Clark University Clark Digital Commons

International Development, Community and Environment (IDCE)

Master's Papers

5-2017

Capturing the Resilience Dividend: Post Hurricane Sandy Insights from Brooklyn's Sea Gate Community

Alexander M. Rezk Clark University, arezk@clarku.edu

Follow this and additional works at: https://commons.clarku.edu/idce_masters_papers

Part of the Environmental Studies Commons, International and Area Studies Commons, and the Urban Studies and Planning Commons

Recommended Citation

Rezk, Alexander M., "Capturing the Resilience Dividend: Post Hurricane Sandy Insights from Brooklyn's Sea Gate Community" (2017). International Development, Community and Environment (IDCE). 115. https://commons.clarku.edu/idce_masters_papers/115

This Research Paper is brought to you for free and open access by the Master's Papers at Clark Digital Commons. It has been accepted for inclusion in International Development, Community and Environment (IDCE) by an authorized administrator of Clark Digital Commons. For more information, please contact mkrikonis@clarku.edu, jodolan@clarku.edu.

Capturing the Resilience Dividend:

Post Hurricane Sandy Insights from Brooklyn's Sea Gate Community

Alexander Mitchell Rezk

May 2017

A Master's Paper

Submitted to the faculty of Clark University, Worcester,
Massachusetts, in partial fulfillment of the requirements for
the degree of Master of Arts in the department of
International Development, Community, and
Environment

And accepted on the recommendation of

Dr. Cynthia Caron, Chief Instructor

ABSTRACT

Capturing the Resilience Dividend:

Post Hurricane Sandy Insights from Brooklyn's Sea Gate Community Alexander Mitchell Rezk

This research project presents a resilience, governance, and vulnerability analysis of populations traditionally considered as non-vulnerable to natural disasters and climate related events. The paper examines how homeowners in Sea Gate, a neighborhood located on Coney Island, in Brooklyn, New York, experienced systemic disruption following Hurricane Sandy. This research sets out to answer the following questions: How does the lived experience of homeowners in a coastal community reflect the creation of newly vulnerable populations in regard to natural disasters in New York City? How is the current municipal resilience strategy being perceived as managing these shifts? And finally, what avenues does this discourse open to better prepare resilience strategists to accommodate the needs of citizens on the front lines of climate risk in a major city such as New York? Currently, resilience planning in New York City is focused on shoring up the region's economic hotspots and areas of high urban activity, but vulnerable residential coastlines throughout the city are being left to fend for themselves under these present policy initiatives. Open-ended interviews were conducted with residential homeowners in Sea Gate who were adversely affected by Hurricane Sandy, i.e. experienced economic and property loss because of storm damage, to elucidate this dichotomy. The paper argues that the current state of perceived vulnerability exceeds both the historical governmental capacity for an organized response to future natural disasters following Hurricane Sandy and the perceived priorities of the municipal administration. Thus, the paper demonstrates that resilience planning is a political process and must consider the perspectives and needs of citizens in coastal communities to ensure more equitable and representative policies are enacted to protect such households from future damage due to institutional unpreparedness.

Keywords: Resilience, Governance, Vulnerability, Coastal Flooding, Hurricanes, Post-Disaster Management, Private Communities, Climate Change, Environmental Policy.

Cynthia Caron, Ph.D. Chief Instructor

Edward Carr, Ph.D. Director and Professor

ACADEMIC HISTORY

Name:	Date:	
Alexander Mitchell Rezk	May 2017	
Baccalaureate Degree:		
Source:	Date:	
Worcester State University	May 2015	

Occupation and Academic Connection since date of baccalaureate

Degree: Full-time student, affiliation Clark University.

DEDICATION

To my father, who worked tirelessly to rebuild our home after the destruction of the Storm. To my mother, who toiled to save every last piece of what could be reclaimed. And to my grandmother, who took us in when we had nowhere else to go.

ACKNOWLEDGEMENTS

I wish to thank Professor Caron for her support of this research, and for her tireless assistance in helping guide me to the final result of what has been a years-long pursuit. I also wish to thank Professor Carr for his support, and the invaluable framing and insight his assistance provided.

Table of Contents

Coastal Resilience as a Conceptual Framework	1
Coastal Resilience Policy in New York City	3
Environmental Instability as a Challenge to Governance	5
Sea Gate: The Research Setting	7
Methods and Methodology	8
Findings and Discussion	10
Conclusions	21
Bibliography	24

Coastal Resilience as a Conceptual Framework

In the present era of hyper-awareness both to the uncertain nature of our changing climate and the recurrent nature of major natural disasters, resilience has emerged as a guiding principle within the policy sphere for those seeking to ensure future stability for atrisk regions and population centers. As Meerow et al. point out, the annual number of citations regarding "resilience" as a framing issue have skyrocketed since 2006. However, they claim that the rise in use of the term has been steadily accompanied by an equally large number of definitions. This very malleability could possibly be why the term itself is so very attractive to various parties. They warn, however, that this ubiquity could prove problematic, for if its endless malleability is abused, the term could be rendered meaningless or too confusing, in a similar fashion to past buzzwords such as sustainability. For example, the malleability of the term could potentially serve as a facilitator to interdisciplinary collaboration, though on the other hand, if every field has its own internal definition it could stifle this process. In the present moment, the tentative nature of a unifying definition still has the potential to make it difficult to fully operationalize the concept. (2016) Nonetheless, an increasing number of experts are beginning to hone in on a central definition that can be credibly reiterated amongst various sources. In its 2012 report on resilience building, USAID states that resilience can be defined as "the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth" (USAID 2012: 5). Meanwhile, this same definition can also be evidenced in the writing of Neil Adger where he defines resilience as, "the capacity of linked social-ecological systems to absorb recurrent disturbances such as hurricanes or floods so as to retain essential structures, processes, and feedbacks." (Adger et al. 2005) A similar definition can be found across a range of publications (Walker et al., Kreimer et al., NOAA, the IPCC, Klein et al.). This paper employs Brown et al.'s definition of resilience. They state that resilience can be classified as:

"The capacity of an individual, community or institution to dynamically and effectively respond to shifting climate circumstances while continuing to function at an acceptable level. This definition includes the ability to resist or withstand impacts, as well as the ability to recover and re-organize in order to establish the necessary functionality to prevent catastrophic failure at a minimum and the ability to thrive at best. Resilience is thus a spectrum, ranging from avoidance of breakdown to a state where transformational change is possible" (2012).

While the myriad definitions of resilience touch on the same points, ultimately reproducing a comprehensive image of resistant and adaptable systems, which can shift and adapt to disruption and change. Yet, they all neglect a key point. None of these definitions of resilience explicitly discuss the resilience of smaller groups of individuals within larger wholes. Systems, either urban or ecological, occupy most of the space in discourse on

resilience at the present moment. While systemic and infrastructural resilience is indeed important, it is only possibly when the whole is as strong as the sum of its parts, and the people on the ground, the residents of those most geographically and environmentally vulnerable points of habitation, must be accounted for in any coherent policy enacted with the intent of creating a more resilient community of any kind. Therefore, smaller communities who face immediate risk from coastal vulnerability must be better investigated in order to deepen this discourse. It is to elucidate this notion that this paper will venture to Sea Gate to describe the stories of the people there.

Amidst this backdrop, the City of New York states that it desires to be a resilient city that is: "...first, protected by effective defenses and adapted to mitigate most climate impacts; and second, able to bounce back more quickly when those defenses are breached from time to time." (NYC 2013) To understand where this framing emerges from within the regional context, one must look to the definitions available from actors involved with New York State. such as Judith Rodin, President of The Rockefeller Foundation. In her text, she defines resilience stating: "Resilience is the capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience...You also develop a greater capacity to bounce back..." (Rodin 2014). The similarities are striking. It cannot be overlooked that Rodin indeed played at least some role in the formulation of policy emerging from New York State as a whole. Her own biographical statement on The Rockefeller Foundation "about" pages states that, "In November 2012, New York Governor Andrew Cuomo named Dr. Rodin to co-chair the NYS 2100 Commission on long-term resilience following Superstorm Sandy" (TRF). The NYS 2100 was the first major policy initiative to be launched in New York State after Superstorm Sandy, and as such, it heavily informed and inspired the revised PlaNYC document which would emerge the following year.

Emerging policies and rhetoric frame resilience as a dichotomy between the City as represented by the administrative or governing body at the front lines and the natural disasters that will lead to crisis, not necessarily factoring in the actual citizens who lie in that path of potential danger. All three iterations of New York's policy packages: *PlaNYC: A* Greener Greater New York, PlaNYC A Stronger more Resilient New York, and Mayor DeBlasio's One New York partake in this narrative. For examples of how these concepts are currently playing out, we can look at two major international endeavors on this front. Both the 100 Resilient Cities program and the C40 Cities initiatives stand out as benchmarks. In the case of 100 Resilient Cities, their self-stated mission is: "100 Resilient Cities—Pioneered by the Rockefeller Foundation (100RC) is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century." (100resilientcities.org). Here again, Rodin's Rockefeller perspective is evident. New York City was the first metropolis to join the network, and its net benefits included gaining a Chief Resilience Officer, support for the development of resilience strategies, and access to a vast partner network. (100resilientcities.org) Quite similarly, C40 bills itself in a similar fashion, stressing its network of over 80 cities, it's supposed 600

million constituents and an active involvement with a full quarter of the global economy. (C40.org/about) Primarily, then, C40 sees itself as a city created and city led initiative to further the cause of urban green-economy conversion.

Thus, the grand narrative of city administrations versus the vagaries of coming crisis ends up becoming the overarching story behind urban resilience. In this tale, cities form vast networks, often with the help of major financial institutions, such as banks or private equity, creating markets of resilience. Though "stakeholders" and multilateral decision making are touted on paper as instrumental to true resilience, the power to control and formulate policy flows in the standard direction from the state or private sector down to the people. Another pertinent statement Rodin published on The Rockefeller Foundation website reads, "...It requires upfront investment both in terms of financing and resources. It requires innovation to solve for known vulnerabilities but also for variables unknown. And it takes partnerships with the private sector, both to uncover weaknesses within systems, but to also unleash the full range of financing for resilience projects and infrastructure." It continues, "Resilience should be a positive selling-point that cities volunteer to attract the best and the brightest, just as they might promote their livability scores, vibrant arts scene or new transportation investments". The truth of the situation, however, depends on where along the chain of command one sits. To those authoring policy, it may seem that forward thinking initiatives are well underway. To those people whose homes sit outside of the limelight, and whose vulnerability to coastal encroachment and natural disasters increases with each passing year, like the residents of Sea Gate, progress toward increased resilience is perceived as slow, when it is perceived at all.

Coastal Resilience Policy in New York City

In order to achieve its vision of "Our Resilient City", the current New York resilience policy document clearly states the priority of the policy is to achieve three goals. These are, "Eliminate disaster-related displacement of more than one year of New Yorkers from homes by 2050; reduce the Social Vulnerability Index for neighborhoods across the city; and reduce average annual economic losses resulting from climate-related events." (One New York 214) These seem, on the surface, to be noble enough causes. However, one must question by what means exactly they could be achieved in unison. Furthermore, a general air of vague optimism dogs the sections that discuss actually ensuring future resilience. For instance, this introductory passage closes with the statement that adaptation is needed and the situation is dire, though hope is not all lost, because the opportunity to buy down future risk still exists if the proper investments are made forthwith. (One New York 218)

This sensibility permeates much of the policy package, as time and again, economically incentivized initiatives are cited as progress where substantive physical improvements to city

3

¹ https://www.rockefellerfoundation.org/blog/realizing-resilience-dividend/

infrastructure or potential resilience are difficult to discern. For example, many initiatives within the document can seem arbitrary, or metric-motivated rather than well considered or impactful. In one case, rather than explaining a specific plan of action, the city cites the, "RISE: NYC, a \$30 million competition that leverages innovative resiliency technologies in energy infrastructure, telecommunications, and building systems for small businesses." (ONY 226) When researching what exactly this is, one sees that it is indeed a competition intended to foster innovation in partnership with the private engineering firm Buro-Happold in conjunction with the New York City Economic Development Corporation or NYCEDC, without stated benefits or outcomes. Most troublingly, and most specific to this study, this shallow strategy is being employed in the actual formulation of infrastructural interventions for coastal protection. While discussing "Vision 4" or "Coastal Defense" the document lays out goals for the next 10 years ranging from flood protection systems, levee installation, investments in vulnerable coastal communities, energy improvements and so-called "naturebased" measures. (ONY 246) However, it commits to none and avoids a detailed explanation of how the city plans to execute these highly complicated and logistically advanced initiatives. Instead, one becomes party to a wild goose chase of donor-network relations which indicate a complex web of funding with little tangible presence yet, now nearly five years post-Sandy.

New York is at a critical impasse, as progress towards resilience would hopefully indicate that New York City would be better equipped today to deal with an event such as what happening in October 2012. Unfortunately, both these policy packages and current administrative behavior indicate that this may not be the case. For example, although the municipal government of New York City may state that their goal is to "...continue to align zoning and building code updates with reforms to the National Flood Insurance Program and expected changes to the Flood Insurance Rate Maps." (One New York 232) They are fighting tooth and claw to not fulfill this promise in real-time. In June, 2015 the Office of the Mayor filed an appeal against FEMA's most recent update to those very same maps. In the appeal, the Mayor's Office argues that the city disagrees with the methodology that FEMA has employed, leading to a measurement of flood projections the city finds unacceptable. The Office asserts, "Specifically, FEMA's Preliminary FIRMs overstate Base Flood Elevations (BFEs) by more than 2 feet in many areas across New York City and misrepresent the Special Flood Hazard Area (SFHA) by 35 percent, unnecessarily putting approx. 26k and 170k residents in the SFHA" (Office of the Mayor 2). As of October 17th, 2016, it seems that the Mayor's office won its appeal, as FEMA and the Mayor made a joint announcement to redraw the floodplain maps, placing tens of thousands of homes along the coast in low-risk zones.

This re-zoning belies a paradoxical mindset within the municipal government. This dishonesty, be it malicious or otherwise, will ultimately result in the uneven distribution of negative outcomes from future flooding. If zones which are indeed at risk are listed as lower than suggested risk, what will stop current and future policy from simply overlooking the need to protect these spaces? This situation resonates with what Burby calls the "safe

development paradox" that exists "when federal efforts to make inherently hazardous areas safe for development in fact make them highly susceptible to disasters of catastrophic proportions." (2006) And as he demonstrates, this would go on to have severe consequences for vulnerable populations across New Orleans during Hurricane Katrina.

This paper adds to the dialogue on resilience and governance by focusing on the perspectives and stories of homeowners on the front lines of coastal vulnerability. Resilience is being touted by proponents in the Office of the Mayor and private organizations such as The Rockefeller Foundation as a dynamic and useful tool in the face of the many challenges laid out before coastal cities. Through the language and actions of current administrations and the investors and formulators who affect their policy, it is clear that grand narratives and large scale maneuverings are being undertaken. The findings of this paper will demonstrate, however, that the current state of resilience planning in New York City does not reflect the perceptions of vulnerability and need expressed by members of a coastal community within its bounds.

Environmental Instability as a Challenge to Governance

Climate change is a multilateral issue which presents the global community with many challenges. Primarily, adapting to changing environmental dynamics and potential instability arising from the political and economic dimensions of environmental crisis whilst also facing the geographic disruption of population centers due to shifting coastlines are key issues. Here a conceptual framework of resilience can be a guiding force for potential change. One of the most prescient examples of this scenario is the current and future state of sea-bound metropolises, i.e. cities such as New York, Boston or Miami.

What does a changing climate mean for coastal cities? Both real-time events and the current literature paint an alarmingly clear picture. Hurricane Sandy and its aftermath demonstrated the weakness of New York's infrastructure to large scale flooding and the disruption it brings. As Pirani and Tolkoff state, "It flooded key arteries in and out of New York City, including the Brooklyn-Battery Tunnel and Amtrak's Hudson River tunnel. It disabled power plants and transmission lines, leaving 8.5 million customers in three states without electricity, some for weeks. The storm surge easily overtopped protective dunes and floodwalls from Atlantic City to New London, damaging more than 600,000 homes and killing 60 people." (Pirani et al. 2014) Then Mayor Bloomberg's policy response *PlaNYC: A* Stronger More Resilient New York that, "Along the shoreline the storm surge smashed buildings and engulfed entire communities. It flooded roads, subway stations, and electrical facilities, paralyzing transportation networks and causing power outages that plunged hundreds of thousands into darkness. Fires raged. Wind felled trees. Heartache and hardship—and at least \$19 billion in damage—are the storm's legacy." (NYC 2013) This state of unpreparedness is nothing new. The gross level of infrastructural and governmental failure in the face of full-scale natural disaster was first on display in this way nearly a

decade prior during Hurricane Katrina. Finally, the United States Senate stated in their executive report *Hurricane Katrina: A Nation Still Unprepared* that:

"1) Long term warning went unheeded and government officials neglected their duties to prepare for a forewarned catastrophe; 2) Government officials took insufficient actions or made poor decisions in the days immediately before and after landfall; 3) Systems on which officials relied on to support their response efforts failed; and 4) Government officials at all levels failed to provide effective leadership." (2006: 2)

A pattern of government failure is well-documented with a number of scholars theorizing its root causes. For some, bureaucratic bloat is often cited as an impediment to efficient governance in times of crisis. As Sobel and Leeson state, layered bureaucracies and centralized decision making are inherently slow and delay action. In many instances, this sluggishness is beneficial and desired for governance, i.e. when implementing changes to the law facilitates stability and the maintenance of stable legal environments. However, this proves a double-edged sword, as even then Governor of Louisiana Kathleen Blanco complained that it was impossible to break through this bureaucracy even at the highest level. (2006)

In other cases, either an incidental or willful lack of attention to potential hazards on the part of governing bodies is seen as attributing to the eventual failure. For example, Raymond J. Burby states that what he terms the local government paradox occurs when local authorities give insufficient attention to the threats posed by hazards when they willfully allow continued development of potentially or known hazardous areas. In turn, the burden of human suffering and financial ruin is then felt most heavily by the citizens when disasters occur. He points out that this was plainly illustrated in New Orleans where the municipal government actively supported heavy development in the eastern portion of the city, whilst the Orleans Parish Levee Board remained staunchly unwilling to underwrite flood and hurricane protection despite the known danger. (2006) Overall, the risk is clear. There is no indication that the occurrence of storm events such as Sandy, and as such the need for municipal policy to meet them, will diminish. In fact, current research shows that the opposite will prove to be true more quickly than is currently thought. As Reed, et al. (2015) state, pre-anthropogenic to current anthropogenic era rates of storm surge and flooding have increased alongside rates of sea level rise, with the mean flood height having increased by over 1.24 meters in that time. In addition, the changes to tropical cyclone activity brought on by environmental shifts have also led to an increase in the severity of storms which produce surges for New York City, yielding a net increase in flood risk for the region (2015). However, the present state of government preparedness to deal with repeat events has yet to be demonstrated in any meaningful sense.

These precedents, combined with the troublesome disconnect between what resilience means to policymakers and what is required of it to serve coastal populations, creates a defining political incoherence surrounding the governmental response to Hurricane Sandy in

New York. The problematizing issue at the heart of the governmental capacity to cope with these responsibilities can be witnessed in the unearned political certainty of policy produced by the municipality and the State to meet challenges that present as clear a danger to constituents in vulnerable communities as they did before a single dollar was pledged to resilience, but for whom little has changed five years later. Such is the case in communities across the City who occupy space on exposed coastline, of which Sea Gate is one.

Sea Gate: The Research Setting

For its features as a private gated community as well as being at the fore of the coastal turmoil that Hurricane Sandy brought, I chose Sea Gate located on the western shore of Coney Island in southern Brooklyn, New York as the research site. My status as a former resident who was present for the unfolding of Hurricane Sandy itself, uniquely positioned me to conduct interviews and navigate the community as an insider without the need for a gatekeeper. Here I provide background information on the community of Sea Gate itself, and its status in regard to the governance, vulnerability, and resilience of city space.

Sea Gate is a private gated community. Land was development for what would eventually become Sea Gate began in 1892 then known as Norton's Point. The name came from the lighthouse that still stands there today. During Hurricane Sandy, Sea Gate alone saw roughly 750 homes damaged to differing degrees at an overall cost of \$45 million to residents. Not only was private property laid to waste, but external structures which served as protection for the community, like the main bulkhead on the point, were destroyed during the storm (Kensinger 2014). A unique feature of the damage that Sea Gate saw, beyond merely that it occurred within an atypically private community, is the length of time it has taken to recoup losses and rebuild. As Kensinger further points out, "Very little has changed here in the past two years, and the landscape is littered with boarded up homes, empty lots and abandoned construction projects." (2014) This was an account made some years ago, though now, in 2017, the situation has not evolved much further. Despite the fact that various sources point to pledges made by the city or federal government to improve storm resistance in the area, there has been no perceptible progress on the ground. This includes a \$2.8 million dollar grant for sea-wall construction which Kensinger eluded to in 2014, but whose link on the Governor's Office of Storm Recovery is no longer operating. Also of note are endeavors such as New York Rising which the New York Times cited in 2014 as pledging \$200 million to communities across the region but whose effects are imperceptible to homeowners.

Meanwhile, though private communities exist all over the nation, they are rare within the boundaries of greater New York City. The characterization and status of private communities sets them apart from the surrounding area both in an ideological sense and in a

7

² This lighthouse was the last civilian-manned lighthouse in the United States.

direct governmental manner. In *Private Communities or Public Governments: "The State Will Make the Call"*, Rishikof and Wohl state:

"From the few progressive and utopian communities of the late nineteenth century, to the early suburbanite developments at the beginning of the twentieth century, to the growing popularization of organized community development in the middle of this century," experiments in urban planning and building private communities have existed in some form, albeit generally as a small percentage of cities or towns. Homeowner's associations, for instance, have a long history in this country and abroad. More recently, particularly in the last thirty years, amidst the fear of spiralling crime and the dual developments of urban decay and urban gentrification, Americans have turned increasingly to the security and style of life offered by private communities, neighborhoods, and living associations" (1996: 512)

As a private community, the governance status of the space in a city which traditionally has heavy municipal oversight is somewhat convoluted. One such homeowner's association as mentioned above oversees the internal administration of the community. This is the Sea Gate Association. While residents pay city and state taxes as any New Yorker typically would, they also pay dues to the Sea Gate Association. Meanwhile, while services like Sanitation or Emergency Medical Transport are handled by the external services upon which Brooklyn residents would normally rely, an independent Police force oversees the day to day security and emergency response duties within the gates. As Rishikof and Wohl note:

"This dramatic change in the dynamics of community living presents the possibility not only of physically reshaping neighborhoods and towns, but also restructuring systems of community and interpersonal interaction, legal rights, and personal responsibilities. At best, these communities may seem like idyllic living locales, which serve to "enhanc[e] the sense of neighborhood identity and community." These efforts to achieve utopia, however, may also support communities which spur the development of an "us versus them" mentality, keeping distance (and walls) between those who are perceived as either economically, socially, or racially different" (1996: 515)

In the case of Sea Gate, this problematic occurrence centers more on an us versus them narrative between the homeowners within the community, the Sea Gate Association, and the municipal government at large in ways which will become elucidated further in the paper. This liminal status can and will cause contention over the maintenance and responsibility towards land, property and emergency response both in times of disruption and day to day policy.

Methods & Methodology

Methodologically, my approach to this research largely dwells within the lens of interpretive knowledge creation, recognizing the lived experience of vulnerability to coastal disaster, assessments of government response, and knowledge of climate change and resilience policy through the testimonies of residential homeowners within the target neighborhood.

One-on-one interviews with the researcher (myself) and willing participants were conducted between June and December 2016. The main subject population was residential homeowners who were adversely affected by Hurricane Sandy, (i.e. experienced economic and property loss as a result of storm damage). Individual informants were selected based on the location of their residence within Sea Gate. Snowball sampling was also used to find additional participants.

As a former resident of Sea Gate, I have first-hand knowledge of where storm damage occurred. I used this knowledge to inform my sampling strategy. I also used photographic and documentary evidence of storm damage throughout the community. These sources of data helped me to create a purposeful sampling strategy that focused on depth of a respondent's experience rather than on completing as many interviews as possible. Interviews were conducted independently with each chosen participant by myself at a place of the participant's choosing. Interviews were recorded digitally and stored until such time as it could be transcribed. From this point transcriptions were arranged in groupings with the aim of elucidating illustrative quotes which could carry the most prescient themes from the data forward. From here, coding categories were deduced which best suited the themes which recurred across the transcripts.

Respondents speak for themselves. Thusly, while I entered this research with guiding interview questions, I did not enter with a pre-conceived coding framework. Rather, I produced deductive codes which evolved from the data. In this way, I was best able to capture the essence of what parties to whom I spoke relayed, and distilled it into academic arguments.

When considering subjectivity, I am a former resident of the community to which I am returning in order to conduct research. I was present during Hurricane Sandy and my own family experienced both extensive property damage and temporary displacement. Therefore, due to my biography, I was well positioned to conduct this study. Not only am I familiar with the subject matter, but also well versed in the social dynamics of the neighborhood.

Regarding the ethical dimensions of this study, the research did not involve any significant risks for the subjects. The questions pertained mostly to matters of vulnerability perceived through a lens of private property and fiscal effects and governance issues associated with post-Sandy response. There were no fatalities in Sea Gate during Hurricane Sandy. Questions did not seek to create personal profiles of individuals. Rather, the focus of the interview questions was to build towards a more communal understanding of how respondents view the issues of vulnerability and governance as a collective whole once data

is collected. Therefore, no personal or political information regarding respondents was included in the study unless where specifically required or requested by the respondent themselves. Furthermore, participants were free to cease engagement with the study at any time. That being said, without divulging enough information for anonymity to be breached, some facts can be laid out about participants. Interviewees were middle to older-aged, Caucasian, and while both male and female individuals were consulted, the majority of participants were male. These trends were not due to any intentional canvassing or preference for the study, but rather the result of who was available and willing to participate at the time of my research.

Findings and Discussion

In the course of data analysis, a narrative emerged from the responses garnered during interviews. This narrative places Sea Gate, or at the very least, representative residents within the community, in the position of occupying a dynamic and nebulous space in the landscape of New York City when considering governance, disaster relief, and ultimately, resilience planning.

Three main themes emerged from the data. Namely, issues of Governance, Vulnerability and Resilience stood as meta-categories for coding purposes. Under the umbrella of Governance, sub-codes included Institutional Coordination, Infrastructural Management and Beach Maintenance. Under the category of Vulnerability, sub-codes included Fiscal Effects and Geographic Factors. Meanwhile, under the meta-category of Resilience, the main sub-codes which emerged were Climate Awareness and Knowledge of Policy.

Governance

Institutional Coordination - Infrastructural Management

One of the primary findings of this endeavor was that a common belief existed among interviewees that the level of Institutional Coordination present in the immediate and lingering aftermath of Hurricane Sandy was subpar in many respects. Not only was the official municipal response from Greater NYC perceived as limited and ineffectual, but the local response from the authorities present both on Coney Island and within Sea Gate itself was seen as relatively piecemeal or unclear. To establish this in the present, however, it is necessary to examine how this belief has underpinnings in past experience as well. It was reflected by several statements made by an interviewee that they had carried a latent distrust of the ability of the state to care for them in times of crisis. Indeed they stated:

"I did not expect to have any support services and the reason I evacuated and urged my neighbor to evacuate was because of seeing Katrina victims on their rooftops. I did not have faith in our community being able to provide support because of our location. Geographically, I live on an island, and the bridge may have not been accessible, it may have been destroyed. In the previous year, during Hurricane Irene situations, neighborhoods were dramatically effected with flooding and we were very, very lucky not to be hit. We were prepared and we evacuated but nothing happened. I had a sense of complacency about the severity of the storm but I still evacuated because I knew things were getting worse with the storms and with the services. We've had snowstorms in which our community could not be dug out for four days, you know, creating problems with access to transportation, ambulance[s] and work, so being in that situation frequently made me cognizant of the fact that if I did not evacuate I would be leaving myself open to whatever could happen."

Furthermore, in regards to the status quo of infrastructure it was evidenced in several statements that this sense of service disruption or potential service bias existed as a sort of cursory baseline. This is present in the following statements:

"Yes at times. We did have electrical problems, and Bus service was actually discontinued by the New Yok City transit system in Sea Gate, requiring residents to walk or drive to access the rest of the transit system. So it was always a difficult commute to get to the subway..."

And:

"The infrastructure is limited, the services they provide, but I would expect that because we pay the same property taxes as everyone else in NYC, whatever services everyone else is entitled to, we should have, that we are getting that? No."

Or:

"This is a unique....when you are talking about Sea Gate, it's like, as far as I'm aware, this went back with Giuliani, when he said, you know, take down the gates, the Reagan-esque thing, and then you have services. People want to keep their privacy but then they charge us the same property taxes so we are paying for nothing."

Another respondent offered a more tempered but still problematizing view:

"I wouldn't say there was a complete failure of services, but I would say that what I saw was a lot of struggling on the part of the city to, you know, respond. They were overwhelmed."

Even something as fundamental as regular phone access was perceived as not wholly reliable:

"Not having the need for any specific services, the answer to that would be no, not necessarily. But the only thing that's bad here, as you know, is the telephones. For some reason that and the electricity, with this locale I think it has to do with wires being above ground and not underground, something along that line..."

Due to this perceived lack of confidence in the ability of state actors or organizations to necessarily be "on the ball", members of the community to whom I spoke entered Hurricane Sandy without much faith in the City or any of its preventative measures to stop the worst effects of storm fallout. Rather, most of the participants prepared for Sandy with the vague hope that the storm would simply pass like so many before it and that an act of chance would be their saving grace.

Meanwhile, in the actual wake of the storm, the respondents perceived major gaps in services provided with one exception. The sanitation department appeared to be actively functioning better than the police force and various emergency response services as one interviewee stated:

"The only agency that I saw that actually functioned well was the sanitation department. Because they picked up garbage, they came around, the guys were empathetic, they got guys in from Queens that were working, they said 'oh geez' you know. I don't recall seeing any other except for the Hasidic "police" but they all went to the members, you know that didn't pertain to me, but they were patrolling and they knew we lived here but they were a private organization because you know our police organization was gone. Did a private organization take up the slack? Yes, they knew we lived here. But that was about all."

Another participant confirmed this when they said:

"The police told us that we had to watch out, that there were looters around out the other side of the fences. They were spread too thin, they couldn't actively patrol everything, and their headquarters had been wiped out by the storm surge. When I think back to that, it makes me think about getting some sort of self-defense for the future. No-one was there to protect anyone, and we didn't have any power."

However, it was not as if knowledge of the potential danger from the sea was without precedent. Certainly, storms had caused intermittent disruption before, though it had been some time since major damage had been inflicted by weather related events. One participant stated:

"In 1991, December 11 or 12-13th, we had a severe storm in which our residence was hit by waves at the level of the second floor. We were ordered to evacuate but we did not heed the orders to evacuate. On the ocean side of the community a house fell into the ocean and it was a pretty scary thing to experience."

And while this precedent existed, it was not as if any set protocol or plan was in place for residents should flooding occur again. Ordering evacuations was perceived 'well and good', but it did not belie a deeper level of planning or coordination. As one respondent states:

"Right now, they're not going to do anything over here. That's basically it. That's why that's an interesting point. If you were to get the New York Times in here, are we the only community in the United States that faces this? [It's a] possibility."

This sense of idleness existing on the part of the "powers that be" feeds into the aforementioned cycle of mistrust which exists between Sea Gate residents and the municipality at large. However, where this mistrust may exist as an above average level of skepticism during times of stability, during a crisis it can easily be observed as transforming into a more palpable sense of fear, where it presents clear existential threats. Take, for example, this account, where one respondent describes the experience of homeowners throughout the community being hassled by suspicious men claiming to be city employees sent to inspect the electrical fuses in houses. Not only were they charging money for said inspections but they were armed with the threat that homes could not be reconnected to the grid without performing one:

"The criminality...you know my plumber came back here and said it looked like Algeria where he had come from. He said now that the water is gone, watch, the 'sharks' are going to come out. They were pulling out...you know people got caught that were gullible, they all claimed they were federal workers but who knows what they were. So the sharks came out, now were they sanctioned by the government? It would apparently seem so, so some of them were legitimate sharks. But you didn't know which ones. Would I have known not to let the guy look at my box, the electrician and let him put a thing on it?" He came 12 o'clock at night saying to put it on you know, 'oh we gotta take it out you were flooded you're in an A zone'..."

Ultimately, this all feeds into Sea Gate's status as a gated community in Brooklyn, which complicates its position in the grand scheme of things during times of stability, let alone in the wake of a natural disaster. This relationship emerged as a persistent obstacle to governance in the area, where respondents seem to perceive a complicated system of mismanagement existing both between themselves and the Sea Gate Association and between the community itself and the rest of New York proper. Consider this statement:

"The only thing you could do, see, if you focus on those issues, I guarantee you, you could get all the local newspapers to write articles on that. Because they are totally unaware of what is going on, because nobody knows that Sea Gate exists, you see, and the Board, the mentality is that we don't want anybody to know, and if they know we're going to wind up getting punished, and having been on the Board, getting punished for what? To the best of my knowledge we're paying city dues and Sea Gate dues, and if you have a single family house, your Sea Gate dues you can't deduct. They don't even know, they're chopping off their foot to battle their toes."

Here we have not only a demonstration of the perception that Sea Gate and its residents are unseen or invisible to the city itself, but also that they shoulder a greater burden, paying taxes/dues both to the city at large and to the local administration for the upkeep of the community, but receiving little perceptible benefit for the trouble. In particular, the interplay between the New York City government and Sea Gate's own administration is relevant to this discourse because it effects how responsibility is partitioned for certain services and

infrastructural oversight within the bounds of the gates. One respondent points out in regard to the history of sanitation services in the community:

"And then I said, how come we have sanitation? I looked at the history, looking at the history of Coney Island and it only ever touches peripherally on Sea Gate, but if you go back and look at the stuff...where did...how did...what happened in the early '60's was there was a deal made...but a deal made by *whom*, in writing? Where? Where is the document that says we are getting sanitation, because basically if we are a private community we shouldn't be, so they don't want to bring that thing up because it might affect snow plows, it's one or the other. So they're thing is its better not to open up that one, and since he [Sea Gate Board chairman] opened up the door in other places, I have no problem opening up the doors other places too."

From this kind of narrative also emerges a latent sense of frustration against the local Sea Gate Association in regard to their stewardship of this public/private relationship, where they are interpreted as acting advantageously in some regards and underperforming in others. One statement reads:

"And here are the other problems, with our quasi status, we're neither fish nor fowl, since, you know, when I was on the board you know and people say 'Oh they're robbing money!', well if they are they would have to be very smart because I didn't see it, but if you want to say oh they're stupid, they're arrogant, yeah I could see situations where that occurs"

Intrinsically, this frustration seems to constitute an underlying dispute over whose responsibility certain actions normally overseen by government in one form or another are, with several parties potentially being culpable in various situations, whilst none emerge to take up this mantle. This, in turn, is then perceived as all actors involved washing their hands of any accountability and leaving problems unresolved.

Vulnerability

Fiscal Effects & Geographic Factors

The main narrative regarding fiscal effects throughout the respondent pool was one of extensive damage that was costly but possible to recoup one way or another. The difficulty experienced by each household differed primarily around how much time and effort was invested in either obtaining financial compensation or physical labor to rebuild. However, cause to celebrate was scarce as all respondents bore an awareness that the open-ocean facing homes bore incredible damage, some being swept completely away, and worry over future damage is still high. Meanwhile, narratives also emerged that painted a picture of insecurity around the external framing of the vulnerability within the community, citing fears that preconceptions about wealth and stability would prevent protective measures from being taken in the future.

On the one hand some respondents were quite content because they received coverage from their private insurance:

"They wouldn't cover some things but it didn't matter because they covered everything else."

Or:

"My experience was really, compared to everybody else, OK, you know going to court and fighting, but then I wasn't looking to make any money on this deal, I just wanted to go on with my life. I came to retire to a beach in Brooklyn, you know, I look at the grass grow. That's just the way it is. This is the perfect place for sedentary people."

However, others still had serious qualms over how federal aid was administered, saying they were lucky they had private insurance because Federal aid never came. In one case, a respondent asserted that they perceived a socio-economic bias at play in the way FEMA responded to certain households, in their view:

"Private Insurance. I got no Federal, I was not entitled to any Federal compensation because, you know, I worked for fifty years. This Federal compensation, FEMA and all that, because we have to be...they don't pay, which is the same thing with FEMA, the only way that they pay with FEMA is if you find some flaw. We were entitled to 200 or 500 dollars, there was really nothing for a person like me because they told me I could pay, therefore there was nothing for me, the flood didn't affect me in their eyes."

And again, a mock conversation with FEMA was requoted:

"Why are you prejudiced against me? [Addressing FEMA] Aren't I a victim? [FEMA] 'Yeah but you can afford it."

Even still exasperation was expressed at being denied coverage by a contractual technicality which they interpreted as unethical and hostile. Part of their statement was:

"The only thing I could think of...as outstanding issues is the sand...not now but in the years to come. The only other thing is I did get screwed with the insurance on the Auto but that had to with that I had leased a car. And I knew someone who worked at GM and she told me, 'Yeah, I knew that was in their contract but I never saw anyone get hit with it' but I got hit with it. And I mean even an attorney, no one would think, oh that clause is going to cost you 7,000 dollars, and I had the car in the garage."

While this extreme was not present across the entire group of respondents, it is important enough to stand out in that it demonstrates another layer of disconnect between the community of Sea Gate and the greater area of New York and southern Brooklyn to which it belongs. Whether real or perceived, such divisions will have an effect going forward on the ways in which homeowners in the area feel their needs are being considered.

A consistent narrative of intense physical damage emerged from the data, with homeowners recounting how much had been lost, in terms of space and time. One respondent stated:

"What can I say? The whole lower floor was inundated, the water came up higher than it ever had before in recent memory. The permanent structure was intact but the entire first floor had to be gutted and rebuilt...I did all of the reconstruction myself, the walls needed to be rebuilt with mold resistant boarding, the electricity had to be rewired completely....its a project that is never finished, I'm still working on it to this day. I think of time often as before and after Sandy now, given the impact it had. This is not even to mention the possessions we lost because we couldn't take everything upstairs...decades worth of things, some of them irreplaceable...gone. Even to this day, I will pick things up and move them downstairs and water from Sandy will spill out, stuff that's been trapped for years now, its like it hasn't fully left."

Indeed, the fiscal aspect of this experience has been equally enduring, where the process of receiving compensation is still underway:

"Oh sure, the private insurance didn't give us trouble after they came to inspect the house, though it took some time. I remember the day, it was so cold it was flurrying and we still did not have electricity, this was in November after the storm, we were using a propane heat lamp to warm the house to keep the cold and damp at bay...prevent mold...But the FEMA compensation is still coming in to this day, just in the past few months we have received more in the mail from them. Its great, but if we had been reliant on that assistance [alone?] we would have been out of luck."

It is imperative to note that while the respondents I spoke to were, on the whole, financially capable of withstanding the cost of the damage dealt, many in other parts of the community were not, and are now gone because they could not rebuild, especially on the ocean-facing side of the island. The socio-economic characteristics of Sea Gate are not homogenous, and while there are areas of the community which house more financially secure households, there are many more which are middle-income on a varying level. In this regard, the great equalizer herein is the geographic position of the community as a whole, and when formulating resilience policy for future scenarios, this category cannot be overlooked.

While the fiscal aspect of the community's vulnerability is important, perhaps the most vital and problematic aspect of Sea Gate's vulnerability are the inherent geographic facts of its existence. In turn, this geographic reality feeds back into the fiscal viability of the community itself. The most immediate and obvious aspect of this positionality is the ever present risk of flood waters. One respondent stated:

"One of the problems here, right, and I saw just in Sea Gate, with the water in the street, you know the reason there was water in the street. It didn't come from my house, because once it came in, you know we live on a slab, [name] lives on a slab, it

came in and it went out. Now [name] and everyone else who had basements, it didn't come out. Now if you're going to find out what FEMA is going to pay and in the meantime it causes mold problems......Why do they build on the beach, that was absolutely ridiculous, and no insurance pays for stuff in the basement anyway, so in other words how do you resolve that problem? We could pay....but what about the person who inherited the property and they can't even pay insurance or even live in a house like this, so that's another problem that the Federal Gov't., you know anytime you make regulations and have a big brother thing you create problems. The only thing you could do is that anyone who lives in any area like this must have insurance. You know when I was buying this my lawyer said to me make sure you have flood insurance, don't worry about the mortgage."

This sentiment is further echoed in another statement:

"People who are actually....you shouldn't have a house on the beach if you can't afford it, but for people who inherit it or don't have insurance. It's a problem how do you resolve it? You punish one to reward another? Is that a solution to a problem?"

Furthermore, worries over the state of flood insurance and proximity to the water were present:

"The way it works here in Sea Gate, we're grandfathered in here the way it was before, but the new owner, they are gonna pay what they are gonna pay in an A zone area, so what the hell could they charge? I hear people on the Bay streets, they wanted 10 or 12 thousand dollars for flood insurance, so what the heck would you have here, and there they aren't even going to flood?"

This line of worry leads directly into the most recent update in the area, which is the aforementioned New York City appeal of FEMA's floodplain mapping. Inherent to Sea Gate's geographic location as the jutting western edge of Coney Island is its potential for flooding, and Hurricane Sandy demonstrated aptly that in our new era of increasing climate instability and unpredictable storms, the potential for flooding is greater than ever before. FEMA's floodplain mapping attested to this, but its conclusions were overturned successfully by the City government on the grounds that extensive predictions for future disaster would put undue burdens on the city and its residents. This action has seen an immediate change come to homeowners in Sea Gate whose properties lie at the water's edge. Recently, one interviewee gave their appraisal of this shift:

"I really couldn't believe it. Here we are, a stone's throw from the water, and all of a sudden I'm 'preferred non-risk' according to my insurance company. My flood premium's gone down by thousands. That's great, to have less bills, but what does this mean for me? Is that going to stop the next storm? I don't think so, nothing has actually changed. I didn't know about the lawsuit or FEMA's role until after this all happened, none of it was publicized, you didn't see it in any news, you had to look it up for yourself, there was no engagement."

And another respondent echoes this sentiment:

"I feel betrayed, honestly. Yeah, it's great to see your bill go down but we are not low risk, we know that, anyone who was here for Sandy knows that. You ask yourself why they would do this, and I can't think of any good reason. FEMA was just observing what actually happened to these parts, what will happen to the coast. These people in the city...I don't think they are living in reality. If they don't think we are at risk, who is going to help us next time?" Look at what happened out at Breezy Point...the whole place burned down. How can they think places like this are lower risk than FEMA said?"

Clearly, there was some sense of worry over the implications of this move, most importantly the primary fear being one of how it alters where the City will place Sea Gate in future plans if they are choosing externally to relate to it as a non-risk entity on a financial level. Such questions are highly relevant and this sentiment transitions well into what was gleaned from the data as being a part of the knowledge-base of the residents to whom I spoke on issues pertinent to Resilience both locally and within New York City at large.

Resilience

Climate Awareness and Knowledge of Policy

Overall, residents to whom I spoke were highly conscious of the risks of residing near the sea. In addition, most were largely aware of current state of climate science and the predominant ideas about how warming seas contribute to both rising sea levels and increased storm frequency and severity. When asked about their awareness of such issues and how, if at all, they perceived them to effect Sea Gate, one respondent answered:

"I actually will not stay here, I have since made plans to move. I now have a residence elsewhere, and from now on will not live in a coastal community for any reason. I do not feel that our population is aware of the risks and while homes are being bought and sold here and while houses are being rebuilt on stilts I think it is foolish to rebuild where nature will reclaim."

Another response shared this sentiment:

"The risks from the water are absolutely high. I no longer wish to reside here. It's a big problem in my personal life that I am still living here. I want to leave, and it is imperative to me that I move my family out."

Yet another interviewee states:

"It's always a risk, it's always a risk [living near the sea] and with Sandy we were a bit thrown off because, you know, we had Irene the year before which was like, you know was like a direct hit, and nothing happened. So then with Sandy, I think everyone was caught off guard..., they hadn't got all their stuff out, and I got hit with

stuff like artworks and paperwork and stuff like that. And what I would have done was bring some stuff upstairs like computers and hard drives but that's all gone..."

Further still, another response explains:

"Certainly, like, anytime a storm hits the Atlantic Coast it could be you, but this one was just like a weird everything conspired together so the water surge and we had the wind and it was rising and the tide was rising but there was also the Full Moon tide. And sometimes it's gonna happen and you just hope...and lots of times we got real lucky, like hurricanes just stalled off the coast and they went away. It would be naïve to say it couldn't happen, and its just like denial if you think it isn't going to happen again."

While all interviewees had a keen awareness that the sea posed a danger and a risk, and most had an awareness of climate change related issues, the connection between the two was not necessarily made. For example, one respondent, who had previously elaborated on his/her risk from the sea also made the following statement:

"I'm sure the climate changes, you know, however many umpteen thousands of years the climate is going to change, but I haven't witnessed any climate change, it's not apparent here. And, you know, supposedly the water level here is rising, but I can't say that I've seen it."

This was a minority view to note. When the connection between the two bodies of evidence was made, some respondents had high literacy in the pertinent information. The following response illustrates a highly informed view:

"Certainly, the risk is terminal. I don't think people will be able to live here much longer. Not in your lifetime, maybe in mine, but I don't want to stay here long term anymore. I've been here for over 30 years, and it's time to go. Where am I going? Anywhere but the coast, maybe mountains. With sea level rise and the storms that we could be in for down the line, a beach like this isn't the place to be any longer. I have nightmares of the waves coming over the house. And this place is unique, there is nowhere else like this in the whole city with this view, this exposure. The sea is the sea, though, and the city sure isn't doing anything to help places like this. They'll take care of the public spaces but even then, what can they do? This was all water before, and it's going to be again, I suppose."

Having established a baseline understanding of where community awareness sat in regard to climate change, sea risk, and its related effects, the next task was to discern what level of knowledge, if any, was present amongst homeowners regarding the New York City Resilience plans emerging from the Office of the Mayor. Furthermore, a secondary objective was to discover what level of engagement was perceived as currently existing between the crafters of said policies and the people whom they will affect. When questioned about this topic, the first response garnered was:

"No, and the only thing that I heard Bloomberg say, when he was mayor before out esteemed DeBlasio came in was, he had looked at what they did in the Netherlands/Holland about putting up a wall somewhere over there so that the water would be...but that was just talk, like with what they're saying now was there any money or anything, and as soon as he went, that went. That's the only thing I have heard. And if there were anything I would really be curious because I don't think there is."

Yet another interviewee states:

"Zero. There is zero engagement between the City and Private Sector and Citizens in regard to planning. It's sort of like the time when my wife had cancer and there were complications and the doctor told me 'I can't talk to you, you're not a doctor.' I was later told you would have had a wonderful case if your wife had died. But because she didn't, since she was alive, he could say it was due to my work she didn't die, because you can't prove something like that...it's like could I prove that that sand is gonna cause me damage so I can sue them? It's like those catch 22's."

This narrative of a communicatory blackout between private citizens (and specifically those in a coastal community like Sea Gate) and the directors of resilience policy within the city was consistent across all findings. Of particular note also is the fact that despite its ubiquity in the field and the regularity with which the City of New York publishes policy packages containing the word, Resilience as a term denoting preparation for future climate impacts was a relatively unfamiliar concept to almost everyone with whom I spoke. This in and of itself denotes at least some level of information dissemination dysfunction in a municipality billed as a global resilience leader. Another respondent stated:

"Noone has spoken to us, not from the city directly. Of course, we talked to some people from FEMA after the storm throughout the process of acquiring assistance, but never anyone directly involved with New York management. And no information has been relayed to us, we don't get any updates on what the city is doing. For all intents and purposes, everything is back to as if Sandy had never happened. Occasionally you see the Army Corps. Of Engineers out in the water doing this or that, but they've been fiddling with the sand for years, so that is nothing new. Certainly if a storm had hit again this Fall we would have been every bit as susceptible as four years ago, nothing has changed."

Ultimately then, it seemed as though the perceived status of municipal activity veered towards stagnation, if not outright regression. While the City of New York has indeed been active at least in a policy production manner, this form of activity has not trickled down to the ground level, and first-line victims of a lack of resilience building still view themselves as existing in an unchanged space comparative to before Sandy, if not a worse one.

Conclusions

Using the data presented above, a number of issues present in Sea Gate pose a significant challenge to the narrative of progressive resilience planning within New York City. These are challenges that will need to be overcome if the city's "resilience dividend" is ever to be met. First and foremost, the issue of governance in times of crisis within New York is highly problematized by the residents within Sea Gate. The scattered, piecemeal response to storm damage, displacement and service deprivation experienced by respondents to this study speaks to an underlying disorganization which mirrors previous accounts of governmental retreat and failure within the literature during scenarios such as Hurricane Katrina. This endemic issue is further complicated by the status of Sea Gate as a private community within an already highly bureaucratic city, further saddled by its own dysfunctional internal administration. This interplay serves to muddy the waters during the imminent aftermath of a natural disaster, and various organizations with ties to the community through either local or municipal chains of command were absent during Hurricane Sandy due to this.

Meanwhile, in the present, the most potent example of the local/municipal dichotomy in Sea Gate is seen in the contention over beach management, where the maintenance of sand-bound property has become a battleground for citizen versus municipal rights to land. While seemingly arbitrary, this issue has grave consequences for the future resilience of Sea Gate as a coastal entity. The proper upkeep of the beach property on the Gravesend Bay facing shore of the community determines flood-based damage in the eyes of the homeowners currently sitting in the path of the sea. Furthermore, a willingness to allow for this upkeep on the part of the City administration and the local Sea Gate Association will ultimately convey to homeowners whether the individuals and institutions of power present truly consider their plight worthy of stewardship, and thus this issue begs its own investigation, though it did not fit in this study.

Furthermore, levels of climate awareness in the respondent pool indicate that residents within Sea Gate are highly aware of both the current and future threats that the sea and environmental issues present to their households, financial stability, and ultimately, their way of life. Some respondents felt this weight so severely that they now live in fear or are in the process of arranging to move away due to an overarching lack of confidence in the city to adapt to the precarious situation Sea Gate and other coastal communities like Breezy Point find themselves in across Brooklyn and Greater New York.

And yet, while all this is playing out, the City administration successfully appealed the status of Sea Gate and other coastal communities across New York City, altering their status and lowering their insurance premiums. With this move, mixed emotions emerged from the community, who while glad to have lower payments were simultaneously confused by a scenario which did not line up with facts they knew to be self-evident. The sea is as close as it has ever been, and homeowners are aware that another Hurricane Sandy could be just a season away, so they question what it means for them to have been listed as lower-risk in

regard to potential inundation. As pointed out earlier, this action on the part of the NYC administration reeks of what Burby called the *safe development paradox*. It would seem that the city is attempting to halt the potential deleterious economic effect that declaring the entire Brooklyn coastline a danger-zone could have by simply *ignoring the problem*. Or at least that is what it looks like from the perspective of the people on the ground. Properties are still being sold, developments still being undertaken, and areas which were flooded or burned to the ground in Sandy actively rebuilt and repopulated. It is not a leap of logic to assume that, like Burby witnessed in the case of New Orleans, the short-term financial boom of positive development levels in potentially at-risk areas is outweighing the long-term goal of keeping communities safe from natural disasters and hazards.

This paper argues that the reality of coastal community experience as told by residents of Sea Gate presents a different view of a resilient New York City than the one present in former Mayor Bloomberg's *PlaNYC: A Stronger, More Resilient New York* and now Mayor Bill DeBlasio's *One New York* policy packages. Certainly, this "real" New York also diverges greatly from their model The Rockefeller Foundation's and Judith Rodin's "resilience dividend". Due to this, changes need to be made as quickly as possible if the actual needs of coastal communities in New York City are to be met before the next Sandy comes along. It is of primary importance that the City government take seriously the findings of the FEMA floodplain mapping which emerged after Hurricane Sandy, and benchmark administrative disasters such as Hurricane Katrina should provide ample evidence for the need of local officials to take heed of early warnings. Furthermore, specifically to Sea Gate's experience, the problematic relationship between the local homeowner's association and the municipal government must be mediated and made more clear. Perhaps, after decades of neglect, the beach management crisis currently unfolding could serve as the staging ground for building a more efficient and equitable system between the two parties.

Finally, I recommend that further research on the ecological history of Coney Island and other coastal areas of high population density which mirror Sea Gate's precarious status could shed further light on the path that sensible resilience planning for these communities could take. Interference by the Army Corps. Of Engineers over the years has fundamentally changed the topography of Sea Gate within the author's lifetime, and the historical status of these coastlines must be taken into account when planning to protect them from future inundation. As Cronon states, "An ecological history begins by assuming a dynamic and changing relationship between environment and culture, one as apt to produce contradictions as continuities." (13) This is a notion which is especially true in coastal cities, as a population's relationship with the sea and coastal land is consistently shifting, evolving, and being engineered. Certainly, this is true for New York where the coast has been dramatically expanded and much of the city today was once below water (Taylor 2012). This leaves a multitude of people at the mercy of whatever may lie ahead, rather than sound policy and the safety that organization and government is supposed, at least in theory, to ensure.

Ultimately, if the issues illuminated in this paper are not dealt with, serious backdraft in the form of unintended consequences and further disruption will be the legacy of current policy initiatives. This would be a shame, for the ability of current municipal policy to meet these needs boils down to the simple responsibility of the City government to hear its constituents. As this paper demonstrates, these stories are out there, people on the coast know the danger they face, and while "Cities" as conglomerate commercial and political entities seek to raise their profile in a burgeoning field, the true resilience of the most geographically vulnerable communities is being left up to chance.

Bibliography

- Adger, W. Neil, Terry P Hughes, Carl Folke, Stephen R Carpenter, and Johan Rockstrom. 2005. "Social-Ecological Resilience to Coastal Disasters." *Science Vol. 309 Issue 5737* 1036-1039.
- Brown, Anna, Ashvin Dayal, and Rumbaitis Del Rio. 2012. "From Practice to Theory: Emerging Lessons from Asia for Building Urban Climate Change Resilience." *Environment and Urbanization Volume 24, Issue 2* 531-556.
- Burby, Raymond J. 2006. "Hurricane Katrina and the Paradoxes of Government Disaster Policy: Bringing About Wise Governmental Decisions for Hazardous Areas." *The Annals of the Ameircan Academy of Political and Social Science Vol 604, Issue 1* 171-191.
- Cronon, William. 1983. *Changes in the Land: Indians, Colonists, and the Ecology of New England.*New York: Hill and Wang.
- FEMA. 2016. "Mayor De Blasio and FEMA Announce Plan to Revise NYC's Flood Maps." *FEMA.gov.* October 17. Accessed November 12, 2016. https://www.fema.gov/news-release/2016/10/17/mayor-de-blasio-and-fema-announce-plan-revise-nycs-flood-maps.
- Intergovernmental Panel on Climate Change. 2013. "Climate Change 2013: The Physical Science
 Basis Working Group I Contribution to the Fifth Assessment Report of the
 Intergovernmental Panel on Climate Change Summary for Policymakers." *Intergovernmental Panel on Climate Change Web site.* Accessed December 2, 2013.
- Intergovernmental Panel on Climate Change. 2001. Working Group II: Impacts, Adaptations and Vulnerability Chapter 6. Coastal Zones and Marine Ecosystems. Policy Report, IPCC Working Group II.
- Kensinger, Nathan. 2014. *Two Years On, Coney Island Enclave Still Awaits Recovery.* October 28. Accessed February 24, 2017. http://ny.curbed.com/2014/10/28/10030508/two-years-on-coney-island-enclave-still-awaits-recovery.
- Klein, Richard T., Marion J. Smit, Hasse Goosen, and Cornelis H. Hulsbergen. 1998. "Resilience and Vulnerability: Costal Dynamics of Dutch Dikes?" *The Geographical Journal Vol. 164, No. 3* 259-268.
- Kreimer, Alcira, Margaret Arnold, and Anne Carlin. 2003. *Building Safer Cities: The Future of Disaster Risk*. World Bank Publications.
- Meerow, Sara, Joshua P. Newell, and Melissa Stults. 2015. "Defining Urban Resilience: A Review." Landscape and Urban Planning 38-49.
- National Oceanic and Atmospheric Administration U.S. Department of Commerce. n.d. *What is Resilience?* Accessed February 22, 2017. http://oceanservice.noaa.gov/facts/resilience.html.

- New York City. 2015. "Mayor de Blasio's One City: Built to Last Wins C40 Building Energy Efficiency Award in Paris." www1.nyc.gov. December 3. Accessed March 20, 2016.
- NYCEDC & Happold Consulting. n.d. *RISE: NYC Resilience Innovations for a Stronger Economy.*Accessed 12 10, 2015.
- NYS2100 Comission. 2012. NYS2100 Commission Recommendations to Improve the Strength and Resilience of the Empire State's Infrastructure. Policy Report, New York State Governor's Office.
- Reed, Andra J., Michael E. Mann, Ning Lin, Benjamin P. Horton, Kerry A. Emanueal, Andrew C. Kemp, and Jeffrey P. Donnelly. 2015. "Increased Threat of Tropical Cyclones and Coastal Flooding to New York City During the Anthropogenic Era." *Proceedings of the National Academy of Sciences of the United State of America*.
- Rishikof, Harvey, and Alexander Wohl. 1996. "Private Communities or Public Governments: "The State Will Make the Call"." *30 Val. U. L. Rev.* 509.
- Rodin, Judith. 2014. *The Resilience Dividend: Being Strong in a World Where Things Go Wrong.* New York: PublicAffairs.
- Security, United States Senate Committee on Homeland. 2006. *Hurricane Katrina: A Nation Still Unprepared*. Policy Report, Washington, D.C.: Unites States Government Printing Office.
- Sobel, Russell S., and Peter T. Leeson. 2006. "Government's Response to Hurricane Katrina: A Public Choice Analysis." *Public Choice, Volume 127, Issue 1* 55-73.
- The City of New York. 2015. *Appeal of FEMA's Preliminary Flood Insurance Rate Maps For New York City.* Policy Report, New York: The Mayor's Office of Recovery and Resiliency.
- The City of New York. 2014. *One City: Built to Last.* Policy Report, New York: Mayor's Office of Long-Term Planning and Sustainability.
- The City of New York, Mayor Bill DeBlasio. 2015. "One New York: A Plan for a Strong and Just City." Policy Report, New York.
- The City of New York, Mayor Michael R. Bloomberg. 2013. "PlaNYC A Stronger, More Resilient New York." Policy Report, New York.
- The Rockefeller Foundation. n.d. 100 Resilient Cities. Accessed 12 10, 2015.
- —. n.d. Rebuild By Design. Accessed 12 10, 2015.
- —. n.d. The Rockefeller Foundation, About Us, Judth Rodin. Accessed 12 10, 2015.
- USAID. 2012. "Building Resilience to Recurrent Crisis: USAID Policy and Program Guidance." Policy Report., Washington, D.C.

Walker, Brian, C.S. Holling, R Stephen Carpenter, and Ann Kinzig. 2004. "Resilience, Adaptability, and Transformability in Social-ecological Systems." *Ecology and Society* http://www.ecologyandsociety.org/vol9/iss2/art5/.