted with ex-residents. Also, on three
occasions there were impromptu and unstructured encounters with ex-residents during passing visits. Although these were impromptu encounters, the conversations were able to document why these residents had chosen to relocate and the prospects of their return.

During the video documentation of a shrimp trawl, there were three community members (two male, one female) on board along with a colleague, the digital video operator, and myself. Seven community members participated in the focus group (three male and four female).

4.3 INTERVIEWEE DEMOGRAPHICS AND DESCRIPTION

This section describes the residents who participated in the following qualitative events: the nine interviews used in risk analysis, the video ethnography, and the focus group discussion. Some residents only participated in one of the events and others participated in all three. Additionally, some of the described residents participated in several of the seven PAR group meetings, where their accounts were documented by ethnographic field notes and used in the analysis process. The descriptions below entail the individuals’ demographics, personal description, and participation fulfillment in this study. The names given to the residents were created for anonymity purposes.

Mr. Cane: This life-long male resident is 87 years old. He identifies himself as French and Native American and speaks fluent English and Cajun French. He has a slender face and frame, red-toned dark skin, and has lost his vision and one leg due to diabetes. He is a veteran who fought in World War II. Tunes from his harmonica can often be heard throughout The Bayou. He is a nice and gentle man, with whom it is always a pleasure to speak. He participated in an interview and attended three of the PAR group meetings. However, he is usually somewhat of a silent voice during the meetings.
**June:** This resident was not born in The Bayou. However, she has been living on The Bayou over the past twenty years. She is in the 35-50 age range. She has pale skin, dark eyes and hair, and can always been seen with a smile. She is married to the assistant pastor of the church and has two children. This resident is a schoolteacher outside of The Bayou. She participated in the focus group discussion and has attended two of the PAR group meetings.

**Picasso:** This life-long male resident is in the 35-50 age range. He self-identifies as Native American and French and speaks English and Cajun French. He has high cheekbones, almond shaped brown eyes, and dark hair and skin. He is a shrimper and trapper and never wants to do anything else. He lives on The Bayou and owns his own shrimp boat. He is the community artist and enjoys painting detailed shrimp boats. He has a down-to-earth personality and can always be seen smiling and joking around with his brother. This resident was the captain of the shrimp trawl documented on video. He also participated in the focus group discussion and has attended three PAR group meetings.

**Muncel:** This male resident is in the 35-50 age range. He is a life-long resident who identifies as Native American and French and speaks English and Cajun French. He, just like his brother, Resident 3, is a shrimper and trapper. He has a slender face with high cheekbones, brown eyes and dark hair and skin. He has a very youthful look and is full of life. He is soft-spoken and enjoys hanging out with his brother Picasso. He participated in the focus group discussion and has attended three PAR group meetings.

**Meda:** This resident is termed in the study as one of the ‘gatekeepers.’ She is a life-long resident, who identifies as a mix of French, Atakapa and Houma Indian. She speaks fluent English, Cajun French, and Spanish. She has high cheekbones, long braided black hair, big brown eyes, and has tan skin. She enjoys reading and is a member of the Arbor Foundation. She
is the most vocal resident, who often times can tower over other residents’ voices. Her home was destroyed during the 2002 storm season. Consequently, she, her handicapped father, and daughter live in the community center. She works outside the community in a specialty shop. This resident has been the key informant during this research. Her interview took place on the front steps of the community center while she peeled shrimp. Additionally, she was part of the focus group and has attended six PAR meetings.

**Bly:** This resident is a life long community member, who self-identifies as Cajun French and Native American. She speaks English, Cajun French, and some Spanish. She has high cheekbones, round brown eyes, dark hair and skin, and she is in the 55+ age range. She has little education but is articulate about the ecological environment of the community. She has one brother, who became a preacher at sixteen years old. When he left The Bayou, she was a young girl, and she then started trapping and shrimping with her father. She says, “I was my daddy’s boy.” She is a homemaker and lives in a home on The Bayou with her mother and her daughter. She has participated in the PAR project from the beginning and continues to be involved. She sees herself as the ‘voice’ of the ‘silent community’—members who cannot always attend the events. She avoids conflict and acts as a mediator during disagreements among community members. She is a very humble, warm, and a sweet person who is always willing to help the project and community. This resident has acted as one of the primary informants during this study. Her interview took place at the community center. After the structured interview, she attended the night trawl where she was casually interviewed on camera. She was also part of the focus group discussion and has attended five PAR meetings.

**Cade:** Another community member interviewed is a young female who is nineteen years old. She self-identifies as Cajun French, Native American, and Polish. She attends college away
from The Bayou (approximately 2.5 hours away) and has been a life-long resident of the community. She hopes to some day be a Pharmacist. This petite young girl has brown almond shaped eyes, high cheekbones and long dark hair. She can always be seen wearing a big smile. She has participated in the PAR project since the beginning and continues to do so, being more active in the summer months when she is not in school. This resident has been a key informant throughout this study. Her interview took place inside the community center. This resident was also part of the focus group discussion and attended five of the group meetings.

**Sal:** A male life-long community resident in the 55+ age range was interviewed. He self-identifies as French. He speaks both English and Cajun French. He has been a fisherman most of his life, but did work outside of the community for some time. This is a frail, small, dark-skinned man, who looks as if he has worked hard outdoors all his life. His answers were short and his view of The Bayou was ‘matter of fact.’ He remembers a better time on The Bayou and talked about how it has changed over time. The interview took place at a donut shop in a nearby town. Other than the interview, he has not been active in this research.

**Shay:** Another interview was conducted with a male ex-resident who is in the 55+ age range. He self-identifies as Native American, French, and Spanish. He speaks all three languages. He has a twin brother and grew up in the community fishing, crabbing, shrimping, and trawling with his dad and neighbors. However, he moved out of The Bayou because of the excessive land loss. Today he lives about 45 miles away but hopes to retire and build a home in the community where he grew up. He is a tall, husky, dark skinned man who works outdoors. He has been a fisherman for most of his life, taking odd jobs in the oil industry between seasons. Today, he and his son are shrimpers and oyster harvesters. He owns a shrimping boat and several oyster leases. The interview took place on his boat. His son was also part of the
interview but had little to say. Other than the interview, he and his son have not been involved in this research.

Peter: This male resident is a life-long community member in the 55+ age range. He self identifies as Native American and French. He speaks English, Cajun French, and some Spanish. He is tall and slender with high cheekbones, brown gentle eyes, with dark hair and skin. Often times, he will break into singing French tunes he learned as a young boy. He is the most loquacious of the men in the community. He grew up as a shrimper, crabber, oyster harvester, and trapper. However, in order to support a family he has chosen to work outside the community. He is also the assistant Pastor of the community church and captain of the school bus boat. This resident has been a vital informant in this research. He was interviewed in a home on The Bayou. Additionally, he was part of the focus group and has attended three of the PAR group meetings.

April: This female resident married into The Bayou and is in the 35-50 age range. She has two sons and one daughter with a male resident of the community. She is married to the brother of the assistant Pastor. She has strawberry blonde hair, pale skin, and freckles. She is a spirited and opinionated woman who is always willing to help the community. Many consider her the ‘secretary’ of the community. On her wedding day, 23 years ago, her father-in-law forgot to pick her and the bridesmaids up from the schoolhouse. She ended up being late to her wedding, which only lasted about ten minutes. Her interview was conducted in her home. She was also present during three of the PAR group meetings.

Mel: This individual recently moved out of The Bayou. He has a home both in Tennessee and ‘up front’ (a term used to describe moving out of the bayou and into the city). He is in the 55+ age range. He is a tall, slender man with dark hair and skin. He grew up shrimping
and trawling on The Bayou, but now lives far away from this way of life. He regularly visits The Bayou and hopes to return someday when there is more land and security. This ex-resident participated in the video ethnography.

Bena: This individual is a life-long community member and is in the 35-50 age range. She self-identifies as Houma and Atakapa Indian. Her features include high cheekbones, dark eyes, long, brown hair usually worn in a bun, and dark, reddish colored skin. Her tenacious spirit helped organize this community into a non-profit organization. She was once a seafood harvester but now works outside the community at various job sites. She can usually be found at local government meetings that relate to coastal issues. She participated in an interview, which took place on the front steps of the community center. She has been a major force for political purposes and behind the community’s organizing and has therefore been integral to this project. She has participated in six of the PAR group discussions.

The stories and accounts of the residents described above, as well as those from other members of the community, allowed this study to document the oral histories and risk perceptions of this ‘at risk’ bayou community. The ethnographic methods discussed throughout this chapter allowed an ‘emic’ portrayal of this community threatened with extinction. The various ethnographic methods are further discussed below.

4.4 PARTICIPANT OBSERVATIONS AND QUALITATIVE INTERVIEWS

In this study, the ethnographic methods employed primarily consist of participant observations and interviews. Through these data collecting methods, the cultural-sharing group known as ‘The Bayou’ is described and interpreted. Through a series of visits, ‘ride-alongs’ and interviews, the oral histories and risk perceptions of the residents were documented either by
MP3, video, or field notes. These data recording sources have been transcribed and coded for analysis.

Participant observation “offers possibilities for the researcher on a continuum from being a complete outsider to being a complete insider” (Creswell, 1995). The change from outsider to insider through the course of the ethnographic study is documented in the field research (Ibid). There are thirteen participant observations where extensive field notes were taken and incorporated into the analysis. The field notes from the last participant observation taken on June 26, 2005 were not captured in the analysis and findings. It will be used in future publications but is not appropriate in this study, except to acknowledge that the community residents were presented the findings of this study.

The following table lists the dates of participant observations, where extensive field notes were taken. These field notes were coded, which is further explained in the section 4.7 (see p.63). “In writing an ethnographic test, the writer organizes some of [the] themes into a coherent “story” about life and events in the setting studied. Such a narrative requires selecting only some small portion of the total set of field notes and then linking them into a coherent text representing some aspect or slice of the world studied” (Emerson et al., 1995: 170). Further, the field worker must return to the field notes to look for potential excerpts to develop the story line (Ibid). The field notes were captured in the analysis by linking observations and themes taken from the transcripts of interviews. Additionally, some field notes were quoted in the findings section. The resident’s accounts from field notes were chosen based on the relationship between risk perception and place attachment. The field notes from the participant observations allowed a more emic portrayal of the community’s perception of risks, and how those risks threaten their attachment to place.
### Table 1: Participant Observations

<table>
<thead>
<tr>
<th>Date</th>
<th>Field Work</th>
<th>Number of Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/10/04</td>
<td>Participant observation -community meeting</td>
<td>5 hours</td>
</tr>
<tr>
<td>6/17/04</td>
<td>Participant observation -community meeting</td>
<td>3 hours</td>
</tr>
<tr>
<td>06/28/04</td>
<td>Participant observation - community meeting</td>
<td>3 hours</td>
</tr>
<tr>
<td>07/26/04</td>
<td>Participant observation and interviews</td>
<td>3 hours</td>
</tr>
<tr>
<td>8/6/04</td>
<td>Participant observation and interviews</td>
<td>3 hours</td>
</tr>
<tr>
<td>10/16/04</td>
<td>Participant observation - community meeting</td>
<td>3 hours</td>
</tr>
<tr>
<td>10/30/04</td>
<td>Participant observation and interviews</td>
<td>3 hours</td>
</tr>
<tr>
<td>11/7/04</td>
<td>Participant observation, interviews, and video ethnography</td>
<td>6 hours</td>
</tr>
<tr>
<td>11/29/04</td>
<td>Participant observation, interviews, and community meeting</td>
<td>5 hours</td>
</tr>
<tr>
<td>12/1/04</td>
<td>Participant observation - community meeting</td>
<td>4 hours</td>
</tr>
<tr>
<td>1/18/05</td>
<td>Participant observation -community meeting</td>
<td>3 hours</td>
</tr>
<tr>
<td>2/18/05</td>
<td>Participant observation and interviews</td>
<td>3 hours</td>
</tr>
<tr>
<td>2/27/05</td>
<td>Participant observation and risk focus group</td>
<td>5.5 hours</td>
</tr>
<tr>
<td>6/26/05</td>
<td>Participant observation, PAR focus group, and presentation of findings</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Intensive interviews were conducted around open-ended questions that sought to draw out resident’s risk perceptions of both natural and anthropogenic risk without prejudicing their responses. Structured interviews were conducted over a four-month period beginning on July 26, 2004, and running through February 18, 2005.\(^7\) Twelve face-to-face interviews with residents were completed for the NSF study. For the purpose of this risk perception study, only nine structured interviews out of the twelve were coded and used in analysis. The three unemployed interviews were geared toward oral history and not risk perception, therefore were not valid for risks analysis. However, the accounts from the three oral history interviews were captured in Chapter 2.

Of the nine interviews used for analysis, five were female and four male. All of the structured interviews were conducted in the community center (see Figure 10A) except five.

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\(^7\) As we accomplished our community interviews, we also found it helpful to conduct a reflexive study on the PARs project itself. We have so far interviewed the all main academics and practitioners on the team.
These five were conducted either in the private homes of the subjects or on their boats, and one was completed in a donut shop. The age range of the subject was from 19 years old to 87. Four were male, and seven were female. It was much easier to arrange interviews with female residents. This may be because the men of the community often work long hours during the day and were not interested in being interviewed after work. Interviews lasted from thirty minutes to an hour and thirty minutes. The average interview length was approximately one hour.

Structured interviews were scheduled during daytime hours.

The interview scheduling was most closely related to the snowball sampling technique, where an interview with one respondent leads through word of mouth or introduction to the next respondent. The interviews that were administered were mainly mediated through two gatekeepers. For example, on occasion, I would casually meet someone in the community and let them know that I was a member of the PAR group. Later, if I decided this member was an important source of information, I would contact one of the gatekeepers and ask that they set up the interview. If the gatekeepers were busy, I would get the phone number and make the appointment. On three occasions, the gatekeepers were successful in getting an interview scheduled. But when I arrived for the interview, the subject did not appear. Approximately six times neither the gatekeeper nor I could secure an appointment with a preferred community member. Additionally, there were many impromptu unstructured interviews, which could last from five minutes to as long as one hour. These could occur around scheduled interviews or unexpectedly during visits to the community for official group meetings and personal visits.

The interviews were split into three separate general parts: (1) respondents’ history, (2) their experience with specific hazardous events, and (3) their future expectations for the community. Before each interview the structure was explained to the respondent to prepare them
before the MP3 digital recorder was turned on. It was necessary to frame the interview in three sections because it was found that residents will lead their informative discussion in many different directions. Additionally, it was discovered that although they enjoyed telling stories, these humble people were very measured in the knowledge they offered to outsiders. In order to document the interview effectively, the interview needed to be open-ended but controlled in the direction of the discussion, without stifling the natural story telling facility of the people being interviewed. This segmented strategy seemed to work. For example, when the respondent would start the interview sharing their future hopes for the community—scheduled for later—I would politely offer, “we can talk about this later during the future section, but now we are talking about the past.” The respondent would get back on track and continue with their history. Other times, if the respondent seemed energized to share a story that may have been out of order, I allowed it to go on and found the appropriate place to redirect the respondent back on schedule. This structure and flexible interview management scheme kept the interviews organized and flowing.

The segment on the respondent’s history included the following prompting questions: ‘tell me about your parents’; ‘tell me about growing up on The Bayou’; ‘tell me about going to school’; ‘talk to me about how you have made your living’ (this was asked only if the respondent’s career or labor was offered by them in conversation); ‘tell me about the community today.’ While answering these prompting questions, respondents would invariably offer information on different hazards or events such as storms or coastal erosion. In the case that a respondent did mention a hazard such as these, questions were aimed to probe more deeply to ensure that they had exhausted their experience or attitude on that particular subject. One observation revealed that residents most often spoke of the two particular hazards of storms and
erosion, as these risks were often a topic of conversation among the residents when addressing the academic group. So, before the interviews, these two risks were anticipated to be elaborated on without the structured questions prejudicing their comments or answers.

Discussing hazards within the framework of their history led to segment two of the interview: a specific event. For instance, if the respondent had brought up Hurricane Betsy in the first segment, the respondent would be asked three different questions about that event. First, ‘how did you prepare for the storm?’ Second, ‘what would you do during the storm?’ Finally, ‘tell me about the community after the storm.’ These questions led to responses that gave insight into how this coastal community has dealt with natural disasters over the last two decades. If the event they chose to discuss focused on coastal erosion, they were asked, ‘tell me about the land’, ‘tell me about the water’, ‘and ‘tell me about the animals.’

The last series of questions focused on the respondent’s future hopes or expectations for the community. Such questions were asked, ‘how do you see the community resolving the environmental and social issues it faces?’, ‘what career advice do you give to the young generation living in the community?’, and ‘would you ever consider leaving the community?’

The open-ended questions discussed above allowed for storytelling and focused more on the subjective experience of the participant. For example, a participant might begin to talk about his or her experience in a storm. After asking him or her what happened during the storm, the researcher might ask the interviewee to talk about what that storm was like for them. This type of open-ended approach aims to understand the participant’s subjective experience.
4.5 VIDEO ETHNOGRAPHY

Visual ethnography (photography and illustrations) developed in the late nineteenth century and steadily grew through the early twentieth century (Harper, 1989; Becker, 1998). It was overcome by more generalizable quantitative methods such as surveys in the mid century. While visual sociology concentrated on photography, visual anthropologists experimented with film. Robert Flaherty is considered one of the first film ethnographers with his 1922 “Nanook of the North” (Jackson, 2004). Dziga Vertov, a Russian filmmaker of the same era, developed a style he called ’cinema-verite,’ or film aimed at portraying reality as truthfully as possible.

An American pioneer of ethnographic film was anthropologist Margaret Mead. In the 1930s, she and her colleagues employed visual techniques in their qualitative studies. Mead argued that anthropology was more than mere words on paper, and that researchers should take more than pencil and paper into the field. Mead helped to organize the Smithsonian Institution that would be world renowned for supporting visual research media.

Film ethnography grew less popular among researchers by the 1940s as other methods emerged. However, it resurfaced in the 1950s with French filmmaker Jean Rouch (Jackson, 2004). Rouch is best known for documenting in the cinema-verite tradition. His influence inspired a new breed of ethnographic filmmakers worldwide over the next quarter century.

As ethnographic film developed into the late twentieth century, filmmakers argued, “ethnographic film should represent ‘whole’ cultures” (Pink, 2001: 68). It should avoid extreme close-ups and “attempt to film ‘whole’ contexts, activities and actions, as well as be minimally edited and use only original synchronous sound” (Ibid, p. 68). In contrast, other filmmakers argued for a more ‘reflexive style’ in selection of subjects and activities and assessment and presentation. In short, they wanted artistic control. Some heavily critiqued ‘content analysis’ as
‘the’ method to analyze visual data because “it fragments naturally occurring meanings, subsuming them under the analyst’s categories” (Ball, 1992: 31). Researchers in the symbolist and structuralist camp agreed that naturally occurring meanings “are the keys to a fuller understanding of the culture in which they are embedded” (Ibid, p. 31). They argued that even if one could create film sequences that might be considered an objective physical record of a cultural event, there would remain the question of the meaning of that event (Henley, 1998). This meaning can only be uncovered through ‘active engagement’ between filmmaker and subject. Henley suggests, “the camera acts as a catalyst, provoking events, situations and relationships that are revealing precisely because of their typicality” (1998: 43). “The camera can act as the medium of a trance-like state whereby the filmmaker becomes fully engaged in the lives of the film’s protagonists and thereby achieves an understanding that is inaccessible to those who insist on remaining neutral and distant” (Ibid, p. 43).

In this study, the experience of the film allowed a more in-depth emic understanding of this community’s way of life. To ethnographically understand the ways of life connected to this particular culture, it was necessary to document and experience ‘a shrimpers life.’ This insight can only be uncovered through active engagement.

**A Shrimpers Life:** For this study, the possibility for visual ethnography resulted from a chance opportunity. Filming was not a possibility as the issue of distrust was conveyed over time from many sources. But then in the early fall of 2004, my colleague and I were invited to experience ‘the life of a shrimper’ for one night. During one of our routine research visits, a shrimper we would later call ‘the captain’ asked, “you think you city girls can handle shrimping down here in the bayou with me on my boat?” The resident advised us that if we really wanted to go shrimping, we would need a pair of ‘Cajun Reeboks’ (bright white high water boots) and a
pair of gloves. He also reminded us that we would be his deck hands for that evening, so we should expect a hard night’s work.

Prior to the trawling event, my colleague and I asked if we could bring a digital video camera to document this unique experience. Another colleague not previously involved in the project would operate the camera. This experience would be too rich to capture with just a recorder or notes, especially since we were going to be actively engaged in the work. Also, it was important to have a visual-audio record of this important cultural-material activity so integrated within the identity of the community. That my informant said ‘yes’ to my request of including a video camera is a testament to the trust bond that we had created over the several months we had been interacting.

The night of the trawl was stormy and the launch was delayed. Tropical Storm Michael was on its way—at one point the trawl was called off. However, the weather cleared and the shrimper was able to go out into The Bayou. As we boarded the trawler, though, we realized our “bayou Reeboks” easily slipped on the damp deck. The boat traveled at a very steady and slow speed and the cameraman was able to document the unstructured activities and interactions on the boat. He did choose, though, not to attach the shotgun microphone as a precaution. Audio would inevitably suffer. Also, the lighting was not the best as the sun set just before we launched. The boat’s fog light and a hand held spotlight, though, provided enough lighting to capture activities, expressions and interactions between the captain and his crew.

The boat was a 30-foot wood trawler with skimmer nets on both sides (see Figure 11A). Since this was a relatively small shrimp boat, and because we trawled inland waters, it was not necessary to have the required TED nets that protected sea turtles. A motorized winch toward the front of the boat allowed the captain to lower and raise the nets. Navigation control was
housed in a cabin towards the rear of the boat. The approximately ten-by-ten-foot cabin had enough space for the navigation controls, radio, a dining table, a small stove (see Figure 11B), a small bunk for sleeping and 20 inch color television. On deck, just below the cabin navigation window was an aluminum “picking table” where we separated the shrimp from by-catch—minnows, shiners, blowfish, eel, catfish, silverfish and blue crab. On the picking table were scoops (see Figure 12A) and rakes that we used to separate and to deposit shrimp into the tubs (see Figure 12B). Below the picking table were four round plastic cleaning tubs where we would collect the shrimp after they had been cleared. We cleared blue crabs into a larger plastic bathtub, which rested just below a large wooden storage chest (part of the boat frame) filled with ice. This is where the captain would store his catch over night. Our captain had only a shrimping license, yet we pulled in over two hundred blue crab during our trawl. Even though the captain could not legally sell them to a middleman, he allowed us to tub them. After the trawl he put the crabs on ice and mentioned he would either throw them back in to the bayou or give them to a friend. Since most people in The Bayou do not have freezer storage, keeping the crabs for personal consumption is not always feasible.

Figure 11. (A) Pictorial description of the trawler and (B) the cabin. (Both pictures taken by Rick Duque)
Figure 12. (A) Pictorial description of the picking table, scoop and (B) plastic bathtub. (Both pictures taken by Rick Duque)

Not all the artifacts on board were traditional to trawling. In the cabin, the captain had a color television airing a major league playoff baseball game between the Los Angeles Dodgers and the St Louis Cardinals. At various times in the evening, the captain could be heard chatting over the CB radio and cellular phone to other shrimpers in the area, coordinating with them throughout the three to four hours we trawled.

We launched into the bayou to shrimp at about 8:00 PM and returned about 11:30 PM. Aside from my colleagues and myself, the crew included our captain, a community informant (a long time friend of the captain) and a deck hand. The deck hand was a visiting friend from Tennessee and a former community resident. My informant, a rather conservative seamstress and homemaker, had not been shrimping in 20 years. At first she wasn’t scheduled to come with us, but decided to join the night trawl. While trawling, the captain told us about the boat and how they worked, or, in his words, he was teaching us “the ropes.” The crew also showed us how to separate the shrimp and how to hold a crab so we would not get pinched. They identified the different types of fish we caught in the nets.

That evening, we made three “pulls”—pulling the nets up and releasing the catch onto the picking table. The first pull was rather small. The captain was easing us in slowly for the hard
work ahead. The second pull was medium sized. By then, we were getting the hang of it. The final pull was massive. It seemed like a mountain of work, but by that time we were almost experts at separating, tossing the by-catch overboard, neutralizing the blue crabs, and tubbing the shrimp. My colleague and I both had gloves on while separating to avoid cuts and abrasions.

Concerning digital videotaping, I initially cautioned my cameraman not to focus too much on the subjects and definitely not to be intrusive with the camera. For the most part, the subjects allowed us to document this experience. On video, we captured the boat and its artifacts as well as The Bayou setting through which we moved, with its still waters in the dusk, channeled wetlands, and symbols of industrial activity—danger signs, small meter stations, and barbwire fencing. We also captured the scenes as we passed other shrimp boats, with their crews exchanging greetings with ours. Additionally on video is a conversation between myself and my informant about multiple “nicknames” each resident is known by within the community; interactions between the captain and his crew; interactions between the captain and other trawlers over radio and cellular phone; the captain navigating the boat; the captain operating the winch and guiding and releasing the catch nets onto the picking table; and the deck hands separating the shrimp from the by-catch.

Once the catch began to be brought on board, though, attention quickly shifted away from videotaping and onto the work of separating the shrimp—hard work, but a great opportunity to understand the way of life of a very unique people. For the record, we helped catch 400 pounds of shrimp and close to 200 blue crabs in a little more than three hours. We would learn later that the other trawlers working that night had pulled up 700 to 800 pounds. After our trawling experience, we were able to transfer the digital-video to VHS. Findings from the video ethnography were used in analysis and are further discussed in the findings chapter (see p. 68).
4.6 FOCUS GROUP

There are five advantages of using the focus group methodology (Babbie, 1998). These advantages are: “the technique is a socially oriented research method capturing real-life data in a social environment; it has flexibility; it has high face validity; it has speedy results; and it is low in cost” (Ibid, p. 248). Babbie notes, “the group dynamics that occur in focus groups frequently bring out aspects of the topic that would not have been anticipated by the researcher and would not have emerged from the interviews with individuals” (1998: 249). Babbie also notes some disadvantages of the method: “focus groups afford the researcher less control than individual interviews; data are difficult to analyze; moderators require special skills; difference between groups can be troublesome; groups are difficult to assemble; and the discussion must be conducted in a conducive environment” (1998: 249).

Scholars generally accept that the size of each group should be small enough to allow everyone to speak but large enough to capture a range of views and experiences. Focus group research is not meant to be statistically representative; therefore, subjects can be chosen at random or by strategy (e.g. representative sample).

A Descriptive Portrayal: Over the six months of the project, interesting data from observations, interviews, and videotaping was gathered. I thought, though, that there was something missing in our understanding of how this community was framing and responding to risk. Most subjects generally agreed about what the major risks facing their community were; however, there were a several inconsistencies that needed to be resolved, and were as a result of the effective risk discussion.

In planning the actual focus group meeting, the primary gatekeeper of the community was asked to invite several preferred residents (basically everyone that had been interviewed). The gatekeeper advised me to hold the discussion on a Sunday, after church. Thus, I planned on
attending the local church service the morning of the focus group meeting to invite more residents. In order to make the meeting more attractive and also to give back to the community, I thought it would be a nice gesture to share with them a special lunch cooked by my father on that same day. My father is an avid hunter and amateur chef who specializes in Louisiana cuisine. I asked him to prepare a caldron of his ‘famous’ jambalaya. He agreed and added that he would also make white beans. I called the gatekeeper and asked her if it would be proper for me to attend church service, share a home-cooked lunch with the community, and have the focus group all in the same day. She thought it was a good idea and made sure to tell me that the community does not like “andouille” sausage in their jambalaya. She also added that she would prepare a salad for the lunch.

After the conversation with the informant, I called the assistant pastor of the local church—also the school bus boat captain—to ask him if I could attend his religious service. Having been one of the original structured interview subjects, he was more than willing to help. He told me to be at the community center dock that Sunday morning so he could pick me up with his boat—the school bus boat that transports the community’s children to traditional school bus pick-up points (see Figure 13A). I asked him if he would be available afterward for jambalaya and a discussion and he said, “of course.”

On the morning of the focus group, the food was brought into the community center before the church service (see Figure 13B). The pastor and his family, assistant pastor, and I boarded the boat and made our way around the community picking up several residents for service. It was a rainy day and only twelve residents attended the service. Afterward, everyone

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8 Andouille is a Cajun sausage made of pork and seasoning. It is typically used in jambalaya. Although not confirmed by all residents, the community tends to have a negative association with things “Cajun.”
was invited back to the community center for lunch and a discussion. Only three church attendees were free to go back, including the assistant pastor.

![Figure 13. (A) Pictorial description of school bus boat and (B) church. (Both pictures taken by Kris Peterson)](image)

When we arrived at the community center, the PAR research group’s resident ethnographer and a graduate colleague were waiting with the gatekeeper and one other community member. It seemed that we had only five residents for the focus group, which was not the number I was hoping for. However, while I was talking to the community member, he received a phone call from the captain of the boat on which we had trawled in early October—the subject of the video-ethnography. I asked to speak with him and on the phone invited him to join our lunch and meeting. He said, “anything for you, Camille.” The focus group officially began in the community center at 11:00 AM. In attendance were three researchers and five residents—four of which had already been interviewed. The captain joined us at about 11:30 a.m. Then, at about 11:45 a.m., the assistant pastor’s wife, who had not attended the church service because of work, joined us as well. In the end, the focus group consisted of seven community members (four female and three male). The age range was between nineteen years old to approximately sixty. We shared the lunch my father and the gatekeeper had made,
discussed, and listened for approximately four hours until 3:00 p.m. We recorded the focus
group discussions on two MP3 digital recorders. The discs were later transcribed and coded for
analysis. Additionally, extensive field notes were taken.

After assessing the qualitative work that had taken place before the focus group, I
concluded that several areas needed more in-depth treatment. Therefore, a series of prompting
questions to lead discussions were agreed upon between the PAR research group’s resident
ethnographer, a graduate colleague, and myself. Unlike the personal interviews, which relied on
general starting points to begin a monologue, the focus group would incorporate a variety of key
concepts or flash points—words or phrases that elicited a consideration of wide dimensions and
profound explanations. These key concepts were those that we had distinguished as significant
after transcribing and coding the interviews. The focus groups hoped to uncover specifics about
the environmental risks, beliefs and attitudes by community members in a setting where subjects
could reflect, share, challenge and synthesize common understandings and differences. For
instance, each person was asked ‘Please talk about why you like living in this community’,
‘Have you ever thought about living somewhere else?’, ‘What threatens your way of life?’, ‘Do
storms change your life permanently or temporarily?’, ‘Why do you think you are losing the
land?’, ‘What goes through your mind when you know there is a big storm coming?’, ‘Do you
think there will be a time when this place won’t be safe for you anymore?’, ‘What do you worry
about on a day to day basis?’, ‘Imagine if the community no longer existed—what will you miss
the most?’ The various answers and discussions we recorded during the focus group provided
greater insight into the cognitive ways this group analyzed and framed risks. Additionally, this
focus group helped to explain some inconsistencies and confirm key conclusions from
preliminary observations, the risk assessment and the first face-to-face qualitative interviews.
In summation, the various ethnographic methods employed in this study allowed for rich description and an emic interpretation and understanding of risk perception. Through participant observations, researchers are immersed in the day-to-day lives of the people; therefore, they are able to study behavior, language, and interactions of the culture-sharing group (Creswell, 1998). By using qualitative intensive interviews, detailed experiences and risk perception accounts emerged, which are constructive in developing an accurate picture of this community. In a video ethnography, the researcher becomes fully engaged in the lives of the culture-sharing group and thereby achieves an understanding that is inaccessible to those who remain neutral and distant (Henley, 1998). Through focus group techniques, the researcher can gather and analyze group memory and various relationships within the culture-sharing group. These ethnographic methods were able to capture life experiences, individual interpretation, ‘digital’ elucidation, and cognitive group interpretations of risk perception in this at-risk community.

4.7 METHOD OF ANALYSIS

In qualitative field studies, analysis is formulated as an emergent product of a process of gradual induction (Lofland and Lofland, 1995). The researcher is first guided by the data being gathered (Ibid). In this study, the research was guided by the ethnographic method. Second, the researcher must code the data for content, frequency, and meaning. Then, the researcher must create evaluative criteria, which provide focus for the analysis. Here, focus was derived by a series of qualitative analytic techniques described in detail below. Finally, analysis has to be formulated from the data, which is very much a creative act (Ibid).

For ethnographic research, analysis is a “sorting procedure or the quantitative side of qualitative research” (Creswell, 1998:152). This involves highlighting, separating specific material, and searching for patterned regularities in the data (Ibid). For this research, a database
was created. First, the interviews were coded, which involves line-by-line categorization of specific notes (Emerson et al., 1995). After the transcriptions were categorized, they were considered and examined with a series of analytic questions where reoccurring themes were distinguished. The themes were sorted and put into different theme databases. For instance, from the resident’s accounts, storms were a reoccurring theme. So, the data was examined and the responses concentrated around storms were highlighted in the color blue and given a personal initial—the initial of the interviewee. Afterward, the highlighted blue information from the data was put into a storm theme database. The field notes from participant observations were analyzed and coded differently.

The field notes were read through, elaborated on and earlier insights and hunches were refined (Ibid). Then, the field notes were coded; using focused coding (Ibid). Emerson et al. (1995) explains, “In focused coding the fieldworker subjects field notes to fine-grained, line-by-line analysis on the basis of topics that have been identified as of particular interest. Here, the ethnographer uses a smaller set of promising ideas and categories to provide the major topic and themes for the final ethnography” (1995:143).

In order to focus the understandings into major topics and themes, this study employed a series of qualitative analytic techniques as described in Lofland and Lofland’s (1995), Analyzing Social Settings: A Guide to Qualitative Observation and Analysis. These techniques contributed to the analysis of the observational, interview, digital video and focus group data. First, units—practices, episodes, roles, relationships, groups, worldviews, lifestyles and culture—were distinguished in the data. In order to understand the full sociological substance or content of the units, various aspects of those units—cognitive aspects or meanings, variations in scope, reality constructionist stance toward meanings, emotional aspects or feelings and hierarchical aspects or
were distinguished (Ibid). The ideas of units and aspects and their combination into topics provided a mindset and strategy to make sense of the data. This exercise resulted in the basic analytic framework used to code and organize the data.

Lofland and Lofland (1995) suggest that combining a unit and aspect lead to a topic, which is an entity about the question the researcher may ask. The initial question of this research was the following: How does ‘the community’ (the unit expressed as a group) give cognitive meaning (an aspect of the unit) to their social and environmental reality (risks and mediation options within the context of social marginalization and preserving cultural heritage).

According to Lofland and Lofland (1995), social analysts usually pose eight basic questions about social topics in order to focus their data. **Question one** refers to the initial question; for example, what are the various risks to which the community brings meaning given their situation vs. their goals. **Question two** refers to the frequency of how often we, the researcher, observe occurrences that inform us about the above topic; for example, how many times residents describe or refer to their situation through conversation and interaction. **Question three** refers to the magnitude of any given occurrence we observe in terms of its intensity, strength or size; for example, what intensity do residents give to different types or risk when they mention them with regard to intonations (loud or soft), physical gestures (animated or not), emotional states (stoic or sensitive), and verbal symbolism (evoking God). **Question four** refers to detail structures of the general type indicated in question one; for example, the details of how residents frame various risks and make sense of them in terms of their situation. **Question five** refers to the different processes (cyclical, spiral and sequential) or the cognitive paths residents follow to frame, deal with and reflect upon the risks they face. **Question six** refers to the causes of the topic; for example, what are the conditions under which residents are faced with risks and
having to bring meaning to them. **Question seven** refers to the consequences due to the causes; for example, what are the results of how the residents frame and deal with the various risks they encounter. **Question eight** refers to human agency in contrast to the *passivist* assumption of the above seven questions; for example, how do residents actively construct their reality, given their situations and what strategies are available to deal with them. These questions lead to two overall themes, and these themes are comprised of sub-themes, described below.

The risk and place attachment literature and theory provided context of deductive themes to frame what might be witnessed in the field. However, through coding the data several inductive themes emerged. There are two main themes that emerged from the data analysis: (1) Identity in an Unmanageable Place and (2) The Struggle of Hope. Under these general themes are a variety of sub-themes.

While keeping in mind the questions discussed above in coding the data, the most apparent overall theme was ‘Identity in an Unmanageable Place.’ This theme can be broken down and described by its two sub-themes: (a) identity in place and (b) way of life. On several occasions, residents articulated that they risked losing their cultural identity, an identity that they described as being connected to this particular geographic location. Other times, identity was often discussed using different terms, such as referring to themselves as ‘unique’, ‘different’, and isolated from ‘outsiders.’ What emerged from their accounts was that their particular geographic location and way of life gave them identity. On every visit and interaction with community members, residents spoke of having a unique way of life and community. They were often referring to fishing, boats and storms. However, when speaking of way of life in the present day, residents speak of how “hard”, “frustrating”, and “unmanageable” it is. The overall theme is that residents of this community find identity in an unmanageable place.
Through coding and analysis, the theme “Struggle of Hope” emerged. This theme can be broken down and described by its content or sub-themes: (a) land loss and unspoken risks, (b) everyday struggles of social and environmental risks, (c) agency, and (d) faith and hope. Residents most often spoke of both seasonal and everyday struggles, which are connected to their ‘place.’ However, some struggles were spoken of with more regularity. For instance, land loss was talked about extensively in every interview and documented in all the field notes. In addition to land loss, residents often spoke of other everyday struggles such as financial burdens. Because of the community’s strong connection to place, even in the face of increasing, ‘struggles’ the community has formed great ‘agency’ with the intent on “saving their heritage and land.” Moreover, residents’ new-formed agency and pronounced ‘faith in God’ provides them with an enormous amount of ‘hope’ for a better future. Additionally, ‘faith’ is often spoken of in direct correlation with ‘struggles’ and ‘agency.’

After the data files were created, the quotes were subsequently organized by frequency. With each category, some accounts were used because they captured the meaning of the categories and themes. In each file, many of the quotes were similar; therefore, the most evocative quote was chosen. Many quotes had more than one theme embedded in their meaning. In those cases, the part of a quote may have been used in one section and another portion in a following section. The reader may read about the person behind the responses in section 4.3 (see p.42).
CHAPTER 5: ANALYSIS AND FINDINGS

The findings are presented using an ethnographic approach (i.e., descriptions are analyzed by presenting information in a narrative order). They are described and analyzed by progressively focusing on the self-descriptions of the study subjects (narratives and quotes). The following describes the themes and sub-themes in the words of the residents.

5.1 IDENTITY IN A UNMANAGEABLE PLACE: IDENTITY AND WAY OF LIFE

This study empirically documented the group’s goal—preserving their way of life—but the possibilities of accomplishing this goal are overwhelming given their unmanageable situation: increasing risks along with decreasing resources. Below is a typology of risks and resources. This typology illustrates the community’s relationship between risks and resources. According to residents, it would be ideal if the community had decreasing risks and increasing resources; however, today the community is experiencing increasing risks and decreasing resources, leaving them in an unmanageable environment.

<table>
<thead>
<tr>
<th>Risks</th>
<th>Increasing</th>
<th>Decreasing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing</td>
<td>Manageable</td>
<td>Unmanageable*</td>
</tr>
<tr>
<td>Decreasing</td>
<td>Ideally Manageable</td>
<td>Manageable</td>
</tr>
</tbody>
</table>

*Represents the community’s situation today.

Figure 14. Risk and resource typology. This represents The Bayou’s current situation, based on their accounts.

The residents are aware of some of the obstacles and risks they face. Meda states, “we are watching our land, way of life, and heritage disappear…due to erosion.” Others have stated similar sentiments such as Peter who comments, “we desperately need help…erosion took [the
land]…before the land used to be high, you had a lot of trees, you were more or less protected…but when [the storm] comes…there is no protection anymore.” Additionally, residents understand some socio-economic threats as well some of the environmental ones. Shay states, “…you have to catch a lot of oysters in order to survive because the cost of living is so high, the diesel, the groceries, and the labor.” Peter has suggested similar sentiments, “the reason why people [are] leaving because, The Bayou, is a fishing village, and the government pressure you, [they] gonna move on.” More importantly, they articulate how these interact and one possible consequence—complete extinction of this bayou community. Peter noted, “what are we looking for, just to live for today or the future, there won’t be a future.” Meda states, “…we have no where to go but into extinction.”

The land they live on—the root of their struggles—is so intimately connected to their self-identity that rational responses to this insurmountable threat are limited. Meda emphasizes, “we are connected to the land.” As the land goes, so go the people and their culture. That is why the risks associated with property damage, personal injury, and even loss of life, seem to pale in comparison to their fear of losing their cultural identity. Thus, geographical displacement is a greater ‘risk’ than living in an area burdened with continual environmental and social threats.

This community is intimately connected to place and the cyclical process of risk and survival. But cultural identity is a negotiated concept that every resident struggles with in his/her own way—some promote the romantic myth of the past, several pragmatically frame the realities of the present, while others plan for an unsure future in both spiritual and material dimensions. The following are excerpts from interviews with residents that illustrate the sub-themes uncovered while understanding ‘Identity in an Unmanageable Place’: ‘Unique Identity in Place’ and ‘Way of Life.’
5.1.1 UNIQUE IDENTITY IN PLACE: OUTSIDERS, GENDER, AGE, AND GENEALOGY

The residents of this community have an authentic sense of place and an inseparable tie to the land they inhabit. Identity often takes the form of distinguishing who are outsiders and how to deal with them and their influences. But pragmatic gender concerns and generational differences tend to determine how some residents frame themselves as insiders and how they chose to adopt outsider behaviors. Genealogical attachment to place plays an important role in managing the romantic myth of the past and how residents deal with the ever-changing present in an effort to ensure that the community’s legacy continues. In this community, there is evidence of an overwhelming genealogical attachment to place. This refers to a correspondence between people and place based on family and historical ties that are encoded in languages and cultural practice (Low, 1992). People find attachment to the linkage of people and land through historical identification and between place and family or community in their particular geographic location (Low, 1992).

Some residents trace their indigenous roots back two to three hundred years and this is reflected in collective community memory and nearby native burial grounds. Some of the residents self-identify as Houma and Atakapa Indians, both Louisiana Native tribes, and commonly relay that the nearby burial grounds contain the remains of their ancestors. However, this is not proven. From a participant observation, Meda is documented for having said, “our ancestors were Atakapa and Houma Indians…our ancestors rest in the Indian mounds where our grandparents used to live.” Other residents self identify as having a cultural mix of French, Acadian, and Hispanic heritage. Many residents such as Shay report, “my grandpa came from France.” And some residents are unsure of their heritage, as one member of the community told me during an impromptu conversation, “they [ancestors] were fisherman, they were people that
live a ‘bayou life’ they come from surrounding areas from the lower coast of Louisiana.” And
Peter suggest, “people didn’t buy this land—it was squatter’s rights. They inherited, they settled
down here…I was born down here. My dad was born over here. My great-grand father, I do not
know where he was [from]. But, he settled down here.” Although residents have independently
stated various ancestral roots, the community’s overall self-definition is Native American.

Although, their exact heritage is unclear, their self-definition and attachment to this
particular place is evident. During interviews and the focus group several residents made the
following statements, all of which are concerned with the importance of place in constructing
their identity as a community and as a member in it:

Media states, “As far as [The Bayou], I feel at home, I feel connected to the land, I feel
connected to this environment, it nurtures me even at the worst of times. I feel like this is
the one place in the world that I do belong.”

“...trying to separate the people from the land…would have disastrous effects, because
we are connected to the land. The land is part of us and we are part of it. For one to be
absent from the other… the land would die without us and we would die without the land.
And you know it would be a welcomed death as far as I’m concerned because I really
wouldn’t want to live somewhere else. Because to live somewhere else, it would be a
life…out of the shell. You’d be out the shell, you’d lose everything, you’d lose your
heritage, you’d lose what came before and you’d have nothing to pass on except just what
everybody else has—you yourself, you couldn’t pass on anything else.”

Bly states,

“It’s like losing your identity.”

The Bayou has provided for residents a unique way of life. This place has given them an
identity with the land and traditional modes of living on it. This identity separates them from
‘outsiders’ and makes them, in their mind, ‘unique.’ The ‘unique’ identity can be understood in
the quote above by Meda, who refers to living outside of a shell, “…you’d have nothing to pass
on except just what everybody else has.” It seems likely that there is a major and clear
distinction between communicating internal identity—those reserved for members within the
community—and external identities—the fear of being “outside their shell” if they lose their land. The term “outside of their shell” means that the residents would not be themselves if they had to leave their land, which provides them with the basis for their identity.

**Outsiders:** The residents commonly refer to people that do not live in The Bayou as ‘outsiders.’ When they communicate identity to ‘outsiders’ they establish boundaries between ‘us’ and ‘them’—the latter being the outsiders. This carves out a cognitive-geographic understanding among residents that the community embodies a ‘unique identity.’ In many of the conversations with residents, they commonly used the term ‘outsiders’: those outside their cognitive geographical identity who do not share the same beliefs. These following accounts illustrate the sense of outsiders:

Cade states, “…they [grandparents] took pride in their community on the bayou…. [today] its dirty and when other people come and look …they think its like a trashy place because of the way it looks and that is because of outsiders….different people brought in damaged old boats and they just left it here to just rot away and it just destroys the view.”

Cade is referring to ‘outsiders’ that have placed their damaged old boats in a canal near the community. She thinks of this as “they just dump their trash here and make our community a trashy place.”

Sal suggest, “We didn’t have all these problems before the outsiders came in…”

Muncel also spoke about when “outsiders come in…everything changed…the land changed.”

Sal and Muncel are referring to what they perceive to be as an outside threat—canal cutting, which in their minds has changed the local landscape and it out of their control.

Media notes, “…they [outsiders] come out here and its not every one…we have made long lasing and almost family friends with some people from the outside world, but…there are people that come here and it’s a lack of respect for the community they are entering.”
The general sentiments in the community can be illustrated in Meda’s account. The residents feel that many ‘outsiders’ have threatened and disrespected their culture, however, they have made long lasting friends with “people from the outside world” that have shown respect for their community and way of life.

From the focus group, residents often referred to outside world intrusions into their “place” that threaten their “unique identity.” But even though most residents were in agreement over the threat of outsiders, they often disagreed about the degree to which outsiders could be let in. This is evident in a community division that was uncovered during the focus group over whether or not to allow the state to build a road connecting HWY 23 to The Bayou. Some of the residents felt the road would allow outsiders to come into the community and corrupt their traditional values. However, other residents felt the road would be a benefit of convenience and accessibility. In the focus group, the women tended to be against the road but the men were for the road. Peter states:

“When they was talking about a road, you know how many people…[in the community] itself, and I was for the road, …how many people told me that ….we want the privacy on [The Bayou].”

This male resident was for the road, but was very aware of the privacy issues involved and how this was a rallying point for those against it. Several female residents brought to light the gender difference with respect to the modes of outsider entry and the consequences:

Bly comments, “My dad was for the road, my mother wasn’t.”

Meda states, “What they were looking at—I can tell you my mother’s point of view…we have traditional values and we also have a heritage and moral, and they saw the influx and conveniences of inviting the outside world into our small community as corrupting the community on some level.”

Men and women alike agreed with this statement, even those who were for the road. Meda continues:
“And that’s why my mother was against building the road. Because she saw that as outsiders coming in and replacing our traditional values with that of a more worldly mindset and…my dad was for the convenience of the road you know accessing to the stores and to the hospital and to the modern conveniences, my mother saw the more tangible where it would affect the persons on a more spiritual level…that’s what she was against.”

June responds, “when they were petitioning for the road…..I lived alone with a young girl, I voted against the road…because I was afraid of exactly what is happening now…..people are on [the] warfs….they [outsiders] get on your warf….they just get out and help themselves, throw their chairs down and they fish and just do what ever they want.”

The discussion about this road represents how the residents of the community perceive their ‘unique’ identity as separate from outsiders that do not share their traditional family and ecological values. Many felt their identity was fragile and did not want the intrusions or risks of the outside world. However, many wanted the accessibility. This sets up the real world cost/benefit dimension that residents deal with individually and as a community. Their unique identity to the land, embodied by their traditional culture and ecological integrity, battles the conveniences of the modern world that offer new forms of predictability and resources, yet also corrupt their values and threaten their environment. This cost/benefit dimension is best illustrated by the differences among age groups and how they manage their place identity within a changing social and environmental setting.

Residents perceive their community as organic and life sustaining. They are emotionally and cognitively tied to this particular ‘place.’ In other words, their life experiences may have an emotional quality that fills the setting to produce an affective bond with the place itself. Attachment behaviors have traditionally been viewed as arising from early life experiences (Rubinstein and Parmelee, 1992).

Gender and Age: This might explain why the older generation has a stronger attachment to place than the younger generation. The older generation has many memories of the
community when there was ample land, predictable resources and different risks. These documented memories are full of emotional statements that associate them to this place. It is the older residents that lament most the disruption they face. The younger residents, having not experienced the “way the community used to be before the land changed” do not form and sustain the same life course place attachments as their parents. The younger generation has mostly memories of struggling with a land besieged by increasing risks and decreasing resources. Therefore, age is a major factor in the risk perception of this community. Meda illustrates the difference between young and old perception of identity and place during the focus group:

“They [the younger generation] see the struggle. But you know I was her [points to nineteen year old] age and younger, I remember a different [place] and so that what ties us to the land. Because we remember the way it was and we are connected to it and we can most probably fight to rebuild. They [younger generation] do not have that same point of view that is why it’s on our shoulders to rebuild and to reclaim what was lost in order to show them what [The Bayou] could be. To make them want to feel a part of the community, not to just see the struggle but to also see the benefits of being out here. I mean….there were no locks on our doors, sleeping with your windows open. You can go outside anytime day or night, you know, your kids could play unharmed in your yard. And all these things that went to nurturing of everyone in the community, I mean you can count on your neighbor, you know, to stick with you…but now we are also stressed out and focused on just survival and all of the things that have gone wrong with you know the physical aspects of the community that we don’t have that connectiveness anymore. And they don’t have [the younger generation] that, they are not benefiting from that heritage that was passed on to us. So, we have to draw a line in the sand and make a stand and say we have to claim what was lost and what was taken away from us to enable them to see what [The Bayou] could be. And for them to pick up the mantle when they, when it gets their turn to take over the maintenance of the community and pass it on to their children. The sense of belonging, the sense of the community, the sense of family, and heritage, and tying to the land. I feel connected to [The] Bayou because my blood is here, that’s it. I mean that’s it, I mean that’s how I feel. Our generation feels this way. The ones [like the younger generation] don’t feel that way because [they] only see the struggle. That is all [they] see.”

Genealogical Place Attachment: As illustrated in the above quote, family and land are connected for many of the older residents. But the genealogical place attachment is not limited
to the differences among age groups. The following accounts are from interviews that represent
genealogical place attachment:

Picasso notes, “…our family is buried here…there is no place like home.”

Picasso is connected to the land because this is where he was raised and his family is buried.

Similar sentiments have been expressed throughout the community. Picasso later went on to say
that he would not want to live anywhere else, and that he wanted to be buried next to his family.

Shay states, “…this is my hope and dream. I definitely want to…build me a nice
place…in the bayou and end my days here. If I die, I want to die right here on [The
Bayou]. They [have] a graveyard. That is where I want to be buried, on [The Bayou].
That is where I [was] born and raised—my whole roots start here. My whole
livelihood…this is me, [The Bayou].”

Shay has moved out of The Bayou due to financial constraints. However, he plans to move back
to the land he was raised on to end his days.

April comments, “[The Bayou] …this is my children’s future….I mean this is their land.
This is their house…. I mean this [is] what my husband’s parents left him and their
parents left them. …This is their legacy.”

April is not from The Bayou, and has only been living in this community for the past twenty
years. However, she has formed a relationship with the land and hopes to pass on her husbands
genealogical place attachment to her children.

Muncel states, “My grandparents and all was from here and a generation I guess, I like it
[The Bayou], I don’t know why, I just do. It’s home.”

The people of this community find attachment to the linkage of people and land through
historical identification between place and family lineage and legacy. This qualitative finding
supports Low’s (1992) assessment of genealogical place attachment.

In summary, residents framed their identity with place multi-dimensionally. They agree
on some dimension of it and disagree on others. For example, residents actively create an
identity that separates them from outsiders, though they differ along gender lines in terms of how
the outside world gets in (e.g., the argument on whether or not the road should be built). Age groups also differ in terms of the intensity of tie to the land. Older residents tend to project the romanticism of the past upon their present situation much more fluidly than the younger generation. Finally, identity and place is no better illustrated than when residents recall the genealogical linkages that historically bind them to place and the cognitive-geographic legacy they pass on to their children in turn.

The community’s identity, which influences risk perception, is reinforced by their worldview and way of life. Looking at this closer, the following section focuses on the relationship between residents and their environment.

5.1.2 WAY OF LIFE: FISHING, BOATS, AND STORMS

Environmental factors are incorporated into cultural strategies through narratives and symbols (Low, 1992). Residents self-identify themselves with their strategies for harvesting the region and surviving the cyclical obstacles, both of which threaten and give meaning to their way of life. When residents describe the community’s ways of life, they usually refer to activities such as shrimping, fishing, trapping, oyster harvesting, their boats, and dealing with their environment (i.e., storms). A fisherman’s activities, boats, and nature interact within The Bayou and result in a cohesive worldview that has established a strong bond among residents. Peter states, “this is a fishing village… everybody is family… everybody helps one another out.”

Fishing: The way of life for residents is materially inseparable from the ecosystem, which sustains them and their families. This community lives in cyclical conditions, which requires an understanding and knowledge of the natural processes of this type of place—a bayou coastal community. Residents state that their way of life requires interconnectedness between the land and themselves.
During the focus group Meda describes:

“Our way of life here is connected to our surrounding, it is part of our being. Like their saying [several people were talking about how they can smell the seasons approaching] it affects our senses, you know, sense of smell. You know, they can close their eyes and they can picture the next season to come, because it’s the next season that intertwines with their lives, you know, they are all intermixed and interwoven together so you can’t tell where one begins and where one lets out. I mean the people; you know the fabric of our lives are intertwined with our environment. Too rip one away from the other, you know, if we loose the land, or if the land looses us, you know, you are unraveling the fabric of our lives and that would compromise the whole thing.”

Peter suggest, “every place you go there’s different ways of life…we eat coon and rabbits and stuff.”

Sal comments, “I learned the way of a shrimper life and in the wintertime….we trapped.”

According to Meda, Peter, and Sal they live a different way of life, which is directly connected to this type of place—a bayou community. The statement above by Meda, “it affects our senses,” was expressed by many of the residents. They often connect their entire human being with their surrounding natural environment. Therefore, they believe they are part of their environment and, according to Meda, “too rip one away from the other…would comprise the whole thing.”

Some male residents do not see shrimping and trawling as work. Their avocation is their vocation. The independence of not calling shrimping and trawling work is significant in The Bayou. As Shay states:

“They [parents] caught shrimp and trapped. They caught some muskrat [and] coon. That is all they did for a living. They never did work on a job. My parents never did [work] they only caught shrimp.”

Sal describes, “I was born and raised here. All I did was fishing, trawling, and catching muskrat and coons” and “My grandparents never worked. They only did fishing.”

Picasso states, “I like to trap, shrimp, catch oysters…I don’t want to ever do anything else…I don’t want a job”
**Boats:** Fishing is by far the number one activity among residents who make a living on The Bayou. Most of the fishing takes place on the water—shrimping, crabbing, oyster farming. For this reason, boats occupy a vital part of their way of life. But boats as a technology embody a variety of elements that compromise the isolated way of life. Boats force residents to have to interact with the outside world for loans, parts, regulators, taxes, and petrol. As Sal put it:

“…when we [fishermen] make a few dollars, we put it right back into the boat…..so you have to catch a lot of oysters in order to survive because the cost of living is so high, [with]the diesel, the groceries, and the labor.”

Shay describes, “…we are struggling to get to where we are right now. I paid for this boat, I never had a dime. We went to my lawyer and made the paper up. As of yet we’ve been struggling, but we’ve been making it to survive. What I mean struggling is working hard. A lot of times….I don’t have the money to fix it [the boat]. I don’t have money to get it really going. I think FEMA gave [money] for the storm. They said they were going to help fishermen with farmer’s loans. I did what they told me to do. I never got nothing because you don’t get no help, [but] that don’t mean your going to stop. I can’t stop…because you know why? We are working people.”

Muncel notes, “….when I did my taxes, I showed a loss.”

From all of the accounts above, this community thinks that it survives by living a different way of life, which evolves around seasonal work. The residents think that this way of life is not only dependent upon the cyclical nature of resources, but also threatened by the everyday unpredictable nature of the market. They perceive the market to threaten their sustenance and way of life.

**Storms** and their disruptive effects, such as floods, wind damage, and debris, are basic elements of the environment. These are constructed features of the human social structure rather than being viewed as extreme one-time events. Residents report they have adapted to this storm-stricken environment over time and by doing so distinguish themselves as uniquely suited for this land and this way of life.
Traditionally, residents in The Bayou have incorporated storms as part of their life on The Bayou—they plan for them, they deal with them and they recover from them. During times of severe weather conditions, most fishermen do not think it is safe to leave their boats at the marina. Instead, residents often shelter their boats in the trees of a nearby canal. The residents say that the men and some women stay up all night tying all the boats together and placing old rubber tires between each one. This arrangement allows the residents mobility and protection from the storms. Others (the elderly, children, and some women) evacuate inland when possible. This cycle of preparation, storm and recovery is something residents learn at a very young age. The following is how Shay remembers his first storm:

“….I remember them parking the boat right along this bank right here [pointing to the area] and grabbing both of us [he and his twin brother] and throwing us to the bow and putting us in the cabin. And then we going to higher ground. I would say higher ground. You see those woods back there? They have hills back there now. Actually, you can get on top and see the water in the river. They call them Indian mounds. We used to go to higher ground behind the big trees, tall trees and weather the storm. I can remember when we come back, very little was left. Some houses were there and some weren’t. But people would help one another build here. And then we’d go build you guys place and then we lived together in little boats and [then] back on your feet. I can remember Betsy. I was much older then [and] it was bad. There were two of them [storms] back to back. I’ve seen water all the way to the roof of the houses…when that water went back down, they had about that much [ a couple feet of] slush inside the house…..so what we did, we all worked together and we helped one another and we survived and we built back up gradually.”

An important part of the residents’ way of life is rebuilding and surviving. Throughout the participant observations, interviews, and focus group residents calmly mentioned that The Bayou can rebuild as long as everyone survives the storms. Peter comments, ‘it’s [a storm] no problem….we can rebuild.’ But their pragmatic view of storms as common occurrences to be dealt with does not diminish the destructive potential threat storms have on the region, community, and to individual lives. Also, the temptation to choose self interest over the
community does not deter some from “riding out the storm.” During the focus group, we asked why some chose to stay during a storm. Meda responded:

“….I feel that I am the protector of my family. My dad goes to Tennessee and [my daughter] goes to Arkansas. As the protector of my child, you know, my own family, I feel that I can survive. You know I feel that I have the capabilities of doing whatever I have to do to survive. If push comes to shove. But I don’t have the capabilities of, you know, of keeping myself alive and my child or watching out for my dad. So, I make sure that they are out of it [the storms way], but I stay. Because you know I cannot turn my back on my community for whatever reasons, I belong here. And like I said, we have to fight mother nature—do what ever you have to do, just to tie another line on the bulk head before it drifts off, you know, fix your wharf before you just take off and go to your boat, you fight to save your way of life. Because this is where we belong, and we fight Mother Nature when she comes at us with her fury, you know, because this is who we are. We are interwoven with the land, you know and we choose to stay, because to go somewhere else is to not be who we are.”

Bly comments on why some residents stay for storms and others leave:

“That’s the reason why [most of] the men folk stays, you know, because the women and the children leave, you know to protect them. But the men stay to protect our belongings, our property. Like there was a storm moving our way, we are not allowed to come back. So what we had, would be was lost. And we could not replace it, and there was no body else to replace it for us. So, the men decided that the women and children [will] go and they are going to stay and whenever the storm [is] over with, what ever is to be saved, they can salvage, they pick it up and you know, maybe use it. And if we lose everything, I mean, some of us have food in our freezers, you know, that we store for the winter from the summer, and when the storm comes, if there is no electricity, you would lose all this stuff and that’s not – you know that’s our survival food. OK? So, these people that stays, they go and take refrigerators, ice chests, or they might carry it up to the front with somebody that has a place to store it. So that way when we come back, we’ll still have our food left for the winter. And our belongings, you know, they pick up whatever, somebody’s house has a refrigerator needs to be lifted or something that they could save – because you are not going to be able to replace all everything exactly.”

For some, protecting property and having a chance to rebuild is an important motivation for staying during storms. But rarely do storms hit with such force that they would cause residents to regret staying. According to their collective memory, no one has ever perished from a storm. During the focus group, residents were asked if storms change their life permanently or temporarily.
Muncel responds, “No, just temporarily. Well it put water in the houses and stuff. But they clean up. Its, you go back living the way you were. I mean after you clean up you know. But uhh, it don’t really bother me.”

Not all residents think this way, though. Others are very anxious and scared when they hear a storm is approaching. Bly states:

“Well when I hear a big storm is coming I’m wondering what is going to be left when we come back. You know what are we going to be faced with, when we come back – you know will we find our homes here or will everything be totally wiped out. You hear in different places how everything is just completely gone. You know. We leave our homes and you wonder, you want to find our houses when we come back. Yeah, all my possessions, everything that we have is out there and if the storm come and take it away, then we’re left without anything. You know. That is why we pack as much as we can to take with us. But our family is most important. Possessions is ok, but um, you don’t want to lose what little you have.”

Meda comments about the financial pressures of storms and their disruptive effects:

“Because a lot of what we have is irreplaceable because we can’t afford the replacement costs. Ok and its not irreplaceable luxury items… I mean just your beds, your mattresses, the rugs on your floor, the walls, the walls of your house, you know when I hear the storm coming, you know I think of what will we lose. What are we going to lose this time? How much are we going to lose? As opposed to how much can I save. I’ve gotten to the point where I pick up my pictures, clothing and shoes you know and some food stuff and that’s all if push comes to shove and the winds come and the waves come – you know all of that, you can’t fight to keep a whole bunch of stuff so you take the things that’s necessities that you have to have, you know a change of clothing and things that are irreplaceable, like photographs and legal documents. That’s it.”

Bly reveals that she has an increased sense of dread when she prepares for a storm:

“I get very scared, thinking about what is going to be left – all our possessions that might be destroyed, just – my childhood memories are there. And to not have that any more, because you count on that, you think, you take it for granted and for one day to come back and it will be just flooded and water and no land its just – its terrifying. And where will we stay, you know, [if] this is not our home anymore, [if] this is not available to us. Where will we live? That [is] something that goes through my head.”

Cade remembers what it was like when she was young. She was very scared to evacuate inland and leave her mom, Bly, in the bayou to ‘ride out the storm.’ Here she shares how her mother prepared her for storms:
“We would go to the store and buy water and bread and canned food. A lot of canned food. But, I never stayed for the storm. My grandmother and I because we were so you know incapable of taking care of ourselves and so young, I was so young and she was so old, that we would go to Slidell or somewhere where the storm wouldn’t hit. But, my mom and different other people who were younger and more strong could stand out through the hurricane and take care of the house and the boats and they would stay. I cried every night to sleep. It was horrible. I was scared because I was like this might be the last time that I ever see you again. I would before we would leave at the canal, I would just hold on tight [and say] I love you, I love you, I love you. And she would be like, “it’s o.k. I love you too, we will be together again.” She would say, “your going to be by your uncle Benny, your aunt, and maw maw’s going to be there. You are going to be fine and their going to take care of you. And, whenever I can talk to you”, you know, we didn’t have phones back then, well I think I was about eight years old by the time we had a phone…so we would have phones and she would call me if she had the opportunity if the electricity or power surges wouldn’t go out or whatever.”

Their cyclical way of life, they perceive, to be further threatened by the involuntary risk of land loss. Because the coast of Louisiana has lost wetlands and barrier islands, which acted as protection during storms, residents no longer perceive that they are as safe as they once were. Additionally, residents perceive that the levee built to protect Highway twenty-three threatens them further.

Peter says, “all the land is gone…we are no longer protected.”

Shay reports, “But the situation about what’s going on now. You see when they built this levee right here….for some reason or another, it hurts us now. Because when a storm comes, quite naturally the water used to go all the way to the levee by the river. Now it don’t go the far anymore. Quite naturally its going to rise quicker here.”

Many residents that used to ‘ride out the storm’ now evacuate to higher ground. In analyzing the filed notes, it appeared that residents began talking about hurricane season in January. Hurricane season does not start until June, but The Bayou starts preparing in January. During a casual conversation with one resident on February 2, 2005, Bena noted, “we are approaching hurricane season again soon.” She went on to mention the Tsunami that had recently struck south Asia during the previous December 2004. Bena stated:
“That Tsunami was devastating but we have the potential for facing that every year. If a hurricane were to touch down the effects would be twice as bad...”

Peter along with others have announced on numerous occasions that they are no longer safe during hurricanes. Looking through all of the data, this is a clear perception. Peter illustrates:

“Before we used to get out by boat [during a storm]. I would recommend that everybody, those that have boat, take it to Empire inside the levee protection. And, take their family and get out. Before, the land used to be high, you had a lot of trees, you were more or less protected. You know, it [the storm] would do some damage, don’t get me wrong. The current used to come in but it was limited. But now, there is nothing to stop it, there’s no land. There used to have an island—Diamond Island—that used to be a big island before, [but] now its very little...There was Bay Adam [and] that had a bayou—Bayou Cook; I can’t find the bayou anymore! We used to pack up and go up a ways and they had trees, a lot of trees—the land was high. Well, Betsy [1965--brought 8-10 ft of storm surge] flooded, it destroyed the low[er] Plaquemine’s Parish from Empire to Venice. And we was up a ways [during the storm]. We had high water. Thank God most [of] the homes, very few homes were destroyed on [The Bayou]. Some of them were destroyed—my grandma’s house next door where she was living was knocked down and they had to rebuild. [Picasso] his house was knocked down but the people all survived, you see. It’s no problem. Everybody was protected, [but] right now if [a] hurricane would come like this [Betsy] how much body bags our governor had requested?"

To get an indication of how an outsider now living inside The Bayou adopts the perspectives of the community, a resident who married into The Bayou was asked about her experiences dealing with storms. Form her account, she has adopted the worldview of the rest of the community. April states:

“The reason they don’t leave is because they can’t get back. They can’t get back in the Parish. And, that is the problem, that is why they still go out in their boats. You cannot get back to clean up nothing, to try and save anything. I mean we can’t just pack up everything, these people there boats are their livelihood and I mean they can’t afford to lose their boats. You know, so they go in their boats. But now, seeing how the way the water came in for Isadore, for Lili, for Bill, you’ve got get out of here, if you not [going to] go up further. There’s no protection—the barrier islands are gone to slow down the storm.”

Hurricane Isadore and Lili touched down in Louisiana during October- November of 2002. Eight months later Tropical Storm Bill traveled in during June 29- July 2 of 2003. These
three storms saturated The Bayou community. Many of the residents did not worry about Bill because “it was just a tropical storm.” They had no idea that a tropical storm could bring in so much water. During this storm, no one prepared to evacuate. The water took them by complete surprise. From this event, the residents perceive that the cyclical nature of storms is becoming a greater threat. Cade gave an account of her first storm experience while remaining in The Bayou during Tropical Storm Bill. She, her aunt, and grandmother were trapped inside the house as the water rose. She relates this experience as:

“Well, I was calm at first because I really did not think—it was my first time actually seeing [a storm]. Tide always goes in and out. I expected it to go out but later on…the realization of everybody leaving and us being there by ourselves, it hit me and panic…I tried not to panic, I have a really level head….during the eye of the storm I’m pretty much a calm collective person but after its over with that’s when I melt pretty much…I want to be strong for my grandmother and my aunt, [be]cause….if one person worries then everybody worries……[my mom] always showed no sign of weakness during the trouble but afterwards when its all over, the stress is gone, finally she [her mom] can go down. And I guess I am the same way. After its over and done with I’ll go to my little closed spot and just break down and realize how blessed we are to have been you know successfully away from the storm and free and just alive—its such a blessing and God really protects us and puts his hand upon us.”

During the focus group the participants were asked: ‘Do you see a time when the place that you’ve always gone during storms for protection will not be safe for you anymore?’ The respondents all agreed that that time is near and they measure it by their highest ground—the Indians mounds. The following are several responses:

Picasso states, “Later on in the future, yes ma’am. We’ll have to seek higher ground…most definitely.”

Muncel notes, “The highest point we got in and around here is the Indian mounds and if the water get on top of that then the levee is going to be flooded.”

Meda interjects, “Our highest point—our last refuge are the Indian mounds, if push comes to shove, the water ever comes that high, that’s our final, that’s where you take the last stand. Only by the Grace of God….if we follow the same traditional ways of evacuating for a storm that our fathers and grandfathers did, we pack up and go to our boats. Traditionally that’s what we do, that’s what we know, that’s how we keep
ourselves safe. But the land has changed…the land standing between us and the storms has diminished because of erosion, subsidence, and all of these other things that came into play. Now when the storms come we get flooded with greater frequency and with higher tides and the porosity of the currents that come through, its stronger and stronger. So each year, so it will come a point in time when those safe harbors will no longer be safe harbors and our traditional ways of evacuating, we will have to find somewhere else to go. Because there will no longer be able to sustain us and its something that we know and its something that we are going to have to face, but because of who we are and because of you know, our ties to the community…life at all costs is better than anything that I can think of, but we do stay and we fight for we have and risk is part of it.”

From the quote above by Meda, “those safe harbors will no longer be safe harbors and our traditional ways of evacuating, we will have to find somewhere else to go. Because there will no longer be able to sustain us and its something that we know and its something that we are going to have to face,” the resident’s are aware that their cyclical way of life is could be defeated. As Meda describe, the reader can see that they perceive the cycle to be breaking down; therefore, the perception of risk is elevated from “not a problem” to “the land has changed…it’s something that we are going to have to face.”

The community’s worldview and way of life are intimately intertwined with their economic relationship with the local ecology. But their material sustenance draws them further and further into the modern world that they perceive threatens their environment—fishing boats need maintenance and resources from outside their environment. Storms both threaten their existence, but more profoundly they anchor them in a way that reinvigorates their commitment to the community’s survival—some are uneasy with the increasing unpredictability of even small storms, while for most others preparing for, dealing with and recovering from storms is a natural way of life.
5.2 THE STRUGGLE OF HOPE: LAND LOSS, STRUGGLE, AGENCY, FAITH, AND HOPE

The ‘struggle of hope’ theme is made up of both negative and positive themes. The Bayou community has taken active measures to gain knowledge and voice their opinions on coastal issues in order to survive. They established a non-profit organization whose goal is to “save their heritage and land.” Residents have taken time off work to meet with representatives from local and state governments on coastal restoration because “we have to fight for our existence.” They are also continually networking themselves to expert outsiders in an effort to attract resources to their community. However, they think that parish and state governments undermine their efforts either by ignoring their issues or by supporting initiatives that compromise them further. For example, residents claim that the government supports oil industry over the community’s welfare. Meda notes, “we are out of sight and out of mind” when talking about the government.

This lack of control creates anxiety among some residents who say they witness their land and way of life disappearing. In addition to dealing with environmental processes beyond their control, residents have everyday risks and struggles to deal with. For instance, some actually do worry about storms and land loss on a daily basis, but most worry about paying the electricity bill and buying petrol for their boats. But although social and natural obstacles beyond their control constrain them, some residents find comfort in a deep faith in God. Through God and their dedication to The Bayou, these residents have found a remarkable amount of hope even as their situation worsens. This hope is often fueled by powerful memories that frame the way The Bayou “used to be.” In the following, is what some residents say about land loss, their everyday struggles, the need for agency, and the sobering power of faith and hope.
5.2.1 LAND LOSS AND UNSPOKEN RISK

Subsidence and erosion emerged as the most frequently mentioned environmental threats when analyzing the ethnographic field notes, transcripts of interviews and the focus group. According to Shay, “Our land has sunk a lot…this land back here…we used to trap all this land back here…but now you can’t walk this land…they ain’t go no more land, it’s all gone.” The residents perceive to be threatened by land loss—it is a struggle—and they do not want it to be a natural part of their way of life or ecosystem. However, they have been slowly watching the deterioration of the land for some time. Residents accept that these threats are a natural process, but they are also quick to charge “oil people” and “the government’s mentality,” which they say supports big oil, for speeding up the land loss process. Sal in his fifties gives the following account:

“It was nice and dry on the bayou before they had no water coming on the bayou…a lot of water now on the land. So many canals. The oil people cut the land to get out the oil and gas. That is why the bayou is so big now…..we had only one canal but now they got canals all over…..the oil companies used to go over there and shoot out there. They had brought a buggy and used to go out in the marsh and put flags. Some spots they put flags and shoot their dynamite to find a place they had oil….a couple of years they come and put a rig and pumped oil out of the ground.”

During the focus group discussion, all seven of the community members were asked why they felt they were losing their land. The following are several responses:

Muncel explains, “Erosion and they had a lot of oil rigs and stuff, [and] cutting canals had a lot to do with it. But they don’t fill it back up, they [oil companies] just leave it open”

Peter suggest, “The oil rig can come on in, it can cut and do whatever they want to do for production, o.k. They can build things to preserve, the only thing they looking to preserve is their pocket”

Picasso comments, “The oil industry…came in and cut canals, they took what they wanted and they left. Simple like that.”

During the focus group Peter states what he perceives to be another reason for land loss:
“Even nature itself, if you let it alone in time nature will just change things around…the coast, we have to help it, preserve it. Land and everything, well we have to help it to build up or else we are going to lose the coast and then New Orleans will be the coast if they don’t do anything. And then in time, maybe there won’t be no more Louisiana.”

Meda interjected:

“One thing about nature having its way with the natural occurrences as far as erosion and changing things, but what we are facing is not just nature, things have been sped up along the way, where as it would have taken the natural way of having the land eroded, you know, several hundred years to get to the point where we find it today but because of man’s interference with the natural order, with their [oil people] taking from the land and not giving back, they have more or less sped up the process. So rather than say two or three hundred years of erosion over this period of times you are losing at a rate, on a yearly rate. Because of their intervention.”

During the night shrimp trawl video documentation, the boat captain and informant made sure to point out the areas where oil companies have been active. They described how the oil companies dynamited the marsh and land to construct, according to Picasso, the “hundreds of pipelines underneath us.” All three community members on the trawl that night were eager to talk about how they perceived the oil industry activities as being destructive to the natural environment and at fault for land loss.

From the aggregate reports of residents, they blame the region’s oil and gas industry for land degradation. Residents perceive industry as having a negative impact on the local ecosystem. In observations and interviews, few questions or comments evoked a much stronger response than their accounts about the oil and gas industry.

Muncel suggest, “They got oil rigs right now they just put right here in Jefferson Lake. They had to dig canals to get to it with a dragline and they dig the canal and when they leave they won’t close it back up—they just leave it open. And this is just for more water to come back in—more current.”

However, some residents go beyond blaming the oil and gas industry, attributing most of the negative ecological impacts on government agencies.
Meda reports, “I think…a large part of the threat, that not only faces the community and our coastal existence, but the entire coastal existence, but the entire coastal region of the State of Louisiana, is the mind set of the people that are in power, they are in power to be able to make changes, implement changes and they for whatever point of time that they are in power, to put in what ever projects that they oversee, the long term vision of the causes and effects are not taken into account and I think that people are not giving back to the land, not protecting the land, I mean they are making their living, they are ‘eeking’ out an existence you know from the natural resources, but they are not giving back, they are taking and not giving back. And just a basic and common logic will tell you if you take something out you need to replace it with something in its place.”

During all of the encounters with residents, they always seem to offer different local coastal restoration and mediation proposals. They often remark, “…if they [scientists, government, industry] would just [use] common sense” or do this [some alternative proposal] instead of what they are doing now to “fix coastal erosion” they would not be facing the risks they are facing. Shay believes that coastal land loss could be reversed if the government followed his plan:

“It seems like to me, if you want to solve a problem like land loss, you’ve got to solve the problem where it starts…if they would start from the Gulf…closing up the passes, filling it up with rocks and then take a suction pump from the Gulf, pump the sand back…then the pass is the way it is supposed to be, let it be.”

Most residents think or hope that coastal erosion can be reversed, even if their accounts show little belief in the policies and programs of authorities. Many residents have suggested that scientists that do research in The Bayou and along the coast do not listen to them. Meda suggest that as a result, the agencies that rely on their ‘expert’ knowledge usually end up implementing “understudied and under-funded” projects that seem only to compromise the community further. After Shay offered me his “proposal,” he had this to say about scientists:

“…not to put them down, scientist, but you really have to live the life on the bayou to really know what the bayou is all about.”
Residents understand the explicit risks of storms and land loss. They perceive oil industry activity as an historical risk to the community’s ecosystem. But there are latent environmental risks of which residents are either not aware or discount because they are not readily observed. Some examples include how they discount the invisible toxins such as mercury and the community’s own human waste.

A chemical such as mercury is known to bio-accumulate in local predator fish species, which form a staple diet in The Bayou residents. Moreover, because the residents of The Bayou do not have septic tanks, their waste flows directly into the bayou water. Oyster beds are commonly polluted with fecal coliform and subsequently the products from these beds cannot be sold at market. Leisure swimming exposes residents to disease as well. April comments, “They say the oysters in the bayou are polluted but we eat them everyday.” These toxic risks possibly affect the community’s harvest, their diet and their leisure on a daily basis, yet are rarely described by residents as environmental hazards. During observations, interviews and the focus group many residents did not even recognize these risks, while the few that did often put their own local ‘spin’ on them.

Shay suggests, “They had a lot of bad reputation about the oyster situation…about maybe people eating the oysters and then dying. I believe myself…especially the people that were here before me, people that had some kind of sickness, maybe the oysters react to them.”

Bena comments, “…there ain’t no mercury in this fish.”

Cade says, “They would have a long rope and everybody would go swimming when the boat passed their house. And the rope would tow us all the way down the bayou…we still do it today. Every year it is the same.”
5.2.2 EVERYDAY STRUGGLES

In addition to the cyclical risks of storms and the ever-increasing rate of land loss, the residents speak of other everyday struggles. The following are female residents’ accounts of what they worry about on a day-to-day basis—the chronic financial struggle, which is a reflection of the socio-economic dynamics experienced by The Bayou community.

Meda worries about, “Financial concerns. Being able to just provide…the utilities that come into our home. To keep us warm in the winter and cool in the summer. To have fresh water running through our homes…. all these things that we have to pay for and we are seasonal workers, our community is based on getting money from seasonal work. From shrimping…if you have a poor catch, then where are those monies going to come from? So, I mean buying food, buying nutritious food as opposed to whatever is on sale, to feed your family a nutritious meal—sometimes that is a everyday worry…and also keep up with fuel and insurance and everything cost money and not having the money is an everyday concern.”

June struggles, “Well, partly the boat situation [a safety concern]. You know traveling by boat. A lot of times we come right here to the dock and people that don’t even live out here, have their boats there. You know and you can’t get toe the dock. You know when the tide is really low, it’s hard to come to even get to the ramps…[they speed] at 60 mph…they hit something they lose control, and they come through your house.”

Bly, along with other residents, worries about the younger generation on a day-to-day basis. She states,

“I worry about the next generation, the kids that are coming up, what is life going to be like for them? And it’s hard for my daughter and they lived a hard life and it’s hard for us. I mean we have it a lot easier than what they did. But what we facing today is going to be much harder for the next generation coming up. You know, the fishing we got, the catch they get, soon they going to have to give it away for free. So, what are our kids going to do? I mean, they don’t have the shrimp to catch to begin with [referring to over fishing] so how [are] they going to make a living off of that? How are they going to survive? …What’s the future holding for her [Cade], because I see how bad it is here as we struggle and the things we are faced with on an everyday basis—survival, feeding your family, clothing them, and you try to make life easier. But it doesn’t get easier in our situation.”

For Cade, she worries everyday about the natural environment—the unpredictable tide.

“Everyday its tides. High tides and low tides. Just walking outside you know, you have your shoes, and your clothes, and you are ready to go to work and there is a big lake in front of your yard. And, you have to walk through that to try to get into the boat. And when you get into the canal, and get to the main road, there is water, if you have a car
that is kind of lower to the ground like I have, you can’t make it. You know you’ll have water in the car.”

The men of the community have other everyday struggles or concerns. Peter says that he worries about erosion everyday:

“…the problem we facing is coastal erosion. Everyday, everyday, when you wake up, picture five square miles is eaten everyday…I worry about this everyday.”

However, the majority of the men who rely on the seafood market for their sustenance, struggle with the everyday struggle of price change, competition, boat repairs, and petrol. Through analyzing the field notes, residents perceive they are marginalized by the seafood market. For instance, I was told on five different occasions about the ever-changing price for shrimp. For example, before a long day of shrimping the fishermen purchase ice and petrol at the local dock. They leave that morning with the previous evening shrimp price in mind. While trawling, they see larger more technologically equipped commercial shrimping vessels, which residents state have “an army of workers.” After a long day of shrimping, they must return to the dock to settle their debt for the purchase of that morning’s ice and fuel. Also, they pay this debt with their catch and anything left over is profit. However, shrimp prices change during the day. The community perceives to be threatened by these socio-economic dynamics of the shrimp market. Bena states, “we are under the control of the dock owners…you have to be careful you don’t want to make them mad and you either settle with them or you don’t and then your stuck because you still owe the debt and you don’t have a freezer to store the shrimp or the outlet to sell that volume of shrimp.” Additionally, residents struggle with the expensive boat maintenance.

Shay states, “…we struggle…I don’t have the money to fix my boat. They said they were going to help fishermen with farmer’s loans. I did what they told me to do. I never got nothing. Because you don’t get no help, [but] that don’t mean you are going to stop. I can’t stop. I didn’t get it so we are struggling”
Everyday the residents feel the tensions of this place—a bayou coastal community. It is either when they walk in through the yard and get their feet muddy, worrying about the tide, worrying about their young leaving, relying on the unpredictable nature of the seafood market, or its when they look at what is left of their land, which they are reminded of everyday. For others, they worry about the unpredictability of seafood market and if they are going to be able to support their family throughout the year. But, these everyday struggles coupled with the fear of losing their cultural identity, have motivated the community to form agency in order to fight for their existence.

5.2.3 AGENCY

Due to all of the struggles listed above, this community has created agency in order to carry on their culture. Residents regularly pursue outside interest in order to acquire benefits for their community. For example, they reach out to politicians and local agencies such as FEMA. To better organize themselves, they created a non-profit to “save their heritage and land.” This agency is the only way that residents rationally are able to cope and have empowerment to fight for their survival.

The local knowledge of residents provides them with an understanding of their natural and cultural environment and what the loss of one would mean for the other. As Bly states, “without the land…the people could not survive.” Meda notes, “trying to separate the people from the land, I mean it would have disastrous effects, because we are connected to the land.” One male resident in his 60s stated during an impromptu conversation, “…we have to try little by little to save our way of life…we struggle but we have to work to save [The] Bayou.” This awareness creates in some a sense of permanent anxiety about the prospects of where they exist. Bly states, “…our situation…it’s not getting any easier.” Bena has stated during a impromptu
conversation, “…we are always having to worry and struggle…so we have to have a vision.”

Some stay and keep their photo albums and other keepsakes packed and ready to go in anticipation of a storm, while others simply pack up and move out all together.

Regrettably, residents notice that the younger generation, which has only dealt with the struggles of a compromised environment, are moving “to the front” – a local expression for moving out of The Bayou. The moving further away symbolizes for some parents the disconnect youths in the community have with their ecosystem. Other elder residents have relocated outside The Bayou because they lack resources or their homes and/or boats were destroyed in storms. Moreover, watching the young and the most vulnerable leaving the community creates an anxiety that magnifies, for those who stay, just how unique they and their “place” really are.

The Bayou residents perceive that the community is slowly facing cultural extinction. Bena states, “we will go into extinction if we don’t do something…before we were not even on the map…FEMA and Red Cross didn’t even know who we were…but God helped us by introducing us to you’ll [the research team] and now we are on the map…FEMA and Red Cross now call us…you have to work and organize to get somewhere…that is what we did.” In order to survive, the community uses agency to fight for their existence. Many residents have concluded that they have to gain knowledge and fight for their survival because the younger generation is not as connected to the place as the older generation. In the following excerpt, one resident battles with another’s view:

Meda describes, “…we are also stressed out and focused on just survival and all of the things that have gone wrong with….the physical aspects f the community that we don’t have the connectedness anymore. And they [pointing to a young resident] don’t…they are not benefiting from that heritage that was passed on to us. So we have to draw a line in the sand and make a stand say we have to claim what was lost and what was taken away from us to enable them to see what [The Bayou] could be.”

Peter interjects by telling a story about his father’s way of life:

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“But the trapping, the shrimping, my daddy and his dad used to make their living to keep their family together—that’s gone. I don’t base my living no more on shrimping and trapping—I can’t. I base my living with a steady job…she [pointing to a nineteen year old girl] is going to move and she is going to go and I can’t blame her.”

Meda responds:

“You have a valid point….[but] in all honesty and seriousness….you have a very fatalistic point of view, which is accurate in the telling and existence of it….in the current existence in the way we are, your fatalistic point of view is accurate, I can find no fault with your point of view. But what I’m saying is we have to continue to fight for our existence. Because we have no where else to go but into extinction and that’s why we have to reach out to whatever means and whatever organization we can in order to educate ourselves. I believe that if our parents and our grandparents had been knowledgeable of the situation of how to go about marketing their catch, we would not be faced with what we are now. So that’s why the need for knowledge is all important.”

Some residents have moved out of The Bayou to places as far as Tennessee. When asked how many people have moved, few give a clear answer. However, one of the younger residents admitted that around fifteen local families have moved to Tennessee. The young respondent reveals the community’s secret resignation “that [Tennessee] is our safe haven.” When asked if they would all eventually move there, she replied, “Eventually we will have to.” However, other residents such as Bena state that Cade’s number is not correct and only a couple of families have moved—mainly the young and some older individuals who are living in nursing homes. Once again, through investigation the exact number of resident’s that have moved away from The Bayou is not known, due to the various responses received.

Some of the residents who have relocated often return to visit. On several improputu conversations with ex-residents, they stated that they miss living on the bayou and hope to return someday. During interviews with two male ex-residents, it was discovered that they visited regularly. According to Shay, he even admitted he planned on moving back one day:

“I’m looking to retire as soon as I can. But I want to come back and live on The Bayou. You know why? I love it back here. Peace and quite. You got water to catch trout, and redfish. It’s comfortable.”
Because the resident’s perceive to be vulnerable by the social and environmental risks that threaten their identity and way of life, they have formed great agency. Because of these risks, organizing and fighting for their existence is the only rational way for them to deal with an unmanageable situation. And while some in The Bayou choose to stay and change the social landscape, others find refuge in safer but less meaningful sanctuary. The choice to relocate is neither something that is frowned upon nor something that compromises the community’s goal to preserve their heritage. It is one of many legitimate responses to the varied risks The Bayou faces. During storms, some evacuate, while some stay. The choice to relocate is simply a permanent form of evacuation.

5.2.4 FAITH AND HOPE

In most interviews, residents speak of God. Some say, “God placed us here.” Others say, “God watches over us.” On my first visit to the community, I recognized the residents referred many times to their unwavering faith in God. For example, they used a metaphor of Noah’s Arc to describe the sanctuary of their boats during severe storms. June once said during a conversation about an upcoming tropical storm, “God is good and he controls all of this, we have to put all our faith in him.” This community has been withstanding natural and social force for decades, but it has yet to be vanquished by storm or by man. Cade says that some have been injured but “…they [the women and the men] tend to that…because going to a doctor or hospital [is] impossible [during storms] ‘cause we [have] to evacuate.” The following are impressions of God and His relationship to the residents in their own words:

Peter suggest, “….God called me for this test. I didn’t ask to be right here but I’m here…I’m going to live here, I’m gonna fight for [The Bayou]… God handle it…. God protect Grand Bayou. God protect this little place. When you can’t go anywhere or find a job…you can always find a crab or fish in the bayou. Something to feed your family or something to sell. And that’s the same way with the cemetery. God protect it.”
Meda comments, “[on their boats, the night before the storm] the community prays and puts all faith and trust in God.”

Bly states, “..it will take the hand of God to [help the community], you know, God is on our side.”

Cade spoke of how she felt after a storm:

“After its over and done with I’ll go to my little closed spot and just break down and realize how blessed we are to have been successfully away from the storm and free and just alive its such a blessing and God really protects us and puts his hand upon us.”

This community finds hope through active agency and their faith in God. In order to deal with their unmanageable risk, residents often place their hope in God. Through their strong connection with the land and faith in God, the community has found a remarkable amount of hope. To illustrate this, the following are several responses taken from interviews and the focus group discussion:

Peter believes, “…hope is possible. I want to do something for [The Bayou]….I [would] bring the people back to [The Bayou]. So to bring the people back on [The Bayou], I want to build a home for the elderly.”

Meda comments, “My hope for [The Bayou] is for us to regain what we lost as far as being self-contained, self sustaining. You know because its not everything that’s available to us on the outside that I feel we need and I feel we need to expose ourselves to. Because in accepting and adopting some of those changes whereby it might you know aid us in some of convenience of life, it also has life altering effects on us and it changes us as who we are…just taking what we need but being true to ourselves….keeping originality…being true and being able to still be here, to have something to pass on to the next generation, [and] the next generation too.”

Bly reveals, “I hope to see a better way of life for our kids, a better way of life…less struggle, comfortable homes, you know to live in. The economy better….you can make a decent living. I mean we don’t want to get rich, just to live…[a] comfortable life, existence, you know. And that’s my hope and dream. That we have comfortable homes a good living, you know, we raise our families and kids and oh, just have a future.”

Many residents often speak of their homes being rebuilt or lifted. They are aware that affluent people from inland build homes and seasonal camps in nearby bayous. They bring
artificial sediment into the bayous and build the land up, and place their homes on stilts. This gives the community hope that measures do exist. Douglas and Wildavsky (1982) mention this kind of risk diffusion, when people start moving into at-risk areas. The following excerpts from interviews with community members refer to hope:

June states, “one of my hopes is for the church to be lifted. Because it is a tragedy when you have to go into the House of God and there is four feet of water in it…and my hope is to see the bayou bulkheaded.”

Shay describes, “I hope to pick up the homes, you got to put land….all the land is gone… I’d like to see it built up.”

Bly comments, “I hope to see [The Bayou] like they’re doing everywhere else through the area, fixed up and a way you can be comfortable without having to worry about when you get outside and walking in water.”

However, some of the younger generation battle with the concept of hope. The account of Cade, a twenty-year-old female resident:

“Its really saddening, you look for hope but then how could you look for hope when you have this [land loss] and a lot of people are visual and you see something and its like—there is no hope but then you always have hope because without hope you would be a miserable person”

These excerpts illustrate the general sentiments felt in the community. They are struggling with what they know this area could be, their efforts to get there, and the endless struggles for hope.

In summation, the residents find identity in a place that is burdened with social and environmental threats. However, geographic displacement or the loss of their identity is perceived to be the greatest risk. Some of the threats have been voluntarily incorporated in their cyclical way of life. Others are involuntary threats perceived the threaten their identity the most. In order to survive this at-risk place, the community has formed agency to save their cultural identity and way of life. Their hope for a better life in this place and their faith in God give them the energy to carry on and according to Meda, “risk is part of it.”
CHAPTER 6: DISCUSSION

The focus of this research was to investigate, by using a qualitative ethnographic approach, the risk perceptions of a small-unincorporated coastal community in southeastern Louisiana. The Bayou is a self-identified indigenous fishing community besieged by numerous social and environmental risks. In the past, global large-scale studies focused on the perception of risk to human health and property connected with natural and technological disasters (Kunreuther et al., 1978), but few explored the issue of risk perceptions from a minority perspective (Flynn et al., 1994). Further, most studies draw their conclusions about the distribution of risks across a large population rather than consider the unique experiences of individuals in a small at-risk community. These global risk perception studies rely primarily on attitudinal surveys, based on the psychometric paradigm designed by Slovic et al. (1980) or cultural theory created by Douglas and Wildavsky (1982).

This research examined how a small, rural, minority community perceives risk. This study employed an ethnographic approach through a variety of qualitative methods including participant observations, face-to-face intensive interviews, video ethnography, and focus group techniques. These methods uncovered the descriptive accounts of the community and how they perceive environmental risks—storms, land loss, flooding, industrial toxicants, water contamination—and social risks—political isolation and a changing economic climate. This type of qualitative risk perception research has yet to be done in Louisiana.

This investigation aims to clarify the following perplexity: Why does a marginalized community with few resources choose to stay in an area that they perceive to be burdened with environmental and social threats, as opposed to relocating to an area perceived as less risky? In other words, why do these already vulnerable people have such a strong attachment to a place
that compromises them even further? The place attachment literature offered an illustrative framework for understanding this dynamic in the community. The literature theorizes that place attachment is formed when there is a symbolic relationship between a people and the place it occupies. The community has culturally shared emotional meanings to this particular at-risk geographic place, which provides the basis for the group’s understanding of and relation to the environment. The place attachment literature was used as a way to theorize the findings based on the shortcomings of the risk perception paradigms such as the psychometric paradigm and cultural theory. However, the risk perception literature offered theoretical elements of why people voluntarily take on some risk but are opposed to other risks.

Qualitative methods and analysis revealed a variety of themes or findings. The six major risk perception themes of this community are: (1) the community finds identity in an at-risk place, which renders geographic displacement as the greatest risk; (2) the residents’ perceived marginalization by outside institutions and governments creates a heightened sense of dread and anxiety towards risk; (3) natural hazards such as storms have been a cyclical way of life for this community; (4) however, due to land loss, storms are now perceived as more destructive than they were previously; (5) the influx of people moving into the area diffuses the regions level of risks; (6) there are many risks to the region that the community either does not talk about or perhaps does not acknowledge. The following paragraphs further describe these six major themes or findings.

(1) The most explicit and obvious finding was that residents obtain identity through their profound connection with the land and way of life. Identity is intertwined with place in a variety of dimensions. From their experiences of community survival (i.e., recovering from storms) over time, they have united to create a unique identity. But they differ along gender lines in
The women of the community tend to perceive the outside world as posing a higher level of risk to the social dynamics of the community. However, men and women agree that the outside world poses an environmental threat to the community. Age groups also differ in terms of the intensity of tie to the land, with older residents tending to project the romanticism of the past upon their present situation more fluidly than the younger generation. Identity and place is best illustrated when residents recall the genealogical linkages that historically bind them to place and the cognitive geographic legacy they pass on to their children. What emerged from the community’s accounts is that the concept of risk is broadened beyond the common definitions—property damage, personal injury, loss of life, ecological loss—to include the loss of cultural heritage, identity, and way of life that is connected to this particular place. Thus, geographical displacement is a greater ‘risk’ than living in an area burdened with continual environmental and social risks.

(2) From their accounts, residents perceive that they have been marginalized by the outside world and this alters their perception of risk. For example, residents think that industrial activity such as channelization or canal cutting leads to increased land loss, which they perceive as threatening their current geographic existence the most. Residents often acknowledge the importance for industrial activity, but think that parish, state, and federal governments should regulate the industrial activities. More specifically, residents perceive that the best interest of industry is heavily supported by government agencies, thereby marginalizing the community’s sustainability. Additionally, residents perceive federal, state and local governments have marginalized them in a variety of other ways. For example, a lower levee was constructed behind The Bayou community by the Army Corps of Engineers to protect HWY 23 from Gulf
storm surge, however, consequently the community experiences increased Gulf surge, which floods their community. Due to the unpredictability of outside mitigation and the lack of financial resources, and the perception of their prescribed social and environmental marginalization, the level of threat is elevated. This marginalization has resulted in a close-nit community, cynical of the outside world. Additionally, the perceived marginalization has resulted in the community creating a ‘unique’ identity separate from ‘outsiders.’ Therefore, the marginalization has resulted in the creation of identity and place attachment.

(3) Another finding was that the community’s way of life is intimately intertwined in their relationship with the water, and storms have been a cyclical natural part of their way of life. Storms and their disruptive effects—floods, wind damage, and debris—are basic elements of the environment. Residents report they have adapted to this cyclical storm-stricken environment over time and by doing so distinguished themselves as uniquely suited for this land and way of life. Storms threaten their existence, but more profoundly they anchor them in a way that reinvigorates their commitment to the community’s survival—some are uneasy with the increasing unpredictability of even small storms, while for most others preparing for, dealing with and recovering from storms is a natural way of life—they anticipate them, deal with them, and recover for them. But, residents see that this cycle is breaking. For example, many residents that used to ‘ride out the storm’ now evacuate inland during more intense hurricanes. From their accounts, they perceive that because a large amount of the wetland and barrier islands have dimensioned, they are no longer protected and now storms occupy a heightened sense of risk to residents. This has led some residents to move away from The Bayou, particularly the younger generation who has less of an attachment to place.
Cultural theory states that individuals voluntarily take on some risk, but are opposed to risk that are involuntarily placed on them by others (Douglas and Wildavsky, 1982). Storms (a voluntary risk) have been a part of their identity and way of life. Land loss (an involuntary risk) inspires a profound cynicism among residents towards outsiders (industry representatives, government officials, and researchers). Because they feel the involuntary risk of land loss is usually managed beyond their control, they have formed agency that networks with outsiders to bring expert knowledge in and to diffuse local knowledge out. Through the newly formed agency—working with outsiders—the community has created a unified vision to generate benefits in order to raise their houses and bring sediment into their canals. By actively working with researchers, experts, and politicians the community residents are empowered to continually fight for their land.

Cultural theory suggests that when people start moving into a risky area, the level of risk to the region is lessened (Douglas and Wildavsky, 1982). Currently, many homes are being built near the community, outside the lower levee that protects HWY 23 from Gulf storm surge. These homes, though, are built on high stilts to withstand storm surge. Additionally, individuals that are building outside the levee are also bringing sediment in to fill-in the canals. The residents believe that if sediment were to be brought into the wetland canals, they would be more protected from storms and flooding. When the community sees the influx of people moving into this at-risk region, their perception of risk is diffused. Instead of objectively evaluating their social and environmental setting, they hope to have their homes built-up and the canals filled-in with sediment.

Residents rarely acknowledge the day-to-day threats such as water contamination. They rarely speak of fecal coliform contamination and other toxins such as mercury. The
community houses do not have septic tanks; therefore, the human waste flows directly into the bayou. Residents continue to swim in the bayou canals, as well as eat the oysters. Oysters from the bayou have been banned from being sold on the market. They do not talk about fecal coliform contaminating their food sources, although they do realize these negatively impact their economic sustainability. However, residents often speak of oyster reef contamination due to fresh water diversion siphon pumps installed by the government. Cultural theory states that the risk that endangers the value orientations behind an individual’s social way of life is defined as the most harmful risk. Possibly, this explains why residents tend to be vocal on the involuntary risk of fresh water oyster contamination, but not vocal on oyster contamination from fecal coliform. To see fecal coliform as a risk would be to admit they are doing something that might harm their environment and would be against their best interest, thus this finding supports cultural theory.

In conclusion, this community finds identity in this particular at-risk geographic location. Because they find identity and are connected to their way of life, agency is the only rational way to deal with their unmanageable situation. While some in the community choose to stay and change the social landscape, the younger generation is relocating to “safe harbors” inland. The conclusion from this flexible interpretation of risk responses is that residents do find rich meaning in a cyclical place troubled with various risks. Those who stay employ the romantic myth of the community to help them mobilize political resources. Further, when some residents voluntarily leave the roots of their bayou identity travel with them and do not necessarily undermine the community’s goal to “save [their] heritage and land.” However, the residents who have left still visit frequently and hope that one day they may return to live in a place they are connected to, find identity in, and thus keep their ‘bayou’ culture alive.
6.1 RECOMMENDATIONS

The environmental and social risks of the “fishing village” explained in this thesis possibly threaten many similar communities along the Louisiana Gulf coast. These coastal communities provide Louisiana with well-trained ardent fishers who provide a percentage of the state’s fishing market, and provide the region with a ‘unique’ culture that attracts visitors from around the globe. Due to the combination of the increasing slow onset (climate change, sea level rise, long-term land degradation) and fast onset (acute hurricanes, flooding from storm surge, and acute technological disasters such as oil or chemical spills) risks, this coastal culture becomes more at-risk for losing its way of life and cultural heritage each year. Although some coastal restoration projects are being accomplished and others are pursued, the possibility is that many of these communities will not be able to continue to ‘ride out the risks’ much longer. This research found that this particular geographic coastal community is slowly approaching, in their terms, “extinction.”

As shown in the figure below, effective policy should be based on a combination of traditional and scientific knowledge. Traditional knowledge is essential to research design and implementation, and allows for locally relevant outcomes that could aid in more effective decision-making, planning and management. As such, this research provides insight into one coastal community’s perception and evaluation of risk. Further scientific research can provide more insight by completing cross-community comparisons of risk perception along the Louisiana Gulf coast.
After considering the different dimensions of The Bayou’s risk perception, yet another line of research becomes apparent. To be prepared for catastrophic events—acute storms or technological disasters—and consequently community relocation, state policy should be more responsive to local community needs. As illustrated in Figure 15, community needs are best based on the communities’ description of need; therefore, active engagement between researchers and residents will facilitate proper approaches to address these needs. Future
research could be performed on the following: coastal community vulnerability, coastal community resiliency, coastal community risk perception, and how conditions shape relocation choices for coastal communities (e.g., relative location within regional political and economic structures influence feasible choices, family structure, choice of lifestyle, etc.). Additionally, research that links the social ‘human’ dimensions with the life science ecological dynamics of the region in which these communities exist—fisheries, natural geological remediation, industrial and human pollution, and seasonal storms—will facilitate a more holistic understanding of coastal Louisiana.

Through ‘active engagement,’ this study found that residents would like sediment filled into the bayous starting near the Gulf and working back to the community. Additionally, they think the government should raise their houses because overall, the government is responsible for speeding up coastal land loss. After assessing the risk in this community, it is not known whether this point of application would be the most feasible or the most appropriate scientific response. An alternative approach might be to relocate these communities into areas where there is more land but enough water so that they can continue living off the natural resources that provide them with sustenance and a ‘unique’ cultural identity.

However, global past studies of resettlement and development revealed that forced population displacement may lead to different forms of impoverishment: unemployment, homelessness, landlessness, marginalization, food insecurity, loss of access to common property, erosion of health status, and social disarticulation (Cernea, 1990). Additionally, Oliver-Smith suggest that “relocation or resettlement of disaster-stricken populations is a common strategy pursued by planners in reconstruction efforts. Recent research emphasizes importance of place in the construction of individual and community identities, in the encoding and contextualization
of time and history, and in the politics of interpersonal, community, and intercultural relations. Such place attachments mean that the loss or removal of a community from its “ground” by disaster may be profoundly traumatic” (1996:308). The Bikinian people, of the Marshall Islands, experienced this type of trauma displacement.

After World War II, President Harry S. Truman issued a directive to Army and Navy officials that allowed nuclear weapons testing on the Bikini Island (Niedenthal, 2005). Emso Leviticus, a Bikinian elder noted, “I remember being very sad at that time because of the strange feeling of having to leave behind the bones of my ancestors while strangers would be walking around on our island” (Interview with Jack Niedenthal, 1990). The Bikinian people were relocated, over the course of two years, to three different islands (Niedenthal, 2005). All three of the islands lacked adequate traditional and local food crops compared to their food supply on Bikini (Ibid). As the food shortages worsened, the small populations of Bikinians were confronted with near starvation (Ibid). According to Esmo Leviticus, a Bikinian woman, “…we could only remain hopeful and keep thinking that one day soon we would be returned to Bikini” (Interview with Jack Niedenthal, 1990). One of the leaders, Lore Kessibuki stated,

“The first symptom was that we all suddenly had a very hard time sleeping…we would find ourselves feeling weak and dizzy and shockingly unable to stand…. I would manage to find the strength to get up and move around enough to get a drink of water. It was then that we would be confronted with the strangest of feelings. By simply touching the water our limbs would be shot with pain as if thousands of needles were running up and down our hands and legs. These sensations, coupled with the awkwardness of adjusting to our newfound environment, left us feeling very perplexed” (Interview with Jack Niedenthal, 1987-1991).

Meanwhile, the Bikini Island was in the process of being irradiated by the United States nuclear testing program (Niedenthal, 2005). Nuclear test were being done on Bikini, while high force winds were blowing in the direction of the inhabited atolls (Ibid). After a destructive hydrogen bomb (Bravo)—said to be a thousand times more powerful that the bombs that were
dropped on Nagasaki and Hiroshima during the end of World War II—the United States began to pull out of the island (Ibid). Several years passed and the US began considering the possibility of returning the Bikinian people to their homeland based on data concerning low radiation levels (Ibid). Many of the Bikinian peoples desire to return to Bikini was greater than the risk of being exposed to alleged radiological dangers (Ibid).

Lore Kessibuki states, “Even through all of these hardships it was unfathomable now that we still held high hopes that the Americans would help us…Bikini is like a relative to us: like a father or a mother or a sister or a brother, perhaps most like a child conceived from our own flesh and blood. And then, to us, that child was gone, buried and dead” (Interview with Jack Niedenthal, 1987-1991).

Oliver-Smith (1996) notes that when communities lose homes, social contexts, and culturally significant places and structures that these elements must be grieved for in ways similar to the bereavement for a loved one. This sentiment can be seen in the quote above by Lore who refers to lose of place as having the same significance as the lose of a child.

Peter Joel, a Bikinian elder described his experience of moving back to his radioactive homeland:

“Once I heard that the U.S. government was proclaiming that Bikini was safe and free from poison, I began to have overwhelming thoughts of joy. I immediately began requesting that they send a ship to pick up my family and I from Rongelap, where we were living at that time, so that we, too, could go to Bikini and get involved in the restoration….During the cleanup, life on Bikini was not like those days where we worry about everything and find ourselves always bickering with each other. The only problems we encountered were due mainly to the fact that we had no revered with us. But we really didn’t have any worries until those scientists started talking about the islands being poisoned again. You see, right before they began warning us about the coconuts, pandanus and the crabs being unsafe, the ships had started coming much more infrequently, and so we had to rely heavily on our local food” (Interview with Jack Niedenthal, 1989).

Eventually, the US declared that the levels of radioactivity were higher than originally thought (Niedenthal, 2005).
Peter Joel then states, “Finally, the Americans and their scientist came back a few years later saying that we had to leave Bikini. They said that we ingested too much poison and that it wasn’t safe to live on Bikini anymore. We didn’t care at this point because we had already started to get that hopeless feeling again; though because we all wanted to stay on Bikini we did explore the possibilities in an attempt to find a way out of this problem.” (Ibid).

Involuntary displacement was a dereliction of the Bikinian peoples’ culture, which was intimately intertwined within the social context of place—the Bikini Island. From displacement, they experienced much grief and trauma. The residents of The Bayou have expressed similar grievance sentiments when talking about relocation.

Meda states, “I think that if [The Bayou], if the people lost the land, then the people would no longer be who we are…we are fighting…and loosing ourselves that way, I think a lot of people, it would cost them their lives. Especially the older generation, they would die from the lack of land. They’d grieve for what was lost and we would be part of that grieving process and not having that to pass on to the future generations…they would have lost a piece of who they were, who God intended them to be.”

Bena states, “we are not leaving… it is not an option…this is who we are…this is our land and this is who we are.”

In summation, to understand the connection between coastal processes and their effects on the human dimensions, additional research and application needs to be done between local residents and researchers by using ‘active engagement’ in order to shape effective policy, as shown in Figure15. Additionally, combining social and coastal science perspectives creates a comprehensive approach for formulating more effective adaptive management strategies to mitigate the effects of coastal wetland loss.
REFERENCES


APPENDIX: MERCURY ADVISORIES

Louisiana Mercury Fish Consumption Advisories

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>NUM</th>
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<td>Amite River</td>
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<tr>
<td>Bayou des Canes</td>
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<tr>
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<td>Bayou Dorcheat</td>
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<td>Bogue Faisnia and Tchoupitche Ranges</td>
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<td>Gulf of Mexico</td>
<td>18</td>
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<td>Henderson Lake Area</td>
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<td>Toledo Bend Reservoir</td>
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Louisiana Department of Health and Hospitals
Office of Public Health
Section of Environmental Epidemiology and Toxicology
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VITA

Susan Camille Manning was born in Baton Rouge, Louisiana, on February 16, 1978. She is the daughter of James and Sue Manning of Baton Rouge, Louisiana. She attended Louisiana State University and received a Bachelor of Arts degree with an art history concentration in December 2001. During a summer working in museums throughout France, she decided to change her academic avenue. After several chemistry and environmental science courses, she enrolled in the Department of Environmental Studies, where she received a graduate assistantship working for Dr. John Pine. Ms. Manning is currently a candidate for a Master of Science in environmental sciences to be awarded in August 2005. Additionally, she is an intern at the Environmental Protection Agency’s Criminal Investigative Division. Upon graduation, she plans to further her education by advancing to a doctoral program.