Answering the Bell: Rebuilding New Orleans Around Neighborhood Schools

by

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Seth Knudsen
Submitted to the Department of Urban Studies and Planning on May 22, 2008 in Partial Fulfillment of the Requirements for the Degree of Master in City Planning

ABSTRACT

Schools are one of the most important and visible infrastructure elements in residential neighborhoods, given their large physical presence and the social network that they represent. A review of real estate, sociology, and urban design research suggests that neighborhoods and residents benefit in a variety of ways from proximity to a well-maintained school of good quality. Not surprisingly, New Orleans residents have identified schools as critical elements in the recovery of their neighborhoods in the myriad of post-Katrina planning processes. In this context, residential rebuilding decisions in substantially flood damaged neighborhoods may be influenced by the status of the neighborhood school.

As residential redevelopment patterns begin to emerge in spring 2008, the master planning process for the public school system is underway. While the public school system was responsible for the education of nearly 66,000 students at 126 campus locations across the city prior to Katrina, private schools provided an educational option for 26,000 other students at 79 campuses citywide. Nearly seventy percent of private school students attended Catholic schools managed by the Archdiocese of New Orleans. In contrast to the public school system that has taken nearly three years to chart its course for the future, the Catholic school system made decisions about which schools would reopen by February 2006, less than six months after the flood.

In this study, parochial elementary schools run by the Archdiocese of New Orleans are used as a proxy for the public school system to examine the effects of neighborhood schools on residential rebuilding. Residential building permits issued within half, quarter, and tenth mile radii of parochial elementary schools in substantially flood damaged neighborhoods are compared with the number of residential lots to calculate a crude rebuilding rate. The hypothesis is that neighborhoods around schools that have reopened will exhibit higher rates of residential rebuilding.

The findings do not support the hypothesis, but instead support a correlation between the location of residential rebuilding and neighborhood school status. While overall rebuilding rates within a half mile radius of open and closed schools are comparable, most redevelopment activity tends to be concentrated in close proximity to schools that have reopened and further away from schools that remain closed. Given the potential of rebuilt schools to attract development, school facility planners should work with the city to identify which pre-Katrina school locations would be most advantageous for post-Katrina development clusters.

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Title: Professor and Department Head, Department of Urban Studies and Planning
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FIGURE 1.1 Rebuilt, demolished, untouched: three states of being in post-Katrina New Orleans
As redevelopment patterns begin to emerge in New Orleans in the wake of post-Katrina flooding induced by the failure of the Army Corps of Engineers levee and floodwall protection system, they are starting to reflect the “free-market chaos, also known…as every man for himself and the devil take the hindmost,” that public officials, like Mike Cowan, the head of the city’s Human Relations Commission, so desperately hoped to avoid (Russell and Donze 2006). The dreaded “jack o’ lantern effect” is in full force. Rebuilding across the most devastated neighborhoods is widely spread and uneven. Rebuilt houses are often surrounded by a combination of blighted structures and vacant lots.

There was no shortage of alternative options floated to avoid this outcome during the city’s myriad post-Katrina planning processes. The proposals ranged from a moratorium on building in the most damaged neighborhoods to incentives and buyouts for homeowners who chose to relocate to neighborhoods on higher ground. Suggested implementation timetables ranged from six months to three years after the storm. As the city approaches the three year mark, none of these proposals have even been discussed recently, much less adopted, and the political climate for major changes has all but evaporated.

At the same time, in many ways, this outcome was born of political necessity. The disaster occurred right before an election season in which the mayor and council were all up for reelection. It was obvious to candidates and the electorate that any declaration, or endorsement of any plan, that stated that any portion of the city would be off limits or unviable going forward was tantamount to political suicide. As such, the mayor and council both endorsed the principle that any resident had the “right to return” anywhere in the city. Abdication on the part of local government was politically expedient.

Perhaps the mayor and council thought that the state or federal government would rescue them from making unpalatable decisions. The state, as the channel through which Community Development Block Grant money from the federal government would flow, had the opportunity to force the issue through rejection of the city’s laissez-faire
rebuilding plans, but chose not to do so. The federal government, in addition to the allocation of rebuilding aid to the state, could have exercised its influence through substantial changes to Federal Emergency Management Agency’s Base Flood Elevations and Flood Zones used in the National Flood Insurance Program, like changing some classifications within the city to coastal, but decided to make only minor revisions. There would, of course, have been a political price for officials at any level of government and, apparently, no one wanted to pay.

Even advocates of the free market approach acknowledge that markets tend not to function well without information. Yet that’s exactly what all levels of government have asked the residential rebuilding market to do. Property owners have been left to make decisions with the little information they have access to while local government has largely been content to wait and see how the market responds before it spends any of its limited rebuilding capital. For every homeowner that has decided he has sufficient information to rebuild, there are several more strategically waiting before they reinvest, hoping to follow and build off of local government investment in public infrastructure and facilities like streets and schools.

Schools are a particularly important infrastructure element in disaster recovery as they represent one of the only kinds of physical infrastructure with a social network compo-

FIGURE 1.2 A significant proportion of pupils attended private, mostly Catholic, schools in New Orleans pre-Katrina.

ment. In the aftermath of a disaster, it is critical to repair social fabric in addition to physical fabric. “Urban recovery occurs network by network, district by district, not just building by building; it is about reconstructing the myriad social relations embedded in schools, workplaces, childcare arrangements, shops, places of worship, and places of play and recreation” (Vale and Campanella 2005, 347).

Of course, these social networks are intimately tied to the built environment and the physical presence of schools in residential neighborhoods is important in its own right. The symbolism of a reopened school in a post-disaster landscape does not go unnoticed by residents. Beth Ann Simno, vice
FIGURE 1.2 Public and private schools were distributed across the city prior to Katrina with the heaviest concentration in the oldest neighborhoods.
president of Mount Carmel Academy high school in flood-devastated Lakeview recounted how neighborhood residents would “routinely shout out words of encouragement or honk as they drive past” shortly after the school reopened in January 2006 (Ritea 2006). In their discussion of resilience, Vale and Campanella (2005) refer to this “symbolic power of the built environment...as a signal of recovery” (9).

Approximately 92,000 students, nearly 20 percent of the city’s population, attended close to 200 public and private schools at the time Katrina hit. The New Orleans Public School system was responsible for the education of about 66,000 students. The Archdiocese of New Orleans enrolled nearly 70 percent of private school pupils while an assortment of other independent and religious schools taught the rest.

While each group of schools sustained significant hurricane and flood damage, the institutional responses to the physical damage and displacement of their students were quite different. The public school system was slow to reopen schools and waited over two years to begin its master planning process. The Archdiocese of New Orleans was comparatively quick to reopen schools and released a complete master plan a little over five months after the storm, not long after basic utilities has been restored to some of the most damaged neighborhoods. Independent private schools have charted their own individual courses, but each

<table>
<thead>
<tr>
<th>Enrollment (Pre-Katrina)</th>
<th>Public</th>
<th>Catholic</th>
<th>Other Religious/Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>66,000</td>
<td>18,000</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>Campuses</td>
<td>126</td>
<td>45</td>
<td>34</td>
</tr>
<tr>
<td>System Geography</td>
<td>City</td>
<td>Metro Area</td>
<td>Metro Area</td>
</tr>
<tr>
<td>Catchment Area</td>
<td>Neighborhood</td>
<td>Citywide</td>
<td>Neighborhood</td>
</tr>
<tr>
<td>Institutional Structure</td>
<td>Centralized</td>
<td>Divided</td>
<td>Centralized</td>
</tr>
<tr>
<td>Facility Condition (Pre-Katrina)</td>
<td>Poor</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Hurricane/Flood Damage</td>
<td>Most</td>
<td>Middle</td>
<td>Least</td>
</tr>
<tr>
<td>Social Network</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Financial Resources</td>
<td>Operations</td>
<td>Property tax millage</td>
<td>Tuition</td>
</tr>
<tr>
<td>Rebuilding</td>
<td>FEMA</td>
<td>Private Insurance, FEMA, Charitable Donations</td>
<td>Private Insurance, FEMA, Charitable Donations</td>
</tr>
</tbody>
</table>

TABLE 1.1 School System Recovery Dynamics
determined its future well before the public schools even began planning theirs.

The different responses can be traced, in part, to the different factors influencing the recovery of public and private schools. These recovery dynamics are outlined in Table 1.1.

Private schools, while facing many of the same issues
as the public schools, found themselves in a post-storm environment that was slightly more conducive to recovery. Because many drew their students from inside and outside the city limits, many private schools had a smaller proportion of their students displaced. Facility condition and location prior to the storm were also key factors. On average, the physical condition of private schools was far superior to that of private schools, ensuring simple negotiations with insurers and FEMA and straightforward repairs. The Catholic school system also benefitted from the ability to reassign students to schools outside the city limits while its damaged schools were being repaired.

The contrasting approaches of the public and parochial school systems are important as they have the potential to influence short and long term recovery and viability of some neighborhoods. It has been well-documented that the longer city residents are displaced, the less likely they are to come back. While decisions about neighborhood parochial schools have been made, the future of district public schools remains uncertain. These decisions may have already had an impact on residential rebuilding in some New Orleans neighborhoods.

This thesis examines the relationship between schools and neighborhood recovery. The research builds on diverse literature that highlights the potentially positive effects of schools on surrounding property values, perhaps encouraging residents to rebuild, and the potentially negative effects of abandoned schools on social order and mental health that may serve to discourage rebuilding activity. The research focuses on the recovery strategy of the Catholic school system and its effect on residential neighborhoods, in hopes of revealing the ramifications of the long range planning currently underway for the public school system in New Orleans as well as the role of schools in future disaster recovery efforts.

The hypothesis is that the rate of residential rebuilding activity is higher in neighborhoods around Catholic...
and academic performance in public schools, utilized the opportunity to change while private schools, which enjoyed considerably better physical conditions and academic achievement, sought to regain their pre-Katrina form.

Chapter Three, Schools and Neighborhoods, surveys a wide range of academic literature that helps to describe aspects of the relationship between schools and residential neighborhoods which might be relevant to the post-disaster context. The quality and proximity of an open school could affect residential property values in the surrounding neighborhood. The physical disorder embodied in the “broken windows” of a closed school could affect crime rates and residents’ mental health and neighborhood attachment. Finally, best practices in urban design suggest that new schools be multifunctional community centers to serve the neighborhood.

Chapter Four, Research Methods, details the rationale for focusing on the Catholic school system as well as the selection of specific schools and the neighborhood case study for analysis. Given the system’s quick planning process and public announcement of school futures in early 2006, the market has had sufficient time to react. Specific schools were selected on the basis of substantial flood damage and the case study neighborhood focuses on the effects of a centralized elementary school on rebuilding in a widely flooded area. The calculation of the residential rebuilding ratio and

FIGURE 1.4 Reopened schools bring people and activity.
related Geographic Information Systems analysis are also described.

Chapter Five, Results, reveals the results of the ArcGIS analysis of building permit data around opened and closed schools. While rebuilding rates within a half mile of opened and closed schools are similar, building activity tends to be concentrated closer to open schools and further away from closed schools within that radius. The case study of New Orleans East closely examines the experience of a substantially flooded area east of the Industrial Canal. The Archdiocese of New Orleans called for a centralized elementary school to serve students from three separate campuses in the area. This section analyzes the Archdiocese's motives for the selection of the centralized campus as well as rebuilding rates in neighborhoods surrounding the open and closed campuses.

Finally, Chapter Six, Planning for the Future, explores the applicability of the Catholic school experience to the future of neighborhoods surrounding public schools. What does it mean for the future shape of New Orleans? Given that the city needs to ultimately consolidate development, perhaps public schools should be considered nodes around which future development may cluster. This section also suggests directions for future research.
FIGURE 2.1 Medard Nelson, a failing public school, has been chartered by the state Recovery School District.
Pre-Katrina Failure

At the time Katrina hit, the state of public education in New Orleans was bleak and well-known. The public school district was responsible for the education of approximately 66,000 students in the city, but public school enrollment had dropped by 26 percent over the previous six years while the overall population decreased by less than one percent (Newmark and DeRugy 2006, 14). The students that remained were disproportionately impoverished and black. One education consultant described the public schools as “one of the most segregated and stratified systems you can see in America” (Tillotson 2006, 71).

During this downward spiral, the school district chewed up superintendents with questionable track records of success in reversing misfortune in large urban school districts and spit them out on a nearly annual basis. The decline in enrollment and degenerative political battles between the superintendent du jour and Orleans Parish School Board were symptoms of a system that, at a very basic level, simply failed to educate its students. Scott Cowen, President of Tulane University, remarked that, “New Orleans had one of the worst-performing public school districts in the country, pre-Katrina” (Vail 2006, 36).

The district spent four percent more per pupil than the state average, but yielded test results 32-44 percent below the state averages (Newmark and DeRugy 2006, 14). Standardized testing revealed low levels of proficiency: 44 percent and 26 percent among 4th and 8th graders, respectively, in reading; 26 percent and 15 percent in math (Hill and Hannaway 2006, 2). Nearly three quarters of the schools were rated “academically unacceptable” by the state (Ibid).

If the state rated school building condition, it would have found most structures to be unacceptable as well. Architect Steven Bingler noted that “The schools in New Orleans were considered to be among the worst in the country in terms of state of repair” (Sack 2005). Air conditioning had only been added in the mid-1990s. Mold and termite damage had long contributed to a deplorable learning environment. Few facilities met minimum safety
FIGURE 2.2 Public school campuses are concentrated in some of the city's oldest and most historic neighborhoods.
TABLE 2.1 Pre-Katrina School Enrollment, By System

<table>
<thead>
<tr>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catholic</td>
<td>Other Religious and Independent</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>66,000</td>
</tr>
<tr>
<td>Percent of System Total</td>
<td>100%</td>
</tr>
<tr>
<td>Percent of Citywide Total</td>
<td>72%</td>
</tr>
</tbody>
</table>

and health code standards and some buildings had even been condemned (Gewertz 2005).

The district’s finances, if it is possible, were in even worse shape. Central office employees and School Board members had been under investigation by state and federal authorities in the months preceding Katrina for corruption and fraud and many were indicted. The U.S. Department of Education discovered $70 million in funding for low income students had not been properly accounted for (Newmark and DeRugy 2006, 16).

On the eve of the storm, the public schools were operating under the watchful eye of the corporate turnaround firm Alvarez & Marsal, hired earlier in the year by the Orleans Parish School Board at the direction of the state. The firm was working with incomplete, unreliable financial data that had not been the source of a clean audit in over four years (Ibid). System-wide layoffs had begun and were expected to continue into the fall as the firm tried to correct financial mismanagement and an impending operating deficit.

The weak public school system led a substantial number of families to send their children to private schools. Approximately 26,000 children, 28 percent of students, in New Orleans were enrolled in private schools prior to Katrina. That figure represents nearly three times the national average and is indicative of the public school system’s struggles (Newmark and DeRugy 2006, 18). Coupled with a strong Catholic tradition in the city, the vast majority of these students attended Catholic schools overseen by the Archdiocese of New Orleans. Of the 26,000 private school students, close to 18,000 -- approximately 70 percent of private school students and 20 percent of the city’s students overall -- attended Catholic schools prior to Katrina (Russell 2006).

The Catholic school system expanded greatly in the early part of the 20th century. In 1894, Archbishop Francis Janssens (served 1888-1897) oversaw the incorporation of individual parishes that allowed them to borrow money to create and run their own schools (Condon 1959, n.p.). Soon after, Archbishop James Hubert Blenk (served 1906-1917) made the promotion of Catholic education central to his term. Archbishop Blenk had a clear goal

“…to establish schools in no way inferior to the public ones. Every effort, then, must be directed towards starting Catholic schools where they are not, and, where they are, towards enlarging them and providing them with better accommodations and equipment until they have nothing to suffer, as regards
Figure 2.3 Catholic school campuses are concentrated in the western half of the city.
to teachers or equipment, by comparison with the public schools” (Hill 1964, 94).

He dedicated the rest of his life to the expansion of Catholic education to as many parishes as he could through the creation of high quality parochial schools.

Most Catholic schools in New Orleans are parochial. Parochial schools are the Catholic equivalent of neighborhood, or district, public schools (Manning and Rogers 2002, 32). Parochial schools are owned and run by ecclesiastical parishes, the geographic divisions of a Catholic diocese (Condon 1959, 4). In New Orleans, all Catholic primary or elementary schools are parochial and function as neighborhood schools. Accordingly, parochial elementary schools closely reflect the city as a whole and generally serve a majority black student population with a few exceptions in majority white neighborhoods.

Most secondary schools, on the other hand, are run by religious orders and do not draw their students exclusively from the parish in which they are located. They function more like public magnet schools and serve students from all over the city, and even the metropolitan area. With the exception of a few historically black schools like St. Augustine and St. Mary’s Academy, Catholic secondary schools serve a majority white population drawn from both within and outside the city limits.

The high quality of a Catholic education is evidenced by the results of their nationally standardized test scores on the Stanford Achievement Test. In the years preceding Katrina, students in grades three through seven were in the 62nd to 70th percentile range with their basic battery scores (Maestri 2006). While these scores cannot be directly compared to the Louisiana Educational Assessment Program (LEAP) results used by the state to rate public schools, it is safe to say that they compare favorably with the majority’s failure to attain basic competence in math and English in the public schools. Although there was room for improvement, Catholic schools were a preferable alternative to public schools prior to Katrina.

Other private schools in New Orleans were managed and operated individually and independently from both the School Board and Archdiocese of New Orleans. Seven schools were affiliated with the Independent Schools Association of the Southwest, a non-profit voluntary membership group that evaluates and accredits schools, but does not provide any form of centralized governance. The majority of the other private schools offered a non-Catholic, but still Christian, religious education while some focused instead on a particular educational technique, like the Montessori method. The schools ranged in size from six students in grades K-6 at the Sister Clara Muhammad Islamic school to nearly 1200 students in grades K-12 at Isidore Newman School. Like Catholic secondary schools, these schools tend
Other Religious and Independent School Locations (Pre-Katrina)

FIGURE 2.4 Other religious and independent private school campuses are scattered across the city.
to serve a more affluent and white student population from both inside and outside the city limits.

There is no aggregate standardized testing information available for the non-Catholic private schools. A variety of tests are used by some schools while others do no standardized testing at all. This group includes some of the most successful and respected college preparatory schools in the city in addition to small start-up schools with little in the way of a reputation.

Post-Katrina Resilience

The combination of hurricane winds and post-hurricane flooding seriously damaged the vast majority of school buildings in the city along with many of the residential neighborhoods they served. The New Orleans Public School System was particularly hard hit, sustaining nearly $800 million in flood damage alone to 85 of its 126 schools (Newmark and DeRugy 2006, 14. One hundred eighteen were thought to have sustained some sort of major damage (Hoff 2005).

Private schools were similarly affected. Times-Picayune staff writer Bruce Nolan summed up the damage sustained by the Archdiocese of New Orleans in 2005: “Because church and community were intimately connected, the archdiocese’s damage closely mirrors that of the neighborhoods it serves: Empty, flood-damaged churches and schools are embedded in empty, flood-damaged communities.” The Archdiocese estimated that its properties (churches and schools) sustained approximately $85 million in flood damage alone (Nolan 2005). Independent private schools in substantially flooded areas experience similar levels of damage.

Academic discussions about urban disaster recovery in general, and in New Orleans in particular, have recently focused on community “resilience.” At a very basic level, the term resilience is commonly understood to refer to the
Both public and private schools were adversely affected by flooding in the wake of post-Katrina levee failures.
physical ability to recover in the wake of a disaster. There is nothing inherently good about this ability, although it is often described in heroic terms. Negative elements may also exhibit resilience in the wake of a disaster. For instance, public schools in New Orleans could return to their pre-Katrina form, both physical and educational, and their recovery could be termed resilient without implication of a positive result.

Vale and Campanella (2005) examine resilience narratives, disaster and recovery symbolism, and reconstruction politics in their edited collection The Resilient City. They conclude with 12 “axioms of resilience,” many of which are relevant to the role of the education system in the recovery of post-Katrina New Orleans.

“Narratives of Resilience Are a Political Necessity”

In the wake of disaster and failure, governments must enhance and restore their own legitimacy, along with the physical and social fabrics of the city. Most often, disasters are used by governments as an opportunity for progressive reform to inspire hope in the wake of destruction. In New Orleans, residents immediately demanded reform in public education and regional governance for hurricane protection in the wake of the storm, making it clear that each would play a critical role in city residents’ decisions to return. Private schools with their positive track record, in contrast, could simply strive to regain their pre-Katrina form.

Katrina provided the impetus for a sweeping reorganization of the public education system in New Orleans. The flooding in the aftermath of the storm inadvertently solved the district’s financial woes, albeit by grinding all operations to a halt and prompting mass layoffs (Adamo 2007, 44). The public school system, a long standing symbol of failure consisting of decrepit facilities and uneducated students, could not be redeemed in the eyes of residents for simply achieving financial solvency.

Rebuilding the school system as it was simply was not an option if the city and state hoped to bring residents back. Desperate to prove that conditions in the city would be better than they had been before the storm, the State of Louisiana seized the opportunity to remake the school system, making good on its pre-storm threat to take over failing schools. In November 2005, the state wrested control of nearly 90 percent of the district from the Orleans Parish School Board (Vail 2006, 38). The State Department of Education adopted the slogan “Change is coming. Yes, it is,” attempting to preempt a pessimistic response of disbelief from residents.

The somewhat complex and confusing system that emerged that fall was multifaceted. Control of the schools was divided between the state Recovery School District and the Orleans Parish School Board. Each of these governing bodies would run some schools directly and charter the
others, creating four possible situations: RSD school, RSD charter school, OPSB school, and OPSB charter school. These changes were meant to show city residents and the world that the new New Orleans would be better than the old. The changes in management, along with the renovation and reconstruction of school structures, are central to the message of hope and progress. Katrina has been reframed by the State of Louisiana as an opportunity for “progress and positive change” in education.

The resilience narrative extended to the built environment as well. The need to rebuild would necessarily force basic improvements to the pre-disaster situation at schools that would have to be renovated. In flooded neighborhoods, the reconstruction of schools is a particularly symbolic act. Schools are especially important as they “represent one of the central institutions of planning, physical and economic development, and socialization” (Vitiello 2006, 185). New schools are high profile projects meant to show residents and the world that the city is coming back stronger. The Recovery School District’s “5 New Schools for New Orleans” initiative, based on community proposals for their neighborhood schools, will quickly create five brand new campuses across the city that will open in fall 2009.

“Narratives of Resilience Are Always Contested”

Charters quickly became the favored model for reopening schools. Schools with active parent teacher associations were particularly anxious to get their doors open and chartering appeared to be the fastest way to accomplish this goal. It wasn’t long before the same political conflicts arose internally on the Orleans Parish School Board as well as between the Board and the state (Newmark and DeRugy 2006, 17). Orleans Parish School Board member Jimmy Fahrenholz, unlike some of his colleagues, wished it had happened sooner: “They should have taken us over a long time ago” (Gewertz 2005 “Charters”). Other School Board
members feared that the State was simply creating a new stratified system.

Whether things have changed for the better, especially for the district’s most disadvantaged students, remains to be seen. Praised for providing choice by their supporters, selective admission charter schools may not be truly open to everyone. Specifically, critics worry that the schools operated directly by the Recovery School District are becoming repositories for undesirable students. Are charter schools really creating choice for the most disadvantaged?

To the extent that the Orleans Parish School Board and the State Department of Education continued to directly control other, non-charter schools, problems remained, especially for the Recovery School District. The school district did not seek, nor receive, community input about which schools to reopen (Adamo 2007, 49). Many of the schools that were opened for the 2006-2007 academic year were understaffed, lacked supplies, and occupied facilities that had not been significantly improved (Adamo 2007, 48). As the public school system moves forward with its master planning process for substantially damaged campuses, which neighborhoods will get to tell their stories?

“Resilience Is Underwritten by Outsiders”

The resilience of both the local public and private school systems has been largely dependent on national resources. The Federal Emergency Management Agency has provided rebuilding funds to both. FEMA typically covers disaster related damage to public facilities. However, given the poor condition of public school facilities prior to the flood, it has been difficult to distinguish between poor maintenance and flood damage. The public school system has been forced to haggle with FEMA over what they claim have been gross underestimates of disaster related damage. With no other sources of revenue for major capital projects to begin, the school district has been forced to wait to deal with many of its facilities.
FEMA’s decision to cover a portion of the uninsured damage to Archdiocese schools was a hotly contested topic, given the need for separation between church and state. The Catholic school system, however, was not entirely dependent on FEMA payments to repair and rebuild its damaged facilities. Through insurance proceeds and donations channeled through the national Catholic Charities USA, the Archdiocese had sufficient revenue to make facility decisions and investments. One Catholic high school even received a gift of new furniture from King Abdullah of Saudi Arabia (Ritea 2006). Similarly, other private schools could rely on their own insurance proceeds and, in some cases, donations from wealthy alumni.

“Resilience Benefits from the Inertia of Prior Investment”

Given the fee simple property system and the survival of all property records in the wake of the flood, the existing division of property amongst public and private owners would continue to govern land use relations in the post-Katrina era. In the case of schools, that meant that both public and private schools most likely would return to properties already owned by their respective governing bodies if they were to return at all. The central question was which campuses would be restored. For residential property owners, the local public or private school, in particular, represents the largest and most visible infrastructure investment in any given neighborhood.

For public schools, once organizational planning was complete, and enough minimally damaged schools could be opened to meet the ever-increasing demand in the immediate wake of the storm, the focus shifted to the long term physical recovery of the district’s facilities. Repair estimates for the public schools totaled well over $800 million (UNOP 2007, 99). Lesli Maxwell, a journalist with Education Week, outlined the questions still facing the system nearly two years after the storm as the district began its master planning process:

- How do you revive a school system when 85 percent of your buildings are in some state of ruin?
- Which schools should be fixed?
- Which ones should be demolished?
- Who will pay the $2.5 billion that officials say it will cost to fix the buildings worth saving and to build new schools to replace those that are not?

Along the way, the district will have to deal with the Federal Emergency Management Agency’s reimbursement process that is designed to physically recreate exactly what existed prior to the disaster – change, in fact, is disincentivized (Maxwell 2007 “Ruins”). Added to the “inertia of prior investment,” there is a strong current to rebuild the system, at least physically, exactly the way it was.

The private schools face a similar dilemma. Insurance
proceeds, much like FEMA grants, are calculated for a one to one replacement. While insurance allows for more freedom in spending the funds, there is a financial disincentive to pursue something other than repair because of the protection provided by the ability to subsequently seek full replacement value if the initial payment is insufficient to complete the work. As a system, the Archdiocese of New Orleans might see value in consolidating some of its land holdings and operations, but for independent and other religiously affiliated schools that exist only on a single property the decision is as simple as whether to comeback or not.

“Resilience Exploits the Power of Place”

Neighborhood attachment is particularly strong in New Orleans and both public and private schools are an important part of neighborhood identity and the tradition of neighborhood schooling. Beyond their physical presence, schools represent important neighborhood social networks. For parochial schools, in particular, the social network aspect ties into the larger religious community that may include a larger group of neighborhood residents, including those without children. These networks are intimately tied to the physical school structures.

The parochial schools had a distinct advantage, as they were able to maintain their social networks while the buildings were under repair by keeping many of their students within the Archdiocese system, even if it was outside the city limits. The Archdiocese school system extends well beyond Orleans civil parish to many suburban areas where many of their facilities were unaffected by the storm.

While students were dislocated, great efforts were made to keep them in Catholic schools. In suburban New Orleans and Baton Rouge, Catholic schools altered their traditional operations to accommodate additional students. Single sex campuses became co-educational and platoon systems were initiated to allow twice as many students to use campuses on a temporary basis. By the end of 2005, 65 percent of their opening day student body was back in school somewhere within the Archdiocese of New Orleans and nearly 80 percent were attending Catholic schools in Louisiana (Hill and Hannaway 2006, 2). As facilities within the city were repaired, students could easily transfer back to their home schools. By the end of 2006, nearly Catholic school enrollment in the city was at 90 percent of pre-Katrina levels (UNOP 2007, 45).

Successful public schools that enjoyed strong parent and neighborhood involvement before the storm were able to build off their existing social network to locate parents and students and submit charter applications that allowed the schools to continue operating, even if it was from temporary quarters in another neighborhood. The maintenance of the school as an institution is a direct result of neighborhood
social networks and will likely lead to the physical restoration of the campus.

“Resilience Casts Opportunism as Opportunity”

For the public schools, in particular, the post-Katrina flood presented an opportunity for dramatic changes to the public school system. On the one hand, the charter school agenda, which might have been received very differently under another set of circumstances, was given the benefit of the doubt for its potential to dramatically and immediately improve a system that had, euphemistically, underachieved prior to the storm.

The Recovery School District and Orleans Parish School Board essentially became charter authorizers in the absence of substantial opposition (Tillotson 2006, 70). By end of 2005-2006 school year, nearly 70 percent of New Orleans public school students were enrolled in charter schools (Newmark and DeRugy 2006, 14). That number declined as the need for schools increased and the number of suitable charter operators was exceeded. However, by end of 2006-2007 school year, nearly 60 percent of students were still in charter schools (Maxwell 2007).

New Orleans quickly surpassed the 25 percent charter enrollment of Dayton, Ohio and the District of Columbia to become the charter school capital of the United States. The long term implications of the post-Katrina charter school movement in New Orleans are unclear, but, to the extent that it’s different from the system it replaced, it is generally viewed as an improvement.

Charter school advocates nationwide are watching the situation closely in hopes of bolstering the case for charter schools in other communities.

“Resilience Entails More than Rebuilding”

Of course, the recovery and reconstruction of the built environment is meaningless without the return of the population to inhabit it. The reconstruction of the built environment is necessary, but insufficient to ensure the recovery of a place. Yet, in some cases, the two components are hard to separate. Schools, in particular, are one of the pieces of the built environment that may need to be present before you can convince citizens to return. As Professor Mickey Lauria of Clemson University has noted, the city “can’t deal with the human problem if the schools aren’t there” (Lang and Danielsen 2006, 248).
Recovery Planning

Stephen Villavaso, whose firm Villavaso and Associates oversaw production of part of the Unified New Orleans Plan, has described what he calls the “Holy Trinity of Rebuilding”: a job, a house, and a place to send your kids to school. These three elements are critical in convincing families to move back to New Orleans. Hill and Hannaway (2006) believed that schools would follow the first two elements, stating that “…in the first three years or so after the hurricane, K-12 education in New Orleans will be a trailing phenomenon, dependent on how fast the economy and housing are rebuilt.”

The public school district was simply overwhelmed at first. William Roberti, managing director of Alvarez & Marsal’s operations in New Orleans, wanted to get a handle on the situation before he made any commitments: “The first priority is to get a physical assessment of the situation and how long it’s going to take us to be able to get the system back up and running to support children, and teaching and learning” (Gewertz 2005). The initial conclusion was that most schools wouldn’t reopen for at least a year (Newmark and DeRugy 2006, 16).

The split into locally-run, state-run, and semi-autonomous charter school systems did not advance the cause of comprehensive facility planning. Benjamin Franklin Elementary School, in Uptown New Orleans, was the first to reopen its doors on November 28 (Gewertz 2005 “Reopens”). Schools open thereafter on an as-needed basis, as suitable facilities became available. The most devastated campuses remained untouched while negotiations with FEMA continued. By far the largest operator of public schools, the state-run Recovery School District, did not begin its master planning process until fall 2007 with a projected completion date of May 2008, 33 months after the storm.

One could fault the city and state for waiting so long to begin the process, but the decision to wait, if indeed one was made, is logical. Assertions that “The size, location, and composition of the student population is likely to shift from year to year, as neighborhoods are rebuilt and different parts of the local economy revive” seem inherently rational and necessarily lead to a substantial waiting period (Hill and Hannaway 2006, 3). Further, the same authors suggest that New Orleans will and should be slow to commit funds to a fixed set of school buildings. It may find that the life cycles of school buildings do not match family residence and employment patterns, so that neighborhoods full of children when new facilities are built have few children only 10 years later, when the buildings still are relatively new (Hill and Hannaway 2006, 11).

In light of this reasoning, the actions of the Archdiocese of New Orleans seem particularly notable. As an alternative to the public school system, primary educational needs in the city have long been met by the Catholic school system.
Parochial schools in New Orleans served close to 50,000 students from the city and the surrounding metropolitan area prior to the storm. Like the public school system, many of its campuses were severely flooded and insurance proceeds were insufficient to cover all the damage. The future was uncertain, but locational decisions about which churches and school campuses would be rebuilt and reopen were made less than six months after the storm.

Unlike its public school counterparts, the Archdiocese moved quickly to reopen undamaged and moderately damaged facilities. Cathedral Academy in the French Quarter reopened October 9, 2005 and was the first elementary school to reopen in the city (Nolan 2005). The Archdiocese went on to open one other school in October and six more in November, before any public schools reopened (Newmark and DeRugy 2006, 18).

While all of the immediate temporary accommodations for displaced students were being worked out, a slightly longer term planning process for parish schools and churches was undertaken almost concurrently. Reverend Michael Jacques of St. Peter Claver Church coordinated a process that focused on proposals advanced by the seven severely damaged deaneries (geographic grouping of parishes) in the Archdiocese (Finney 2006).

The primary outcome of the education plan was a proposal for a new system of central elementary schools. In most cases, one elementary school campus would serve students of three or more parish schools. Superintendent Rev. William Maestri characterized it as “challenging because it’s going to require some of our schools to begin thinking of themselves as serving in a different way than they previously had served” (Finney 2006). The changes were striking. In many cases, parish religious and educational life would continue to exist, but in separate locations. The centralization also meant that many areas would lose their neighborhood school and all of its associated benefits.

Operations were generally centralized on campuses
FIGURE 2.9 The centralized elementary school system generally shifts students from substantially damaged schools to minimally damaged campuses closer to the center of the city.
that had sustained the least flood damage. Typically these central campuses were closer to the city center than the schools being consolidated. In New Orleans East, however, a substantially damaged campus in the geographic center of the area east of the Industrial Canal was chosen over another campus closer to the city center that sustained little hurricane damage.

Although the other substantially flooded campuses were temporarily closed, Catholic school officials promised to monitor the situation and continue to reopen schools as the situation warranted. “The plan is to open key schools, and once they overflow with students, then open the next available school,” said Superintendent Maestri (Nolan 2005). Given the Archdiocese’s financial situation, and uncertain repopulation of the city, it was unlikely that any other schools would reopen in the short term. The “pastoral plan” was designed to be revisited as a whole eighteen months later.

Jim Meza, dean of the College of Education at the University of New Orleans, was skeptical that the lower-tuition parochial schools reopened in the most damaged and depopulated neighborhoods would survive (Waller 2006). All indications are that they have. The Archdiocese does not, however, have plans to open any more in the immediate future. The promised update to the 2006 Pastoral Plan, released exactly twenty six months after the original in April 2008, proposed no changes to the operations of parochial

![Figure 2.10] Students from St. Mary of the Angels School in the Upper Ninth Ward now attend St. Peter Claver School in Treme. The Archdiocese of New Orleans continues to maintain the structure which provides shade for local residents.
schools in New Orleans. As evidenced by the axioms of resilience, the recovery of facilities is a necessary but insufficient element in recovery from a disaster. In New Orleans, a narrative of resilience for schools in general, and public schools in particular, is critical in signaling to residents and the rest of the world that the city is moving forward. The private schools had an easier goal and job rebuilding what existed prior to the storm. The delay for planning the long term future of public schools may not have been necessary, but it certainly created an opportunity to study the effects of rebuilding schools on the recovery of the residential neighborhoods city and to plan accordingly.
FIGURE 3.1 The broken windows of Corpus Christi School may be a sign of social disorder.
There is no literature specifically dedicated to the role of schools in residential neighborhood recovery after a disaster. There is, however, relevant research to be found in the fields of real estate, sociology, and urban design that helps define the relationship between schools and neighborhoods that might be relevant in a post-disaster rebuilding environment. The present and expected future situation surrounding schools and substantially flooded areas seems to exist at the crossroads of these literatures. The current research in each of these fields is reviewed in summary in this brief introduction and then followed up by a more in depth review and discussion of lessons for rebuilding schools in post-Katrina New Orleans.

Real estate researchers have investigated the relationship between the quality and proximity of schools and residential property values in the surrounding neighborhood. Schools generally have a positive effect on property values in the immediate area. For devastated residential property owners in New Orleans, the return of the neighborhood school has more than symbolic value. Its return may help surrounding properties regain some of their pre-storm value which is especially important for homeowners, but also relevant for landlords who may be able to charge higher rents. In either case, reopening a school could be interpreted as a stimulus for rebuilding.

Sociologists have been investigating the effects of “broken windows,” a specific example of physical disorder, on surrounding neighborhoods for over a quarter century now. In many ways, flood damaged neighborhoods resemble disinvested urban areas in their physical form. Buildings are abandoned, lots are overgrown, and the streets are littered with debris. Many flood damaged schools that have not reopened, even those that are supposedly being maintained, exhibit broken windows, or worse. Some of the physical damage to schools was due to the hurricane and flood, but post-storm vandalism of abandoned properties is an increasingly important issue in rebuilding neighborhoods. The physical disorder embodied in the “broken windows” of a closed school could affect crime rates and residents’ mental health and neighborhood attachment.
Finally, best practices in urban design suggest that new schools become multifunctional community centers to serve the neighborhood. Most of this research involves schools on suburban fringe as few new schools are being built in urban areas, but the community design principles are the same and applicable to the future of neighborhood schools in New Orleans, as suburban schools try to become more urban in form and function.

Housing Markets

Tiebout (1956) provides the basis for the school and housing market literature with his hypothesis that households sort themselves according to preferred combinations of public goods based on social and demographic characteristics. Most recent studies have focused, specifically, on public school proficiency test scores, but others have examined the market capitalization of other measures thought to be proxies for school performance, like a school’s expenditures per student, the student-teacher ratio, teacher education, experience, and salaries, and student attendance and graduation rates. Of these measures, public schools in New Orleans only score favorably on the expenditures per student measure, when compared with other public school districts in the state of Louisiana.

Quality

Brasington (1999), unsatisfied with the seemingly unjustified, exclusive focus on test scores, summarizes and lays out the various school statistics that are thought to influence housing values. Hedonic models and corrections for spatial autocorrelation are applied to housing transactions in six major metropolitan areas throughout the state of Ohio to determine “Which Measures of School Quality Does the Housing Market Value?”
The author concludes that the housing market, not surprisingly, rewards high performance as measured by those statistics most accessible to homebuyers: high standardized test passage rates, spending per student and a low student-teacher ratio. In fact, Brasington finds that high proficiency test rates and expenditures per student may appropriately be substituted for one another. The other measures examined are not consistently reliable proxies, but may be valued by the market, depending on the type of statistical analysis performed.

Brasington and Haurin (2006) revisit the notion of measuring school quality after the emergence of proficiency tests as the preferred proxy in the literature. Several authors have pointed out the inadequacies of such a measure and, perhaps as a result, the authors claim that the increase in student achievement over time (value added) is emerging as a preferred measure among education and labor economists. The value added approach attempts to gauge how much schools add to students’ knowledge. Brasington also includes such a measure in his 1999 study.

The housing market apparently, however, has not caught up with the economists. The researchers examined 77,000 house sales in Ohio in the year 2000, but did not find much evidence of market capitalization of value added measures. As Brasington (1999) once postulated, the result may be attributable to the availability of information. The concept of value added is a new one for realtors and homebuyers and may not have made it into the mainstream, making it difficult for the market express a preference.

The authors, however, continue to find that proficiency tests and school expenditures per student have an effect on housing prices. In particular, a one standard deviation increase in test scores was found to increase housing prices by 7.1 percent. Proficiency tests apparently remain the standard for school quality.

Lately, studies have attempted to control for neighborhood differences in housing prices by examining differences in housing values at artificially imposed political boundaries, like public school districts. Black (1999) builds upon the standard hedonic model employed by Brasington (1999) and others before her by trying to isolate the effect of school quality from neighborhood characteristics. Black attempts to control for unmeasurable characteristics like property improvement and upkeep by limiting her study of houses in close proximity to school attendance district boundaries.

Drawing from an initial sample of 22,679 single family residences, 39 school districts, and 181 attendance district boundaries across three Boston suburbs, Black whittles down her sample to examine 4,594 house sales within 0.15 miles of attendance boundaries. The Massachusetts Educational Assessment Program, a standardized proficiency examination...
tion, was used as a proxy for elementary school quality.

The findings show that an increase in elementary school test scores of five percent yields an increase in house price of approximately two percent. Black notes that this result is about half the increase found in standard hedonic housing regressions. Standard regressions, then, must understate the importance of neighborhood characteristics and overstate the case for school quality.

There is an important assumption underlying these results: neighborhood characteristics change relatively smoothly across space and do not vary significantly within short distances. Yet, the author notes that the structural age of houses does differ significantly across attendance boundaries, even if other features do not. The age difference could be interpreted as a proxy for the unobservable house and neighborhood maintenance factors and might account for some of the variance, although it seems unlikely to drastically change the results.

Weimer and Wolkoff (2001) also look at boundary effects in Monroe County New York. In contrast to Black (1999), the authors use non-contiguous school district and municipal incorporation boundaries to control for the effects of school quality on housing values. The authors build on the work done by Brasington (1999) and Black (1999) before them, by controlling for potential differences in public service bundles and student cohorts in addition to the typical, while varied, attempts to control for housing and neighborhood demographic characteristics. By utilizing non-contiguous boundaries, Weimer and Wolkoff are able to separate the marginal price increase due to school quality from that of other non-school public services. The authors also look at the student cohort through participation in the free lunch program.

Like Brasington (1999) and Black (1999), school quality is measured through student performance on a standardized test -- the English Language Arts exam. The authors utilize both a log-linear model and a multiplicative model in their statistical analysis and find that raising test scores by one standard deviation results in a 1.0-8.3 percent increase in average city housing values. Both a standard hedonic model and Black’s findings fall within this range.

Artificial boundaries, whether contiguous or not, may change over time. School attendance boundaries, especially in the second half of the twentieth century, were subject to federal desegregation orders and changing demographics in both inner city and suburban neighborhoods. Research studying the effects of these changes on housing values has recently emerged and might be termed boundary change effects, in contrast to Black’s boundary-fixed effects.

Kane, Staiger, and Riegg (2005), look at the effects of school desegregation in Mecklenburg County (Charlotte), North Carolina from 1994-2001 through both boundary
effects and redistricting. Like Black (1999) and Weimer and Wolkoff (2001), the authors study house prices along attendance boundaries, but also the change in housing prices after neighborhood school assignments changed.

Modeling their study after Black (1999), the authors find a significant positive relationship between higher scores on school proficiency tests and housing values at the attendance boundary, resulting in a price premium of 10 percent. However, they question whether unobservable house or neighborhood characteristics are partly responsible given that many of the observable characteristics (i.e. number of bathrooms, square feet, and percent African-American) change discontinuously at the attendance boundary. While also noted by Black (1999), the magnitude of the differences found in this study is greater.

As for the change in housing prices due to school reassignment, Kane, Staiger, and Riegg find a statistically significant relationship at the high school level only, with a 4.2 percent decline in property values when reassigned to a school with ten percent more African-American students, a 2.3 percent increase in property values with ten percent higher median incomes, and a 1.8 percent increase in property value with a ten percent increase in a performance composite.

The authors also note that the data used in their boundary effect analysis implies a significant difference in house prices based on the distance to the assigned elementary school. This may reflect the significance of the “neighborhood schools effect” found by Bogart and Cromwell (2000). Both suggest that the effect of school proximity, in and of itself, is worthy of further study, although it has attracted relatively little attention in the literature.

Proximity

Guntermann and Colwell (1983) conduct one of the most extensive early investigations into the effects of school proximity with data from Lubbock, Texas. Holding school quality constant, the researchers look at 1,044 residential sales between 1969 and 1977. The authors analyze both the potentially positive effect of accessibility and the potentially negative externality associated with being too close (i.e. noise, traffic) and conclude that each is statistically significant. In short, household location choices are strongly influenced by access and distance to a primary school; access outweighs the proximity externalities. On the whole, larger schools are valued more by the market due to the variety of functions and activities they offer.

Des Rosiers, Lagana, and Theriault (2001) update this study with data from 4,300 single family home sales near 116 schools in and around Quebec City between 1990 and 1992. Parallel to Guntermann and Colwell (1983), the researchers find that negative externalities associated with close proxim-
ity increase with school size, but max out at 365 students, leading to a decrease in housing values up to that point before rebounding. Similarly, housing prices increase up to a value-maximizing distance of \( \frac{1}{4} \) mile and decrease thereafter. Again, access is found to outweigh the negative proximity effects.

In the 1990s, a Michigan Land Use Institute study compared the property values within a half mile of two elementary school locations in similar neighborhoods in Jackson, Michigan: one campus was open and the other closed. The study finds that over the course of a decade, property values appreciate at a 3 percent greater annual rate around the open school. Consequently, property tax collections likely would be significantly higher if both schools are open.

Bogart and Cromwell (2000) systematically analyze boundary change effects in relation to school redistricting. They identify three distinct dimensions of redistricting: the “neighborhood schools effect,” the “racial composition effect,” and the “transportation services effect.” The first effect refers to the difficulty students have in participating in after school activities and parents working with the PTA when the distance between home and school increase. The second effect refers to a family’s willingness to pay depending on whether they wish for their child’s school to reflect racial integration or segregation. The third effect refers to the introduction of bus service in areas that might not have previously received it.

The authors examine 4,463 home purchases in Shaker Heights, Ohio between 1983 and 1994 in an attempt to study the effect of a 1987 redistricting action. School quality is held constant while the variables of interest reflect the three dimensions: whether the house remained in a neighborhood school district, the racial composition of the neighborhood school district, and whether or not a student living in the house would be bused.

The authors conclude that the “neighborhood schools effect” was substantial, with the loss of a neighborhood school leading to a 9.9 percent decrease in house prices. The “racial composition effect” was not found to be statistically significant. The “transportation services effect,” however, was found to be significant, albeit at a low magnitude with the introduction of bus transportation associated with a 2.6 percent increase in house prices.

Lessons
Schools have an important role to play in the strengthening of the post-Katrina residential real estate market in New Orleans. It is clear that reopening schools of high quality, as measured by proficiency test scores, with higher expenditures per student will be critical to bringing residents back. Returning households are likely to evaluate
their pre-Katrina locations, in part, on proximity and access to a neighborhood school in the post storm environment. Some households may choose to rebuild closer to a school that has reopened instead of near and abandoned campus.

The new institutional structure of the public school system may go a long way towards increasing student achievement and spending. However, the heavy reliance on charters in place of district schools does not ensure that neighborhoods have access to their local schools which may instead serve residents from other parts of the city. If this system expands to substantially flooded campuses as they are rebuilt, spots should be reserved for neighborhood residents to preserve the positive proximity effects on nearby residential properties.

Restoring residential real estate values is important for property owners – there is no incentive to return to or reinvest in a worthless investment. Reopening higher performing public schools will help homeowners recapture the value in what had been their greatest asset. The schools will attract and cluster residential redevelopment and higher property values will result in greater property tax receipts for the city and help to finance the provision of city services in the surrounding neighborhood.

Physical Disorder

Closed schools should concern neighborhood residents and government to the extent that they may come to represent physical disorder, if they do not already. Ross and Mirowsky (1999) defined physical disorder in relation to the overall physical appearance of a neighborhood, specifically cleanliness, level of building repair, occurrences of vandalism, and building vacancy. As social scientists Sampson and Raudenbush (1999) have noted, disorder “changes the calculus of prospective home buyers, real estate agents, insurance agents, and investors and shapes the perceptions of residents who might be considering moving” (604). The physical maintenance of institutional and government buildings is an especially important signal in flooded neighborhoods that will not recover without significant private investment.

Crime

The study of neighborhood disorder began with Wilson and Kelling’s (1982) “Broken Windows.” The authors examined the effects of the implementation of police foot patrols in Newark. While the strategy didn’t reduce crime, statistically, it did have a significant impact on fear and perception of crime in the neighborhood. The foot patrols effectively elevated the level of social order by enforcing mores (rather than written law) with drunks, panhandlers,
delinquents, etc. Also known as the order maintenance function of the police, the ability to enforce informal rules is especially important in heavily used areas.

Wilson and Kelling asserted that the social disorder often stems from physical disorder, like broken windows that are left unrepaired. “Social psychologists and police officers tend to agree that if a window in a building is broken and is left unrepaired, all the rest of the windows will soon be broken…one unrepaired broken window is a signal that no one cares, and so breaking more windows costs nothing.”

The authors cite a 1969 study in which Stanford psychologist Philip Zimbardo abandoned two identical cars in the Bronx and Palo Alto. The automobile in the Bronx was stripped of everything value within 24 hours and destroyed in a matter of days. The car in Palo Alto was untouched for a week until Zimbardo broke a window to help the process move along. The car then succumbed to the same fate as its counterpart in the Bronx.

In conclusion, Wilson and Kelling remarked that, “The key is to identify neighborhoods at the tipping point…where a window is likely to be broken at any time, and must quickly be fixed if all are not to be shattered.” Many flooded New Orleans neighborhoods are arguably at that point and, in many cases, abandoned schools are at the center.

Many studies of neighborhood disorder and crime rates followed “Broken Windows.” Using regression, most
analyses found a statistically significant correlation between physical disorder and crime rates, but acknowledged that other neighborhood characteristics, like incidence of poverty, often play a more important role (i.e. Sampson and Raudenbush 2004).

**Mental Health**

Recent studies have focused on the physical and mental health consequences of neighborhood disorder that may lead to further deterioration of the neighborhood. Haney (2007) studied the relationship between physical disorder and mental health. Using data from Boston and Los Angeles collected by the Multi-City Study of Urban Inequality survey in the mid-1990s, the author utilizes three regression models to account for influence of poverty level, health and civic engagement, and physical disorder, while controlling for age, sex, education, income, and race and ethnicity.

The study found that perceptions of physical disorder in neighborhoods are more important than poverty levels, but equal to physical health, in determining resident self-esteem. Haney concluded that blighted and decaying urban neighborhoods are seen as disinvested by both residents and governments and their image is incorporated into residents’ psychological makeup. According to Haney, “individual level traits (such as education or race) interact with a neighborhood’s physical conditions and mechanisms of social control to send a clear message to residents regarding their life chances, the level of investment in their neighborhood, as well as their future prospects” (991).

**Attachment**

Resident self-esteem may be important at a collective level and directly tied to civic engagement and neighborhood attachment. Woldoff (2002) studied the effects of neighborhood disorder on attachment attitudes and behaviors, noting that “Researchers…have contended that stressful aspects of the local urban environment generate weaker feelings about – and social connections to – one’s community” (87).

Woldoff utilizes confirmatory factor analysis (CFA) and structural equation modeling (SEM) on 1988 Nashville survey data, selecting 767 residents across 81 partial block faces. The study examines the most severe aspects of social disorder (e.g. drunkenness, vandalism, homelessness) and physical disorder (e.g. abandoned buildings and empty lots) while controlling for age, race, sex, socioeconomic status, marital status, children, homeownership, and length of residence.

In regards to physical disorder, Woldoff found that higher perceptions were correlated with lower sentimental (emotional) attachment to the neighborhood. Perceived levels of physical disorder, however, had no impact on neighboring or participation in formal or informal problem-solving.
Sentimental attachment is particularly important in a neighborhood resident’s decision to return and physical disorder may serve as a negative intervention.

**Land Use**

Finally, Wilcox et al. (2004) studied the effect of land use on neighborhood disorder. They focused on the effects of adult-centered, business-oriented areas (i.e. shopping) and youth-centered, residence-oriented areas (i.e. schools). In addition to the neighborhood disorder literature, the research built on Jane Jacobs’ (1961) “eyes on the street” principle – the land uses were chosen for the pedestrian traffic they create in surrounding neighborhoods.

The authors used data from 100 Seattle neighborhoods and sampled 300 block pairs. Physical disorder was measured through the presence of garbage on street, abandoned houses/buildings, and poor street lighting. Utilizing multivariate regression models, the researchers found that the presence of schools had little effect on disorder, but increase neighboring behavior. Businesses, on the other hand, increase physical disorder, but have no effect on neighboring behavior.

**Lessons**

All of the research on physical disorder suggests that all damage to abandoned school facilities should be mitigated, whether or not they will ever reopen. Facilities damaged by the hurricane and flood, as well as post-disaster vandalism, should be demolished or repaired if the city and school system want to show that they care about substantially damaged residential neighborhoods. Otherwise, physical disorder has been linked to increased levels of social disorder in the form of crime. The New Orleans Police Department is already stretched thin and can ill afford the permeation of environments that encourage crime.

The maintenance of these facilities is also important for the self-esteem of residents that have chosen to rebuild...
and return to the neighborhood as well as those who have left and are mulling a return. The mental health dimensions of physical disorder have been alluded to in the local media as well. Nearly two years after the storm, Times-Picayune staff writer John Pope captured the phenomenon in his headline “Weeds creep into rebuilders’ heads.” The post-storm environment is stressful enough without additional signs of physical disorder that indicate that no one cares about the residents that have returned. At the very least, the city and school system should lead by example if they expect private abandoned property owners to maintain their properties.

Perhaps most importantly, physical disorder weakens neighborhood attachment. New Orleanians have an unusually high level of attachment to their communities, but it is being tested every day in the post-Katrina environment. Physical disorder damages the social networks that are critical for community resilience. The physical and social aspects of resilience are inextricably linked – either element alone is insufficient for recovery. The physical disorder literature indicates that open schools have a positive effect on neighboring, placing schools at the nexus of physical and social networks critical to recovery.

**Urban Design**

The literature on the design of schools mirrors the issues faced by suburban school districts as they did most of the building during the latter half of the 20th century. Over the last fifty years, public school enrollment has steadily increased as the Baby Boom generation and its “echo” have matured. The educational infrastructure has aged along with the Boomers. The average age of school buildings was 42 in the year 2000. Unfortunately, rapid deterioration begins at age forty (USDOE 2000, 1). Many of these facilities are at capacity and in desperate need of modernization.

There has been a new school construction boom in the last ten years as urban and older suburban school districts have been forced to deal with decrepit, overcrowded buildings. New schools are bigger and tend to be further removed from the people they serve in suburban environments that are already low density. While public school enrollment increased nearly 85 percent between 1930 and 2001, the number of public school buildings serving students has decreased 60 percent (ICMA 2008, 4). This statistic reflects the fact that average school size has increased rapidly.

Tight budgets and minimum site acreage requirements promulgated in the 1990s by the Council of Educational Facility Planners International made it difficult to find suitable sites in already developed areas so school
districts have been forced to seek larger plots of cheaper land further from developed areas. In some cases, schools are even leading development on the exurban fringe. Yet, research on school size suggests that student populations greater than 800 may negatively affect the learning process (USDOE 2000, 1). These new, large schools are typically located far from the students they serve, making walking or biking to school impossible. Increasing occurrences of childhood obesity have been linked to this trend in school development.

The recent movement toward smaller community schools reflects the real and perceived shortcomings of the large suburban model. School size and location are becoming increasingly important decisions as one of the most important infrastructure investments shaping demand for growth and development (Lambert and Huh 2008). Community schools are typically smaller, located within the neighborhood they serve, and may also serve as community centers or provide social services. These facilities are typically woven into existing urban fabric and seek to engage all members of the community, not just parents and students, through multifunctional spaces that are accessible before, during, and after regular school hours.

The schools are strongly identified with their surrounding neighborhoods, enjoy local support, and foster a sense of community ownership. Community schools are a center of neighborhood activity. Instead of being open only to students and during school operating hours, the buildings are open to the whole community after school hours and on weekends. The schools house other community uses, like libraries, family support centers, and physical and mental health services. The school is then an asset to the entire community and a source of pride (Khadduri et al. 2007, 5).

The introduction of the community school model can also be used as a tool for revitalization in depressed areas. Indeed, they are most effective when pursued together: “Neighborhood strategies must be coordinated with school improvement activities in order to be most effective… a neighborhood revitalization strategy that includes a school improvement component will be more successful and more sustainable than a strategy that focuses solely on the neighborhood” (Khadduri et al. 2007, ii-1).

Creating a new community school in an older established neighborhood with a rich history and vibrant mix of uses can help spur job creation, attract new businesses and educated workers, and enhance quality of life (Lambert and Huh 2008). For instance, community school-centered housing can help retain and attract families with children, and increase residential stability in a neighborhood (Khadduri et al. 2007, 6). Yet, in much the same way as land use planners and school facility planners tend to operate in their own silos, community development practitioners and school officials
often work independently and miss out on opportunities to advance their missions in tandem, yielding less than optimal results.

Multifunctional community schools will be especially critical in the future as the demand for school facilities declines. Over one half of households had children in 1950, but that number dropped to one third by the 2000 Census and is expected to decline even further, down to one quarter by 2025. The result will be a smaller percentage of households with a direct connection to local schools (ICMA 2008, 4). The potential for community schools is great. As Vice President Al Gore observed in 1998, “These [school] buildings will have a profound impact not just on students, but on entire neighborhoods” (USDOE 2000, 5).

**Lessons**

Reopening schools in depressed, flood-damaged areas of New Orleans can be a key part of revitalization efforts. The schools should be relatively small in size and serve neighborhood residents. Resident access to physical and mental health services has been partially limited by facility closure since the storm and rebuilt schools offer a perfect opportunity to reintroduce these services to the community. Additionally, close proximity to school allows students to enjoy the health benefits of walking or biking in addition to a short commute. The new or rebuilt facilities should be designed as community centers to engage all neighborhood residents, not just families with children. Building a community center component into new and rebuilt schools is one way of dealing with potential fluctuations in the school age population and local economy that Hill and Hannaway (2006) believe will ultimately guide development, without having to wait for the entire situation to play out. School facilities should be developed in concert with neighborhood plans, in partnership with community development and planning professionals, even though they are not required to interact or work together.

Due to the poor condition of its facilities prior to the storm, the public school system will be forced to build many new schools from scratch. As it develops its master plan it should keep these tenets in mind. The Martin Luther King, Jr. elementary school in the Lower Ninth Ward of New Orleans, developed with a public library branch prior to Katrina, is a good example. Again, if the charter school system is expanded to substantially damaged campuses, it is critical that spaces be reserved for local residents so the benefits of proximity to a neighborhood school can be fully enjoyed.
FIGURE 4.1 Resurrection of Our Lord School is a beacon of hope in New Orleans East.
The research method is designed to focus on the effects of the Catholic school system’s recovery strategy on surrounding residential neighborhoods, to determine whether or not there is a correlation between the reconstruction of schools and residential rebuilding in substantially flood-damaged neighborhoods. The Catholic school system completed and announced its long term plan in February 2006, approximately five months after the city flooded and well before the future of many flood damaged neighborhoods was clear. Relatively few residential building permits had been issued in these areas prior to the announcement of the plan. While there are some structural differences between the public and Catholic school systems, the actions of the Archdiocese and their effects are a reasonable proxy for the public school system.

The method relies on the calculation of a simple rebuilding rate, based on the number of structures that have been issued a variety of building permits divided by the number of residential lots, each within certain radii of Catholic schools that have reopened or remain closed. The hypothesis is that neighborhoods around schools that have reopened will have higher crude rates residential rebuilding than the neighborhoods around schools that have not been restored and remain closed indefinitely. This hypothesis is grounded in prior research that suggests that proximity to an open school of good quality has a positive effect on residential real estate and that physical disorder in the form of abandoned buildings has a negative effect on residents’ mental health and neighborhood attachment.
In order for property owners to make a decision about whether or not to rebuild, they need information on a wide variety of issues including local schools. Yet, as of April 2008, the State Department of Education and Orleans Parish School Board have not publicly announced the future of many public school campuses that were damaged by the flood. Due to haggling with the Federal Emergency Management Agency, many schools were not remediated or secured until more than two years after the storm. In these cases, public school campuses have been significant contributors to neighborhood physical disorder. Any decisions to rebuild in these areas are necessarily being driven by other factors.

If decisions had been made earlier, it would be preferable to examine the effects of public schools on their surrounding neighborhoods, given the scale of the system and its geographic distribution. However, it would be difficult to control for the quality of public schools as it could vary greatly from one neighborhood to another, even if the system was judged to be of low quality on the whole. The transition to a largely charter system is another wildcard in the future of the school system. What comes back to flooded campuses may be, and hopefully will be, very different from what existed, but that will not be known for some time. In short, the future of public schools in flooded neighborhoods has not yet been determined and it would be difficult for property owners to even make an educated guess about the future of their neighborhood public schools.

The Archdiocese of New Orleans, by contrast, announced which schools they planned to reopen in early February 2006 – a little more than five months after disaster struck. While only about 30-35 percent of the size of the public school system in both students served and number of campuses, property owners in these neighborhoods have had plenty of time to react to the information. Additionally, school quality was relatively constant across the system and more highly regarded than the public school system. There is no need to control for quality, so it is easier to judge the effects of proximity and neighborhood physical disorder.

As for the future of the social network represented by the restoration of the school, most of the teachers and students at the schools that came back are the same ones that were originally there, or elsewhere in the system, before the storm. Further, parish schools are often paired with churches that serve and represent a neighborhood social network as well. Taken together, these elements make the Catholic school system the best case to study the impacts of reopening schools.
Individual Schools

The Catholic school system in New Orleans consisted of 44 schools prior to the hurricane: 31 elementary schools, 11 secondary schools, and 2 combined schools. Within a year after the post-Katrina flooding, the Archdiocese had reopened all of the secondary and combined schools, but only 19 of the elementary schools. The closures, deemed temporary, were recently reconfirmed in a review of the Archdiocese’s post-Katrina parish realignment.

Almost all of the elementary schools are parochial, or affiliated with a church parish, meaning they are neighborhood based and tend to serve that population. Before the storm, most elementary schools had 300-400 pupils. The secondary and combined schools, in contrast, are more centralized and have a much larger catchment area – well into the suburbs, in many cases – leading to student pre-storm populations well over 1,000. As a result, the secondary and combined schools in neighborhoods that sustained substantial flood damage did not lose the majority of their student bodies.

Another factor working in the favor of secondary school restoration, related to the population they serve, is the scale of their buildings. Nearly all are multi-story, so only the first floor would have sustained flood damage. On the other hand, many elementary schools are single story and were completely wiped out and required a much larger investment on a per-pupil basis. To date, the Archdiocese has only restored one single story elementary school, while nearly all the multi-story buildings have been refurbished. As catastrophe losses far outpaced insurance and grant proceeds, this approach was an economic necessity.

Parochial elementary schools were chosen as a subset of the Catholic schools because they serve a neighborhood population and provide a point of contrast between flooded neighborhoods where schools were closed or restored.

Refinement

Two elementary schools that serve special needs populations and one middle school that draw their students from outside their immediate neighborhoods were eliminated to leave ten neighborhood schools that include kindergarten through fifth to eighth grades. The remaining campuses were geocoded with ArcGIS on a map of New Orleans against a layer of post-Katrina flood depths generated by the North American Aerospace Defense Command (NORAD).

Not surprisingly, not all of the elementary schools sustained significant flood damage. Even some schools in largely flooded neighborhoods sustained little damage as they were in prominent locations along ridges with higher elevations than their surrounding neighborhoods. Flood depths at each elementary school in the flood zone were
FIGURE 4.2 Four substantially flood damaged parochial elementary schools have reopened while six others remain closed.
estimated with the NORAD data embedded in the GIS layer. Given the potential change in elevation between ground level and floor level of schools and surrounding residences, 2.5 feet was used as a minimum flood depth for the selection of relevant cases. Of the original elementary school population of 31, ten schools sustained substantial flood damage. Four of these schools have reopened while the other six remain closed. The Archdiocese has been forced to strategically concentrate its resources into a few facilities, so it is no surprise that the majority of substantially flooded campuses remain closed. The cases are well-distributed across the flooded areas of the city.

Data

Post-Katrina permit data, as of February 1, 2008, were obtained from the city’s Department of Safety and Permits on the City of New Orleans Community on One Page portal and imported into Microsoft Access. The database was queried to select relevant permit types:

- Residential (Addition, Emergency, Homeowner Repair, New, Renovation-Structural, Renovation-Non-Structural, Repair, Repair-Replace-Addition)
- Electrical (Construction Loop, Service-Circuits-Feeders)
- Mechanical (General Mechanical)
- Certificate of Occupancy

These permit types and sub-types represent the range of permits applied for in the course of residential rebuilding and construction. Demolitions were omitted as a demolition permit, without application for another type of permit, does not represent intent to rebuild.

In many cases, rebuilding projects seek multiple permits, resulting in multiple records for each address. Additionally, some individual permits are entered multiple times. In order to get an accurate count of properties that have been or are being reconstructed, the records were queried for only the most recent permit and type issued for each address. The filtered building permits were geocoded in ArcGIS.
It should be noted that the fee for a residential building permit was waived immediately after the storm and, after multiple extensions, until June 30, 2006. There is a compelling argument that residential building permits, especially of the emergency and repair variety, do not necessarily indicate a property owner’s intent to rebuild. Many owners may have been hedging their bets by applying for permits in case they decided to rebuild or to avoid new flood elevation restrictions. Indeed, it is likely that a significant number of permits were issued for residences where no work has been completed and the permit has expired.

However, there is no evidence to suggest that this trend would be concentrated in one substantially damaged neighborhood over another. Assuming these cases are more or less equally distributed, the GIS analysis may overestimate the level of rebuilding overall, but not the relative levels between neighborhoods that are the focus of this analysis.
GIS Analysis

Zoning and lot layers were then added to the file. A residential zoning layer was created after selecting residential zoning classifications. The intersection of the residential zoning and lot layers was used to create a layer of residential lots.

Tenth, quarter, and half mile buffers were drawn around the ten selected elementary schools to capture building permit and residential lot information within these radii. The tenth mile radius was chosen to capture properties in the immediate vicinity of the school – those properties that may have a direct view of the school from their porch or window. The quarter mile radius was chosen as the expected walking radius and distance that maximizes property value for school proximity effects (Des Rosiers et al. 2001). Finally, the half mile radius was chosen to more fully capture each school’s neighborhood and expected catchment area, without overlapping with other neighborhoods.

The intersections between the buffers and the geocoded permit data were recorded in Microsoft Excel. Building permits were divided by the number of residential lots to generate a crude rebuilding rate around the reopened and closed schools, both individually and collectively, within each radius. The same procedure was used to determine rebuilding rates with building permit data before and after the public announcement of the Archdiocese’s Pastoral Plan on February 9, 2006 as well as after schools reopened in August 2006.

Once the number of lots and permits surrounding each school was obtained, aerial photographs of the schools and their neighborhoods were examined for correspondence to the GIS lot layer. In two cases, St. Dominic (open) and St. David (closed), the photos revealed little resemblance between the developed condition and the lots on record. The lot layer displayed multiple lots per dwelling in these two neighborhoods, indicating a development pattern distinct from the property records. As a result, an accurate rebuilding rate could not be calculated for these two neighborhoods and consequently they have been excluded from the results.
FIGURE 4.2 Tenth, quarter, and half mile buffers capture rebuilding activity in the neighborhoods surrounding substantially damaged parochial elementary schools.
Case Study

Of the ten flooded cases, one school, Resurrection of Our Lord, was designated by the Archdiocese as a centralized elementary school that would serve students from other schools in the area that had been closed. Other centralized elementary schools designated in the pastoral plan generally had minor damage and were selected to serve the students from substantially flooded parishes. In this case, the chosen school sustained a similar level of damage to the other schools it will serve, but was publicly designated as a replacement. All three schools served New Orleans East prior to the storm, occupied single story structures, and are similarly embedded within residential neighborhoods. The case study will examine the relative rates of rebuilding among the neighborhoods served by the schools, relative to the overall trends, and speculate about the other significant factors in play at each site.
Another house facing the reopened Resurrection of Our Lord School is being rebuilt.
RESULTS

Aggregate

Of the eight remaining cases, three schools have reopened while the other five remain closed. Although it's a small number of cases, the geographic information systems analysis revealed an interesting trend: while rebuilding rates are comparable at a half mile distance from open and closed schools, rebuilding rates increase as the radius gets closer to schools that have reopened and rates decrease as the radius gets closer to schools that have not.

<table>
<thead>
<tr>
<th>1/2 mile</th>
<th>1/4 mile</th>
<th>1/10 mile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Pius X</td>
<td>179</td>
<td>847</td>
</tr>
<tr>
<td>St. Anthony of Padua</td>
<td>1132</td>
<td>2066</td>
</tr>
<tr>
<td>Resurrection of Our Lord</td>
<td>866</td>
<td>1497</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2177</td>
<td>4410</td>
</tr>
</tbody>
</table>

TABLE 5.1 Neighborhood Rebuilding Rates: Reopened Schools

<table>
<thead>
<tr>
<th>1/2 mile</th>
<th>1/4 mile</th>
<th>1/10 mile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Simon Peter</td>
<td>799</td>
<td>2008</td>
</tr>
<tr>
<td>St. Monica</td>
<td>873</td>
<td>1920</td>
</tr>
<tr>
<td>St. Mary of the Angels</td>
<td>1300</td>
<td>2513</td>
</tr>
<tr>
<td>St. Frances Xavier Cabrini</td>
<td>755</td>
<td>1826</td>
</tr>
<tr>
<td>Immaculate Heart of Mary</td>
<td>1057</td>
<td>1868</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4784</td>
<td>10135</td>
</tr>
</tbody>
</table>

TABLE 5.2 Neighborhood Rebuilding Rates: Closed Schools
These results do not support the hypothesis that reopening neighborhood schools in substantially flooded areas is associated with an increase in neighborhood residential rebuilding rates overall, at least when measured at a half mile radius. However, these results do suggest that reopened schools may serve as a center for clustered redevelopment in a neighborhood. Closed schools, in contrast, may repel development in their immediate vicinity. In short, school status seems to affect the location of rebuilding activity within a neighborhood, but not the overall rate.

**Time Sequence**

The results above do not control for the timing of building permit requests. As such, it is unclear whether the patterns revealed by the aggregate post-Katrina data above have been created in response to either the Archdiocese’s public announcement about which schools would reopen in early February 2006 or their visible, symbolic reopening in August 2006. However, a time sequence analysis shows no strongly discernible pattern prior to the public release of the pastoral plan.

Prior to the public announcement of the plan, there was little variation in rebuilding activity across the radii of interest. The pattern that emerges after February 9th is completely consistent with aggregate data, which is not terribly surprising given that the vast majority of building permits were issued after this date. Similarly, the permit data for permits issued after the 2006-2007 school year began reveals the same pattern, albeit somewhat less pronounced.

<table>
<thead>
<tr>
<th>Radius</th>
<th>Before 2/9/06</th>
<th>After 2/9/06</th>
<th>After 9/1/06</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permits</td>
<td>Percent</td>
<td>Permits</td>
</tr>
<tr>
<td><strong>Closed Schools</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2 mi</td>
<td>285</td>
<td>2.8%</td>
<td>4499</td>
</tr>
<tr>
<td>1/4 mi</td>
<td>55</td>
<td>1.8%</td>
<td>1088</td>
</tr>
<tr>
<td>1/10 mi</td>
<td>7</td>
<td>1.3%</td>
<td>161</td>
</tr>
<tr>
<td><strong>Reopened Schools</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2 mi</td>
<td>187</td>
<td>4.2%</td>
<td>1990</td>
</tr>
<tr>
<td>1/4 mi</td>
<td>78</td>
<td>4.8%</td>
<td>777</td>
</tr>
<tr>
<td>1/10 mi</td>
<td>15</td>
<td>4.8%</td>
<td>182</td>
</tr>
</tbody>
</table>

**TABLE 5.3 Neighborhood Rebuilding Rates: Time-Controlled**
Demographic Characteristics

This analysis does not control for a number of other factors that undoubtedly play a role in property owners’ decisions to rebuild near a reopened school. The proportion of school age children in the neighborhood, socioeconomic status, and the proportion of homeownership are all factors that might play into the decision and also factor into neighborhood housing values and neighborhood physical disorder. A comparison of rebuilding rates and selected demographic characteristics by school Census tract in 2000 is shown in the tables below.

This comparison reveals that neighborhoods around reopened and closed schools, on average, have similar proportions of renters, homeowners, and homeowners without a mortgage indicating that property owners have similar economic motivations, whether it is to have rental income or to recapture their housing investments.

Yet, areas where parochial schools have been rebuilt...
are generally more affluent, as measured by average family poverty rate, median household income, and median home value. However, it should be noted that the neighborhood around St. Pius X is one of the wealthiest in the city and represents an extreme outlier among these cases. If you remove the St. Pius X data from the comparison, the rebuilding rates do not change significantly, while the average family poverty rate, median household income, and median home value join the same range as their counterparts surrounding closed schools. Ironically, the neighborhoods where schools have been rebuilt would be expected to have a smaller school age population, assuming the same households returned.

While these tables do not provide an exhaustive comparison of other neighborhood characteristics that might contribute to rebuilding rates, they cast doubt on the assumption that the underlying characteristics of neighborhoods where schools have been rebuilt and closed are completely dissimilar. It seems unlikely that any of these subtle differences would completely account for the vast difference in rebuilding rates, especially at the smallest geography.

A detailed regression, including these and other variables, would help to reveal the extent to which a reopened school influences residential rebuilding. In addition to the demographic characteristics noted above, other factors that might influence the decision to rebuild around a parochial school might include neighborhood physical disorder (which may or may not mirror the physical condition or status of the school), neighborhood attachment, and religious affiliations. Neighborhood physical disorder would be relatively easy to measure through field study. Neighborhood attachment and religious affiliation data would have to be obtained through a survey of pre-Katrina residents, a particularly difficult task with the resident displacement in the post-storm environment.
Case Study: New Orleans East Parochial Schools

As part of the 2006 Pastoral Plan, the Archdiocese decided to consolidate four elementary schools in New Orleans East into one campus that would also serve children from two other parishes that did not have their own schools prior to the storm. Elementary education in the almost universally flooded eastern portion of the city went from a neighborhood to a regional scale. The 2008 Pastoral Plan recently confirmed that Resurrection of Our Lord will continue to serve elementary education needs in New Orleans East while the other schools remain closed.

Campus Selection

In the other four cases of centralized elementary schools, church officials picked a campus with minimal flood damage to serve students from schools that experienced more significant flooding. Together, these movements moved Catholic elementary education west, to centralize it in the center city and along the river where the population was expected to rebound most quickly. These relocations were expedient and pragmatic given the precarious financial position of the Archdiocese and the uncertain future of many neighborhoods.

If there was a gambit in the centralization plan, it could be found in New Orleans East. Instead of centralizing operations at the least damaged campus on the western edge of the neighborhood, St. Paul the Apostle, the Archdiocese opted for one of the devastated campuses with an appropriately symbolic name: Resurrection of Our Lord. While both campuses experienced hurricane wind damage, the map of flood depths shows that St. Paul the Apostle did not sustain any flood damage. The Resurrection of Lord campus, in contrast, experienced significant flooding comparable with the other schools it replaced.
Facility Characteristics

Finally, while it does not appear that physical design considerations played a significant role in the selection of the central campus, it is worth noting how similar the flooded campuses are in structure and orientation to their respective neighborhoods. All of the school buildings are single story, masonry structures. Immaculate Heart of Mary opened in 1954, Resurrection of Our Lord opened in 1963, and St. Simon Peter opened in 1986.

The schools and churches are embedded in predominantly residential neighborhoods. Unlike older parishes in the central city, the locations are not prominent or along primary thoroughfares. The campuses are only encountered by those with local business or residence in the surrounding neighborhood.

Ostensibly to support rebuilding efforts and serve as a catalyst for recovery, the choice made sense for other reasons. In a large area that experienced nearly universal flooding, it made sense to follow central place theory: the Resurrection of Our Lord campus is the central school campus on an east-west axis. Additionally, the Resurrection campus offered a significantly larger capacity (~350 students), and therefore a better ability to serve students from multiple campuses, than either St. Paul the Apostle (~200 students) or St. Simon Peter (~250 students). St. Paul the Apostle, although not significantly damaged, lacks the proximity to a predominantly residential neighborhood that is often critical to a successful parish. The Immaculate Heart of Mary campus had a similar capacity to the Resurrection campus, but sustained a similar level of damage and does not occupy a central location in New Orleans East.

Socioeconomic Characteristics

Finally, a quick examination of the socioeconomic characteristics reveals other potential motivations. The least damaged campus of the four, St. Paul the Apostle, is

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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resurrection of Our Lord</td>
<td>17.23</td>
<td>5564</td>
<td>22.7%</td>
<td>$39,049</td>
<td>8.0%</td>
<td>14.9%</td>
<td>85.1%</td>
<td>$79,100</td>
<td>21.1%</td>
</tr>
<tr>
<td>Immaculate Heart of Mary</td>
<td>17.2</td>
<td>4972</td>
<td>25.4%</td>
<td>$36,387</td>
<td>15.7%</td>
<td>36.2%</td>
<td>63.8%</td>
<td>$70,500</td>
<td>17.2%</td>
</tr>
<tr>
<td>St. Simon Peter</td>
<td>17.38</td>
<td>9931</td>
<td>28.9%</td>
<td>$37,120</td>
<td>22.0%</td>
<td>33.2%</td>
<td>66.8%</td>
<td>$81,400</td>
<td>6.6%</td>
</tr>
<tr>
<td>St. Paul the Apostle</td>
<td>17.33</td>
<td>1865</td>
<td>24.2%</td>
<td>$14,583</td>
<td>48.0%</td>
<td>74.6%</td>
<td>25.4%</td>
<td>$54,500</td>
<td>65.7%</td>
</tr>
</tbody>
</table>

TABLE 5.6 New Orleans East Parochial Elementary School Parishes: Selected Socioeconomic Characteristics

ANSWERING THE BELL
also located in the most economically depressed area. The Resurrection campus, on the other hand, benefits from a neighborhood with the highest median household income, rates of homeownership, and median home value, along with the lowest family poverty rate. The Archdiocese undoubtedly maintains records about weekly alms collections and parish membership and it is fair to assume that these statistics would strongly reflect these socioeconomic characteristics.

Selection Effects

Given the similar socioeconomic and physical design profiles, it is particularly interesting to look at the pace of rebuilding in the surrounding neighborhoods. Like the aggregate data, the highest rate of residential rebuilding can be found in immediate proximity to the school that has reopened, Resurrection of Our Lord. However, Immaculate Heart of Mary does not exactly follow the overall pattern of declining rebuilding rates as the analytical radius gets closer to the school and St. Simon Peter is an extreme case with lower than average rates of rebuilding. Keeping their similar socioeconomic profiles in mind, potential reasons for these discrepancies are explored below to shed light on some of the other factors influencing residential rebuilding.

<table>
<thead>
<tr>
<th></th>
<th>Status</th>
<th>Rebuilding Rate</th>
<th>School Age (2005)</th>
<th>Median Household Income</th>
<th>Families in Poverty</th>
<th>Rent</th>
<th>Own</th>
<th>Median Home Value</th>
<th>No Mortgage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resurrection of Our Lord</td>
<td>Open</td>
<td>57.90% 51.80% 67.30%</td>
<td>22.70%</td>
<td>$39,049</td>
<td>8.00%</td>
<td>14.90%</td>
<td>85.10%</td>
<td>$79,100</td>
<td>21.10%</td>
</tr>
<tr>
<td>Immaculate Heart of Mary</td>
<td>Closed</td>
<td>56.60% 39.80% 54.90%</td>
<td>25.40%</td>
<td>$36,387</td>
<td>15.70%</td>
<td>36.20%</td>
<td>63.80%</td>
<td>$70,500</td>
<td>17.20%</td>
</tr>
<tr>
<td>St. Simon Peter</td>
<td>Closed</td>
<td>39.80% 37.40% 0.00%</td>
<td>28.90%</td>
<td>$37,120</td>
<td>22.00%</td>
<td>33.20%</td>
<td>66.80%</td>
<td>$81,400</td>
<td>6.60%</td>
</tr>
</tbody>
</table>

TABLE 5.7 New Orleans East Substantially Damaged Parochial Elementary Schools
FIGURE 5.2 Resurrection of Our Lord is the only substantially flood-damaged campus the Archdiocese has rebuilt so far.
Resurrection of Our Lord

The area around Resurrection of Our Lord developed after a portion of Bayou Sauvage was filled in during the mid-1800s and eventually became Chef Menteur Highway, which now borders the neighborhood to the south. Residential development occurred primarily during the 1950s into the early 1960s.

The neighborhood enjoys relatively close proximity to pre-Katrina regional shopping and recreational opportunities, developed partly in response to the fast pace of the original residential development. The Plaza Shopping Center was recently designated as one of the city’s 17 targeted recovery zones and expects substantial commercial reinvestment going forward. Joe Brown Park, the only regional park in New Orleans East, reopened in the summer of 2007 and provides a wide range of recreational opportunities. While neither of these areas fall within the radii of analysis, they are close enough to positively influence residential redevelopment around Resurrection of Our Lord while being too far from Immaculate Heart of Mary and St. Simon Peter to exert substantial influence on their redevelopment.

There are only residential land uses in the immediate vicinity of the Resurrection of Our Lord. In addition to being open to serve the students that attended the school, a public school that did not reopen until fall 2007, Schaumburg Elementary, falls within the radii of analysis. Resurrection of Our Lord therefore provided an educational option during the 2006-2007 school year for children that previously attended Schaumburg, making it easier for their families to return.

![FIGURE 5.3 Many of the houses situated around the perimeter of the school, with a view of the campus, have been rebuilt.](image)

<table>
<thead>
<tr>
<th>School Age (2005)</th>
<th>Median Household Income</th>
<th>Families in Poverty</th>
<th>Rent Own</th>
<th>Median Home Value</th>
<th>No Mortgage</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.70%</td>
<td>$39,049</td>
<td>8.00%</td>
<td>14.90%</td>
<td>85.10%</td>
<td>$79,100</td>
</tr>
</tbody>
</table>

TABLE 5.8 Resurrection of Our Lord: Neighborhood Characteristics
FIGURE 5.4 This aerial photo shows the neighborhood surrounding Resurrection of Our Lord within a quarter mile radius.
FIGURE 5.5 This map shows permit activity associated with residential lots (greens and yellows, lightest colors) within tenth, quarter, and half mile radii drawn around Resurrection of Our Lord.
FIGURE 5.6 Neighborhood residents express their desire for the Archdiocese to rebuild Immaculate Heart of Mary through messages on the door.
Immaculate Heart of Mary

The Pines Village neighborhood was developed by Sigmund Pines in the 1950s during one of the first phases of construction in New Orleans East, closest to the central city. Similar to Resurrection of Our Lord and St. Simon Peter, Immaculate Heart of Mary is located in a predominantly residential neighborhood. However, unlike the other two neighborhoods, the neighborhood around Immaculate Heart of Mary is immediately adjacent to other land uses that may be influencing its redevelopment.

The high rates found at a half mile and tenth mile radius may be related to non-residential land uses that have returned. Commercial and industrial activity may be having a positive effect at a half mile radius from the school. Commercial activity along Chef Menteur Highway was largely unaffected by the flooding and has returned. Industrial uses along Downman Road and the Industrial Canal were impacted by the flood, but many bounced back quickly. Recreational activity may also be having a positive effect at a tenth mile radius. There is a large neighborhood park immediately adjacent to the school campus. These areas provide shopping, employment, and recreational opportunities for Pines Village residents immediately adjacent to and a short distance from the Immaculate Heart of Mary School and may be having important effects on rebuilding in the neighborhood.

<table>
<thead>
<tr>
<th></th>
<th>Status</th>
<th>Rebuilding Rate</th>
<th>School Age (2005)</th>
<th>Median Household Income</th>
<th>Families In Poverty</th>
<th>Rent</th>
<th>Own</th>
<th>Median Home Value</th>
<th>No Mortgage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immaculate Heart of Mary</td>
<td>Closed</td>
<td>56.60%</td>
<td>1/2 mi</td>
<td>1/4 mi</td>
<td>1/10 mi</td>
<td></td>
<td></td>
<td>$36,387</td>
<td>15.70%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25.40%</td>
<td>54.90%</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$36,387</td>
<td>15.70%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25.40%</td>
<td>54.90%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$70,500</td>
<td>17.20%</td>
</tr>
</tbody>
</table>

TABLE 5.8 Immaculate Heart of Mary: Neighborhood Characteristics
FIGURE 5.9 This aerial photo shows the neighborhood surrounding Immaculate Heart of Mary within a quarter mile radius.
FIGURE 5.10 This map shows permit activity associated with residential lots (greens and yellows, lightest colors) within tenth, quarter, and half mile radii drawn around Immaculate Heart of Mary.
FIGURE 5.11 St. Simon Peter has been boarded up in anticipation of a long closure.
St. Simon Peter

The area around St. Simon Peter was originally developed as fishing camps along Lake Pontchartrain, giving it a rural character. The land was drained for agricultural development in the 1920s. The rural character is still evident on the large plot of undeveloped land adjacent to St. Simon Peter church and school. Residential subdivision development began in earnest in the 1960s as part of the second major construction period in New Orleans.

Rebuilding around St. Simon Peter has lagged behind both Immaculate Heart of Mary and Resurrection of Our Lord. It is the furthest out and most isolated from other development, near the eastern edge of the city. Unlike the areas around the other two campuses, the zoning map reveals no significant commercial development or recreational areas in close proximity to the school and both these factors may be inhibiting residential redevelopment. There are no employment or shopping centers in the immediate vicinity.

The residential development surrounding the other two schools is characterized exclusively by single and two family residential structures. The residential development around St. Simon Peter is dominated by a multifamily residential complex, consisting of many units, immediately adjacent to the school that has not yet been redeveloped. Its contribution to neighborhood physical disorder and uncertain future may also affect rebuilding activity in the area.

<table>
<thead>
<tr>
<th>Status</th>
<th>Rebuilding Rate</th>
<th>School Age (2005)</th>
<th>Median Household Income</th>
<th>Families In Poverty</th>
<th>Rent</th>
<th>Own</th>
<th>Median Home Value</th>
<th>No Mortgage</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Simon Peter</td>
<td>Closed</td>
<td>39.80% 37.40% 0.00%</td>
<td>28.90%</td>
<td>$37,120 22.00%</td>
<td>33.20% 66.80%</td>
<td>$81,400 6.60%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 5.10 St. Simon Peter: Neighborhood Characteristics
FIGURE 5.14 This aerial photo shows the neighborhood surrounding St. Simon Peter within a quarter mile radius.
FIGURE 5.15 This map shows permit activity associated with residential lots (greens and yellows, lightest colors) within tenth, quarter, and half mile radii drawn around St. Simon Peter.
FIGURE 6.1 What will become of flooded public schools like Edward Hynes in Lakeview?
Given the state of current real estate, sociology, and urban design research relevant to the relationship between schools and their surrounding neighborhoods, the correlation between an open school and a high concentration of residential rebuilding efforts within a neighborhood is not surprising. The proximity and accessibility of a good quality, well-maintained parochial school with community facilities and a strong social network could be predicted to be a powerful draw.

In a post-disaster environment, people are looking for signs and symbols to help them make decisions about whether and where to return. The decisions of friends, families, and neighbors are important, but local government can help by indicating which areas are worthy of investment through investments of its own in infrastructure. Schools, given their social network component, are especially important among the infrastructure elements controlled by local government. Compared with police and fire stations, libraries, public parks, and cultural facilities, schools are the most common and visible government facilities in residential neighborhood. Only streets and sewerage water infrastructure are more common, but they are arguably less visible. Visibility is important, as Nobel prize-winning economist Thomas Schelling notes that citizens are looking for “credible commitments” from government that the city is a safe place to come back to (Gosselin 2005). The levees and hurricane protection are first on most citizens’ lists, but schools aren’t far behind. Without exception, the restoration of neighborhood schools was been mentioned as a critical piece in all of the post-Katrina community planning processes.

The restoration of the local school is important because it represents a vote of confidence in the neighborhood. For most residents, the school is at least symbolic in this way. For families with children, the school has an equally important functional value. New Orleans had a rich tradition of neighborhood-based public schools, even if it had few modern multifunctional schools with community facilities. Family allegiance to a neighborhood typically extended to the local school as well. Most families are still inclined to have their children attend school close to home (Robelen 2008). “For a lot of people in New Orleans, that’s still the default setting. People are very tied to their neighborhoods,”
observes Mickey Landry, principal of Lafayette Academy Charter School (ibid).

This presents a challenge in the new predominantly charter public school system that knows no neighborhood boundaries. Any child anywhere in the city may attend any school he is admitted to. No spaces are reserved for students in close proximity who might walk or bike to school. Instead, pupils are bused all over the city to their schools of choice. Of course, none of the schools opened so far are in close proximity to children that have returned to substantially flood damaged neighborhoods. In these areas, it seems especially important to return to the neighborhood school model. If these facilities don’t serve the needs of neighborhood residents and their children, there will be less incentive to cluster development around them.

### Clustering

The data indicates that residential rebuilding activity is clustering around Catholic schools where they have reopened. Catholic schools enjoyed several distinct advantages over public schools pre-Katrina. The system offered better academic performance, but more importantly the social network and capital embodied in the church parish. A tight social fabric made repair of the physical fabric possible and practical. Parochial schools came closest to the idea of community schools advanced in current urban design as they were generally paired with churches and other multifunctional parish facilities. The programmatic and physical overhaul of public schools in post-Katrina New Orleans, however, holds the promise of improvement in all these areas.

The future of schools in Orleans Parish has been pondered by experts and residents in the context of numerous planning processes and it is safe to say that the long term vision is quite different from the reality that has emerged from Katrina’s exigency. The first effort came from a panel of experts assembled by the Urban Land Institute in November 2005. The panel, in its advice to the Mayor’s Bring New Orleans Back Commission, focused on land use and said little about the future of school facilities, although it tacitly endorsed the community school concept.
Building on the panel’s efforts, the Bring New Orleans Back Commission designed a neighborhood center to serve as a model for rebuilding communities. The model advocates for two small elementary schools at sub-centers, within a comfortable walking distance for all children, as part of its guidelines for a sustainable neighborhood for eleven thousand people.

In contrast to the first two efforts, the Danzey-Lambert plan made the gathering of community input central to its planning process for flooded neighborhoods. With few exceptions, individual neighborhoods prioritized restoration of their local schools, second only to the reopening of supermarkets and pharmacies (22). In a survey ranking fears about returning, 27 percent of residents cited access to schools – a higher rate than those concerned about jobs (Lee 2006, 2).

Finally, the Unified New Orleans Plan asked residents from all over the city how to approach rebuilding infrastructure. When it came to schools, Community Congress participants expressed support for reconstruction based on neighborhood repopulation and recovery rates and endorsed the community school (multifunctional community centers) model (15). The plan advocates for the establishment of community centers on school campuses. Schools should first be rebuilt in low risk areas, then in moderate risk areas, and finally buildings in high risk areas should be relocated (100).

Clustered development around schools should be encouraged and carefully considered in the planning of public school facilities because of the advantages it offers to both the city and its residents. Since the storm, the city has enjoyed steadily increased tax receipts, thanks to a long overdue property tax reassessment and sales tax proceeds from durable good replacement and reconstruction activity. Along with post-storm staff cuts, the city has been able to continue providing services residents expect like twice weekly trash collection and emergency response at similar levels, albeit at a much higher cost per capita. City officials acknowledge that the practice is inefficient and unsustainable, but have offered no solution or preview of what is to come. It is clear that the city will ultimately be incapable of provide these services at such low densities across the entire pre-Katrina footprint. Once tax receipts decline to a normal, stable level, difficult decisions will have to be made.

Policymakers have been looking for ways to cluster development and create pockets of density, examining property buyouts and land swap opportunities. Perhaps master planning for the New Orleans Public School system could provide part of the desired solution. Rather than simply trying to respond to demand, facility decisions should be made with an eye towards the future layout of the city and recognition that residential development may cluster.
next to improved public schools. Yet, there is no institutional framework for planning land use and school facilities together and no requirement for the individual entities involved to consult (Vincent 2006, 434). In order for new schools to be developed as the center of residential neighborhoods, school facility planners must work with city planners to achieve the goal of new facilities that act as true, multifunctional community centers open to all neighborhood residents. Schools, as the one of the few types of infrastructure with a social network component, can help repair both the physical and social fabric.

Like the parochial school system, the public school system will not be able to rebuild or restore all its facilities in the near future. While insufficient funds are partly to blame, local officials also recognize that there may never be sufficient demand to warrant reopening schools in some neighborhoods. The Archdiocese strategy of centralizing elementary schools might be relevant to the public school system. A similar thought process about which facilities can be brought up to speed most quickly, along with actual and projected neighborhood recovery should govern the public school facilities planning process. From the city’s perspective, a strong argument can be made for centralizing facility investments closest to the least vulnerable areas in the center of the city.

The bottom line is that government can and should incentivize residential rebuilding in selected areas through infrastructure investments, in order to achieve its goal of clustered development. Even those in favor of a free market approach to rebuilding acknowledge that the market needs information to function properly. Local government has misled some residents by announcing that recovery projects will follow private investment – there simply isn’t enough money to go around. The hard decisions about which neighborhoods will receive investment have only been postponed. School investments could send a clear signal about which neighborhoods the city believes can and should be resettled. Strong public schools will help to concentrate residential development, enhance property values and thereby increase property tax revenues, making the efficient delivery of city services to clusters financially possible.
Directions for Future Research

Although the GIS analysis used in this study suggests a connection between neighborhood schools and residential rebuilding, further research is needed to determine the strength of the correlation and extent of a school’s influence. There are a lot of unknowns in emerging research about rebuilding in New Orleans. How does one measure who has returned? What factors are involved in making individual decisions to return? What is the role of community institutions and municipal government? What finally prompts a decision to be made? How can we create a framework for understanding the rebuilding process?

Ideally, a study of schools would be able to control for these unknowns and answer all these questions. As it is, it is exceedingly difficult to definitively determine the wide range of factors and the relative importance of each in individual rebuilding decisions. A survey format might be the best way to assess the influence of a neighborhood school until some of these questions can be answered. Leading questions might include a list of known factors in the rebuilding decision and ask respondents to rank them in order of importance. Alternatively, an open-ended survey or interview format might ask residents what factors influenced their decision to rebuild or not, to gauge the importance of a local school without suggesting it. However, it would be difficult to successfully survey a statistically valid sample of neighborhood residents. While it would be relatively easy to reach residents that have returned, it would likely be difficult to locate residents that are still displaced to learn their motivations for staying put elsewhere and what factors might have led them to return to their home in New Orleans.

The method employed in this analysis might be utilized again after public school decisions are made. It would be interesting to see, for instance, if there is a spike in building permit activity once the futures of flooded public school campuses are announced. A comparison of building permit activity six months prior to the announcement and six months after might be telling. If there is an increase in building permit activity, that would signal that the significant portion of the market has been waiting for information, even if it does not yield a higher rate of rebuilding around schools that are scheduled to reopen.

The city is just now getting to the point, approaching three years after the post-Katrina flooding, where most final decisions have been made and meaningful research about rates of rebuilding and return can be conducted. Schools appear to be an important part of the equation that merits further inquiry.
Conclusion

Approaching three years after post-Katrina levee failures flooded New Orleans, the recovery is moving along. The free market approach to rebuilding has led to uneven redevelopment across the city with scattered pockets of density. Billions of dollars in private insurance proceeds are still waiting on the sidelines as homeowners try to make final decisions about whether and where to rebuild there homes. Local government, meanwhile, hopes that future development is clustered in order to provide city services more efficiently, but has taken no action to further this goal. For New Orleanians looking for “credible commitments” from government before they decide to rebuild, there is no more omnipresent symbol than the neighborhood school. A unique type of infrastructure with both physical and social dimensions, rebuilding schools can contribute to the restoration of the multiple networks needed for a successful recovery.

Although this analysis does not support the hypothesis that there would be higher overall rates of rebuilding in neighborhoods around schools that have reopened than those around schools that remain closed, it suggests that the location of rebuilding activity may be affected by school status. All the neighborhoods studied are being rebuilt to similar degrees, but there is increasing rebuilding activity, as measured through the issuance of residential building permits, with decreasing distance to a school that has reopened. The exact opposite relationship exists with schools that have not and are not scheduled to reopen.

Of course, there are many other factors in individual property owners’ decisions to rebuild, leaving some uncertainty about the extent to which schools may be influencing rebuilding patterns. As the public schools belatedly embark upon their own long term rebuilding strategy, they should consider the urban design implications for the future of New Orleans. If city government is serious about clustering development in substantially flooded neighborhoods, the public school system should pick and choose the campuses it intends to rebuild carefully. Existing market demand for public education should only be one consideration as the reopening of schools seems likely to spur development in their surrounding neighborhoods.

Given the uncertainty about the catalytic effect of a school in and of itself, and the experience of Archdiocese schools with a stronger social network, new and rebuilt public schools should designed as multifunctional centerpieces of the community that serve all neighborhood residents, not just families with children. The reconstruction of schools presents an excellent opportunity to reintroduce social and physical and mental health services to communities. Community schools may also function as community
centers through the provision of other public facilities, like libraries, and recreational opportunities. Schools are at least partially responsible for driving redevelopment in some residential neighborhoods and present an opportunity to create neighborhood centers that are even more capable of guiding future rebuilding activity in New Orleans.
A phone call with Larry Vale placed from a Super Wal-Mart parking lot in Chattanooga, Tennessee in early September 2005 ultimately led me to the Department of Urban Studies and Planning here at MIT to advance and reflect on the recovery of New Orleans. I am grateful for all the opportunities I have had to do just that over the past two years, thanks to the tireless efforts of faculty like Larry, Karl Seidman, and J. Phillip Thompson.

Not long after that first advisory session, I was cleaning out my family home in Lakeview, contemplating its future along with that of the neighborhood. A few people had come back to survey their property, but most left immediately. Some roads were still impassable and basic utilities had not yet been restored. Yet, a little over a mile away, generators were humming and contractors were working to reopen Mount Carmel Academy, a Catholic high school for girls. It was truly amazing and inspiring and that is where this story began.

In the production of this thesis, I would like to thank J. Mark Schuster for his interest in this topic and encouragement throughout the preparation of the proposal. Larry and Karl provided valuable freedom, insight, advice, and understanding along the way and helped me always see both the forest and the trees. Jeffrey Schwartz has worked alongside me the whole way; he made green tea, listened to Bruce, and routinely stayed up later than I did.

--Seth Knudsen, May 2008
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