

ABSTRACT

New Orleans after Katrina, Policy Decisions in the Impossible City

Charles Preston Morton

Director: Marlene Reed, Ph. D.

Geographically and economically, New Orleans is unique among North American cities. New Orleans is an island city surrounded by marsh, bayous, lakes and rivers constructed on over four hundred square miles of artificial land. It is home to the world's largest port on the world's greatest river system. Paradoxically, the location and its importance lead to the conclusion that New Orleans is both the "Impossible and Inevitable" City. This thesis traces the policy decisions and historical context that determined outcomes during Katrina and the policy decisions made in the six years after the disaster. Looking back on the policy response to rebuild the city, the first clear successes and failures have become apparent. The dramatic change in the health, education, and justice systems through policy have led to one of the most significant attempts at urban policy reform in the modern era.

APPROVED BY DIRECTOR OF HONORS THESIS:

Dr. Marlene Reed, Department of Management

APPROVED BY THE HONORS PROGRAM

Dr. Andrew Wisely, Director

DATE: _____

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CITY

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By
Preston Morton

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CHAPTER ONE

New Orleans - a study in Urban Geography

The History of New Orleans was a combination of cultural differentiation and feats of engineering. Culturally, the city would see seven changes in ownership in its history. Its demographics were always strikingly different from the rest of the continent, being heavily catholic and maintaining a more European culture. Unlike all other continental cities in the US, the ability for New Orleans to grow was dependent on its ability to expand into the surrounding marshes. Technology has turned the fight for real estate from gaining inches to gaining miles, but not without consequences. The geography and culture combined to create the pre-disaster landscape and helped determine the post-disaster outcome. However, like the land it now stands on, New Orleans is a city created by its river.

The Mississippi River, combined with its tributaries, is the largest river system on Earth. It covers more land mass than any river on Earth -- over 41 percent of the continental United States. The Mississippi river is longer than the Nile, carries more water than the Amazon and is the bread basin for the United States (Berry 21). The entirety of Louisiana sees more freight than any other travel by river, and southern Louisiana is the world's largest port (Lewis 7). The one location that controls the entire river network is a small hill sitting on the river, the only high elevation in a network of lakes, swamps and waterways that make up the Mississippi River Delta.

The Mississippi River Delta is an ancient construction. It was built from sediment collected from every mountain and valley the Mississippi has touched. The majority of the delta is made up of the swamps, marshes and other wetlands that sit on the threshold between water and land. Normally flat and uninhabitable, there are only a few spots along the Mississippi that rise up enough to become dry land. One hundred miles upriver of where the Mississippi enters the Gulf of Mexico, the river makes a sharp turn to the east before returning to its southern route. Between the river and its largest lake sits the largest piece of elevated land in the marsh, the location of the City of New Orleans. (17-19)

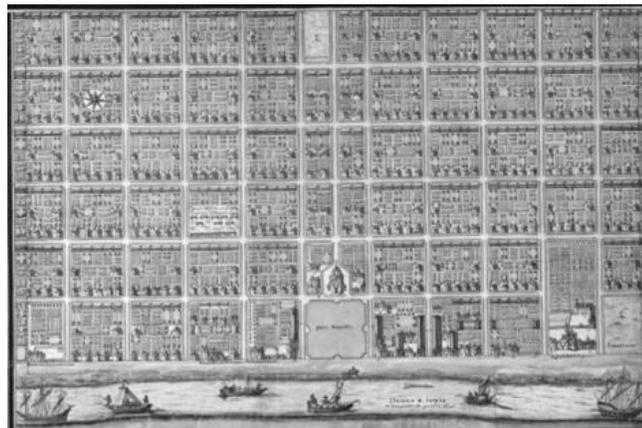
New Orleans is a city built by economic necessity, but cursed by reality. The environment of the city has forced it to face a set of challenges unique to any city on the North American Continent. Originally called the “Island of New Orleans” by the French, the city is isolated by its geography (12). Bordered by the Mississippi to the south, Lake Pontchartrain to the north and miles of swamps to the east and west, there is no way of reaching the city except over water (22). It was far enough up the river that it was protected by the delta from major storms; it was high enough on a plateau that it was protected from major flooding, and provided a location on the river that could prevent any shipping from exiting the Mississippi (28-29). While not the first French colony on the continent, New Orleans was expected to be the wealthiest colony the French owned on the North American mainland (30).

Despite the expectation of prosperity, the location provided its inhabitants with no lack of hardship. Cut off from the mainland, the city had to be supplied by the other locations for food and other essentials. The marshes caused seasonal epidemics of Yellow Fever and other diseases that festered in the humid region. Flooding would be a problem

for the lower land locations before the levy works were built, and a poor year of shipping could cause an economic depression. New Orleans was costly to maintain and the Mississippi marsh was difficult to capture (32-34).

The original French colony was built six blocks deep and fifteen blocks along the river, and forms the traditional borders of the French Quarter. Predominantly Catholic, its population carried with it the culture of the French who settled it. During this period the first canals were built, which acted as simple ditches that would funnel water from the marsh into Lake Pontchartrain. The French goal was to build a European French capital for her colonial ambitions. Unfortunately, New Orleans was never profitable; and the French sold their ownership of the city to the Spanish (33).

Figure 1.A

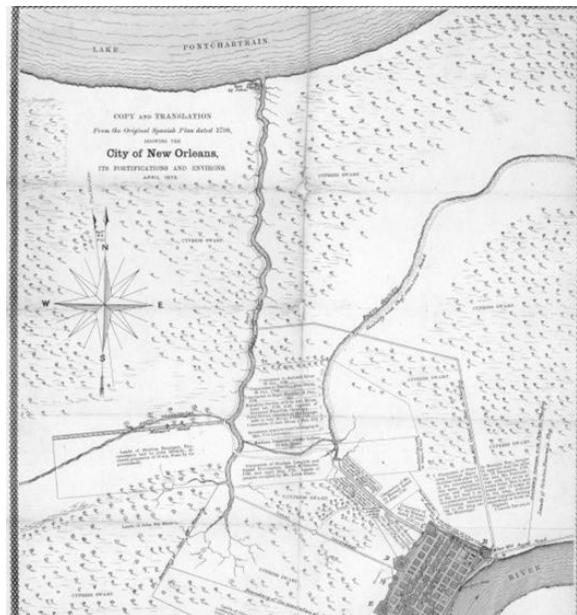


Map New Orleans, “capital of the province of Louisiana” under the French regime in 1755. The eight by fifteen block area that the city is traditionally considered the boundaries of the French quarter.

In Spanish hands the traditional form of the city took shape. The older French structures were burned down and replaced with structures such as the Cabildo and the Pentalba. The Spanish made plans to expand the canals of the city to access more of the navigable waterways; however the colony still wasn't profitable. The planners at the time saw the opportunity to expand the city's trade capability. Alexander Hamilton himself

was the one of the first people to propose an intercostal waterway across the Atlantic, even before the Louisiana Purchase. While the technology needed to produce such a network remained out of reach for over one hundred years, the building of small canals within the city allowed for an increase of shipping traffic. Still, the Spanish shifted ownership of the colony back to the French as mainland North American became a distraction for the crumbling Spanish empire (34-35).

Figure 1.B



Spanish plan for New Orleans, includes several new canals from north of the city that would allow for trade into Lake Pontchartrain and the Gulf of Mexico.

When Jefferson sought better access to the Ohio River valley, he contacted the French. Jefferson's goal was to purchase New Orleans only, as at any time the French could cut off all transportation from the Ohio. With war on the European continent looming, Jefferson sought to add the one location that controlled all trade on the Mississippi to the United States. However, without New Orleans the French would have no control over the river. Napoleon offered his entire holding on the Continent and

Jefferson's purchase would transform into the Louisiana Purchase. New Orleans, however, would come with more of a cost than just money (36-37).

The city of New Orleans is unique among all of the territory gains of the United States. It would be the only time that the U.S. would purchase a large and established city (8). Unlike the frontier, New Orleans would be difficult to assimilate within the United States. With a pre-established culture, the creoles of New Orleans still attempted to maintain their French and Spanish roots. Isolated on its cultural island, New Orleans gained a mystique unique for a city on this continent. Designed like a European capital and filled with foreigners, New Orleans was culturally closer to the old European cities than the English colonial holdings (37-38).

The strategic importance of the city was demonstrated during the British invasion of New Orleans in 1815. Surrounded by swamps, an occupied New Orleans represented a powerful bargaining position as well as an impressive defensive position. An American fort blocked British access into the Mississippi; however the British would dig a canal from Lake Borgne into the Mississippi, creating one of the first canals that could access the Mississippi from the lakes of the river delta. After the British defeat, New Orleans would enter a phase of fortification, adding fifty forts along the bayous and passes of southern Louisiana. New Orleans became the most fortified city in the northern hemisphere, rivaling the only walled city on the continent, Quebec (37).

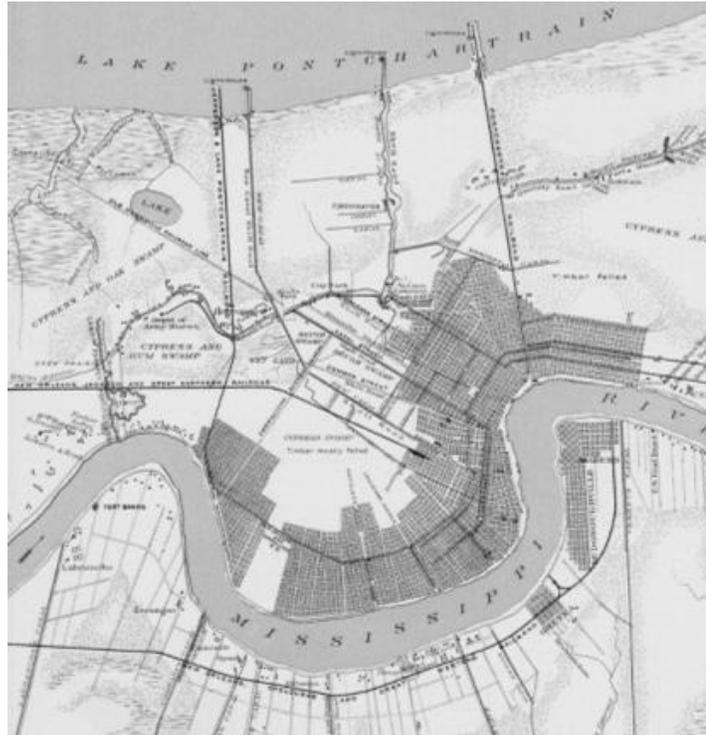
The expanse of the American frontier and addition to the United States let New Orleans grow far faster than France and Spain would allow. Coming with the Americans was the industrial revolution, which included steamboats to navigate the strong currents of the Mississippi upriver. With that growth of the population came the first cultural

divisions, with U.S. citizens moving up river to what is now considered “uptown” New Orleans, while creoles remained in control of the old district. Downstream transformed into a location of immigrants, a part of the city that today is cut off from the mainland by the industrial canal called the Lower Ninth Ward. New canals were dug into the new sections of the city as each had their own demands for business (37-38).

This began the first major segregation of the city into races. The uniquely large American Catholic city would attract a unique group of immigrants. Irish and German Catholics were attracted to the city, forming two distinct communities centered in the same geographic area (39). The French Acadians would settle on the outskirts of the city, forming their own communities and creating a Catholic southern Louisiana (12). African Americans, both free and slave would be settled in parts throughout the city; and their culture would mix with Catholicism to form a unique culture(41). In modern times, New Orleans has developed the largest community of Vietnamese immigrants in the country by attracting fleeing native Catholics from South Vietnam after the war (97-98). In addition, there is a sizable group of Catholic Hispanics. New Orleans’ demographics have produced a city full of different cultures.

During the pre-Civil War era, New Orleans was one of three candidates for the beginning of the Trans-Continental Railroad. Southern leaders would end up supporting the Gadsden Purchase, which would in theory allow the railroad to pass around the majority of the Rocky Mountains and build primarily on flat ground (37). Politics at the time prevented a southern rail route to California, which would not be completed until after the civil war in 1880, 11 years after the completion of the Union Pacific railroad (50-51).

Figure 1.C



A map of New Orleans during the Civil War. All of the high elevation areas have been built upon on the river, and the city is slowly pushing back into drained swampland.

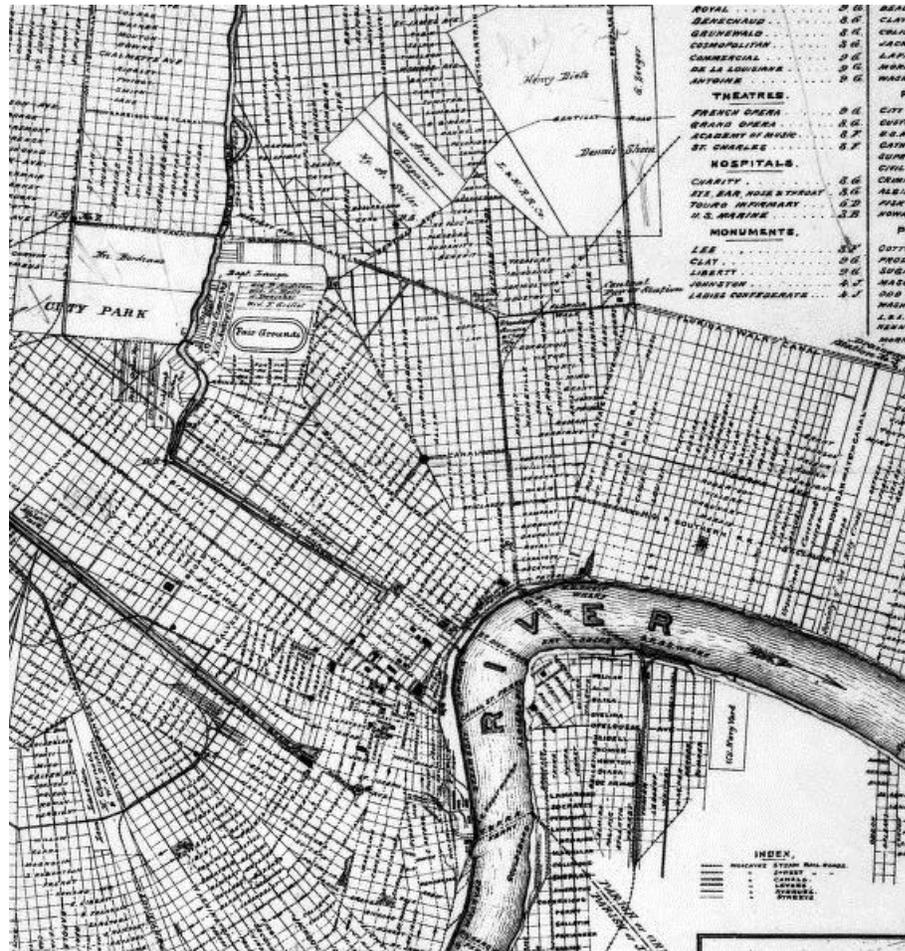
The Civil War and Reconstruction put on pause the development of the city.

Despite the fortifications, the Union army was able to take the city without a significant fight. Without supply Confederates abandoned the forts around the city. The politics of reconstruction and the conflict caused by an occupied force stalled any modernization. After years of neglect, the city of New Orleans's port was in disrepair, only qualified to load and unload steamboats and not modern merchant ships (51-53).

In 1897, the Louisiana legislative branch instituted a commission to turn around the situation. Modernizing the port by taking over private property, it rebuilt all of the port facilities on the river. Panama Canal would be finished by 1914, and New Orleans' new port would be ready for the extra traffic. New Orleans took more advantage the

opening of the canal than any other city, and number of individuals moving into the city increased significantly (53-54).

Figure 1.D



New Orleans 1894

Soon the city had reached the point where it had filled the highland of the Crescent City. The only option was now to drain the swamps bordering Lake Pontchartrain and expand the small settlement on the West Bank. Albert Baldwin Wood, an engineer who worked for the city, developed a pump that could take water out of the city faster than the swamps could be filled in. Levees, canals, and earthworks had to be built, but slowly New Orleans was terraformed (60-62).

In the 1920s, it was decided that the city was to finish its levee system and completely enclose Orleans Parish. To do so, the city built the one of the final new areas of the city, the city Lakefront. Adding two thousand acres of land to the city, the city engineers constructed an artificial high ground. This land was given to Louisiana State University New Orleans, which was later shortened to UNO. The terraforming did not end with the lakefront; but from the 1960s onward there was an explosion of capital into the new city (62-63). Jefferson Parish was drained, and highways built and expanded between New Orleans to Baton Rouge and New Orleans to Saint Tammany.

New Orleans' period of suburbanization was relatively unique. Taking place in the 1960s, New Orleans was late when developing its surrounding suburban landscape. Creating the New Orleans Metropolitan area happened very quickly. Many of the building and styles used were identical; because suburbia took over in one wave, much of the city became identical in architecture. Much of the new land was built on the drained marshes at the lowest elevation of the city. Much of this would be flooded during Katrina. However, Jefferson Parish, the newly low lying suburb of the city which now hosts more than a quarter of the city's population, was relatively safe from flooding (60-63).

From the 1970s onwards, New Orleans suffered the same political disaster as other cities when suburbia changed the urban landscape. New Orleans Parish would adopt higher taxes, and would see higher crime than the rest of the New Orleans statistical area. White, wealthy residents fled New Orleans to the nearby Jefferson Parish and Saint Tammany Parrish (63-70).

Not all white residence would head out of the city, and very few of them ended up in higher ground. Of the 486 square miles of manmade land in the city of New Orleans, including Jefferson Parish, only about 8 were natural high ground of the original city(20-24). Much of artificial high ground was taken by commercial land, by the tourist French Quarter, and the Port of Orleans (Horne 7-10). In Orleans Parish, the prosperous lakefront would be both low lying and a neighborhood of white middle class (17).

New Orleans has always had the reputation for corruption. From 1999 to 2009, the congressional representative for New Orleans, William “Bill” Jefferson, would be convicted of 11 counts of corruption (307-308). The New Orleans Board of Education, six months before Hurricane Katrina, would lose track of the remaining money that would have been used to run the New Orleans Parish school system (Perry 31-32). The construction of the superdome in 1976 would only have been possible if the city wasn't giving enormous kickbacks (Lewis 95). Even the construction of the levees, and the committees whose job it was to supervise their upkeep took shortcuts (Horne 271-272). From the top office to the bottom, corruption seemed to leak into the ground.

New Orleans is the impossible city. It doesn't just rise from the swamp, it was constructed on top of the swamp (Lewis 17). As one massive construct, the city stands as one of the largest manmade structures. However, every project of this magnitude comes with some level of ignorance. New Orleans is impossible because it is built against fate itself.

This construct has been cut into pieces by the port and the individual canals. It is no longer a single island, but with current development it is a city built on an archipelago, with a limited connection between island to island (Horne 3-4). There are only eight

routes out of the city, and all of them are dependent on water crossing. There is one road between modern New Orleans and the mainland that snakes across the Mississippi over land, but even that connection depends on control of water. Unlike New York or Venice, spreading across the east coast there is twenty three miles of water between the nearest suburb and New Orleans (25-27). The city will either adapt to its environment, or force the environment to adapt to it.

The River every ten thousand years attempts to change course. Without the intervention of man, the river would have changed course forty years ago into the Atchafalaya Basin. The Mississippi river would turn into a trickle on the New Orleans riverwalk. The river would bypass New Orleans, Baton Rouge, and the majority of the ports in Louisiana. The Mississippi would stop rebuilding the city's marshland, the protection the city had against hurricanes could not rebuild itself (Lewis 25-27). The impossible city would sink into the ocean as a modern Atlantis.

The engineering challenges of the Mississippi are long term problems that will persist. But the problem of geography is a constant issue. The city of New Orleans is no longer the city that care forgot, but the city that forgot to care. The marshes are receding, torn up by the oil and gas industry as well as the levee system. The United States has built canals that bring the water of the Gulf directly into the city (Horne 3-4). In 2004, *The Times-Picayune* issued a warning that if a major hurricane hit the city directly the levees would fail, and the city would return to the sea.

CHAPTER TWO

Katrina – An Imperfect Storm, a Perfect Disaster

The nation has witnessed the vulnerability of the city of New Orleans with Katrina and the Deep-water horizon spill in the Gulf of Mexico. There is evidence that Katrina was more a fault of man than a natural disaster. Certainly, the combination of geography and engineering contributed significantly to the outcome. While the response to Katrina would not have limited its physical construction, it would change the social recovery of the city.

There are two different types of disasters, physical disasters and social disasters. Physical disasters destroy assets, homes and individuals. Physical disasters are often natural, but occasionally mankind does create their own. Social disasters not only destroy people, they destroy a person's community and his culture. Disasters like famines and wars, while they may not destroy anything of value, destroy elements of society. It is not rare that a disaster can be both physical and cultural, but it is worth analyzing a disaster from both perspectives (Miller 7-11).

Katrina was not the perfect storm, nor was it unique. When it first hit the Florida coast, it was the seventh hurricane to ravage the state. It feasted on mobile homes, trees and roof tiles. After it left Florida, the estimated damage was 60 million dollars; it took the lives of six Floridians. Florida was the largest of all barriers that protected Louisiana from hurricanes. Hurricanes would slow down over Florida and expend their energy. It was predicted that Katrina would pass Florida at a meager six miles an hour. Instead, Katrina passed over Florida at twelve miles an hour (Horne 9-14).

Certainly this wasn't a cause for alarm for the city. When Katrina passed over it was barely a hurricane at sustained winds of seventy five miles an hour. The only individuals who were worried were the power companies. When a Low Pressure system settled over the city, it was predicted that the system would simply pass by Louisiana, and be shifted left or right. However, the waters of the gulf were unusually hot for that September; and when the hurricane passed over the Gulf of Mexico, it only strengthened (14-20).

The science of determining a hurricane's destination has always been under scrutiny in the gulf region. Predictions shift, and gulf residents often play games of chance with oncoming storms. This plays havoc with political decisions made before the storm. The decision to enact a recommended or mandatory evacuation can cause a significant negative impact on the community, evacuating the tourist industry that is critical for the gulf coast (30-33).

Most politicians were weary of ordering an evacuation. On August 26th, the Democratic governor, Kathleen Blanco, ordered a state of emergency a full three days before Katrina made landfall. Mississippi Governor Haley Barbour would issue the same declaration on August 27th. Only 24 hours before the storm hit, Mayor Ray Nagin of New Orleans would issue the first ever mandatory evacuation. Nagin was especially cautious, as he had ordered an evacuation earlier that evacuated the city during the current season and the hurricane went around New Orleans. Afraid another evacuation would open the city to litigation, he was only convinced when the head of the National Weather Service called and described the potential of the storm on the city (35-40).

The city's evacuation plan had been tested before; however, it was a great failure. When Hurricane Ivan approached the city, Mayor Nagin had made the order to evacuate. The city would be evacuated using a system called contra flow, where both directions of the four major highways were converted to one way roads out of the city. During the evacuation of Ivan, the city and the state had failed to coordinate contra flow in many Parishes and in Mississippi. The evacuation plan turned a 90 minute drive into a daylong affair; and the longer the wait, the more that went wrong on the roads (26-27).

The situation would fall apart again during the evacuation. While the evacuation was coordinated, the route to Texas was filled with cars. With only eight routes out of the city, it was estimated that within twelve hours 67 percent of the city could be evacuated. The problem with this calculation is that it assumes that individuals will evenly distribute themselves between the eight available roads. With Katrina projected to make landfall to the east, most individuals chose to leave to Baton Rouge, Lafayette, or to Texas. In addition, with most of the highways having miles of bridges over swamp and water, a single breakdown could cause significant problems during the evacuation. The effectiveness of the evacuation is still under debate, as the peak capacity during the hurricane was estimated to be nearly 18,000 cars per hour which was under the estimated load required to evacuate the city in twelve hours (181-184).

Not everyone could leave, and many didn't want to. To Individuals of New Orleans, a hurricane was a celebration more than a feast. Before the predicted power outages, the city would clean out its freezers and serve anything that would spoil. In a city where one third of the population did not have cars, individuals found it difficult to leave (39-40). Many patients in hospitals along with hospital staff were forced to stay

behind. Criminals saw a chance for lawlessness as an opportunity to settle scores and sack the city. Diehard residents would refuse to leave, and the poor would have no access to transportation out of the city. When the water rose, the islands of the city would be cut off from each other, and Lake Pontchartrain would cut through the city -- making new islands of its own (31-33).

The levees breached were linked with the geography of the city. Most famously, the first levee breaches were along the industrial canal. The Mississippi River Gulf Outlet, the Industrial Canal and the Inter-coastal Waterway combined to make the perfect inflow of tidal surge into the city. In addition, many of the other canals into the city in the north were breached because none of them were designed to handle storm surge coming from the north. However, when Katrina hit, the storm surge would come from every direction except the river (145-167).

When the levees collapsed, the true horror of the situation was apparent. Hospitals realized that their generators were often built on the ground floor of the buildings, only to be flooded (132-144). When the city was evacuated, many of the staff on the pumping stations left as well. With the river coming into the city, it cut the city into two halves, the high ground of the old city and the new construction on the lake front. Any attempt at evacuation was halted by rumors of gunfire. While these rumors were true, the gunfire was mostly individuals attempting to draw rescue by shooting into the air. Because the city was a giant bowl, there was no ability to close up the gaps in the levees until the entire city was filled with water. Evacuation was difficult, because three of the eight methods to enter New Orleans were bridges that sustained structural damage. New Orleans could only be entered through the west (180-201).

The government response to those stuck in the city was extremely poor. Many of the leadership of the evacuation were cut off from being able to communicate with each other. Mayor Ray Nagin had weathered the storm in the large Marriott Hotel in downtown New Orleans. His single source of communication was his Blackberry. By three days into the storm, he could only get messages out with text. Kathleen Blanco lacked the ability to communicate to the Louisiana National Guard and social workers in the city (60-72).

The FEMA agents on the ground faced a different problem. While they could communicate, the director of FEMA Michael D. Brown was the weakest link of the Katrina recovery. His response would hamper the recovery more than it would help. He would promise goods, busses and other support, but most of what he promised would never show up. Kathleen Blanco would initially depend on him for the resources that Michael Brown would promise, and this lengthened her ability to respond to the disaster. When Brown was informed about the situation in the superdome and the state of the special needs patients from his FEMA contact at the superdome, he provided no immediate assistance to help the superdome. His subordinates would eventually give up trying to communicate with him, and he was cut out of the loop entirely (59-70).

Luckily, some of the most critical supplies and equipment could be found inside the city. The first records of “looting” were of social workers bringing in food and supplies taken, with permission, from flooded stores. One of the most important efforts was the water search and rescue in the flooded districts. Three hundred volunteer boats, mainly from the fishing industry outside the city, now turned inside to rescue inhabitants

stuck on roofs. While the volunteer force was very successful in its search and rescue attempts, those who were saved still had to endure the shelters of the city (133-144).

The refugees in New Orleans Parish were centered in the New Orleans Superdome, the Arena, and the Morial Convention Center. The Superdome was home to the special needs individuals of the city as well as about 22,000 refugees. The New Orleans Arena was the first of the overflow shelters and supported about 8,000 refugees. The Morial Convention Center was home of about 20,000 of those that had been turned away from the Arena and the Superdome.

The conditions of these shelters would be horrid. After the power failure, there was no plumbing. All three would be characterized by a stench so horrible that the buildings were uninhabitable. After a certain time, the stench became so unbearable that those in the convention center were forced to live outside. The National Guard unit in the Convention Center was an engineering unit that rarely interacted with the refugees. Many of those leading the response were unaware of the existence of the refugees in the Convention Center at all. After staying through the hell of Katrina, these refugees suffered days of neglect and unsanitary conditions (49-72).

With 80 percent of New Orleans Parish filled with water, there were still 50,000-100,000 refugees still inside the city. This estimate is uncertain, but because the city records over 45,000 individuals around either the New Orleans convention center or the Mercedes Benz Superdome, it is safer to assume that the true number resides in the higher end of that spectrum. In addition, statistics do not represent the number of individuals who were in Jefferson Parish. Despite this, the city's population was evacuated to less than 10,000 and replaced with 30,000 National Guard (220-231).

The water that had flooded 80 percent of the city was not normal water. The city was flooded with all of the chemicals that make normal life possible, as gasoline and other chemicals leaked into the water. This would cause even more damage to New Orleans' structures. The chemicals, often flammable, would add to the fire problem the city now faced. With the roads under water and the plumbing system failed any fire could only be put out by helicopter. The helicopters would fill up with water from either the lake or the river and drop it into the city. While fires were difficult to put out, because of the flooding they rarely spread; and thus the city was spared some destruction (76-85).

When the water level in the city equalized with the water level of Lake Pontchartrain, the city would finally be able to be drained. However, most of the pumps of the city had been flooded and were inoperable. After the Army Corp of Engineers had filled in the levee breaches, they begin bringing in hundreds of small portable pumps. While draining was much slower without the stationary pumps, the city would eventually drain.(145-156)

When the water receded, the effects on the city were clear. With 80 percent of New Orleans Parish under water, Katrina became the largest payout from any disaster in the country's history. Katrina was the hurricane that New Orleans had feared for over 50 years, and over 1,100 people dead in the state of Louisiana. Of the 1,100 dead, many of them were poor and black, because the majority of the flooding happened in poor, low lying African American communities. This was not because Poor black communities were all segregated to the area that had the most flooding risk. Much of the unflooded area of the city had been below sea-level. Jefferson Parish and the West Bank suffered very little flooding (245-248).

What had happened was that the African American community had been built up in New Orleans because it controlled the politics of the Parish. New Orleans was the hardest hit because the hurricane made landfall to the east. Jefferson Parish's levees were newer and provided better protection. However, had New Orleans suffered a direct hit, both the west bank and Jefferson would have flooded. Katrina would have only saved the very wealthiest of the city on the natural river levee. But because the city was hit from the east, New Orleans Parish suffered the most damage (41-50).

It would be months before the city would be able to restore its own power system and weeks before any residents were let into the city. Garbage piles several stories tall would build up as individuals gutted or destroyed their homes. Most individuals who returned immediately to the damaged areas were living in FEMA provided trailers, so that if a hurricane would return these individuals would be in danger. New Orleans Parish suffered a 50 percent loss of population immediately, and went from a half-million individuals to a quarter of a million souls (308-312).

There were some economic benefits that protected the city from further disaster. The money used in construction would quickly raise the local level of prosperity. The destruction of the housing in New Orleans provided an economic shield from the housing crisis. The city would have the attention of national politicians who funded the building of new levees.

New Orleans was determined to make the best of the situation. However, the recovery was primarily open to only those rich enough, or those who had insurance, to rebuild. The poor, and those in the housing projects, would be left to fend for themselves in other

cities. The attempt to restore the city to its former size, and the attempt to restore the African American community would last for years (337-350).

CHAPTER 3

Model for Movement between Cities

To understand what happened with the massive population loss of New Orleans, this paper has derived a model for the movement of individuals between cities based on Individual city's income level. New Orleans would suffer a loss of half of the city's population. This model makes certain predictions about which individuals would return to the city first, how industry would respond to the loss of labor, and the regional changes created by the event (O'Sullivan 315-330).

In order to predict the outcome of a massive loss in population from an economic standpoint, first the equilibrium balance of an individual city should be found. To determine the size of a city, we look at the wage the city offers and the city's unemployment. From this we determine a real wage. Assuming that individuals seek to maximize their real wage, we can predict the transfer of population between cities by comparing their real wage. After comparing real wage to the wage of other cities, we determine a regional and national real wage equilibrium, which we can use to predict the inflow or outflow of individuals.

In creating the model, there have to be assumptions, and the primary assumption of this model is the Income benefit function. In the model, Individual income can be expressed by the function of income "I" determined by two variables, educational achievement and experience. Thus, the function of income is

$$I(A, E)$$

Where A represents educational achievement and E represents experience. The primary assumption of the function is that achievement and experience are positively correlated with income.

Where A represents educational achievement and E represents experience. The primary assumption of the function is that achievement and experience are positively correlated with income.

Achievement represents the education level and allows the model to take into account different levels of education. Achievement is set mostly when an individual is not working, and acts as a baseline for initial starting salary, as every individual would start off with little to no experience. It contributes to the income function, and is raised through working.

Experience is gained only when working, and gained at a different rate depending on the industry. Experience not only models a rise in salaries over time, but also an increase in productivity that results in increases in commissions. Some jobs, including manual labor and repetitive tasks, have a much lower rate of growth than those in the professional fields. From a city's prospective, there is a desire to attract industries that provide a high rate of experience gain among employees. Still, it would be impossible for cities to eliminate some industries that have low experience growth, as they are needed to the continued function of civilization.

We have already assumed that any increase in experience or income would result in a similar gain in income. Experience is only linked to a gain in income, so we can define a gain in experience as

$$I_1 - I_0 = k_E * \Delta E$$

Where I_1 and I_0 are incomes in the current period and the previous period, and k_E is a constant defined as the number of dollars represented by one value of experience.

The total effect of achievement can be measured as the income when an individual enters the workplace without experience. The total contribution of achievement can be represented as

$$I(A, E = 0) = c_A$$

where C_A is the fixed individual contribution from education.

Mathematically, the benefit of achievement extends far beyond one's starting salary. Because achievement is the most important factor of what industry an individual enters, achievement also determines the gain of experience by the individual. However, those jobs have to exist in the city in order for them to benefit from them, and this is covered in the model of industry.

If C_A is the fixed contribution of experience, then

$$I(A, E) - I(A, E = 0) = k_E * E$$

Therefore,

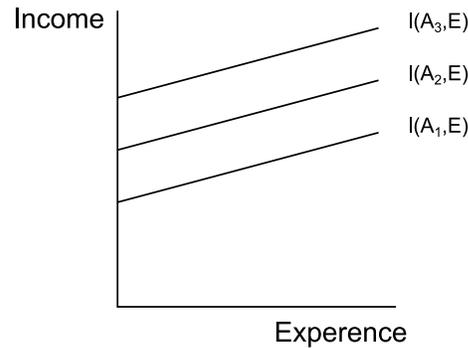
$$I(A, E) - c_A = k_E * E$$

Or

$$I(A, E) = k_E * E + c_A$$

Mapping a set of income functions, with increasing achievement levels A_1 , A_2 and A_3 would look like this

Figure 3.A



For a fixed experience growth rate over several periods, Experience at period t would be $E_t = E_0 + (\Delta E)^t$ so that the Income function becomes $I(A_n, E_0 + (\Delta E)^t) = k_E * (E_0 + (\Delta E)^t) + c_A$ for any period t . However, the present value of that income would be discounted by an interest rate r over a period of time, such that the present value of income at period t would be $\frac{(k_E * (E_0 + (\Delta E)^t) + c_A)}{(1+r)^t}$.

The Income Function, Unemployment, and Price Levels

The current income model obviously applies only to those people who are employed, but we need a model that can account for differences in unemployment in other cities. Because the assumption is made that every individual with the same experience and achievement level receives the same pay, calculating the average wage becomes simple.

$$\text{Average Income} = \text{Unemployment Income} * \text{Chance of Unemployment} + \text{Employment Income} * \text{Employment rate}$$

We have already determined the Employment rate for any given achievement and experience, $I(A, E)$. Now, we introduce an unemployment rate for any given achievement and experience, $U(A, E)$. Secondly, we can define the chance of employment as one minus the unemployment rate. Therefore, our formula becomes this,

$$\text{Average Income} = \text{Unemployment Income} * U(A, E) + I(A, E) * (1 - U(A, E))$$

Initially, we would define Unemployment Income as zero to simplify the model; but the model can take a value to unemployment income, and it would show that it would increase the unemployment rate and encourage individuals to stay in the same location.

Now, however, in order to compare employment in different cities, we need to account for different price levels. So far, both $U(A, E)$ and $I(A, E)$ have been referring to the income and unemployment rate. In order to compare cities, we need to adjust income to account for cost of living. Real Income is going to be defined as the price adjusted average income, and can be expressed at price level P as

$$i(A, E) = \frac{I(A, E) * (1 - U(A, E))}{P}$$

Where $i(A, E)$ is the function for real income.

Unemployment and Income are, as stated earlier, dependent functions of cities. While the model already has a mathematical representation for Income, we can generate a simple mathematical representation for employment and unemployment. In a fixed, one city model there is a fixed amount of total labor L , or the number of people who desire to be employed.

That labor can be separated by labor pools with similar features, those with similar experience and achievement. In the short run for any given achievement and experience level, the total amount of labor employed is a fixed amount. For city labor, we receive variables equal to total labor (L), employed labor (L_e), and unemployed labor (L_u) for each city, with unemployed labor being defined as $L_u = L - L_e$. Thus, According to

our setup, the function $U(A, E)$ is equivalent to $\left(\frac{L_u}{L}\right)$ or $\left(\frac{L-L_e}{L}\right)$ or $\left(1 - \frac{L_e}{L}\right)$ and $1 - U(A, E)$ is equivalent to $\left(\frac{L_e}{L}\right)$ or $\left(\frac{L-L_u}{L}\right)$ or $\left(1 - \frac{L_u}{L}\right)$.

Two city model

We've established a real income and an average real income for a single city; however, in a closed system and without a production or consumption model, this number has no meaning. If we assume that there are two cities with two distinct income, employment and labor functions, we can derive a model of immigration between cities. First, we assume that there are two cities with two different average income functions, $i^*(A, E)$ and $i(A, E)$ with values of $i(A, E) = \frac{I(A,E)*(1-U(A,E))}{P}$ and $i^*(A, E) = \frac{I^*(A,E)*(1-U^*(A,E))}{P^*}$. The total average present value of real income received for both cities would be the sum of the total income expected over a total period $t+1$, depreciated by a interest rate r . thus the total average present value is

$$\sum_{n=0}^t \frac{i_t(A, E)}{(1+r)^t} = \sum_{n=0}^t \frac{1-U(A, E)}{P} * \frac{I_t(A, E)}{(1+r)^t}$$

Assuming that unemployment and price levels are constant,

$$\frac{1-U(A, E)}{P} * \sum_{n=0}^t \frac{I_t(A, E)}{(1+r)^t}$$

Assuming that there is no cost from immigration between cities, and assuming that all laborers attempt to maximize their own real income, we can say that in the two cities it is expected that average present value of real income, an individual's expected lifetime wage, should equal each other.

$$\frac{1 - U(A, E)}{P} * \sum_{n=0}^t \frac{I_t(A, E)}{(1 + r)^t} = \frac{1 - U^*(A, E)}{P^*} * \sum_{n=0}^t \frac{I^*_t(A, E)}{(1 + r)^t}$$

Solving for city one's expected lifetime wage, we get the formula

$$\sum_{n=0}^t \frac{I_t(A, E)}{(1 + r)^t} = \frac{P}{P^*} * \frac{1 - U^*(A, E)}{1 - U(A, E)} * \sum_{n=0}^t \frac{I^*_t(A, E)}{(1 + r)^t}$$

The model makes significant assumptions. First, that both price level and unemployment are fixed over the long term. It might be better to explain this as expected price levels and expected unemployment. Because of the difficulty in assessing future unemployment rates, an individual makes his decision off of current unemployment rates and current pricing levels. There is no cost of immigration between cities, but that will be worked into the model as it develops.

In this two city model, were assuming that the only option for labor in city one is to stay or relocate in city two, and the only option for labor in city two is to relocate to city one or stay in city two. The labor in city one and two added together is a total labor pool with a fixed amount of labor. Thus, the labor in city one (L) and the labor in city two (L^*) is equal to a total labor (L_T). If this is the case, then

$$\left(\frac{1 - U^*(A, E)}{1 - U(A, E)} \right) = \frac{\frac{L^*}{L}}{\frac{L_E}{L}} = \frac{L}{L^*} * \frac{L^*}{L_E} = \frac{L}{L_T - L} * \frac{L^*}{L_E}$$

In the short run $\frac{L^*}{L_E}$ and $\frac{P}{P^*}$ are constants. Assuming that city two's expected lifetime wage is also constant, we can determine the marginal cost of each additional individual in the labor force, with L being quantity of individuals and the price of that additional individual being lifetime wage.

$$\left(\sum_{n=0}^t \frac{I_t(A, E)}{(1+r)^t} \right) = \left(\frac{P}{P^*} * \frac{L_E^*}{L_E} * \sum_{n=0}^t \frac{I_t^*(A, E)}{(1+r)^t} \right) * \left(\frac{L}{L_T - L} \right)$$

Cost of Moving and searching

The final piece of the model is the cost of moving between regions. Individuals face costs in searching for jobs and moving geographically. Over a small scale, like the metropolitan statistical area of a city, these costs are insignificant. As the distance increases, search cost and moving cost rises. The expected change in real income would have to overcome the cost of moving in order for individuals to move into a city or out of a city. Therefore, there are two formulas created instead of one. The first formula determines immigration into the city, when cost as a function of distance is surpassed by the change of income.

$$\sum \Delta i(A, E) > C(d)$$

The second formula determines when individuals choose to leave the city, when the sum of the change in income surpasses the cost of moving.

$$C(d) < - \sum \Delta i(A, E)$$

Conclusions

Unfortunately, because the evacuation of New Orleans was mandatory, we cannot apply these formulas to the short term evacuation of the city. However, this formula makes certain predictions about what will happen as individuals seek to re-enter the city. When Katrina hit a majority of the individuals in the city were uncertain about their future, and many of them were let go. The available jobs in the city fell, but there were a

fixed number of jobs that had to exist in New Orleans from the port, from tourism, and from essential city services.

After the initial exodus, the first individuals who return are those for whom the cost of moving matters less, the wealthy and educated. The significant size of their income would cause any small change in income to encourage return. Those still with jobs had a significant advantage, as the positions they filled had to be served on a local basis, such as medical services and individuals associated with fixed industries.

These fixed services required a certain amount of local commerce. However, the retail and food industries had to overcome the cost of moving their employees back into the city. Because rents were high, cost of living was higher in New Orleans than on average. The formula would predict that income would have to rise for individuals to move back in. In New Orleans, companies initially offered large sign on bonuses for the first year to help individuals overcome the cost of moving and to attract people back into the city.

The flow of construction money into the city allowed the few construction workers left to become price takers. Construction salary rose, and individuals who did not initially live in the city were attracted by the high wages. Even before many of the city's own residents returned, New Orleans was gaining new residents who were attracted by the construction industry.

FEMA and the government would offer incentives to return. One of the primary incentives were the temporary housing provided by FEMA trailers, as well as payment for the cost of moving. These FEMA trailers would allow individuals to bypass high rents

and reduce their cost of living. FEMA trailers would be relied on heavily, as the cost of construction increased with its new demand.

The final group that was slow to return was the lowest income individuals, many of whom had lived in subsidized government housing. Initially, the government had been hostile to their needs, tearing down the New Orleans “Projects” Section 8 housing. The government policy would change slowly, as the Section 8 apartment buildings were replaced with mixed income housing. Eventually this action would bring individuals into the city.

CHAPTER 4

Health, Education and Crime in the Crescent City

Healthcare

Like the destruction of the New Orleans Public School System after Katrina, the destruction of significant portions of the city's healthcare facilities allowed for a rethinking of the policy around healthcare. The challenge was significant, as lifestyle factors made health in the region the worst in the state. The environment, the heat and humidity would cause its own geographic health problems. Adding in very poor demographic groups, healthcare in New Orleans was far from ideal ("State Health Facts").

Louisiana, and specifically New Orleans, has faced a string of challenges in offering healthcare to individuals. New Orleans has more restaurants per capita than any city in the U.S. and its citizens' desire for fried and fatty foods are known to cause an above average demand for healthcare. Louisiana is a part of a strip of states that contain the worst healthcare in the nation ("State Health Facts").

Louisiana, as a state, belongs to a geographic belt that represents the worst healthcare in the country. This area starts in West Virginia, moving into the Deep South, and ending in Texas. It is defined as an area with high spending and low healthcare outcomes, as well as the largest number of inpatient days and a high number of hospital beds. The region is split in half, with the eastern corridor having far fewer doctors than

Louisiana and Texas. In the center is Mississippi, whose healthcare performance is significantly more abysmal than the other states ("State Health Facts").

Total Ranking	Health Demographics (0-5)	Health Outcomes (0-5)	Medicaid (0-5)	Medicare (0-5)	Health Coverage (0-5)	Health Finance (0-5)	Total Ranking (0-5)	Rating amongst states
Texas	1.91	2.25	2.65	2.27	1.53	3.20	2.31	37
Arkansas	1.32	1.46	2.49	2.31	2.18	2.74	1.92	41
Alabama	1.97	0.78	2.95	2.23	2.68	2.55	1.78	45
Louisiana	1.66	1.15	2.25	1.28	2.51	2.36	1.46	46
Mississippi	0.73	0.14	2.25	1.47	2.55	1.79	0.28	51

New Orleans has one of the United States' largest Medicaid populations, and one of the nation's largest poor adult populations. Both populations are statistically above one standard deviation of the nation. Also of statistical significance are the large poor elderly population, and a population of poor children that cover the state ("State Health Facts").

New Orleans overall outcomes are poor, due to the number of violent crime and unhealthy lifestyles, as well as poor access to healthcare. The amount of illegal drug abuse in the state results in both the nation's fourth highest infant mortality and fourth highest preterm birth rate. Combined, they lead to give the state the second highest number of children born underweight. Problems continue with the healthcare system with a significant population of childhood obesity and one of the highest numbers of childhood deaths in the country ("State Health Facts").

Among adults, it is no surprise that one of the largest killers in Louisiana is fatalities from heart disease. In addition, the hospital system has to deal with a large population diagnosed with diabetes, as well as a higher than average rate of cancer

amongst the population. All these poor healthcare outcomes build up to increase the cost of healthcare ("State Heath Facts").

The costs combined with demographic attributes lead to the poor performance of Medicare and Medicaid in the state. All of the large populations of poor children qualify for CHIP, as well as a significant population of both poor adults and elderly individuals in the state. To make matters worse, Louisiana spends more in Medicaid than a significant majority of states, and is second in the nation in Medicare spending per enrollment. Much of that spending is going towards home healthcare and prescription drugs to manage the more prevalent diseases ("State Heath Facts").

Just like the rest of the southern healthcare services, Louisiana is plagued by a large admission rate, emergency room usage, and a large number of inpatient days. Unlike the eastern belt, however, Louisiana has a surplus of doctors and nurses as well as a large number of hospital beds. This increase in medical employment is the result of having three medical schools in the state: Louisiana State University Health Sciences Center in New Orleans, Louisiana State University Health Sciences Center in Shreveport and Tulane University Medical School in New Orleans. This one benefit may keep Louisiana from falling to Mississippi's horrible performance ("State Heath Facts").

The damage to the hospital infrastructure during hurricane Katrina was extensive. Touro, Children's and Tulane Hospital all escaped serious damage during the storm, while East Jefferson, University and Charity Hospitals were flooded on several floors. Hurricane Katrina would close several of the local hospitals down permanently, forcing East Jefferson Hospital down for several years and putting Charity Hospital out of operations. East Jefferson lost the entirety of the surgical wing to the storm and Charity

lost the entirety of its emergency department to flooding. In addition, several hospitals in New Orleans have had significant financial problems due to the hurricane with Touro hospital being purchased by Children's Hospital of New Orleans after revenue issues and Baptist Hospital transferring to Ochsner Baptist (DeSalvo 45-50).

Hurricane Katrina might have had some positive effects on healthcare. Shutting down Charity's emergency room would have reduced costs for its owner, Louisiana State University. There was a significant inflow of patients suffering from stabbing and shooting, coming from St. Claude, Treme, and Central city. While LSU has proceeded to build a new hospital near the same location, the drop in crime and the closing of charity has allowed it time to plan a solution to the problem ("State Health Facts").

In addition, there are two other positive healthcare trends in the New Orleans metropolitan statistical area. The first is an import from Texas, as Louisiana has the second largest number of physician owned hospitals in the country. While lacking comparable data on performance, the spending on these hospitals has increased the local economy. The second trend is the expiation and reconstruction of local hospitals by Charity, LSU and East Jefferson. The increase medical spending may have had a dampening on the recession (DeSalvo 52-60).

The policy decisions around healthcare have been focused around building a more decentralized system. Small community clinics have replaced the much larger Charity Hospital for the needs of the poor. The poor's Access to healthcare has increased because of private and public grants, these community centers have been able to grow throughout the city. Where healthcare was focused on a few large public hospitals, the clinics have spread that burden over multiple locations. The primary benefit is a reduction in use of

emergency care. While it is too early to see significant changes in outcomes, the poor have responded that they do feel like they have better access to care (DeSalvo 53-60).

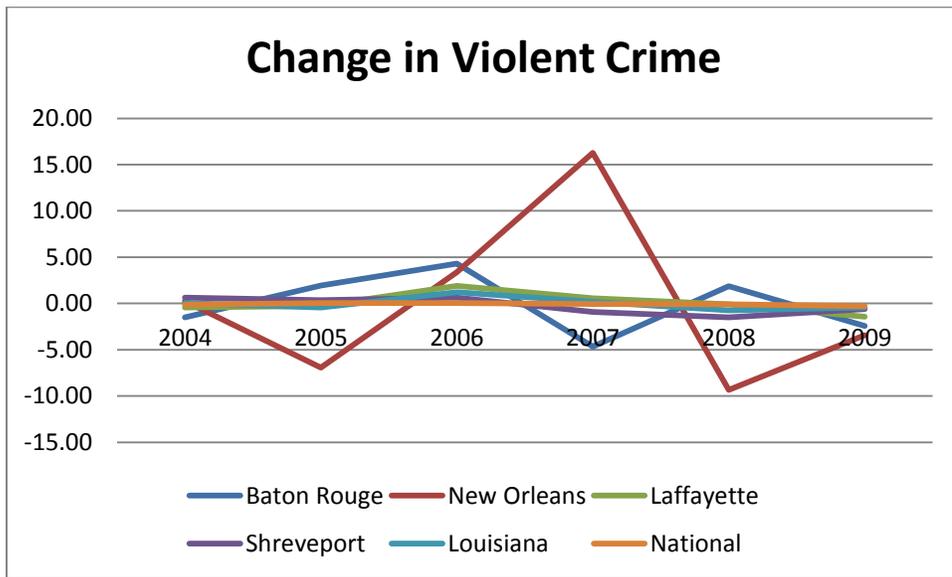
Crime

New Orleans was and is the murder capital of the United States, and many of the state’s problems can be linked to the high crime rate. Worse, many of the crimes were covered up by the flood waters, as evidence was destroyed by the rising tide. The FBI records reported crime of all major cities, and show significant changes in the city of New Orleans. What is shown is a significant fall, followed by large jump in crime years after Katrina. In other cities, there is a slight rise in crime, followed by a return to the status quo. These statistics can effectively show how criminals first fled the city, only to return in droves in 2007 (Horne 300).

Population, According to FBI				
	Baton Rouge	New Orleans	Laffayette	Shreveport
2003	226,391	475,128	111,612	220,888
2004	226,063	471,057	112,150	221,895
2005	224,487	463,072	112,161	218,407
2006	210,486	431,153	106,189	217,495
2007	228,446	220,614	114,212	216,734
2008	226,920	281,440	113,770	198,525
2009	223,187	336,425	113,868	200,031

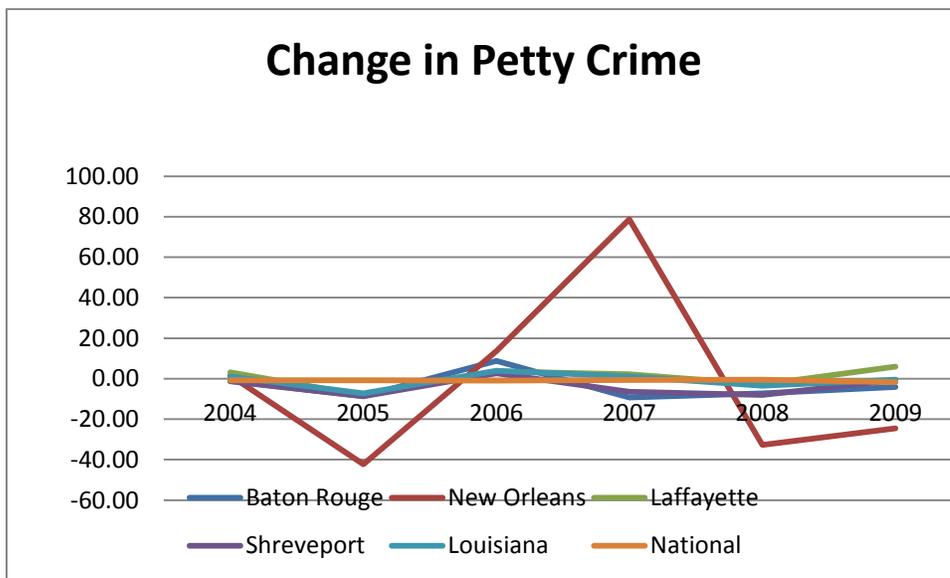
After Katrina, the city and national law was enforced by the National Guard under martial law. Many crimes went unreported as gangs used this time to strike at their rivals and police used their time to raid drug houses. There are no accurate records of all the crime that happened after the storm, or any strong enforcement of the law. The Danzinger Bridge incident and other charges of police brutality were only shown to have happened years after the fact (223-224).

Violent Crime Rate per 1,000 individuals						
	Baton Rouge	New Orleans	Lafayette	Shreveport	Louisiana	National
2003	16.20	14.52	9.52	10.30	6.37	4.76
2004	14.71	14.78	9.09	10.93	6.40	4.63
2005	16.63	7.85	8.84	11.30	5.97	4.69
2006	20.93	11.21	10.75	11.93	7.18	4.74
2007	16.26	27.50	11.32	11.00	7.37	4.67
2008	18.13	18.16	11.22	9.51	6.64	4.58
2009	15.70	14.74	9.79	8.90	6.20	4.29



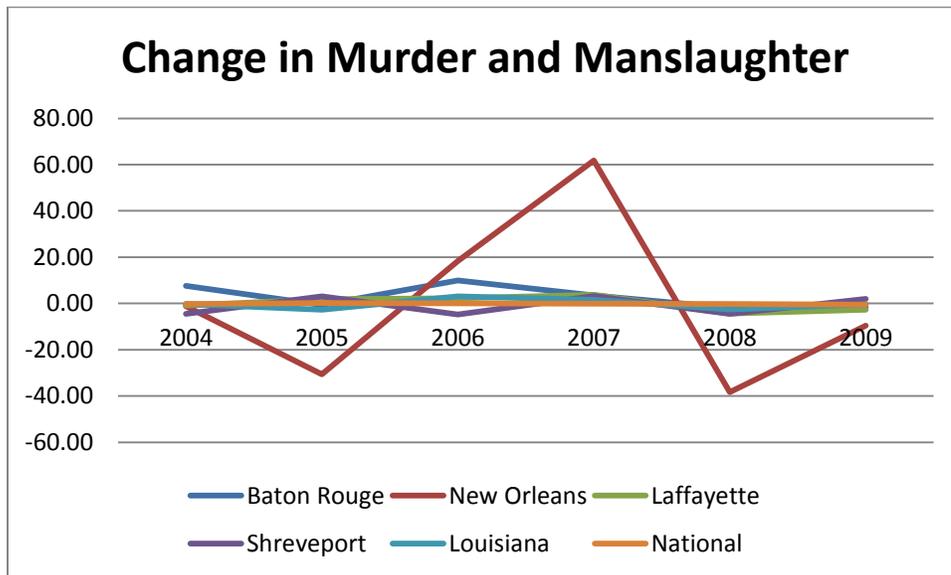
The mass exodus from the city caused a rise in violent crime in other areas, which can be seen in the jump in violent crime in Baton Rouge from 2005 and 2006. The increase was minimized because effective crime enforcement in other areas reacted to the rise in crime with actual convictions, something that was difficult to achieve in New Orleans. Houston, Dallas, and Lake Charles also saw the same rise in crime. All these cities were hurricane evacuation cities, and often individuals had connections that caused them to flee the city where crime would rise from the exodus ("Uniform Crime statistics").

Property Crime Rate per 1,000 individuals						
	Baton Rouge	New Orleans	Laffayette	Shreveport	Louisiana	National
2003	120.31	87.43	61.79	74.66	43.10	35.91
2004	119.21	89.04	64.94	73.36	44.19	35.14
2005	110.52	46.74	56.54	64.71	36.96	34.32
2006	119.28	60.33	60.20	67.34	40.89	33.35
2007	109.95	139.03	62.32	60.95	41.96	32.64
2008	102.75	106.34	59.47	52.91	38.45	32.12
2009	98.63	81.87	65.44	52.22	37.95	30.36



The 2007 jump in crime was responded to by heavy protests. When crime returned, it was centered in areas that no longer were as accepting of the crime lifestyle. Four fifths of the public housing options were still closed, and criminal dealings were forced into the unique structure of a recovering New Orleans. They had the advantage of all of the derelict housing, or they took advantage of the temporary FEMA housing. Because of the change in turf and environment, this fighting turned into the greatest number of murders per capita the city had ever seen. However, the 2007 rise in crime did not continue, as gangs had lost their influence over drugs and the remaining residents were more trusting of the police ("Uniform Crime statistics").

Murders and Manslaughter per 100,000						
	Baton Rouge	New Orleans	Laffayette	Shreveport	Louisiana	National
2003	21.64	66.30	6.27	21.04	13.00	5.68
2004	29.20	65.17	5.35	16.56	12.74	5.50
2005	28.51	34.55	7.13	19.60	9.98	5.65
2006	38.48	52.88	9.42	14.85	13.11	5.69
2007	42.02	114.68	13.13	18.02	14.70	5.61
2008	40.10	76.39	8.79	13.54	12.15	5.40
2009	38.53	66.88	6.15	15.53	11.80	4.96



The Homicide rate of 2009 is the same as 2003, but that is no compliment. New Orleans still remains the crime capital of the United States. Baton Rouge falls ninth nationally, and Louisiana's homicide rate is three times the national average. New Orleans, during 2007 was more dangerous than Bagdad for American citizens. As of 2010, the murder rate has fallen to 59 per person, a sharp decrease, but still ten times the national average. New Orleans is a warzone, and the failure to reduce crime has been one of the worst policy failures made after the Katrina ("Uniform Crime statistics").

Education

Education has been pushed as one of the better policy responses made after Katrina. The city, and its two school districts, made unique choices that created an administrative environment far different than any other school system in the nation. It pushed a policy of having schools compete against each other and adopted a market based approach to education. There were four significant policy changes of great importance to the city. The first was the creation of the Recovery School District, or RSD. The RSD was a school district only answerable to the state, controlled by the state Congress but funded locally. The RSD adopted a policy of creating charter schools wherever possible. In addition, the RSD adopted school choice, and students in the RSD could choose to go to any school in the district. Lastly, the RSD and the Orleans Parish School board both fired the majority of their teachers after Katrina. When they were individually rehired, they came without the collective bargaining that most school districts had. These policies have drawn critics, but there appears to be some evidence of better performance (Perry 33-35).

Even before Katrina, Louisiana had decided that it would remove control of the majority of the schools from the New Orleans Public School District. The preemptive Recovery School District was founded months before Katrina hit central stage. After Katrina, there was significant damage to the buildings and lands of schools in the Orleans Parish, and the RSD decided to revert a previous decision to avoid creating charter schools. Now, New Orleans is over 60% charter schools; but the programs are new, and there is a mixed feeling towards their effectiveness (Perry 33-37).

The push to charter schools began two years before Katrina, when UNO offered to open up the first charter school in New Orleans. The push was rejected by the Orleans Parish School Board, who by this time was in significant trouble. An audit done several months before Katrina found that the school board was running on fumes, and that the board had lost tens of millions of dollars. After Katrina, the Recovery School District approved two UNO charter schools as well as charter schools run by the Bill and Melinda Gates foundation. Currently, New Orleans is the only city to have more than 50% of students attend charter schools, with 37 operated by the RSD and 12 by the OPSB (Perry 37-42).

Louisiana measures school performance with the School Performance Score, a mixture of test scores and classroom factors that often measure the performance of teachers and schools. The Recovery School District still significantly underperforms the state average, while the Orleans Parish School Board out performs the national average. The main reason for this behavior is that the Orleans Parish School Board was allowed to keep their highest performing schools, while the Recovery School District would take over the worst segments of the parish. The OPSB also contains some of the magnet and selective programs that are allowed to filter students based on their own performance. Ben Franklin is one of these schools, whose scores have been as high as 208, and skew the performance of the OPSD (Perry 38-44).

School Performance Score for all schools				
District	Schools	year 2008-09	year 2009-2010	Average change
New Orleans Metropolitan Statistical Area				
Recovery School District	53	56.69	63.47	6.78
Orleans Parish	16	100.83	108.58	7.75
Plaquemines Parish	7	95.83	99.19	3.36
St. Bernard Parish	7	89.89	101.63	11.74
Jefferson Parish	78	83.93	88.54	4.60
St. Tammany Parish	50	104.52	106.40	1.87
New Orleans Metropolitan Statistical Area	211	83.84	88.78	4.94
State Performance				
Louisiana	1264	89.17	92.35	3.17

The greatest argument for the RSD is the significant improvement seen at the RSD schools. A score of ten or greater is the best performance that is expected by Louisiana in the SPS. Only ten percent of all schools in Louisiana are able to achieve an improvement of 10 points over a period of a year. The RSD has 32 percent of all their schools achieving an improvement of ten points, with the majority of improved scores coming from the worst performing schools ("Student Achievement Data and Reports").

The school system is also marked for its social change. Before Katrina, less than 90 percent of the school district was white. New Orleans, before Katrina, was only 70 percent black. What was happening to the school districts were white, wealthy parents moved their children to private schools, while middleclass white and black residents moved to the higher performing Jefferson Parish school district. The charter school system has seen a number of the private school students return to the public pool, due to economic conditions or the recovery of the school district ("Student Achievement Data and Reports").

School Performance Score growth greater than 10 points					
District	Schools	year 2008-09	year 2009-2010	Average change	% achieving high growth
New Orleans Metropolitan Statistical Area					
Recovery School District	17	56.52	72.39	15.87	32%
Orleans Parish	2	113.30	134.70	21.40	13%
Plaquemines Parish	1	104.00	116.90	12.90	14%
St. Bernard Parish	6	87.92	100.62	12.70	86%
Jefferson Parish	10	89.44	103.91	14.47	13%
St. Tammany Parish	3	91.83	105.37	13.53	6%
New Orleans Metropolitan Statistical Area	39	76.64	91.69	15.05	18%
State Performance					
Louisiana	135	80.47	95.02	14.55	11%

There are significant positive results with the RSD and the policy changes made in New Orleans. However, according to law, the RSD is set to return its high performing schools this year to the OPSB (Perry 40-44). While we have seen the OPSB operate a small numbers of schools, the biggest challenge faced is to see if the OPSB can maintain the performance of the RSD.

BIBLIOGRAPHY

- Abbot, Henry L. *Approaches to New Orleans*[Map] 1863. "The Historic New Orleans Collection" Louisiana Digital Library <<http://louisdl.louislibraries.org/cdm4/browse.php?CISOROOT=/p15140coll28>>
- Barry, John M. *Rising Tide, The Great Mississippi Flood Of 1927 And How It Changed America*. 1. New York City: Simon and Schuster, 1997.
- Brinkley, Douglas. *The great deluge : Hurricane Katrina, New Orleans, and the Mississippi Gulf Coast*. New York: Morrow, 2006. Print.
- Debrunner, Alexander. *Copy and Translation From the Original Spanish Plan dated 1798 Showing the City of New Orleans*. "The Historic New Orleans Collection" Louisiana Digital Library <<http://louisdl.louislibraries.org/u/?p15140coll28,79>>
- DeSalvo, Karen. "Delivering high-quality, accessible health care : the rise of community centers" *Resilience and opportunity : lessons from the U.S. Gulf Coast after Katrina and Rita*. Ed. Amy Liu. Washington, D.C.: Brookings Institution, 2011. 45-60. Print.
- Grandjean, George H. *New Orleans 1898*[Map] 1898. "The Historic New Orleans Collection" Louisiana Digital Library <http://louisdl.louislibraries.org/cdm4/item_viewer.php?CISOROOT=/p15140coll28&CISOPTR=84&CISOBX=1&REC=6>
- Horne, Jed. *Breach Of Faith, Hurricane Katrina And The Near Death Of A Great American City*. 1st. New York: Random House Inc, 2006. Print.
- Kaiser Foundation. Henry J. Kaiser Family Foundation. *State Health Facts*. 2011. Web. <<http://www.statehealthfacts.org/>>.
- Louisiana. Louisiana Board of Education. *Student Achievement Data and Reports*. Web. <<http://www.doe.state.la.us/data/>>.
- Miller, DeMond, and Jason Rivera. *Hurricane Katrina and the redefinition of landscape*. Lanham, MD: Lexington Books, 2008. Print.
- O'Sullivan, Arthur. *Urban economics*. 3rd. Chicago: Irwin, 1996. Print.

Perry, Andre, and Michael Schwam-Baird. "School by school : the transformation of New Orleans public education." *Resilience and opportunity : lessons from the U.S. Gulf Coast after Katrina and Rita*. Ed. Amy Liu. Washington, D.C.: Brookings Institution, 2011. 31-44. Print.

Pierce, Lewis. *New Orleans : the making of an urban landscape*. 2nt. Cambridge, Mass.: Ballinger Pub. Co., 1976. Print.

Thierry. *Plan de la Ville La Nouvelle Orleans Capitale de la Province de la Louisiane*[Map] 1755. "The Historic New Orleans Collection" Louisiana Digital Library <<http://louisdl.louislibraries.org/u/?p15140coll28,51>>

United States. Federal Bureau of Investigation. *Uniform Crime statistics*. 2010. Web. <<http://www.fbi.gov/about-us/cjis/ucr/ucr>>.