

Social Capital and Disaster Resilience in the Ninth Ward

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Roberts, P.S., 2018. Social Capital and Disaster Resilience in the Ninth Ward. *Oñati Socio-legal Series* [online], 9(3), 400-422. Received 28 December 2017, Accepted 3 September 2018. Available from: <https://doi.org/10.35295/osls.iisl/0000-0000-0000-1065>



Abstract

The conventional wisdom in disaster management is that communities exhibiting social capital are more likely to bounce back after disaster. This paper examines the link between social capital and resilience to disasters and climate change through an examination of New Orleans' Lower Ninth Ward neighborhood before and after Hurricane Katrina. Using archives and interviews to examine the neighborhood's recovery, the paper finds evidence for the existence of social capital and the properties of community resilience in the Lower Ninth Ward before the storm. Social capital and resilience proved to be fragile because the neighborhood was particularly vulnerable and lacked political power. Attempts to use social capital and community resilience alone as part of a strategy to combat climate change should take into account older notions of vulnerability and political power as important ingredients in community well-being.

Key words

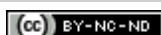
Social capital; disasters; climate change; New Orleans; recovery; social equity

Resumen

Este artículo analiza la relación entre capital social y resiliencia ante los desastres y ante el cambio climático a través de una observación del barrio de Lower Ninth Ward de Nueva Orleans antes y después del huracán Katrina. Utilizando archivos y entrevistas para examinar la recuperación de esa área, el artículo encuentra pruebas de que ya antes del huracán había capital social y las cualidades propias de la resiliencia comunitaria en el Lower Ninth Ward. El capital social y la resiliencia resultaron ser frágiles porque el barrio era especialmente vulnerable y carecía de poder político. Los intentos de utilizar el capital social y la resiliencia comunitaria como parte de la estrategia para combatir el cambio climático deberían fijarse en nociones más antiguas de vulnerabilidad y de poder político como ingredientes importantes para el bienestar comunitario.

The author wishes to thank the organizers of the *Regulating Climate Change: Governance and Legal Mobilization* workshop as well as the participants and peer reviewers for providing helpful feedback on earlier drafts.

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Palabras clave

Capital social; desastres; cambio climático; Nueva Orleans; recuperación; igualdad social

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1. Introduction

The devastation of Hurricane Katrina made the longstanding vulnerability the Gulf Coast visible. Large populations in low-lying areas are vulnerable to storm surges, rain, wind, and the creeping effects of climate change. The existence of large, urban areas along major bodies of water raises the question of when, not if, the next big disaster will occur. Once people acknowledge the inevitability that their community will be hit by a natural disaster, acknowledging the need to plan for recovery rather than prevention alone becomes essential.

Some scientists are optimistic that technical and organizational strategies will improve recovery. Timothy Dixon (2017, 23) writes that “one hundred years in the future, it is likely that damage from earthquakes and hurricanes will be much less common”. One popular idea is that disaster recovery will be more effective if it has more money. Frederick Weill’s research on recovery in New Orleans after Hurricane Katrina complicates that simple hypothesis. He finds that neighborhoods where recovery spending was highest remain among the most damaged and slowest to recover because they had the most severe problems to begin with (Weil 2010). The storm made the problems of decaying infrastructure, crime, and blight more visible, but hurricane recovery spending alone could not cure them (Galafaro 2013).

If greater spending alone is insufficient to make recovery effective, what else can be done? The literature on extending the timeline of a disaster offers two additional possibilities: social capital and political power. Some people understand disasters as brief events that punctuate a period of normal activity. However, a growing literature views disasters through the lens of their underlying causes, which reaches back years if not decades before the event. The new lens also looks at the long term consequences of disasters, which extend into the future, long past when FEMA relief operations and the Red Cross depart. Social capital and political power are deeply embedded into communities, and can help explain why some communities bounce back more quickly and fare better over the long term.

Some communities bounce back quickly, and some do not come back at all. In 1886, Texas’ second largest port, the thriving city of Indianola, was destroyed by a hurricane and became a ghost town. Most of the 15 by 5 grid pattern of the original town now sits underwater (Emanuel 2005). Roughly 150 miles away, the state’s largest port, Galveston, was struck by a hurricane in 1900. The storm killed 6,000 people and still ranks as one of the United States’ deadliest hurricanes. The town was rebuilt soon after, and the new Galveston was protected by a 3.3 mile seawall that later grew to 10 miles long (Austin 1905). Galveston’s wealth and size and the importance of its port meant that the county could rebuild key infrastructure and float bonds to pay for the seawall.

In recent years, scholars have looked beyond a community’s wealth and size to explain differences in recovery and identified social capital as an important property of community resilience (Dynes 2005, Aldrich 2012). When communities exhibit social ties and community members can rely on one another, the community is more likely to bounce back after disaster – or so the theory goes. This paper examines the link between social capital and resilience to disasters and climate change through an examination of New Orleans’ Lower Ninth Ward neighborhood before and after Hurricane Katrina. The Lower Ninth Ward has experienced only mixed success in recovery. Did it lack social capital? This paper uses archives and interviews to examine the neighborhood’s recovery and finds evidence for the existence of social capital and the properties of community resilience in the Lower Ninth Ward *before* Hurricane Katrina. This social capital and resilience proved to be so very fragile because the neighborhood was particularly vulnerable and, in essence, lacked political power. Attempts to use social capital and community resilience as part of a strategy to combat climate change should also take into account older notions of vulnerability and political power as powerful ingredients in community well-being. In addition to standard measures of social capital in neighborhoods ties, a social capital

that is politically engaged should include measures of civic skills such as speaking, writing, and organizing ability, as well as measures of representation on planning commissions and access to politicians. Without a politically engaged social capital, the concept of overall resilience risks being rendered inert.

2. Theories of Social Capital. What is Social Capital? How does it operate and how is it measured?

In recent years, scholars have proposed that social capital is essential to disaster recovery and resilience (Dynes 2005, Aldrich 2012). The literature on social capital grew out of work by Bourdieu, Coleman, and Putnam to span multiple methods and disciplines in the social sciences. At its core, social capital refers to the resources embedded in social networks (Adler and Kwon 2002, 17, Lin 2008, 51). These resources are capital in that they possess some metaphorical liquidity: social ties, financial resources, and civic skills can be expended for other purposes, such as disaster recovery.

Some scholars conceptualize social capital as ties, but others focus on human capital resources such as abilities, motivation, or skills (Adler and Kwon 2002). Some argue that social ties are dependent on human capital and networks of mutual expectation which lead to academic achievement, for example (Coleman 1988, S110). Others find that social capital can lead to success even without a corresponding degree of human capital, as in the case of some immigrant communities (Lin 1999).

Focusing on the role of social capital in disaster recovery and resilience has moved attention away from ecological vulnerability and a lack of material resources toward the networks of mutual assistance and resource activation that help a community to bounce back (Nakagawa and Shaw 2004, Dynes 2005). The quick recovery of the low-income but high social capital Vietnamese community in Village de l'Est shows the importance of social resources above and beyond material ones (Storr and Chamlee-Wright 2010). In an analysis spanning disasters in India, Japan, and New Orleans, Aldrich (2012, vii) finds that social resources are as much a foundation for resilience and recovery as material ones. He shows that neighborhoods with higher levels of social capital were better able to use resources to meet goals. Individuals used their networks that reached beyond their neighborhoods to share knowledge and strategies to cope with disaster. Aldrich found that high levels of social capital were the "core engine of recovery" more than factors such as socioeconomic conditions, density, severity of damage, or amount of aid.

His analysis focused on bridging social capital, which links groups to other groups or outside members, often spanning geographic, ethnic, racial, and class boundaries (Gittel and Vidal 1998). Bridging is typically contrasted with bonding, which strengthens within group ties (Putnam 2000, 22–24). Putnam (2000, 23) explains the difference with a metaphor: "Bonding social capital constitutes a kind of sociological superglue, whereas bridging social capital provides a sociological WD-40." Kai Erikson's (1976) seminal study of the 1972 Buffalo Creek, West Virginia flood offered ethnographic evidence of neighbors looking out for neighbors, a reciprocity characteristic of bonding social capital.

Some scholars prefer the Goldilocks approach, splitting the difference between bonding and bridging, or combining them. Elliot, Haney, and Sams-Abidoun (2010, 629) found that "the most useful form of social capital during disaster and displacement may be bonding ties that bridge space". If strong "in-group reciprocity" could also contain ties that bridge economic inequalities and spatial distance, then a community would be better prepared to bounce back from disaster. In the case of Village de l'Est, the Vietnamese community exhibited strong in-group ties within the neighborhood, and they were connected to other Vietnamese communities in Houston and Baton Rouge, which provided material and emotional support after disaster. The community was not highly integrated into other parts of New Orleans' business or political structure, however.

Whether bridging or bonding, social capital depends on material, social, and knowledge resources that can be used for new purposes, in this case disaster recovery and resilience (Storr and Chamlee-Wright 2010, 21–22, Aldrich 2012, 33). Some theories of social capital emphasize the collective resources of individuals, such as per capita wealth or education levels, while others focus on collective resources, such as public space and services. In his study of recovery from Katrina, Frederick Weil (2010) offers a theory of recovery that combines individual and collective level resources. He maps his theory on a 2 by 2 grid that predicts that the highest level of recovery in New Orleans would be seen in areas with high individual and collective resources, such as the Jewish community. The lowest level would be in areas without many individual or collective resources, such as the Renaissance Village trailer park or the 9th Ward. Verba, Nie, and Kim (1979) find that collective resources or civic skills compensate for individual level ones in the political domain, but this thesis has yet to be tested in disaster recovery.

Most studies of social capital find that it operates through feelings of trust, goodwill, or mutual benefit in support of action (Putnam 1995, 67, Inglehart 1997, 188, Adler and Kwon 2002, 17, Storr and Chamlee-Wright 2010, 21–22, Aldrich 2012, 33). Some studies attempt to measure trust through surveys or interviews, while others use proxy variables or focus on effects (Portes and Sensenbrenner 1993, Sandefur and Laumann 1998, Dynes 2005). Effects might be benefits such as opportunities for new immigrants in new places (Portes and Sensenbrenner 1993) or job opportunities overall (Fernandez *et al.* 2000).

While the concept has been embraced across multiple disciplines, criticism of social capital has focused on how it obscures connections to other social structures. Putnam's early work drew criticism for being too bottom up. Decisions to join a bowling league or to isolate oneself by watching television are social and not strictly individual phenomena (Levi 1996, Berman 1997). Others note the ways in which government structures rules and opportunities for social capital (Schneider *et al.* 1997, Woolcock and Narayan 2000). The architects of resilience and enhanced recovery face a tension between a focus on hierarchy and structuring collective action and a collaborative, bottom up, non-coercive approach to social capital. The debate over social capital has arrived at a point where scholars can appreciate the phenomenon of social capital while also analyzing the features of social structure in which social capital is embedded, shaped, and sometimes inhibited.

The most convenient level for analyzing social capital as a property of resilience and recovery is the neighborhood. Larger societies may exhibit average levels of trust and distinctive cultural codes and characteristics, but neighborhoods are small enough that their physical space is recognizable by everyone, and the public spaces of parks, schools, stores, and transit lines are shared in common. Neighborhood structures contain resources—the networks of trust, reciprocity, knowledge, skills, and material resources that can archive collective objectives (Lin 2002). Tenant associations channel grievances and seek redress (Conway and Hachen 2005).

One measure of neighborhood based social capital is home ownership. Roughly 1/3 of Americans' assets are in their homes (Keister and Moller 2000). Homes are a symbol of financial capital, but they are also more than that. They represent attachment to a physical place, with concomitant networks of kin and friendship (Kasarda and Janowitz 1974, Kang and Kwak 2003). Government agencies and nonprofits arrive on the scene only later, and are often overwhelmed and operate through legal and bureaucratic assistance mechanisms that take time (Sterett 2013, 2015).

Sometimes home ownership is associated with exclusionary behavior such as fences, factionalism, and private police forces (Meyer and Hyde 2004, Finegan 2013). The killing of Travon Martin by George Zimmerman, a neighborhood watch coordinator in Sanford, Florida, is one ugly example of the bad effects of exclusionary neighborhood culture. The bulk of the research, however, shows more positive effects. Homeowners

are more likely to be active in neighborhood and community voluntary organizations than renters, and long-term homeowners more active than newcomers (Cox 1982, Rossi and Weber 1996, McCabe 2013).

Voter turnout rates are another proxy for social capital (Aldrich 2012, Aldrich and Crook 2013, Manturuk *et al.* 2013). A long literature in political science examines the costs in time and attention required to vote and concludes that voting is as much expressive behavior as it is instrumental action. If people turn out to vote, they are signaling their attachment to their community. Other studies have shown that voter turnout is associated with other kinds of civic engagement (Narayan and Cassidy 2001).

Neither home ownership nor voter turnout alone are sufficient measures for the rich notion of social capital. The real estate market and conditions that drive turnout are complex, and distant from the motivations to help one's neighbors reach their potential. Home ownership and turnout are not bad measures, but they are incomplete. Some studies use in depth interviews and observations to understand the nature of trust in a neighborhood, but these studies are time consuming and make comparisons across neighborhoods challenging (Hart and Dekker 2003). No single measure captures everything that is conveyed by the concept of social capital. Even home ownership may be associated with high neighborhood bonding trust, but not with trust of strangers, government, or the police. McCabe (2013) shows that median neighborhood income, not home ownership, is the most salient predictor of neighborhood-level trust. Kwon, Heflin, and Reuf (2013) show that membership in neighborhood-level voluntary associations is associated with higher levels of trust and cooperation among renters and non-homeowners, but the effect is attenuated among homeowners. Homeownership is caught between a tension: investing in the community and its collective welfare on one hand, and protecting one's property to the exclusion of others, on the other.

When it comes to disasters, neighborhood stability is important for building the social capital necessary for resilience and recovery. Family and neighbors are the first responders to a disaster, and government and charity assistance arrive only later as a supplement (Drabek *et al.* 1975). If neighbors know one another, it stands to reason that they are more likely to help. The neighborhood's resources, whether financial or knowledge-based, are also important for mutual assistance, as well as accessing assistance from outside the neighborhood. Formal assistance networks traditionally favor homeowners rather renters or temporary networks. And residents of a neighborhood with deep ties seem like they would be more willing to overcome obstacles to stay or return after disasters. Indeed, delays in reestablishing housing often delay other aspects of recovery (Peacock *et al.* 2006).

3. The Ninth Ward – did it possess social capital before and during the storm? Compared to what?

The effects of Hurricane Katrina are still felt more than a decade after the storm passed. New Orleans is richer, whiter, and emptier than before. The Mississippi Coast has more large casinos and hotels and fewer fishing villages. When the storm was bearing down on New Orleans, none of the anguished commentary predicted that the city would spend years after the storm debating how to mend rifts between longtime residents and the new bohemian arrivals and latte bars. New Orleans has fewer residents, but they are more spread out, making the region as vulnerable now as it was before Katrina, just in different ways. Government reinvested in levees and elevated homes after the storm, but the storm's devastation emptied out some neighborhoods that never returned, and led to new developments in and around the city by new residents who had no experience with the city's past.

The Lower Ninth Ward, a historically black neighborhood east of the famous French Quarter, drew attention because it was particularly slow to recover compared to many other neighborhoods. Fewer people moved back, and fewer homes and business were

rebuilt. Why was the neighborhood so slow to bounce back, and what was it like before the storm? To get groceries many residents drive to a Wal-Mart in a neighboring county. It had no high school for a decade after the storm. Why does it remain sparsely populated, with few services? The leading edge of theory in disaster recovery identifies social capital as an important ingredient. Was the Lower Ninth Ward lacking social capital, or was it lacking a something else necessary to bounce back after a disaster?

4. The Lower Ninth Ward before the Storm

The Ninth Ward is divided between two parts, the Upper Ninth and the Lower Ninth, both east of the tourist attractions in the French Quarter, and north of the Mississippi River. The area was a cypress swamp that attracted African-Americans and immigrants from Europe in the 19th century who sought affordable housing (Greater New Orleans Community Data Center 2000). The residents grew the region's characteristic okra and caught crawfish in the bayous. Families stayed for generations, adding on to their creole cottages and shotgun houses, and passing them down from generation to generation, but often without clear titles. In 1923, the state completed dredging the Industrial Canal to the west of the Lower Ninth, separating the neighborhood from the rest of the city.

Geographically, the city itself was vulnerable, with much of it at or below sea level, and with a large poor population. Peirce Lewis called it "the inevitable city on an impossible site". The Mississippi River delta led settlers to occupy the land for trade and fishing, but it also exposed them to flood and hurricane risk. Social ills such as poverty, crime, and low educational attainment also impeded the city's resilience (Moreau 2006, BondGraham 2007, Sastry 2009). The city had the second-highest concentration of poverty of any major American metropolitan area before the storm, at 18.4 percent.

As of the 2000 census, the Lower Ninth Ward consisted of five tracts (and housed 14,000 residents), and at 2.25 square miles is four times the size of the French Quarter. Today, the population is closer to 3,000. The Upper Ninth's bounds are larger and more amorphous; it is usually referred to as an area 20 by 25 blocks on the west side of the canal.

Socially, the neighborhood was relatively poor in terms of average wealth, but it had vibrant voluntary associations and relatively high rates of homeownership and neighborhood stability. Pre-Katrina homeownership rates in the Ninth Ward ranged from 42 to 59 percent, depending on how they were calculated and excluding government housing projects (Chamlee-Wright and Storr 2009). Homeownership rates were in line with the average of Orleans Parish (46.5 percent in 2000) and greater than those in other poor neighborhoods such as the Seventh Ward (33 percent) or Central City (16 percent). The Lower Ninth Ward had the highest rates of black home ownership in the city. By some measures, social capital in the neighborhood was higher than average. Elliot, Haney, and Sams-Abidoun (2010, 631) conducted a survey in which they found that respondents in the lower Ninth Ward were more likely to know their neighbors by name and had lived there longer than respondents from the wealthy, majority white (racial and ethnic categories) Lakeview neighborhood. The difference is striking because the Lower Ninth had 36 percent of its residents below the poverty line, with a median family income of \$23,000, while Lakeview had only 5 percent below the poverty line and a median family income of \$64,000.

The Lower Ninth's greater social capital, despite its relative lack of economic prosperity, can be attributed to the depth of the residents' ties to the neighborhood. Before the hurricane, two-thirds of Lower Ninth households owned their homes, and three-fourths had lived there for at least five years compared with only 57 percent of Lakeview residents surveyed during the 2000 census (Schachter *et al.* 2003)

The Lower Ninth faced high levels of social, physical, and geographical vulnerability, however. Its rates of poverty and crime were relatively high before the storm, and its rates of education relatively low (Moreau 2006, BondGraham 2007, Sastry 2009). In addition, the neighborhood was 99 percent black, and race is correlated with social vulnerability in the United States (Henkel *et al.* 2006, Herring 2006, Elliott *et al.* 2010, 630). Geographically, the Ninth Ward sits below the high ground of the city's original plan, bisected by the Industrial Canal. During 1965's Hurricane Betsy, storm waters breeched the canal's levees and flooded the neighborhood. Concrete walls replaced areas where the breach had occurred, but the event showed that the neighborhood was vulnerable to storm surges and crumbling levees. It is not the lowest ground in the parish, but a combination of social vulnerability and lack of political power left it without adequate defenses.

The most visible signs of typically nebulous social capital were the social aid and pleasure clubs that put on annual parades in the neighborhoods they represented. The exuberant revelers march in colorful suits to the tunes of brass bands and made stops at bars and restaurants. The New Orleans tradition of a "jazz funeral" in which a brass band would play tunes and march after leaving the cemetery dates from these pleasure club societies. Their revelry was only half the story, however. They also delivered groceries to shut ins, supplies to schools, and paid funeral costs for families who could not afford them. Sociologist Frederick Weil called them "inner-city relief societies," and found that members of social aid clubs were "more civically active, service oriented, and trusting than even the rich or well educated" (Weil 2010, Robertson and Reckdahl 2013). He measured social capital through averages of questions about whether most people could be trusted, membership in a neighborhood association, and engagement in service activities. The associations date from benevolent societies created in African-American communities as a way to provide social services and solidarity in response to racial discrimination.

The long-lasting social ties and distinctive culture created a sense of place among the Ninth Ward's residents. Anthropologists and geographers study why certain places hold special meaning. People may develop an attachment to the physical and built environments where they live through sensory contact and familiarity over time (Tuan 1990). The novel term *solastalgia* describes a specific form of melancholia that results when people experience a lack of solace and desolation when a place to which they've grown attached is under attack and threatened with annihilation (Albrecht 2006, Albrecht *et al.* 2007). The psychic pain that results from solastalgia occurs over and above the material damage.

Some research shows that a disaster can lead to a decline of sense of place because the place's former functions become closed off. For others, however, a disaster can ignite a sense of place because it focuses attention on what is lost and what is important (Milligan 1998). Before the storm, the Ninth Ward was known for its tight communities, distinctive ramshackle houses passed down from generation to generation, and colorful, tight-knit pleasure clubs and social aid groups. It was the opposite of Gertrude Stein's description of placelessness – "there is no *there there*". The Ninth Ward did not look or feel like other neighborhoods.

Perhaps the existence of a sense of place is only proven by the people who remain or return after disaster, despite the odds. Without being asked directly, 84 percent of the Ninth Ward residents interviewed by Chamlee-Wright and Storr (2009) said that the distinctive characteristics of New Orleans was a reason why they returned after Katrina. One committed resident, Laura Pine, runs a nonprofit (lowernine.org) dedicated to helping former residents return. Her organization has rebuilt 84 homes as of 2017.

After the storm, one woman told Chamlee-Wright and Storr that:

[T]he Lower Ninth Ward was a very family-oriented place. We had our problems because it was part of the urban setting. But this was the more 'country part' (...) of

New Orleans. We have the highest rate of home ownership in the entire city (...). So even though these were modest homes, most of them owned their homes outright. For instance, I could tell you [about] my mother, she's 84 years old. She owned her own home. And many of my peers, their parents owned their own homes outright. So this area had (...) we had a lot of general interest (...) and concern about our neighborhood. We didn't have the problem [that] some people had in other areas of the city where PTA meetings, there was nobody there. We only had standing room always when we had PTA meetings. Because people were concerned about their children and there was always parental involvement. They never had problems about getting parent chaperones and that kind of thing. So we had a community that basically worked together.

Interviewee after interviewee tells Chamlee-Wright and Storr a similar story: the distinctive cultural characteristics, long history of the residents, and geographic distance from the rest of New Orleans give the residents of the Ninth Ward a particular affection for their neighborhood. The Lower Ninth Ward was subject to geographic risks, along the Industrial Canal and Mississippi river, and subject to a history of racial discrimination (Colten 2006). Nevertheless, the neighborhood's residents developed their own traditions of mutual aid to build "networks, institutions, and events that provide opportunities for public recognition and esteem" that "exceeded the level of mutual aid and public-spirited activity in wealthier neighborhoods" (Breunlin and Regis 2006, 746, Rodríguez *et al.* 2006).

5. The Ninth Ward's lagged recovery – What Happened and What Explains It?

A decade after the storm, more than half of the city's neighborhoods have recovered 90 percent or more of pre-storm population – but not the Lower Ninth Ward (Allen 2015). As of 2015, it had only 37 percent of its pre-storm population, or 5,560 people (Allen 2015). Where did everyone go? Seven hundred home owners took a buyout and turned their property over to the state through a program designed to compensate victims and mitigate future losses (Allen 2015). Others could not afford to rebuild, and in still other cases, renters were not compensated for their losses and found no suitable housing stock to return to in the neighborhood. Some moved to other neighborhoods in New Orleans, but many more sought new opportunities in Houston, Baton Rouge, and elsewhere. Studies have tried to determine whether these migrants' lives are better in the new location. Many people report that they are pleased with new opportunities, but that their new home doesn't feel the same as the Ninth Ward. Obstacles stand in the way of the "road home," to use the name of a Louisiana state program to support recovery (Chamlee-Wright and Storr 2009, Weber and Peek 2012). The longer one stays in a new city and works at a new job or enrolls children in a new school, or make new friend networks, the harder it is to return to an old neighborhood that no longer looks the same as the one they left.

Beyond the numbers, the landscape looks bleak. Vacant lots outnumber occupied ones, and tall weeds and grasses grow kudzu-like among weathered debris. Dogs that were abandoned at some point during or after the storm roam free. In informal conversations in the French Quarter, I learned that people from other neighborhoods take unwanted dogs and cats to the neighborhood and leave them. Piles of tires likely find their way to the neighborhood in the same way. One clickbait headline from 2016 says the neighborhood "resembles a zombie apocalypse" (Lohr 2016). Demand for hurricane tours continues, though prices have risen.¹ The tours of the devastated Lower Ninth Ward began soon after the storm for \$35. One advertisement promises "We'll drive past an actual levee that 'breached' and see the resulting devastation that displaced hundreds of thousands of U.S. residents." (Insurance Journal 2005). The crass ad shone a light on the condition of the neighborhood. It has no supermarket, hospital, or police station, and only in 2014 did it get a new \$4.3 million

¹ <https://www.tripshock.com/New-Orleans-Hurricane-Katrina-Tour/details/246/from-Apr-27-2016/page-num-1/star-filter-5/to-Apr-27-2016/>

fire station. A 237-unit townhome development known as Press Park and the neighboring Gordon Plaza subdivision are built on a Superfund site, a dump that closed in 1981. FEMA called an abandoned elementary school and housing project on the site a “haven for crime, vagrancy, and vermin that could potentially spread diseases” (FEMA 2013).

Other areas gentrified with coffee bars, new, young residents, more white residents, and new housing developments, but not the Lower Ninth. After Katrina, the neighborhood remains 95 percent black and relatively poor (Nonprofit Knowledge Works 2018). The neighborhood’s vacancy rate was 13.9 percent in 2000, but 48 percent in 2010 – and that’s not counting the homes that are no longer standing. Orleans Parish, meanwhile, had a similar vacancy rate in 2000 but was nearly half the Ninth Ward’s rate in 2010. The Lower Ninth had a higher number of people who owned their homes free and clear before the storm than Orleans Parish or the U.S. as a whole, but also a higher percentage of owners and renters spending more than the recommended 30 percent of income on housing than Orleans Parish or national averages.

The residents were relatively poor before the storm, and the ones who were left after remained poorer, on average, than New Orleans as a whole or the United States. The general rule holds measured by the percentage of people living in poverty, or the percentage of income from social security and public assistance. Much of the literature on social vulnerability to disasters reflects the influence of socioeconomic status, which is closely correlated with race, as Daniel Aldrich (2012, 45) points out.

The Lower Ninth Ward’s lack of access to cars and material resources impeded its recovery, and its physical vulnerability led to severe damage. Yet other poor, majority black, and hard hit areas recovered faster or gentrified. The historic Tremé neighborhood is now thriving with residents, businesses, and a museum. The relatively poor Vietnamese enclave of Village de l’Est was flooded as badly as the Ninth Ward, but it quickly returned to its pre-storm population and vibrancy (VanLandingham 2017). Rather than social vulnerability, alone, the early uncertainty about whether the Ninth Ward would be rebuilt led to migration and a lack of investment whose cumulative effects hollowed out the neighborhood. Timing and sequence matter for recovery. The seemingly quixotic project by actor Brad Pitt to rebuild the neighborhood appears to have eliminated the possibility that the Ninth Ward would return to wetlands and have begun a slow but now inevitable process of rebuilding and public investment.

6. The Footprint Debate

After the storm, the Ninth Ward was so heavily damaged and regarded by some as so vulnerable, that some experts questioned whether it should continue to be inhabited. What Richard Campanella (2017, 346) called the “footprint debate” shifted expectations and delayed recovery. The debate began when the Bring New Orleans Back Commission, created shortly after the storm by Mayor Ray Nagin, concluded that some neighborhoods that were devastated by the storm and remained vulnerable should be turned into green space and parks (Campanella 2008, Chamlee-Wright and Storr 2009). The areas slated for green space were covered by green dots, and the plan came to be known as the “green dot map.” A dot covered the Lower Ninth Ward, and the message was clear – it was not a priority for recovery. Most residents were not allowed to return for three months or more, so their homes festered in the heat.

A series of recommendations by outside expert panels and local dignitaries wrote off the Ninth Ward’s return. One of the city’s biggest developers and a member of the rebuilding commission, Joseph Caniza, said: “As a practical matter, these poor folks don’t have the resources to go back to our city just like they didn’t have the resources to get out of our city. So we won’t get all those folks back. That’s just a fact. It’s not what I want, it’s just a fact.” Housing and Urban Development Secretary Alphonso

Jackson expressed the sentiment of many at the time when he said that: "Whether we like it or not, New Orleans is not going to be 500,000 people for a long time (...). New Orleans is not going to be as black as it was for a long time, if ever again." (Associated Press 2005).

The green dot map and public comments writing off some neighborhoods galvanized neighborhood activists. Reggie Lawson, who joined the Faubourg St. Roch Improvement Association after the storm, said the map was his "reason for coming home immediately" (Krupa 2010). He accelerated his renovation schedule because he thought that a renovated property would be more difficult for the city to buy back. "For me, there was no fair price because this was my home, and I had no intention of moving, nor could I fathom a reason why I should move."

In the end, Mayor Ray Nagin backed away from the recommendations to shrink the city's footprint and turn flooded neighborhoods into green space. In place of a plan, he took an ad hoc approach that combined the elements of many plans and resisted making firm decisions about the city's shape and future. The initial map wasn't a roadblock, but it may have deterred some people from setting off on the road to return. Vera Triplett of the Gentilly neighborhood said that, "Some elderly people were just not up for the battle. I think seeing that map made some people think, 'I'm not fighting that fight'" (Krupa 2010). Other residents accused the city of using the maps to guide investments in infrastructure, pointing to the delays in rebuilding the 5th district police station in St. Roch and the Andrew "Pete" Sanchez Multi-Service Center in the Lower 9th Ward. While police station and community center sat vacant for years, a new station was built in 2012 and a new community center built in 2015.

The green dot plan went out with a whimper, not a bang. The maps hung in some offices for years, but they may have remained out of neglect or spite. The city did build some parks after a buyout process, and some building permits were held up (Krupa 2010). Today there is no evidence that the map and its buyout and permitting obstacles stood in the way of development, however. Only in lower Ninth Ward and eastern New Orleans did the green dots accurately predict slow recovery and redevelopment pockmarked with vacant lots. In most other areas, rebuilding proceeded apace – against the advice of planners who wanted to use the map as a tool to relocate building to higher ground.

The Ninth Ward remains sparsely developed, but those people who returned quickly to redevelop were exceptional. Other neighborhoods drew more private and nonprofit investment and bounced back more quickly. Providence Community Housing, a Catholic non-profit, focused its efforts on rebuilding in the Tremé neighborhood. Tremé was a relatedly poor, majority black neighborhood that suffered slightly less damage than the Ninth Ward but drew far more recovery attention. Providence Community built more than 500 homes there after the storm, and the neighborhood's occupancy rate steadily rose above 70 percent while the Ninth Ward languished below 30 percent a decade after the storm (PBS 2013). Tremé was never slated for erasure, but the Ninth Ward's uncertain future delayed outside investment.

7. The Wrong Kind of Social Capital?

Advocates of social capital might say that the Lower Ninth Ward lacked the right kind of social capital. The neighborhood scored high on bonding social capital measures of home ownership, neighborhood tenure, and association membership, activities that strengthened the glue within the neighborhood. It scored lower on measures that would allow it to access resources outside of the neighborhood, such as education levels, or civic skills. Other poor neighborhoods bounced back more quickly. The Ward had a high number of English speakers, unlike in immigrant neighborhoods, a skill important for navigating post disaster assistance networks. The trust and reciprocity that make up social capital can be difficult to measure, therefore many studies use highly contextual proxies. Daniel Aldrich (2012, Aldrich and Crook 2013) judged

neighborhoods that resisted siting FEMA trailers as high in social capital. In the wake of the storm, displaced residents needed housing, and FEMA provided mobile trailers for temporary housing. These trailers were regarded as a nuisance, and neighborhoods with the capacity to organize and exercise political power were able to ban the trailers. Half of Louisiana's parishes banned trailers after Katrina and approximately one in four FEMA or City of New Orleans proposed sites were rejected by the communities (Davis and Bali 2008, Aldrich 2012, 135). No FEMA trailers were put in the Ninth Ward, however. It was not clear whether the neighborhood was worth reviving, or if it would instead revert to wetlands.

The residents of the Lower Ninth returned much later to their homes and property than the residents of other neighborhoods. Elliot, Haney, and Sams-Abidoun (2010, 641) found that the average Lower Ninth resident did not return to New Orleans until 177 days after the storm – even to visit – compared with 67 days for the average residents of the middle-class, white Lakeview neighborhood. Only 14 percent of those surveyed returned to live in their pre-Katrina housing. The neighborhood was devastated by the hurricane, not well served by the city, and suffered from waste from the former dump turned Superfund site. Elliot and colleagues' (2010) comparison of the Ninth Ward with Lakeview also finds that the latter's residents were more dispersed and more out of touch with each other in the years after the storm, having been scattered and unable to return to the city because they lacked the financial means, and because there was not much waiting for them if they did. The Lakeview Civic Improvement Group held regular meetings during the recovery, but when asked about the Ninth Ward's analogous group, a resident said: "What meetings? I didn't know about any meetings," or "Meetings? Who's around to meet with? This place is ghost town," (Elliott *et al.* 2010, 643).

8. A Flag in the Ground

The expectation that the Ninth Ward might not come back was set by political forces, not social capital. A green dot map and comments by politicians might not have mattered for the historic French Quarter or the wealthy garden district. Consider that tony Miami Beach is thriving despite the fact that it is vulnerable to storms and climate change and probably should be free of human settlement. Public expectations matter for a fragile place such as the Ninth Ward. If investors and non-profits believe that a neighborhood would not be serviced by the city, they are less likely to focus their rebuilding efforts there, or invest in a convenience store, or consider it as part of the city's reorganized school district. Without homes, stores, or schools, residents face high costs to moving back.

Some outside groups recognized that the neighborhood had a distinctive sense of place and was worth preserving. One of the earliest interventions came from actor Brad Pitt's Make It Right Foundation. The Foundation invited star architects including Frank Gehry to design new homes that drew attention for their striking designs as well as for their celebrity backing. The Foundation built approximately 100 colorful houses with solar panels and flood resistant features for families who would not have been able to afford to build a home on their own (Whoriskey 2015). The Foundation did not donate the homes outright; it deliberately provided homeowners with a manageable mortgage, at an average cost of \$150,000 each (MacCash 2017). The limits on the size of the mortgage meant that costs had to be kept down, and many of the flourishes sketched by celebrity architects were removed or limited to the prototypes (Whoriskey 2015). Still, the residents who were able to buy the homes appeared pleased. "Baby, this was the worst disaster to have, and they did nothing," 72-year-old Gloria Guy told *New Republic* (Depillis 2013). "The only person who came through here and worked with the people was Brad Pitt. The Prince of Wales came down here, and boy he was in the helicopter looking at us hanging on the roof, and then he took off in a jet and kept going." Unlike some celebrity foundations, the Make It Right Foundation produced results. It delivered houses that were by all accounts

well-functioning even if their prominence was too big a target for architecture critics to resist (Culvahouse 2010).

The Foundation's houses planted a flag in the Ninth Ward at a time when some critics proposed that New Orleans shrink its footprint and abandon the most vulnerable and heavily damaged neighborhoods (Perrow 2011). The media attention to the *Brad Pitt Houses* and the foundation's substantial financial resources meant that once houses were built, the city had to service them with power, sewer, police, and fire, and make road repairs. Shrinking the city and turning the lower Ninth Ward into a park or unserved area on the model of Detroit or some European shrinking cities was functionally difficult and politically impossible once the Make It Right houses were built (Schilling and Logan 2008, Ryan 2012).

Though the Ninth Ward would not be turned into wetlands, the Foundation's 100 homes did not lead to a renaissance in the neighborhood; they merely prevented the neighborhood from falling into oblivion. The neighborhood languished for a decade, but by 2017, the city had invested in the neighborhood, led by the administration of Mayor Mitch Landrieu (Rich 2012, Crockett 2016). There's a new \$19 million community center with a pool and gathering space and a new \$39.4 million high school that replaces the one destroyed by Katrina. Money has been allocated to street repairs. Businesses have followed.

9. Social Capital and Political Power

By conventional measures of social capital, the Ninth Ward was in a good position to bounce back. It had high rates of homeownership, neighborhood stability, English language ability, and a culture of reciprocity and distinct sense of place. Despite these virtues, the neighborhood was devastated by Hurricane Katrina and recovery lagged. The Ninth Ward's relatively slow recovery shows that social capital requires access to political power to translate the networks of trust and knowledge into action in recovery. In this case, political power refers to the ability to pursue community goals effectively (Parsons 1963). In some cases, goals are unclear or ambiguous, but disasters provide an opportunity to come together around a clear goal-revision to a normal or better state of operations.

The neighborhood's plight also shows that timing in sequence matter in shaping a neighborhood's fate. Immediately after the storm, blue ribbon panels created an expectation that the neighborhood might vanish; soon after, efforts by an outside celebrity foundation as well as a tourist influx drew attention to the neighborhood as an enduring part of the city. The experience of the Ninth Ward offers possibilities for interventions to strengthen communities' ability to bounce back before the next disaster.

Social Capital Must be Able to Leverage Outside Resources and Political Power. Bonding social capital is an amorphous term, but it illustrates the connections that neighbors feel for one another and is evident in the care many New Orleans residents took of their neighbors (Solnit 2010). Bridging social capital sometimes refers to feelings such a trust or reciprocity, and at other times to formal networks of aid and resource allocation. The social capital explanation for the Ninth Ward's fate is not so much wrong as it is better illuminated by also taking into account the ways in which the neighborhood was left out of networks of political power, which allowed the hurricane's devastation and the expectation that the neighborhood would become wetlands to delay recovery. Other relatively impoverished neighborhoods bounced back more quickly, but they had access to external network, such as the Vietnamese community in Houston, or to developers and private investment, such as the Tremé neighborhood. (It is another question whether gentrification can be equated with resilience and bouncing back).

Raised bar for participation in planning. The lack of access to political power raised costs for participating in city plans and redevelopment were high. After the storm

outside experts descended on the city, including everyone from celebrity architects to jazz musician Wynton Marsalis. The city's population was scattered in the wake of the storm, but wealthy developers had a greater say than residents fighting for their lives and livelihoods. Many of the wealthy developers were white, and the displaced residents black, but many African-American leaders also participated in the redevelopment of the city.

Regulations impose costs on the poor and ad hoc entrepreneurial. For those left out of official redevelopment plans and contracts, regulations inhibit neighborhood initiatives. Restrictive zoning laws raise the costs of redevelopment, and all but the most skilled and organized have the money, legal expertise, time, and civic skills to persevere. "Louisiana's conservative property laws have made it difficult to tear down blighted structures in the Upper 9th Ward as well as in other parts of New Orleans", Jeff Hebert, the city's chief resilience officer, told PBS (2013). Each damaged property requires its own process, rather than the neighborhood as a whole. "There is a [lengthy legal] process we have to go through to either demolish or put them up for sale", he said. The crumbling Press Park development in the Ninth Ward remains scheduled for demolition, but work is held up by litigation (Lohr 2016). A PBS (2013) documentary interviewed a contractor in the Ninth Ward who expressed frustration with the legal and procedural roadblocks to rebuilding:

Interviewer: Joseph, a contractor by trade, says he couldn't get a permit to rebuild until 2009, only to be told then by state inspectors that he didn't have the right paper work. He insists he did. Now he's says he's waiting for yet another inspection on his home while the newly constructed frame of the house he built is starting to rot away and supplies sit in storage.

Errol Joseph: I've got windows – vinyl windows. I don't know if they're going to be warped. I've got ceramic tile. I don't worry about that. I've got Brazilian floors. I've got paint. I've got insulation.

Interviewer: You're ready to go?

Errol Joseph: I've been ready to go. I've got all kind of plumbing fixtures, cabinets. And my frame rotted out.

Political power raises the importance of timing and sequence. The Brad Pitt homes appear to have made a difference – not for their lampooned celebrity architects or designer flourishes, but because they drew enough attention that the city and state had to pay attention to the neighborhood, and shrinking the footprint of the city to exclude the Ninth Ward became impossible. The *New York Times* observed that the Make It Right Foundation homes seem "less a part of the neighborhood than a Special Economic Zone" (Rich 2012). Their incongruous modernism drew attention and made it more difficult to erase them and their surroundings. A new mayor, Mitch Landrieu, took office in 2010 with a new agenda to reduce blight. The Ninth Ward's decay, combined with small pockets of inhabitants, fit the agenda. When Landrieu took office, New Orleans had the highest percentage of blighted properties in the country, more Detroit or rust belt cities (Rich 2012).

Political power structures determine whether aid is place-based, or not. Federal government assistance after disaster targets homeowners and individual structures, but not neighborhoods or communities. Even economic development after disaster considers a city or a region, but not a neighborhood. Federal aid cannot be said to be place-based in a meaningful way. The Make It Right Homes, for all their false starts and shortcomings, were place-based, in that they attempted to restore the neighborhood's character and function to the extent that their resources allowed. Research on other disasters suggests that while federal government aid may be good for individuals, it does not necessarily help neighborhoods recover, on average. A recent study found that residents were more likely to leave their counties after disaster after FEMA was created than before (Boustan *et al.* 2017, n.d.). Disaster assistance has been bureaucratized and has become a central part of federal government activity over time, however, most aid is individual rather than place-

based. Unemployment insurance, food stamps and housing assistance flow to individuals, not communities, and people can receive the benefits and then move to another city or even state.

10. The Limits of Social Capital

The strongest criticism of social capital is that it is a tool of neoliberalism. Social connections, homeownership, volunteer activities, uncompensated mutual aid, self-help and even voting constitute an endorsement of an economic system that leaves some communities perpetually marginalized. The same economic system also engaged in disaster capitalism. New Orleans is richer, whiter, and emptier than before the storm, but it is no longer the same city. Many of its former residents have dispersed and lead new lives in other cities. The post-disaster reorganization cast out some old institutions, such as the school board, as if it were an appendix, an organ that once served a function but is no longer needed. Without access to political power that sets agendas for redevelopment and the rules for engagement in rebuilding and return – in addition to doling out funds – social capital can prove inert.

Despite its limits, the concept of social capital has reinvigorated studies of disaster. It has drawn attention to the ways in which neighborhood resources and spirit are important sources of disaster resilience and recovery, above and beyond measures of individual well-being and citywide averages, which are insufficient to appreciate the variation in how neighborhoods change over time. When social capital is put toward democratic and place-based purposes, it can be an engine for neighborhood renewal. The concept should be considered in context as it relates to and furthers political power, a notion that contributes to work on social capital's "institutional contingency" and "appropriability" from one context to another (Adler and Kwon 2002, Lin *et al.* 2013). As social relations are increasingly managed by the state, there is less opportunity for bottom up social capital without considering the political structure (Skocpol 2003).

No single factor explains resilience. Bridging and bonding social capital, and political involvement contribute to resilience, but it's their interplay rather than the absolute level of each that shapes how well a community bounces back to disaster. The implication for research is that large-N social science studies of any one of these concepts should be supplemented by contextual analyses that take into account place, timing, and sequence extending back farther than the event, since all of these factors shape how social capital and political involvement are enacted.

Politics at its best is the search for common ground, common values, equality, prosperity, freedom, and growth. A new style of politics that incorporates the sense of place and engagement found in high social capital neighborhoods into plans for renewal can provide hope for the future. Skocpol (2003) laments the well-documented move from grassroots organizations to large membership organizations. She also identifies a less well-documented and subtler shift from explicitly political engagement by civil society, reflecting a changing conception about what civil society is. Reimagining civil society and social capital as part of the political process rather than as separate from it is one way to reinvigorate neighborhoods.

This vision is not pie in the sky. New Orleans is a place where an old-style politics collides with the new. In the old style of politics, groups press government for favors, and the horse-trading that shaped the city before and after the storm has never gone away. The old style particularist politics collided with Weberian-style ideal which is governing without regard for persons. In practice, however, administrators were often responsible to special interests and particularly developers who acted with little regard for a community's sense of place if the sense didn't promote tourism or business investment (Ford 2010). Developers in pre-storm New Orleans also rarely took into account the effects of growth and development on the city's ecological footprint and vulnerability to wind and water. An old debate categorized some neighborhoods as either public regarding or private regarding (Banfield and Wilson

1963). One can hear echoes of this distinction in contemporary political discourse. New Orleans' experience shows that the binary is too simple. Neighborhood opportunities are structured by politics and by outside interventions – such as the flag planted by the Make It Right Foundation – and that social capital is a resource that can be tapped and used or squelched and ignored.

More than a decade after the storm, a new style of politics has emerged in the city. Instead of advocating for government assistance, which resulted in neighborhoods competing with each other in a zero sum game, civic groups are increasing their organizational capacity, developing block captain leadership, building long term strategies, and growing new resources from outside the community. Frederick Weil's (2010) research has uncovered burgeoning small, nonprofit organizations that have succeeded in opening up governing process. To take one example, a Vietnamese community in eastern New Orleans protested the creation of a dump in their neighborhood, and in response, Mayor Landrieu created citizen-driven task forces to address this and other issues. Task force membership was diverse and included neighborhood-level leaders. Weil finds that the city has been effective in listening to the task force recommendations. The politics of cooperative planning and envisioning what kind of city will grow after the storm represents a hopeful model for employing bonding and bridging social capital for public rather than particularistic purposes.

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