

THESIS

‘ONE THING HAPPENS, AND THEN ANOTHER ONE COMES RIGHT AFTER.’

ANTHROPOLOGICAL PERSPECTIVES ON VULNERABILITY,
RESILIENCE, AND SOCIAL JUSTICE FOR A LATINX COMMUNITY IN
POST-HARVEY HOUSTON

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ABSTRACT

‘ONE THING HAPPENS, AND THEN ANOTHER ONE COMES RIGHT AFTER.’
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The materially destructive and socially disruptive impacts of natural hazards run parallel to historical inequalities that put marginalized communities in harm’s way. The purpose of this thesis project is to gain insights into the role that chronic disaster conditions play in actualizing acute disaster impacts. I begin with a discussion of anthropological perspectives on disaster vulnerability and resilience and explore social justice and capabilities theory as a starting point to improve disaster recovery approaches. I use this framework to analyze my findings from conversations with residents of a low-income Latinx community in Houston, Texas that was impacted by Hurricane Harvey. Next, I discuss the approaches to disaster recovery employed by government agencies and community-based organizations (CBOs). I conclude this thesis with a discussion of how government agencies and CBOs can apply these insights to better support marginalized communities during disaster recovery.

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INTRODUCTION

The materially destructive and socially disruptive impacts of natural disasters are often shaped by historical processes whereby human practices have caused systemic inequities that are aggravated in times of crisis. The severity of disaster impacts often runs parallel to the inequitable distribution of disaster risk across lines of gender, race, class, and ethnicity (Barrios 2017a). The extent to which societies allocate resources and support capacities in a socially just way determines who is safe, who is at risk, and how various institutions manage risk to ensure the safety of their populations. When Hurricane Harvey struck low-income minority communities along the Houston Ship Channel in Houston, Texas, the storm's impacts revealed the patterns of long-standing inequalities that have led to poor minorities in the United States being disproportionately exposed to environmental risks. In disaster contexts where inequality increases vulnerabilities and reduces adaptive capacities and resilience for marginalized groups, effective disaster recovery initiatives require recovery agencies to better understand and explicitly address the structural problems that marginalize communities, place them in harm's way, and erect barriers to their resilience.

In this research project I will examine the disaster recovery experience of a Latinx community in Port Houston, a neighborhood in Houston, Texas that was affected by Hurricane Harvey. I will explore Port Houston residents' experience preparing for, enduring, and recovering from the storm. I will also explore how government disaster recovery agencies (referred to as 'government agencies' for the purposes of this discussion) and local community-based organizations (CBOs) approach their neighborhood work in pre- and post-disaster contexts. The purpose of this study is to gain insights into the role that chronic disaster

conditions play in actualizing acute disaster impacts, and to apply these insights toward solutions for government agencies and local CBOs to better support marginalized communities during disaster recovery.

This thesis is structured in five parts: it begins with this introduction, followed by three main chapters and a conclusion. In this introduction I will provide background information on the Houston Ship Channel Area, the neighborhood of Port Houston, and the majority-Latinx community who lives there. I will also provide details on Hurricane Harvey and its impacts on Port Houston. Lastly, I will discuss the research sample and methodology I used during this study.

Chapter 1 consists of a discussion of the theoretical framework that guided my research in Port Houston and my subsequent data analysis. I will explore anthropological perspectives regarding disaster and the root causes of disaster vulnerability. I will argue that the neoliberal ideology that has historically shaped U.S. culture and power structures is at the heart of the social inequalities that (re)produce disaster vulnerability. I will discuss how a shift in our conceptualization of vulnerability and resilience can shift the market-serving default of American institutional culture towards a people-centered approach that holds powerful social actors accountable for problematic disaster recovery outcomes. I will conclude the theory section with an exploration of how a framework informed by social justice and capabilities theory can help disaster recovery organizations to pursue transformative action for more socially just disaster recovery outcomes.

In Chapter 2 I will discuss the findings from my conversations with Port Houston residents. I will discuss five key, overlapping areas where residents navigate varying, often compounding challenges – cultural minority and immigrant status, housing, income and livelihoods, access to

aid, and health and environmental hazard exposure. I will discuss how the Port Houston residents I spoke to navigate these challenges in their daily lives, and how these issues shaped the impacts of Hurricane Harvey on different households in the neighborhood. I will also present my findings regarding residents' attachment to place and sources of wellbeing and belonging in Port Houston.

In Chapter 3 I will present the findings from my conversations with local CBO representatives and my review of Hurricane Harvey response reports published by various government disaster response and recovery agencies. I will discuss the disaster recovery pipeline and the roles and expectations of organizations operating within this process at different administrative levels. I will also contrast government agency approaches with those of local CBOs and argue for the importance of collaboration among federal, state, and community recovery organizations as an opportunity to enhance different organizations' strengths and improve disaster recovery outcomes. Finally, I will argue for the need to bridge cultural gaps between recovery agencies and disaster survivors as a way for recovery agencies to minimize human suffering during disaster recovery. I will conclude this thesis with a set of recommendations for future research.

Background

Building for business: chronic disaster in Houston's Ship Channel communities

Houston, Texas is the most flood-prone city in the U.S. Rapid, poorly planned growth and urban sprawl, the paving of environmentally sensitive areas, and the prioritization of market-driven land use over proactive flood control have led to frequent and severe floods over the past several decades, causing numerous deaths and billions of dollars in damage every year (Berke 2017; Olson 2018). The Houston region holds the largest petrochemical manufacturing complex in the Americas. The Port of Houston is one of the busiest seaports in the world, with nearly 200

private companies engaging in petrochemical activity along the 52-mile Houston Ship Channel. According to the Port of Houston's official website, the port generates 3.2 million jobs and \$801.9 billion in economic value each year.

The Houston Ship Channel is an area where low land prices and Houston's market-friendly lack of zoning regulations (Wallace Brown 2020) have historically attracted both low-income residents seeking affordable housing and industrial facilities seeking to minimize operational costs. Due to historical racial discrimination in the U.S., many of these low-income neighborhoods are home to communities of color (Bullard 2000; Mankad 2017; Mohai & Bryant 1992; Mohai et al. 2009) and are located within one mile of an industrial facility, including hazardous waste generators and dischargers of cancer-causing and neurotoxic substances (City of Houston 2003; UCS & t.e.j.a.s. 2016; Whitworth et al. 2008). Residents often rely on these facilities for their livelihoods, which expose them to health and environmental hazards at work as well as at home. Research shows a high incidence of childhood cancer, respiratory illnesses, and chronic migraines in ship channel communities (UCS & t.e.j.a.s. 2016; Whitworth et al. 2008).

The Houston Ship Channel area illustrates "the power of the market to author society (Kroll-Smith 2018, 31)" via public policies that prioritize economic development over the safety and well-being of marginalized populations. The placement of low-income communities of color in a hazardous location by market forces is not a random, neutral occurrence. In the U.S., where groups of people have historically been segregated and disadvantaged based on race and ethnicity, present-day socioeconomic and environmental inequalities follow those same lines (Faas & Barrios 2015; Bullard 2000; Mohai & Bryant 1992; Mohai et al. 2009; Peterson & Maldonado 2016). The demographic makeup of ship channel communities, as well as the inextricability of their housing and livelihood opportunities from environmental hazard exposure,

speak to the city's values and priorities. The city's failure to proactively legislate to prevent the hand of the market from placing these communities in harm's way – and the city's failure to correct the situation once it has occurred – constitutes a tacit acceptance of this arrangement because of its convenience for market interests. By historically and systemically creating and maintaining certain groups of people as a labor underclass, decision-makers reveal whose risk and exposure they consider acceptable and whose marginalization they consider justifiable for the sake of market interests.

Institutionalized, systemic causes for long-term suffering are not often considered disasters. The communities of color who live in portside neighborhoods often live their lives in marginal conditions that can be described as contexts of chronic disaster (i.e. poverty, discrimination). These communities must often navigate circumstances that limit their life choices and prevent them from acting in their own best interest, negatively impacting their wellbeing across all aspects of everyday life. If disaster response and recovery organizations are to effectively support household preparedness and recovery in the face of an acute disaster, it is crucial for them to contextualize their response according to the compounding effects of place- and community-specific chronic disaster conditions on acute disaster impacts.

Port Houston

Port Houston is a ship channel community located in eastern Houston. 91% of Port Houston's approximately 5,000 residents are Latinx (Rodriguez 2018), and over half of the community lives below the poverty line (City of Houston 2003). The neighborhood consists of a grid of approximately 20 streets that traverse McCarty Street, an industrial access road that connects the neighborhood to Market Street and the I-10 Freeway to the North, and to Clinton

Drive and the 610 Freeway to the South (see neighborhood map, Figure 1). These roads are the only two access points to the neighborhood.

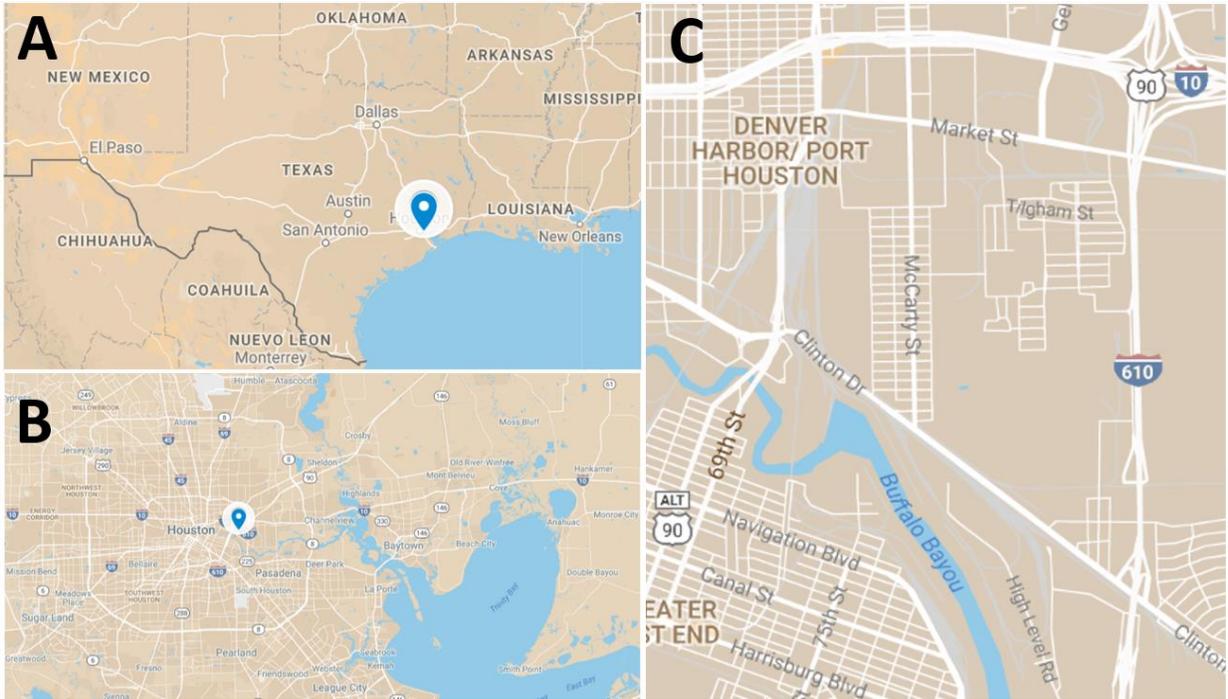


Figure 1. Maps showing the location of Port Houston. A. Location of Port Houston marked on the state of Texas; B. Location of Port Houston marked on the city of Houston; C. The Port Houston neighborhood consists of a series of streets traversed by McCarty Street, which connects the community to Market Street to the North and Clinton Drive to the South. These are the only access points to the neighborhood. Source: Google Maps. 2018. Denver Harbor/Port Houston (Houston, TX). Retrieved from: <https://goo.gl/Lo9Fsk>

Official government data presents Port Houston as an area of minimal flood hazard (FEMA 2017) and community residents emphasize that the neighborhood has not traditionally been prone to flooding during hurricanes. The experiences of Port Houston residents during and after Hurricane Harvey speak to the severity of the storm and reflect the wide range of factors that can shape household capabilities to prepare for, endure, and recover from an acute disaster. None of Harvey's impacts in Port Houston can be discussed as separate from the everyday realities of life in this neighborhood.

Hurricane Harvey: acute disaster impacts in a context of chronic disaster

On August 26, 2017, Hurricane Harvey made landfall along the Texas coast and poured a historic 50 inches of rainfall over southeastern Texas, including the city of Houston. These rains caused catastrophic flooding, killing at least 68 people and causing approximately \$125 billion in damages – making it the second-most costly hurricane in U.S. history after Hurricane Katrina in 2005 (Blake & Zelinsky 2018).

Port Houston residents state that the neighborhood endured continuous rains for one week as a result of Harvey. McCarty Street and its connecting roads and freeways were submerged, making travel into and out of the neighborhood impossible until the floodwaters receded days later. Residents commented that their streets and homes flooded to varying degrees during the storm, ranging in depth from a few inches to up to four feet. Poorly maintained and clogged drainage ditches in the neighborhood contributed to this issue (Lee 2018). Impacts were not uniform within the neighborhood, with severity of flooding or home damages varying sometimes between households on the same street.

Port Houston is considered a food desert, with a significant number of low-income residents living more than one mile away from a supermarket and lacking vehicle access to seek alternative food sources elsewhere (USDA 2015). Residents that ran out of food while waiting for floodwaters to recede had to resort to expensive, poorly stocked local convenience stores. The ship channel is also a low-lying drainage area, making these neighborhoods some of the last for floodwaters to recede and exposing them to toxic substances likely carried by floodwaters and left behind in the soil (Hersher 2017; Schlanger 2017).

Neighborhood residents dedicated up to three weeks to cleanup activities after the storm. While most considered that it took one month for the neighborhood to return to a state that they recognized as normal, many people expressed that Harvey's impacts, including debris in

neighborhood yards and structural damages to homes, were still visible six months after the storm and beyond. In-depth conversations with Port Houston residents revealed that, while neighborhood functioning may have returned to a state most residents recognized as normal, some households were still reeling from the traumatic experience a year after the storm.

The variation in storm impacts between households in the same neighborhood reflects the role that chronic disaster conditions play in actualizing acute disaster impacts at the household level. This variation also presents an additional challenge for organizations to effectively targeting aid and resources to affected households, especially when organizations lack community relationships and place-based knowledge to inform their response and recovery activities.

Sample and Methodology

The anthropological study of disaster highlights the ways in which both the creation of disaster risk and the disaster recovery process are shaped by culture, social organization, and the compatibility between culturally dominant institutions and cultural minority communities. I used ethnographic field methods to conduct a qualitative exploration of how Port Houston residents, CBOs, and government agencies can best address vulnerabilities and support resilience during disaster recovery. This anthropological approach allows for the identification of the real-world impacts that expert practices can have on marginalized communities, opening them to reflection and improvement.

Due to time and funding limitations, it was not feasible for me to study a large enough sample to produce results that were representative and generalizable across Port Houston. For this reason, I approached this research as an initial exploration of disaster recovery for disadvantaged cultural minority households to identify areas for further study regarding how

households, CBOs and government agencies can best use their resources to mitigate community vulnerabilities and support resilience in the aftermath of a disaster. The sample for this study included nine Latinx women who live in Port Houston and whose households were impacted by Hurricane Harvey, as well as two CBOs that have worked with the neighborhood and have engaged with government disaster response and recovery systems. These CBOs were Port Houston Community Center (PHCC) and Texas Center for Social Justice (TCSJ). I also interacted with numerous other Port Houston residents and with two other CBOs that had not worked directly with the neighborhood. The data from these interactions served to provide additional context for the data collected through semi-structured interviews with the nine Port Houston women and two CBOs that had worked more directly with Port Houston residents.

I further informed my data analysis by reviewing secondary sources that detailed the activities, responsibilities, and recommendations of government agencies following Harvey. These documents provided further insights into the priorities and cultural assumptions that underlie disaster response and recovery mechanisms at the state and federal levels, shedding light on the challenges facing disadvantaged cultural minority households attempting to navigate official disaster recovery systems.

Field work for this project was divided into two two-week phases to capture the community's experience surrounding themes of vulnerability and resilience at various points during disaster recovery. The first two-week visit took place six months after the storm. During this visit, I sought to learn about disaster recovery as a lived experience at the household level from the perspective of community residents, as well as from the perspective of CBOs that worked to respond to residents' needs after the storm. The second two-week visit took place 18 months after the storm. During this second visit, I followed up with community residents and

CBOs to learn about their perception of their disaster recovery progress and to gain a better understanding of the elements of community belonging that kept residents in the neighborhood, especially after a slow and difficult disaster recovery.

I conducted field work in English and Spanish, based on participant preference, to address any language barriers that may have otherwise limited the voices and experiences represented in this study. I identified research participants through their involvement with local CBOs and through neighborhood canvassing. I interviewed participants once and then asked them if they wished to participate in a follow-up interview. Each interview lasted up to two hours. Each participant also completed a household survey, which took approximately 30 minutes to complete. The total approximate time commitment for participants over the course of the study was 5 hours.

I chose to interview Latinx women residents of Port Houston because this segment of the population faces unique challenges during disaster recovery in a context of socioeconomic vulnerability and evolving social roles and structures. Latinx women face historical minority exclusion and institutionalized gender-based economic disadvantages, leading to a higher risk of economic insecurity, workplace risk, and reduced access to benefits such as health insurance and other social services. The negative impacts of these disadvantages on Latinx women's economic, physical, and mental well-being often extend to their children, stressing the importance of supporting this demographic during disaster recovery (Angel & Angel 2009).

During this research I encountered women who are undocumented immigrants. While these women were not the target focus for the study, undocumented immigration status did not constitute an exclusion criterion. Due to the sensitive nature of the subject, I did not ask participants any direct questions about their immigration status. Instead, I allowed participants to

share – of their own accord, to the extent that they felt comfortable, and without further probing from me – details about how their immigration status impacted their lives and their disaster recovery experience. To minimize privacy risks to research participants, I used verbal consent instead of signed consent forms and I did not collect any names or personal identifiers. Audio interview recordings were handled confidentially and for transcription purposes only. Any potential personally identifiable information was removed during interview transcriptions, and audio recordings were then destroyed. Data collected through surveys and during participant observation also excluded any personally identifiable information.

I also interviewed CBO representatives who had a history of working with the community, including during and following Harvey. I chose to interview these CBO representatives because their daily engagement with the community provides them with a well-informed, nuanced perspective on the community's way of life and disaster recovery experience. At the same time, CBOs can provide valuable insights into community experiences with government agencies thanks to their role as culture brokers bridging the needs of the community with government aid structures and mechanisms. By engaging with this often-marginalized group of people and the organizations that support them I sought to uncover challenges and experiences which may have otherwise remained hidden, and which are crucial to inform effective and compassionate disaster response and recovery.

Community resident interviews took place in the participant's home, unless they specified a different preferred location. Interviews with CBO representatives took place at the participant's workplace, unless they specified a different preferred location. All interviews were conducted away from other people to avoid any situation that could compromise participant confidentiality or influence their responses. To protect the privacy of community residents,

CBOs and their representatives in this thesis document, names have been changed and personally identifiable information has been removed.

Ethnographic research methods

The research protocol for this study was reviewed and approved by the Institutional Review Board at Colorado State University. The methods I used to conduct this research include participant observation (which provided insight into participants' interactions with their environment and social networks), semi-structured ethnographic interviews (which explored aspects of community life before, during, and after Harvey), a household survey (which addressed aspects such as financial impact and recovery after Harvey), free-listing and pile-sorting exercises (which were conducted alongside the semi-structured interviews to gain a deeper understanding of the sources of vulnerability and resilience experienced by community residents during disaster recovery), and semi-structured interviews with CBO representatives (which explored what their community support work entails, their strengths as community builders, and the challenges they faced both in their daily work and in the aftermath of Harvey). This combination of methods allowed me to gain unique insights into the social, cultural, political, and economic dynamics that shape interactions among and between community residents, CBOs, and government agencies; aspects of household and community life before, during, and after Harvey; how CBOs and government agencies have engaged with both short- and long-term community needs; and the challenges that community residents, CBOs, and government agencies faced after the storm.

I conducted a qualitative analysis of interview data using Maxqda to identify patterns regarding the key issues that shape the daily struggles for Port Houston households; the reasons behind residents' attachment to Port Houston; and the key ways in which CBOs approach their

work with the community to pursue transformative disaster recovery and community development outcomes. The data I collected through the household survey and free-listing and pile-sorting exercises complemented the data I collected through participant observation and semi-structured interviews. The data collected through the survey provided useful quantitative elements to complement interviewees' stories, such as the monetary value of damaged belongings or lost wages after the storm. The free-listing and pile-sorting exercises allowed interviewees to share their experiences using their own words to reflect their lived experience more faithfully. These exercises also enriched my understanding of the stories that participants shared with me during participant observation and semi-structured interviews by creating more spaces in my interactions with them to spotlight their voices and experiences.

CHAPTER 1: THEORETICAL FRAMEWORK

Disaster

Disasters are large-scale, expensive, public, and traumatic events that take place at the intersection of human populations and a potentially destructive hazard that is part of a total ecological system (Matthewman 2015; Oliver-Smith & Hoffman 2002). This human-hazard intersection, however, does not inevitably produce a disaster. A disaster becomes unavoidable “in the context of a historically produced pattern of vulnerability, evidenced in the location, infrastructure, sociopolitical organization, production and distribution systems, and ideology of a society” (Oliver-Smith & Hoffman 2002, 3). The anthropological study of disasters seeks to uncover the root causes of avoidable disasters to protect collective human well-being, considering what risks confront us, who will be hardest hit, and who is at the center of decision-making and mitigation practices (Matthewman 2015; Wisner et al. 2004). The differentiation between hazards and their potentially disastrous human impacts is a useful theoretical starting point. Oliver-Smith and Hoffman (2002) define disaster as

a process/event combining a potentially destructive agent/force from the natural, modified, or built environment and a population in a socially and economically produced condition of vulnerability, resulting in a perceived disruption of the customary relative satisfaction of individual and social needs for physical survival, social order, and meaning (Oliver-Smith & Hoffman 2002, 4).

Hazard, on the other hand, is defined as

the forces, conditions, or technologies that carry a potential for social, infrastructural, or environmental damage. A hazard can be a hurricane, earthquake, or avalanche; it can also be a nuclear facility or a socioeconomic practice, such as using pesticides. The issue of hazard

further incorporates the way a society perceives the danger or dangers, either environmental and/or technological, that it faces and the way it allows the danger to enter its calculation of risk (Oliver-Smith & Hoffman 2002, 4).

When studying disasters triggered by natural hazards, there is a danger in separating ‘natural’ disasters from the social frameworks that shape how hazards affect people, placing excessive emphasis on the natural hazards themselves, and not enough on the social environment that played a role in actualizing the hazards’ human impact (Wisner et al. 2004). Labeling major damaging events as ‘natural’ obscures the social and economic structures that are the root causes of unequal vulnerabilities (Olson 2018). Disaster anthropologists argue that a society’s pattern of vulnerability conditions the behavior of individuals and organizations throughout a disaster more than the physical force of the hazard (Browne et al. 2019; Oliver-Smith & Hoffman 2002).

When hazards threaten and disasters occur, they reveal the nature of a society’s social structure, including the distribution of power evident in the differential vulnerability of groups and the allocation of resources in reconstruction. They also offer a unique view of a society’s capacities for resilience in the face of disruption and the relationship between the ideological and the material (i.e. public institutional discourse versus lived experiences at the household or community level) (Browne et al. 2019 Oliver-Smith & Hoffman 2002).

In order to better understand disasters and how to prevent or mitigate them, it is essential to view them as multidimensional processes that affect every aspect of human life, impacting environmental, social, economic, political, and biological conditions. The term ‘disaster’ includes events and processes that range from slow-onset phenomena (like poverty and discrimination) to rapid-onset events (like a hurricane or a flood) (Oliver-Smith 2002). It is crucial to understand disasters not as extraordinary events separate from everyday living, but

rather as additional burdens placed on populations with varying capacities to cope with and recover from disaster impacts.

Disasters disclose fundamental features of society and culture in the intensity of their impact and the stress of recovery and reconstruction. Groups of people experiencing everyday disasters (such as poverty, hunger, disease, or conflict) suffer repeated, multiple, mutually reinforcing, and often simultaneous shocks to their families, communities, and livelihoods. These compounding challenges erode whatever economic and human development attempts have been made at the household level to brace for crisis situations that repeatedly destroy assets and resources (Browne 2015; Matthewman 2015; Oliver-Smith 2002; Wisner et al. 2004). Such is “the daily and unexceptional tragedy of those [who suffer] through ‘natural’ causes, but who, under different economic and political circumstances, should have [...] enjoyed a better quality of life” (Wisner et al. 2004, 3).

Human action often exacerbates this pattern of frequent and compounding stresses, brought on by a variety of ‘natural’ trigger mechanisms. Rather than taking the physical hazard as the starting point, researchers must uncover the ways in which political, economic, and social systems operate to turn natural hazards into human disasters by placing people in harm’s way (Browne et al. 2019; Wisner et al. 2004). Researchers must also challenge the culturally embedded assumptions that disasters are a ‘natural’ part of the rhythms of destruction and reconstruction that preserve and reinforce a particular set of unequal social relations that are key to the nation’s economic productivity but continue to harm certain groups of people in their wake (Rozario 2007; Steinberg 2000).

The current ways in which human systems interact with earth systems increase disaster risk while hindering the ability of some groups to ensure their safety (Matthewman 2015). Disasters,

both natural and technological, are becoming more frequent and more serious as they impact ever-larger numbers of people in conditions of increasing vulnerability around the world. Global trends show that disasters are increasing in frequency, scale, cost, and severity as wealth disparities, growing population numbers, urbanization, resource depletion, and anthropogenic climate change increase people's exposures to hazards (Olson 2018; Wisner et al. 2004).

Wisner et al. (2004) consider that there is often a reluctance to address the social and economic factors shaping disaster risk because it is more politically expedient (i.e. less difficult for those in power) to focus on the technical factors that deal with natural hazards. A transformative approach that lifts people away from the daily disasters that place them in circumstances more vulnerable to disaster impacts usually requires radical policies that alter the way that power operates in a society (Browne 2015; Wisner et al. 2004). For such a transformation to take place, we must examine the neoliberal values at the core of dysfunctional disaster response and management strategies that promote a cycle of death and destruction while normalizing class and race injustices (Rozario 2007; Steinberg 2000). It is also crucial to acknowledge the market-driven frameworks that govern our social, political, and economic lives – mechanisms that make disasters more likely to occur and enable only the market-visible (i.e. wealthy) to shield themselves from the catastrophic impacts of natural hazards (Klein 2007; Matthewman 2015).

Neoliberalism and the market-ordered society

Neoliberalism is an economic order that holds markets as the superior mechanism for resource allocation and welfare maximization (Evans and Sewell, Jr. 2013). This system strives to move public functions into private hands, using market-style competition to address regulatory and social problems (Gotham 2012). The neoliberal frameworks that govern the world's social,

political, and economic landscapes promote an interaction between human and earth systems that increase disaster risk while privileging the safety of some groups over others. The neoliberal ideological transformation of global social identities has reinforced the political power of neoliberalism as a policy paradigm, with aggressive economic and social policies that expose communities to the volatility and irrationality of the market, hinder wealth redistribution and obstruct equitable development. At the same time, it has enabled private elites to control public policy and shift public resources in their favor, while undermining public institutions that support collective social development (Evans and Sewell, Jr. 2013).

As the world continues to pursue an economic system that requires constant growth while rejecting environmental and social regulations, a steady stream of human and natural disasters is to be expected. Privatization is an element of neoliberalization that has become a central feature of emergency management and disaster recovery. The diminishing role of nonprofit and state actors in disaster recovery is concerning, as disaster contexts provide strategic spaces where private actors can secure a favorable policy environment and undermine the state's capacity to undertake disaster-related functions (Klein 2007). Gotham (2012) argues that the privatization of disaster recovery "is a process of 'downsizing democracy' (Gotham 2012, 635)" as policies increasingly address disaster survivors not as citizens and members of an aggrieved community, but as customers, clients, and consumers. This process obscures liability and accountability for problematic post-disaster outcomes while nurturing a new market of entrepreneurs that view disasters as major opportunities for profit and sources for corporate planning and investment (Browne 2015; Gotham 2012; Klein 2007).

Klein (2007) presents the social and economic revelations following disasters not only as an unveiling of the present's perpetuation of past injustices, but also as a foreshadowing of a future

based on the divergent values that present societies assign to different categories of people. She warns that when disaster strikes in a society shaped by neoliberal ideology, the distribution of vulnerability and well-being is contingent on wealth. Kroll-Smith (2018) echoes this argument, stating that societies organized in service of a market economy require a base of social inequality structured by market priorities. When a natural hazard upsets this unequal social structure, market-driven disaster recovery will prioritize material over human interests, restoring pre-disaster conditions of market-serving inequality rather than seizing the opportunity to rebuild more equitable communities.

Gotham (2012) challenges the perception of neoliberalization as a neutral policy adjustment and presents it instead as a force that reinforces relations of domination and subordination, with “the tyranny of the bottom line and the single-minded pursuit of profit [organizing and motivating] decision-making [...] in a way that compromises the best interest of the disaster-stricken public” (Gotham 2012, 642). From a neoliberal perspective, it is the disruption of market-serving roles and structures that constitutes a disaster, and it is the restoration of these roles and structures that constitutes disaster recovery. A social order structured around the logic of the market – which is aimed at material priorities – will struggle to follow said logic to ease human suffering in times of crisis. The material and symbolic differences necessary for the well-being of a market society are so deeply embedded in American cultural fabric that willful, intentional acts of recovery discrimination are not necessary to re-create durable inequality following a catastrophe (Kroll-Smith 2018).

As disasters continue to lift social, political, and economic veils, they urge us to consider the mechanisms that make certain groups more vulnerable to disaster than others, while simultaneously making disasters more likely to occur. More compassionate approaches to

disaster recovery are especially needed at a time when extreme weather events are expected to increase due to climate change. Disasters can be an opportunity for social learning and change due to their tendency to encourage prosocial behaviors, as long as the drive for profit does not overcome the public pursuit for the collective good during disaster recovery (Browne 2015; Klein 2007; Kroll-Smith 2018; Matthewman 2015).

The same social processes that shape communities before disasters shape post-disaster outcomes. At the same time, disasters trigger political processes that determine if, when, and how families are able to return and rebuild their lives and communities. Recovery processes controlled by government-corporate-elite entities that lack in transparency and representation of affected communities can produce greater inequities than existed prior to a disaster. There is a need to address rationales that justify inequitable treatment of communities impacted by disasters, particularly negative narratives that conflate deserving and undeserving communities with racial and ethnic composition, socioeconomic status, leadership, and political affiliations (Weber 2017). A transformative approach would require decision-makers to shift their current roles as facilitators for the interests of the private sector and the use of market-serving social roles and structures as primary indicators of resilience and recovery.

Vulnerability

The concept of vulnerability draws attention to inequity and the sociohistorical production of disasters (Marino & Faas 2020). Wisner et al. (2004) define vulnerability as “the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard” (Wisner et al. 2004, 11). Disaster anthropologists emphasize that this definition should be understood as the characteristics of a person or group *relative* to the characteristics of their situation. Rather than creating taxonomies

of embodied qualities that constitute vulnerability, the focus should be on how specific circumstances can impact different groups of people in different ways to create situations of vulnerability that people move into and out of over time.

The distinction between embodied and circumstantial vulnerability is an important one because it recognizes the agency, capabilities, and persistence of people and local institutions and avoids framing people as limited, passive and incapable of bringing about change (Browne 2015; Enarson et al. 2007; Marino & Faas 2020; Wisner et al. 2004). A focus on embodied vulnerability in marginalized groups fails to capture the active role that the dominant culture's actors play in marginalizing certain groups and creating circumstances of vulnerability. This omission places the burden of vulnerability – and the responsibility of 'fixing it' – on those who have been marginalized rather than on the actors who explicitly or implicitly perpetuate the inequitable distribution of risk. Marino and Faas (2020) argue that there is

...an acute perversity— and an implicit whitewashing—to envisioning vulnerability as an attribute of a people or place in need. [...] When communities are defined as 'vulnerable,' they are necessarily, if often invisibly, defined in opposition to nonvulnerable communities, implicitly conceived as the corrupt, passive, powerless, deficient inverse of resilient communities. [...] Locating vulnerability within geographies, neighborhoods, social identities, or even bodies renders those geographies, neighborhoods, identities and bodies as 'weak' or 'risky (Marino & Faas 2020, 4).'"

A social vulnerability perspective considers the contextual and situational dimensions of pre-existing social divisions and power relationships that distribute disaster risk in a society (Enarson et al. 2007). Historically rooted causes of vulnerability manifest through social, political, and economic processes that are driven by ideologies that produce, reproduce, and sustain political

and economic systems by distributing access within societies to power, structures, and resources. (Browne et al. 2019; Oliver-Smith 2002; Wisner et al. 2004). Social categories do not shape hazard vulnerability because of the ways different people may embody them; social categories shape hazard vulnerability because of the ways dominant institutions and power structures marginalize those categories. It is thus more useful to think of social categories like race, ethnicity, and class as dynamic structuring features of society – active circumstance creators – rather than fixed demographic characteristics indicating embodied hazard vulnerabilities (Bolin 2006). Bolin (2006) considers that disaster vulnerability research needs to shift its attention away from statistical *differences* between groups and focus instead on the pervasive social *inequalities* that produce measured difference to begin with. He warns that research as usual will continue to render invisible the complex mechanisms by which different categories of people are disadvantaged in relation to hazardous environments. Wisner et al. (2004) argue that disaster studies must shine a spotlight on the political reluctance to address the social factors shaping the root causes of vulnerability, such as altering the way power operates in a society.

In line with these critiques, Marino & Faas (2020) propose a transformative theoretical approach to vulnerability in disaster anthropology that “conceives of vulnerability not as a community, neighborhood, people, or bounded domain subject to risk or harm, but rather as assemblages of diverse subjects, institutions, materials, and meanings that are vulnerable to [committing] acts of oppression, suppression, theft, and erasure” (Marino & Faas 2020, 2). When defining vulnerability, it is important to question whether the very act of labeling communities that suffer the burdens of history as ‘vulnerable’ in effect compounds these historical burdens, while failing to demand transformative action from the actors perpetuating systems of oppression.

[I]dentifying or labeling particular cultural groups, neighborhoods, or geographical locations as ‘vulnerable’ can in itself constitute an act of marginalization and oppression, and mistakenly focus attention on the experiences and ‘cultures’ of the communities exposed to risk, rather than on the significantly more vast assemblage of culture-bearing actors and institutions engaged in the (re)production, distribution, and contestation of risk, resources, and possible futures. [...] [F]ocusing on the culture of ‘vulnerable communities’ can effectively obscure culturally-steeped bureaucratic logic (Marino & Faas 2020, 2).

The root causes of disaster vulnerability – and thus the opportunity for transformative action – do not rest in the minority status of a community, but rather in the power-imbalanced relationship where the dominant system marginalizes that community because of its ‘otherness’ relative to the dominant culture’s values and social, political, and economic interests. This approach to vulnerability recognizes the capabilities and the resilience of communities who persist, not only in the aftermath of acute disasters, but also in the face of unequal power structures that continue to establish and re-establish the conditions that subject them to chronic disasters like poverty and discrimination. This approach also shifts the spotlight onto the more powerful actors in disaster recovery relationships and challenges their accountability for problematic disaster recovery outcomes.

In line with this approach, throughout this thesis I will not speak of a community that is vulnerable because of its cultural minority or low-income status. Instead, I will speak of the relationship space between government agencies and this community, where the cultural baseline of government bureaucracies clashes with the lived experience of a community that does not fit the dominant culture’s standard mold for being worthy of help. I will discuss the ways in which the powerful actors in that relationship are vulnerable to reproducing patterns of discrimination

and disadvantage, emphasizing the government agency as the actor that holds the power – and, thus, the responsibility – to choose different, more socially just disaster recovery outcomes. I will also contrast the government-community relationship with the CBO-community relationship, identifying the ways in which the latter can serve as an example for government agencies to improve the areas where they are vulnerable to perpetuating systems of oppression.

Resilience

Resilience is a concept which originated in the field of ecology and generally refers to a system's ability to bounce back to its original state after a disturbance. While the concept is increasingly viewed as a relevant perspective to social processes (Brown 2014), there are theoretical gaps between the ecological roots of resilience and its application to social contexts. Disaster anthropologists argue for the need to recognize resilience as a socially contingent process to be continuously supported rather than a fixed outcome to be achieved; to emphasize system transformation rather than persistence; and to focus on systemic rather than direct causation (Brown 2014; Cox & Perry 2011; Lakoff 2012). Failure to address these theoretical gaps when applying the concept of resilience to a post-disaster social context risks prioritizing the preservation of the status quo (i.e. system persistence) rather than seeking transformative change to address root causes of vulnerability.

A theory of social resilience acknowledges the ways in which agency and power asymmetries determine the structural and political dynamics of disaster recovery (Brown 2014). Rather than focusing on individual capacities to withstand disaster impacts on a physical or material level, this approach highlights the crucial roles of relationships and elements of ritual and place in mediating community well-being and preserving community identity post-disaster (Browne 2015; Cox & Perry 2011; Falk 2015). Falk (2015) argues that while rebuilding physical

structures after a disaster is of great necessity, building human resilience can be of greater significance, as “[human] networks have been shown to be more sustainable than buildings” (Falk 2015, 173).

The role of relationships in resilience building

Browne (2015) and Falk (2015) present resilience as a function of a person’s social and cultural support network, which creates a sense of belonging through groups that create bonding social experiences and provide access to leaders and resources. Such groups can become lifelines for many months after an acute disaster has devastated the fundamental conditions for people’s lives, including routines, livelihoods, and valued belongings. Social networks ultimately support individual resilience, which Falk defines as the ability to be mentally flexible and maintain a sense of equilibrium and stability after a disaster.

Ritual is another key element of both individual and collective resilience building through relationships. Rituals and ceremonies reinforce bonds between individuals, embodying attachment to family, community, and society, and reflecting unity in the journey away from the disaster. Rituals create a safe and contained space where trauma is recognized and can become metaphors for transformation and change, helping people to find meaning in both individual and collective loss as they construct their new post-disaster reality (Browne 2015; Falk 2015). In this way, social networks, self-help groups, rituals, and ceremonies are interconnected building blocks of resilience.

The role of place in resilience building

Place plays an important role in preserving identity, relationships and belonging during disaster recovery (Barrios 2017b; Browne 2015; Falk 2015; Fullilove 1996). Place can be defined as “the sum of resources and human relationships in a given location [that] set the

conditions for human consciousness... [and] provides the physical structures within which human relationships unfurl” (Fullilove 1996, 1518). Connection to place comes from deep, social, bonding ties that embed people within society and motivate them to stay in a particular location after a disaster (Barrios 2017b; Browne 2015; Falk 2015).

Individuals are connected to their environment through the development of intimate knowledge that provides familiarity – a cognitive map on which people rely to move through space. Attachment to place also comes from a series of emotions and behaviors that relate to a person’s environment as a source of protection and satisfaction. People develop identities that are deeply rooted in place and integrate their life experiences, relationships, and aspirations within their environment (Fullilove 1996).

Disruptive events and environmental upheaval can threaten people’s connection to their environment and the well-being they derive from it. The loss of homes, communities, and familiar surroundings is disorienting and distressing, and can lead to feelings of alienation (a collapse of self-pride and identity resulting from the loss of place). Disaster recovery that disintegrates and displaces communities poses a serious threat to human well-being. Loss of place, cultural space, and identity can have harmful, lasting effects for current and future generations (Barrios 2017b; Browne 2015; Cox & Perry 2011; Falk 2015; Fullilove 1996; Peterson & Maldonado 2016).

A social resilience approach to disaster recovery demands consideration of place reorientation as a key facet of recovery. Fullilove (1996) argues that the mental health community must prioritize mental health protection and restoration for displaced individuals and communities during disaster recovery, by re-establishing a health-promoting environment and affirming each person’s sense of belonging to place. It is important to avoid disaster recovery

approaches focused solely on material or financial elements that obscures the psychosocial recovery process of disaster survivors and undermines long-term community resilience (Barrios 2017b; Browne 2015; Cox & Perry 2011).

Discourses of resilience in constructions of disaster recovery

The discourses that shape approaches to disaster recovery can reveal the cultural baseline from which top-down bureaucratic logic operates (Barrios 2017b; Browne 2015; Marino & Faas 2020). Wisner et al. (2004) argue that notions such as ‘disaster management cycle’ and terms such as ‘rehabilitation’ and ‘recovery’ are technical constructs imposed on different cultural, economic, and political realities, and that these constructs risk neglecting the complex lived reality of disaster and can fail to engage local people in a community construction of disaster recovery. Western thinking tends to place a market-serving emphasis on individualism and self-reliance through material and financial rebuilding that seeks to ‘rewind’ the impact of the acute, physical hazard rather than transform root causes of chronic, systemic vulnerability through community relationship building (Barrios 2017b; Browne 2015; Falk 2015; Kroll-Smith 2018). The notion that everything should return to the way it used to be prior to the disaster creates obstacles to community resilience and the relief of suffering. Recovery processes that fail to question dominant discourses that emphasize economic concerns over social ones will encourage resilience as system persistence, reinstating pre-existing power structures and inequities (Cox & Perry 2011; Falk 2015).

An alternative, social resilience approach views disaster recovery as a process- rather than an outcome-based approach to finding a ‘new normal’ that supports both individual and collective well-being, reorientation, and belonging in the aftermath of a disaster (Barrios 2017b; Browne 2013, 2015, 2016; Falk 2015). Disaster recovery actors at federal, state, and local levels

must remain vigilant of recovery discourses controlled by market-serving economic concerns (i.e. system persistence through individualized material or financial capability), which risk reinstating pre-existing inequalities and disregarding holistic community wellbeing. This risk can be avoided by following a processual approach to resilience grounded in community relationships (i.e. system transformation through collective social resilience), prioritizing community engagement, identity, and belonging in shaping meanings and constructions of disaster recovery from the ground-up – what Fullilove (1996, 1521) calls ‘empowered collaboration’.

Resilience for radical social transformation

Cox and Perry (2011) argue for a serious consideration of the disorienting effects of environmental and social upheaval on disaster affected communities, and how recovery decision-making shapes both immediate experiences for survivors and long-term consequences for their communities. In such key moments, resilience thinking stands at a juncture between perpetuating existing systems or supporting social transformation. Social transformation involves shifts in perception and meaning, power relations and institutional arrangements, and changes in lifestyles, norms, and values. Resilience as an organizing concept for radical social change emphasizes social learning and prioritizes relationships and social justice in favor of transformative, inclusive, and dynamic community planning and policy-making (Barrios 2017b; Brown 2014; Browne 2015; Browne et al. 2019; Cox & Perry 2011). This approach targets contradictions in dominant discourses of resilience in science and policy that fail to address root causes of vulnerability.

A theory of resilience that encompasses contemporary understandings of stress, adaptation, wellness, and resource dynamics promotes community resilience as a process that

supports adaptive capacities to ensure a population's quality of life after a disturbance. The way forward for disaster recovery guided by social resilience lies in reducing risk and resource inequities, engaging local people in mitigation, and boosting and protecting social supports (Browne 2015; Norris et al. 2008). Furthermore, the short- and long-term impacts of recovery decision-making on structural and social inequities must be considered, aiming to apply resilience and reorientation as a transformative negotiation of identity and belonging in the wake of disaster (Barrios 2017b; Cox & Perry, 2011; Norris et al. 2008).

Browne (2015) and Marino (2015) emphasize the institutional responsibility of state and federal governments to ensure the protection of community residents during disaster recovery. Communities do not experience disasters in fragmented ways; therefore, fragmented disaster responses and constructions of recovery should not be considered 'good enough,' but rather a starting point to be continuously improved upon. Local, state, and federal disaster response and recovery agencies must develop clear protocols that allow for the flexibility to respond to place-specific circumstances and place decision-making power in the hands of residents. These agencies can address their risk of neglecting holistic community well-being in their pursuit of purely material or economic recovery by informing their response through community relationship-building that sheds light on bureaucratic blind spots and how to address them. In this way, social resilience thinking can guide a transformative negotiation of both individual and community identity and belonging in the wake of disaster, using a people-centered framework in which human and environmental rights are upheld, knowledge sharing is encouraged, and the diversity of the communities involved is honored and respected (Browne 2015; Peterson & Maldonado 2016).

Social justice

Just as vulnerability is historical, intersectional, and multi-faceted, resilience is the cumulative outcome of a high-functioning social fabric that has been supported and preserved at the community level. When social power structures erect barriers to justice, they obstruct the capabilities that people are able to act upon to prepare for, endure, and recover from a disaster. We can use the concept of social justice to challenge the assumption that every household experiences a disaster from (and afterwards returns to) a non-disastrous reality. The concept of social justice provides a useful framework to explore the systemic barriers that produce vulnerability and hinder resilience for households and communities who experience acute disaster impacts in life contexts of chronic disaster.

Bankston (2010) defines social justice as fairness and as based on two principles: that each person should have equal rights to the most extensive liberties consistent with other people's enjoying the same liberties, and that inequalities should be arranged so that they will be to everyone's advantage and so that no one will be blocked from occupying any position. An egalitarian understanding of justice gives more attention to those in less favorable social positions, allowing for the inequality of conditions that enables equality of opportunity. This conception of justice is essentially redistributive, viewing disadvantage as a consequence of social structure, and the just way to proceed as "political action aimed at benefiting those at the bottom through the redistribution of goods, opportunities, and power" (Bankston 2010, 174).

The concept of social justice targets fairness by providing an actionable framework that translates across cultures and contexts for the standards that all people should enjoy throughout their lives. Social justice prompts contextualized approaches to fairness, encouraging tolerance, equity, knowledge, and respect of human dignity through the understanding of the life circumstances of groups who have been marginalized (Clingerman 2011). Social justice is rooted

in capability theory, which presents a person's capacities to act in their best interest and reach a valued state of well-being throughout a lifetime as the most relevant space of comparison when justice-related issues are concerned (Clingerman 2011; Nussbaum 2003).

Social justice grounded in capabilities

Clingerman (2011) and Nussbaum (2003) argue that a capabilities approach to policy and action grounded in social justice provides superior guidance than the distributive and utilitarian approaches that have traditionally guided decision-making in justice-related issues. The principle of distributive justice focuses on a personal belief system of right and wrong that determines the services and benefits that people believe they deserve or are entitled to. This approach to justice has historically been concerned with equitable distribution of benefits and burdens (i.e. resources, opportunities, taxation) and the rights and responsibilities of all members of society (Clingerman 2011). The main issue with distributive justice is that it fails to acknowledge that different people need different resources and support to achieve similar outcomes in well-being and quality of life; a concern over 'who *deserves* what' neglects 'who *needs* what,' and a concern over 'who *must* do what' neglects 'who *can* do what.'

On the other hand, a utilitarian framework, which assumes people act based on preference and pursuit of satisfaction, fails to take into account the adaptability of preferences to adverse contexts, as well as the heterogeneity and incommensurability of the various aspects of individual and collective development. The dominant emphasis on economic growth or status as an indicator of quality of life (and as an indicator of vulnerability, resilience, and successful recovery in disaster contexts) neglects the circumstances of the deprived – those who are excluded from that economic growth or those at whose expense that economic growth occurs (Nussbaum 2003).

Distributive and utilitarian approaches to justice are embedded in the cultural baseline of a disaster recovery bureaucracy operating in the interest of a market-ordered society. The economic and moral rationale behind the redistribution of resources aimed at a society's poor is rooted in the historical pursuit of better standards of living through a capitalist economic strategy that encouraged consumption to increase demand for rapidly growing production. This approach views poverty and marginalization not as a violation of basic human rights, but as a failure to maximize a society's economic potential. As a result, this system increasingly commodified various aspects of human life, valued people primarily in their roles as consumers, and equated political freedom with economic agency (Bankston 2010).

A social justice framework guided by capabilities theory challenges this tradition; it questions whether a market-driven approach truly incentivizes fairness and lifts the veil that market-based approaches to justice often cast over the people who are unable to engage with the dominant market system to benefit from its prosperity. A capabilities approach to social justice explores the relationships between the different actions that give unfair advantage or disadvantage to members of one group over another. This approach asks what people are truly able to do and be within the realities of their life context, and therefore more accurately identifies the barriers that societies have erected against full justice for all people (Clingerman 2011; Nussbaum 2003).

As long as society values equality and pursues it as a social and political goal, equality of capabilities provides a more effective and ethically satisfactory way of pursuing equality than a distributive or utilitarian approach. A capabilities approach is well-placed to address inequalities because it is people- rather than resource-focused, taking into account that people need different

levels of resources to achieve similar levels of capabilities to function, and that they have differing abilities to convert resources into functioning.

Adapting capabilities: the importance of context

Overlapping social, economic, political and legal contexts produce distinct patterns of poverty, occupational risk, disenfranchisement, marginalization, exploitation, and discrimination that place additional burdens on the lives of people who have been relegated to unfavorable positions in their society's power structure. A capabilities-based social justice framework fosters awareness of the complex way that political, economic, and social agency converge in contextually- and culturally-specific ways to shape the capabilities that determine quality of life. This awareness reveals how different groups of people are situated relative to other groups, considering inequities as differences that are avoidable, unnecessary, unfair, and unjust (Clingerman 2011; Nussbaum 2003).

A capabilities approach to social justice can only be implemented through an understanding of the contexts that shape how different groups of people navigate challenges. However, Bankston (2010) warns against an understanding of structural advantage or disadvantage that reduces people to categories of marginalization defined by victimization or oppression. The assumption that goods, opportunities, and power exist to be distributed to passive consumers defined by static social categories denies the agency involved in the production of social, political, and economic life, rendering those who have been relegated to positions of disadvantage as passive victims of circumstance, and obscuring the roles of more powerful actors who have played an active part in creating said circumstances.

When considering the patterns of disadvantage that have been used to characterize a certain group, it is important to determine whether these patterns may be less a matter of human

choice or equal access (distribution) or more a matter of (limited) available choices (Clingerman 2011). As long as people receive the resources and support they purportedly ‘deserve,’ rather than the resources and support they *need*, we cannot speak of their actions as a matter of preference or choice. If people’s capabilities are not secured and protected, their actions may be more about what they were driven to by adverse circumstances (created by disparate power relationships) than about empowered choice (Clingerman 2011; Nussbaum 2003). Wisner et al. (2004, 13) echo this distinction, arguing that “if the structure of urban land ownership and rent means that the closest [the urban poor] can get to economic opportunities is a [risky location], people will locate there almost regardless of the risk. This is a situation in which ‘voluntary choice’ is not applicable.” The choice between daily hunger and yearly hazard risks is one nobody should ever have to make.

Contextualized capabilities: social justice in practice

Certain freedoms are taken to be entitlements of citizens based upon justice – the abridgement of any of these is considered a violation of basic justice, a cost that in justice no citizen should be asked to bear. [...] [E]ither a society has a conception of basic justice or it does not. If it has one, we have to know what its content is, and what opportunities and liberties it takes to be fundamental entitlements of all citizens (Nussbaum 2003, 46).

Social justice is a normative concept with a typically critical role; we hold reality up against what we consider to be just to produce criticisms where we find reality deficient. A conception of social justice that states simply, “All people are entitled to freedom understood as capability,” is vague, provides no basis for people to challenge the violation of their rights, and holds no one accountable for said violations. If the capabilities approach is to provide clear and

useful guidance to construct a cross-culturally and cross-contextually relevant normative conception of social justice, we must face the question of which definite set of capabilities are the most important ones to protect. Moreover, our answer to this question must be tentative and revisable – providing an explicit enough set of objectives to act as guidelines for decision and policy making while allowing space for cross-cultural and cross-contextual adaptation (Nussbaum 2003).

Community rights and capabilities are often made vulnerable by macroeconomic forces and historical biases too powerful to be addressed by traditional social justice mechanisms embedded in culture alone. In disaster recovery, the failure to consider socioeconomic, political, and historical context leads to the disempowerment of marginalized communities to continue unchecked in the reimagining and rebuilding of the community. Institutional structures must prioritize cultural competence and context awareness to support problem solving and address historical inequalities (Browne 2013; 2015; 2016; Browne et al. 2019).

Current market-serving systems produce environments where the rights of certain people (i.e. low-income cultural minorities and immigrants) are unequal, and they are kept this way by power structures that have no incentive to make the necessary shifts to protect the capabilities that marginalized groups have been previously denied. Market-serving systems also dictate the functioning of human capabilities (i.e. aid bureaucracies expecting households and communities to be able to prove themselves worthy of support in a single, inflexible way) and punish those who cannot function in those ways.

If a person's present life circumstances undermine their capabilities and prevents them from acting in their own best interest, such a situation should be considered a violation of social justice and should be addressed in a transformative way. Disaster recovery aid that seeks to

return people to a starting point of limited capabilities and chronic disaster is operating from a resource-focused baseline that will continue to reproduce inequality. A social justice framework can serve as a more actionable approach that includes advocacy and leadership aimed at shaping policies and institutional structures that influence choice availability and capacity for action (Clingerman 2011; Kroll-Smith 2018; Nussbaum 2003).

Explicit guidelines based on a capabilities approach to social justice must address justice issues at a systemic level. Bankston (2010) warns that society must be viewed not as a specific institutional entity or set of procedures, but rather as the total sum of interactions and historically shaped patterns of interactions among people. Just as the theoretical approach to vulnerability needs to shift away from identifiers of marginalized groups and towards identifiers of the relationships that produce conditions of marginalization, a capabilities approach to social justice necessitates the identification of the power dynamics at play within those relationship spaces and holding the more powerful actors accountable for problematic capability outcomes. A social justice lens clarifies the historical makeup of vulnerability and detriments to resilience, and can refocus the priorities of the disaster recovery discourse to serve community rather than market interests, recognizing that, as much as market-serving actors would have us believe otherwise, these two things are not the same.

CHAPTER 2: PORT HOUSTON RESIDENT EXPERIENCE WITH HURRICANE HARVEY

Intersecting challenges that make life hard in Port Houston

Acute disasters like Hurricane Harvey disrupt the routine practices, institutions, and structures that support social hierarchies in everyday life. The contexts and social relationships that exert, resist, reproduce, and transform power become especially visible during disaster recovery, revealing how different social, political, and economic forces disadvantage different groups of people in intersecting ways (Browne 2015; Browne et al. 2019; McKinzie 2017; Weber et al. 2012). It is impossible to accurately portray any one issue affecting a marginalized community without discussing how other, overlapping challenges compound that issue – and how that issue itself compounds other challenges (Peterson & Maldonado 2016).

In the following section, I will discuss five overlapping areas that the residents of Port Houston navigate on a daily basis: cultural minority and immigrant status, housing, livelihoods and income, access to aid, and health and environmental hazard exposure. Each household I spoke to experienced different, compounding challenges in each of these areas. By discussing the intersection of multiple challenges and inequalities, we can bring to the foreground the experiences and perceptions of people in specific contexts who are often rendered invisible by the status quo (Browne 2015; McKinzie 2017; Peterson & Maldonado 2016; Weber et al. 2012). This intersectional lens also reveals the broader contexts of resident experience beyond individual struggles, exposing underlying power dynamics and tracing inequalities back to the forces and interests that perpetrate them (Browne 2015; Browne et al. 2019; Marino & Faas 2020; McKinzie 2017).

Cultural minority and immigrant status

Port Houston is 91% Latinx. Historical minority exclusion and institutionalized economic disadvantages for Latinx communities in the U.S. have led to a higher risk of socioeconomic insecurity for this segment of the population. Undocumented immigration status can aggravate this insecurity by limiting access to formal employment, increasing workplace risk, and reducing access to benefits such as health insurance and other social services, with harmful effects on Latinx families' economic, physical, and emotional well-being (Angel & Angel 2009; Dawson 2016; Peterson & Maldonado 2016).

Rodriguez (2018) commented on the difficulty of broaching the subject of immigration status with neighborhood residents, emphasizing the importance of building relationships and trust as a prerequisite for addressing the issue.

Just from my personal survey, with the moms that I know – and it's only because we have this relationship of trust that I can ask those things, you know, because we've known each other for [...] years. People tell me, 'You asked them that?!' But I mean, they have been to my birthday parties, you know? We know each other well. So I would guess 90% of the moms [who we work with] are undocumented. That doesn't mean 90% of the children, because some were born here, but... my guess would be 70-80% of the children are undocumented. And this is a neighborhood where, if they're not undocumented, they [often have] political asylum (Rodriguez 2018).

Whether residents were born in the neighborhood or arrived as more recent immigrants, affordable housing and job availability are two key factors that draw families to Port Houston and keep them there. Among the residents I spoke to, those who were born in Port Houston (see Ana and Sara, Annex 1) love the neighborhood and feel a sense of belonging linked to home

ownership, having their family close by, and having a life history connected to the neighborhood. While Ana and Sara's status as US citizens means that immigration issues are not a major concern for their households, these issues impact their lives through members of their extended family and friends in their community who are affected by immigration policy.

The remaining seven residents I spoke to were immigrants who left their birth countries fleeing extreme poverty and drug violence. They settled in Port Houston because of affordable housing (both for home ownership and renting), job opportunities with nearby industry, and to join family members who were already living in Port Houston for those same reasons (housing and livelihood opportunities). Although I did not inquire about immigration status during my conversations with residents, some of them confided in me their daily struggle as undocumented immigrants. Angela could not afford to pursue the legal immigration process when she came to the U.S.; Silvia was left without a legal status after her husband died while she was in process to obtain legal immigration status through marriage; and Maria's ex-husband was deported from the U.S.

Sofia's family sought asylum in the U.S. after fleeing life-threatening drug violence in Honduras. Her family is in the middle of their immigration process, making every effort to handle the stress and expenses that such a process entails. The household is also healing the scars that the U.S. immigration system left on the family after Sofia's husband was detained by Immigration and Customs Enforcement (ICE) for months before their asylum petition was approved.

I would have preferred to cross the desert than to have my husband detained. Because [a few years ago] he tried to take his own life [...], I felt like I did not know my husband anymore. He had never told me [...] what he went through at

the detention center. When he decided to be open with me and told me, [...] ‘This is what they did to me,’ [...] many things I was surprised by, I cried with him. [...] And so I said, no, I have to keep fighting (Sofia 2018).

In Houston, the ongoing immigration enforcement legislation debate under Texas Senate Bill 4 (SB4) creates an uncertain and hostile climate for Latinx families who were impacted by Harvey (Aguilar 2017; Rodriguez 2018; Fernandez 2018). SB4 is a controversial law that allows police to question the immigration status of anyone they detain or arrest; requires police chiefs and sheriffs to cooperate with federal immigration officials by honoring requests for deportation; and pushes to punish local officials for adopting, enforcing or endorsing policies that stand against the bill (ACLU 2018). Fear of deportation keeps undocumented families from leaving dangerous living conditions or making use of official support mechanisms (Martinez 2018; Hauslohner 2017; Lee 2018). While undocumented residents are especially fearful of calling attention to themselves and their families, Latinx communities in general tend to distrust government assurances that they will not be victimized because of their ethnicity or their socioeconomic and legal status, preferring to rely on family, friends, and neighborhood relationships for support (Martinez 2018).

Community and belonging in Port Houston

For the residents who are more recent arrivals to the community, their degree of engagement with the neighborhood and sense of belonging vary. Some residents are isolated and avoid close relationships with their neighbors out of fear of becoming the object of neighborhood gossip or being taken advantage of if they share their personal and household struggles. In some cases, residents also isolate from their neighbors due to trauma, depression, and the challenges of

recovering from the horrors that drove them to leave their countries of origin while adjusting to life in a new place (see Lucy, Annex 1).

It was really rough...because [the drug cartels] killed her son and then they ran them out.

“They kidnapped him and we didn’t have any money. They killed him.”

“After they did that, they forced them to abandon [their business], so they left. [...]

Drugs came in. It was an ugly time. They would hang people at the town exits. [...] I always told my brother who’s still there, ‘Let’s get out of here.’ ‘No, no,’ he says, ‘it will get better.’ I tell him it’s never going to get better. Once those people show up, it never gets better.”

“For me, my life was over after they killed my son. I don’t want to know anything about anyone anymore” (Lucy and her husband 2018).

Other residents were more open to relationships within their community (see Paula, Isabel, and Sofia, Annex 1). Residents who were involved with local CBOs were especially motivated to take on active community leadership roles and nurture relationships with their neighbors. Sofia expressed that she used to be withdrawn and suspicious in social interactions, but that receiving spiritual and material support through PHCC allowed her to reach a place where she was no longer consumed by her family’s struggles and was able to build positive relationships with the people in her community.

Language is another factor that draws people to Port Houston. All of the residents I spoke to appreciate that they can speak in Spanish to anyone in the neighborhood and be understood. Ana and Sara are bilingual, which allows them to benefit from housing and livelihood opportunities outside Port Houston with the assurance that they will be able to communicate with the people around them. Port Houston residents who were not born in the U.S. and who struggle

with the language barrier, on the other hand, may stay in Port Houston even if they could afford to move elsewhere because they value the language and cultural connection that the neighborhood provides. One PHCC prayer group participant stated that she and her husband “could move to a better neighborhood, but then we’d be surrounded by people who only speak English and no one will want to be my friend.”

Each household’s daily experiences in Port Houston regarding housing, livelihoods and income, access to aid, and health and environmental hazard exposure are shaped by their status as immigrants and cultural minorities within the broader US social, political, and economic context. Immigrant and cultural minority status also influenced each household’s capabilities and experiences preparing for, enduring, and recovering from Hurricane Harvey.

Housing

While all of the residents I spoke to were driven to Port Houston because of affordable housing options, their housing experiences differ according to their immigration status, which determines whether or not they have the documents, income stability, and material and social resources necessary to access quality affordable housing. Undocumented immigration status can shape housing circumstances by restricting access to quality housing and increasing the likelihood that families will settle in less-advantaged neighborhoods where perceived fears of detection are minimized (Hall & Greenman 2013). Undocumented householders are less likely to be homeowners than documented immigrants, tend to live in more crowded homes, report greater structural deficiencies with their dwellings, and express greater concern about the quality of public services and environmental conditions in their neighborhoods (Hall & Greenman 2013; Lee 2018).

Ana and Sara (see Annex 2) – both US-born citizens – owned their homes (thanks to access to a combination of family resources, the necessary personal documents, and sufficient, stable income) and could afford the structural maintenance that allowed their homes to sustain little to no damage from Harvey. Both households had family members who had the knowledge, skills, and physical ability to take actions to minimize storm impacts and structural damages to their homes. Although both households were mindful of their resource limitations, both families had a financial safety net that allowed them to absorb the minor damages their homes sustained despite their preventive measures.

Some residents who were more recent arrivals in Port Houston (see Silvia, Isabel, and Lucy, Annex 2) also owned their homes, but their households faced more challenging circumstances to prepare for, endure, and recover from Harvey. These homes often had pre-existing structural deficiencies that could not withstand the rainfall that Harvey unleashed over Houston. Some families decided that the damage was minor enough that they could leave it unaddressed. However, many households suffered serious structural damage to their homes which the families could not afford to repair, and which were often not covered by the families' insurance policies or post-disaster reconstruction aid options. Six months after the storm, several of the families I spoke to were still living in damaged, mold-infested homes.

Homeowners in low income Houston neighborhoods face increased flooding risk due to poor city maintenance of clogged drainage ditches and crumbling drainage infrastructure. Furthermore, homeowners risk losing their homes during disaster recovery due to new building requirements that place the financial burden of flood mitigation on individual homeowners. For example, after Harvey, the city required homeowners in flood-prone areas to raise their homes in order to approve reconstruction plans, leaving many who could not afford to comply with these

requirements with no other choice but to sell or abandon their damaged homes and rent elsewhere (Lee 2018).

Houston's susceptibility to flooding overlaps with a number of policy and regulation challenges that create an unfavorable housing environment for renters. The city lacks an effective policy framework and enough housing inspectors to enforce housing regulations and incentivize landlords to address housing quality issues. These challenges result in damages from repeated flooding events that often go unaddressed in rental complexes. At the same time, a lack of affordable housing in the city drives marginalized groups to tolerate subpar living conditions in order to access the city's economic opportunities (Lee 2018). The cases of Paula, Sofia, Angela, and Maria (see Annex 2) illustrate the contrasting ways in which disaster impacts and recovery can play out for home renters in Port Houston.

Paula and Sofia rent apartments in the same Port Houston apartment complex. While their street flooded, the water did not reach their apartment complex. Both Paula and Sofia's apartments withstood the storm and sustained no damage. However, another unit in the apartment complex sustained severe roof damage. Paula and Sofia were unclear as to whether the landlord repaired the unit. This incident also illustrates how, for low-income immigrant households like Paula and Sofia's, making it through an acute disaster without any serious damages and losses is more often a matter of chance than something the families can control.

Angela and Maria (see Annex 2) suffered severe structural damage to their homes. Their stories illustrate how being at the mercy of a landlords' responsiveness (or lack thereof) during disaster recovery can exacerbate an already distressing experience. After experiencing physical injury, emotional trauma, and material and financial loss, both families were forced to keep living in the chaotic aftermath of the storm for months afterwards, exposed to black mold and

unable to attempt recovery because all means to address the damages in their rented homes were beyond their control. In Maria's case, the family eventually found alternative housing, but not before losing everything in an electrical fire that likely resulted from unaddressed structural damages in her apartment complex after Harvey.

Income and livelihoods

Latinx communities have historically been among the most disadvantaged groups in the U.S. with regard to earnings and employment benefits. This segment of the population is often confined to occupations in sectors that include agriculture, construction, and services in which salaries are low and benefits such as paid leave, retirement and health-care coverage are rare. Undocumented status exacerbates this trend, as labor structures limit livelihood options and worsen income disparities that restrict economic mobility for undocumented families (Angel & Angel 2009; Clingerman 2011). These issues affect the material and financial resources that Latinx households may have at their disposal to mitigate risks, prepare for disasters, minimize damages and losses, and recover quickly and effectively after a disaster. Household income stability and household savings shaped the livelihood and income impacts that Harvey had on the Port Houston households I spoke to.

Household income stability

Income stability was a key factor that shaped the recovery resources that each household had at its disposal and how long the post-Harvey crisis period lasted at the household level. Income stability includes whether employers were flexible and understanding of their employees' post-Harvey circumstances and whether households' livelihoods suffered or disappeared after the storm.

In Paula and Maria's cases (see Annex 3), the families did not suffer significant gaps in their income because of Harvey and both households' livelihoods remained stable during and after the storm. It is worth noting that the fortunate circumstances that prevented these two households from experiencing significant livelihood and income challenges during the storm were more about the household income providers being in the right place at the right time, rather than a proactive effort on the part of their employers to protect their workers during a time of crisis. For instance, while many residents who worked outside of Port Houston could not reach their workplaces while the neighborhood access points were underwater, Paula's husband was able to walk to his job in the neighborhood and returned to work immediately after the storm. Paula's experience stands in contrast to Ana and Sofia's cases (see Annex 3). While these families' jobs remained stable after the storm, they could not access their workplaces outside the neighborhood for several weeks after the storm. These income losses impacted the households' finances significantly and, in Sofia's family's case, caused them to fall behind on rent payments.

Other residents I spoke to (see Angela and Isabel, Annex 3) faced financial challenges when the jobs they relied on for significant portions of their household incomes did not recover after the storm. In Isabel's case, while she lost most of the clients she previously cleaned homes for, the household retained a portion of their monthly income through her elderly mother's retirement pension. This stable social security net played an important role in minimizing the negative livelihood and income impacts that some households (i.e. Isabel and Lucy, Annex 3) may have otherwise suffered. In contrast, Angela's family had no support when their lost wages and livelihoods after Harvey caused them to fall behind on their rent payments; it took them a year and a half to catch up on their rent.

Household savings

Another key factor that shaped the post-Harvey recovery journey for each household was whether they had savings that allowed them to better prepare for the storm and to absorb the expenses to address damages and losses. Some households had some savings, which allowed them to better prepare for the storm and to use their own resources to repair home damages and cope with lost wages (see Sara, Ana, and Paula, Annex 3). In the end, whether households had savings or not, every resident I spoke to was aware of their resource limitations and feared that Harvey would impact them in a way that would exceed their financial capacity to cope with the damages and losses.

Resource availability and access to aid

Knowledge of and eligibility for available aid options was an important source of support for Port Houston households to fill the gaps left by unstable livelihoods and incomes and limited or no savings. The residents I spoke to had varying abilities to rely on personal resources to meet their household's needs, as well as various levels of awareness of and access to aid options to address household resource gaps. Resource availability (whether through their own means or through aid options) directly shaped the actions each household was able to take to prepare for the storm, household experiences weathering the storm, and the length of time it took each household to return to a state they could recognize as normal.

Some residents I spoke to (see Ana, Sofia, and Angela, Annex 4) relied on food aid (either from their local food bank or from faith-based organizations such as community centers and churches) to feed their families on a weekly basis prior to the storm. All of the residents I spoke to relied on their own resources to prepare for, endure, and recover from the storm. Household resource limitations influenced the degree to which different households were able to brace themselves to weather the storm. However, none of the households sought out aid in

preparation for the storm, even if they felt their capacity to prepare was insufficient. For instance, Angela's family could not afford to stock up on much food and could not purchase drinking water; the family resorted to drinking rainwater when a problem with their pipes cut off their water supply during the storm.

Households that did not suffer significant damages and losses (see Paula and Sara, Annex 4) did not have any knowledge of available post-Harvey aid because they did not feel they had needed it. Households that sustained more severe damages and losses (see Sofia, Angela, Isabel, Eva, and Ana, Annex 4) sought out aid when resource gaps became apparent in the aftermath of the storm. These gaps included home repairs that would be too expensive to cover out of pocket or that were not covered by the household's insurance policy; replacing lost belongings; buying food; and making up for lost wages (including catching up on late rent payments).

For residents navigating resource gaps during disaster recovery, access to aid through involvement with CBOs made the difference between a short- and a long-term crisis. For instance, when Sofia's husband lost several weeks' wages and the family fell behind on rent payments after the storm, they were able to catch up on the payments and return to a state they recognized as normal in three months' time thanks to financial aid they received from PHCC. In contrast, when Angela's family fell behind on rent payments due to lost wages and livelihoods after the storm, it took them a year and a half to catch up on rent payments and the family continued to struggle financially afterwards. Angela's family received one-time food aid after the storm, which they budgeted to last them six months.

The varying experiences between the households I spoke to revealed that awareness of aid options does not necessarily translate into aid access. Especially for immigrant families with uncertain legal status, navigating the process to apply for aid and determine their eligibility can

be a challenge. For example, Sofia stated that she applied for government food aid after the storm despite her fear of being rejected. This fear was based on having been denied food stamps in the past due to her immigration status. She also witnessed other people being rejected for post-Harvey food aid while she waited her turn in line but did not know on what grounds. She sought out aid despite her fear of being turned away because her family's need was so great, but she believes that a lot of people in a similar situation regarding their immigration status do not seek out aid because they fear rejection and they are often resigned to never qualifying for aid.

Community participation and ownership in aid efforts

Both Sofia and Ana (see Annex 4) are actively involved in community organizing efforts and played active roles in helping local CBOs coordinate aid distribution. Through their participation in and ownership of community organizing efforts, both of them were better informed regarding the aid options that were available to them. Both families were empowered to reach out for support, which helped them to resolve their household disaster recovery needs as quickly as possible. At the same time, Sofia and Ana used their dual role as community members and local CBO collaborators to reach out to their community with opportunities for support and to ensure the local CBOs were responding to community needs in the most effective way.

In contrast to Sofia and Ana, Maria (see Annex 4) was not aware of aid options available to her family and weathered the hurricane's aftermath alone, growing resentful and further isolating from her community as a result. Six months after the storm, an electrical fire displaced Maria's family from their water-damaged apartment and they began rebuilding their lives in a new neighborhood. Maria became involved with TCSJ and this involvement has brightened her outlook regarding her present and future circumstances in her new neighborhood. Nevertheless, Maria still struggles with the lonely, traumatizing experience that the family went through after

Harvey, which continues to cast a shadow over the family's new life (i.e. Maria's lack of motivation to replace lost belongings that could be lost again in a new disaster). While making it through the storm without suffering any damages or losses would have been ideal, the true cruelty in Maria's case was that she felt abandoned by her community and by government agencies, leaving her to navigate her family's challenging post-Harvey circumstances alone. The suffering of Maria's family could have been avoided had community and organizational support been more readily and proactively available to them.

My conversations with Port Houston residents about their experiences with Harvey revealed a contrast between the ease of being able to make things happen through personal resources and the struggle of having to advocate for a household's needs through aid channels that may not be designed with that community's life realities and challenges in mind. A society that holds the market as the ultimate resource allocation mechanism and values people first and foremost as producers and consumers addresses disaster preparedness, mitigation, and recovery in a way that assumes a baseline of household income stability and plentiful savings. This cultural baseline disregards the segments of the population that have been chronically denied livelihood and income stability, and thus the opportunity to accumulate savings. These are the households who are often denied access to resources and support post-disaster, in the same way they were systematically denied access to resources and support before the hurricane.

The experiences of Port Houston residents illustrate how social safety nets such as retirement pensions and unemployment benefits can play an important role in supporting income stability for households (especially among the elderly). The reduced availability of work following a disaster, combined with increased expenses to replace damaged belongings and repair housing damages, can be financially crippling for households who are already struggling

under the weight of chronic disaster. Where CBOs were able to step in and provide aid in ways that were informed by an understanding of the community's daily life and struggles, they greatly reduced the crisis period for households. For families that fell through the cracks of the official recovery system and were not connected to CBOs, however, their post-Harvey crisis period stretched over many months and, in extreme cases (like Angela's), they had to learn to live with the storm's damage as their new normal.

Health and environmental hazard exposure

Environmental justice in the United States

The U.S. Environmental Protection Agency (EPA) establishes that “no population, due to policy or economic disempowerment, [should be] forced to bear a disproportionate share of the negative human health or environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies” (EPA 1998, p.2). However, powerful social, economic, and political actors and decision-makers rarely acknowledge the underlying and converging economic, sociopolitical, and racial drivers behind the industry and government actions that shape differential exposure to environmental hazards.

Economic explanations for environmental justice violations (sometimes also called market dynamics explanations) argue that industry actors seek to place facilities where cheap land and labor pools are available and material sources are nearby. Sociopolitical arguments add that industry and government seek the path of least resistance when siting hazardous or polluting industrial facilities. Racial explanations further contextualize the economic and sociopolitical drivers of industry and government decision-making, emphasizing the ways in which racism manifests as a material, cultural, juridical, and psychological phenomenon that leaves people of

color in positions of economic and sociopolitical disadvantage, unable to hold industry and government accountable for environmental injustice.

Histories of institutionalized racism and discriminatory public policy compound these economic, sociopolitical, and racial challenges by leaving poor communities of color disproportionately exposed to environmental hazards and hindering their capabilities to demand environmental justice (Bullard & Wright 2012; Singer & Evans 2013). Public policy in the U.S. thus fails to protect “all Americans, not just Americans who can afford lawyers, scientists, and experts or Americans who can ‘vote with their feet’ and exit polluted or contaminated communities” (Bullard & Wright 2012, 125). Disparate policy impact, rather than intent, should be the basis to prove environmental discrimination (Mohai et al. 2009) and can provide a starting point to steer environmental justice in a direction that supports communities that experience their environment as a perennial threat from which they cannot escape, due to poverty, poor health, and lack of familiarity with and support networks in official decision-making structures (Singer & Evans 2013).

Health and environment in Port Houston

Most of the Port Houston households I spoke to (see Annex 5) live with chronic illness, including cardiovascular disease (i.e. high blood pressure, heart attacks, stroke), type 2 diabetes, cancer, hormonal imbalances, reproductive illnesses, chronic migraines, sensitivities due to harsh chemical exposures (i.e. from cleaning and industrial jobs), and chronic diseases and poor health and quality of life due to a lack of access to timely, effective medical treatment. These health concerns were an important consideration while preparing for and recovering from Harvey, with residents focusing on health-conscious disaster preparedness (i.e. Isabel stocking up on her and her mother’s medications when she heard the storm warning). On the other hand, health issues

also presented challenges to physical, emotional, material, and financial recovery (i.e. Angela's (Annex 5) inability to return to work because of an improperly treated respiratory infection that progressed into chronic pneumonia).

As residents manage their lives with various combinations of chronic health challenges, many of them must learn to live with their illness without hope for treatment, relief from symptoms, or recovery due to a lack of access to affordable health insurance or care. In Ana's case, for instance, she and her husband do not have health insurance because they cannot afford it – her income is too high to qualify for Medicaid, but the family cannot afford alternative insurance. Ana's last health checkup revealed she was borderline diabetic with possible high blood pressure and that she needed to be tested for cervical cancer. However, she never followed up with these issues because the family cannot afford the follow-up exams and because she would not be able to afford care anyway:

In my mind, ignorance is bliss. If I'm gonna die, I'd rather not do radiation and a whole bunch of care that I can't pay for. [So] I live day by day. If health care was free, then that would be a different situation (Ana 2018).

While residents do not consider nearby industrial activity or other systemic factors (i.e. living in a food desert, chronic stress from immigration or financial problems) to be a health hazard or a potential cause for their health challenges, research shows an increased incidence of certain types of cancer, respiratory, and neurological illnesses in Ship Channel communities linked to exposure to toxins from nearby industry (UCS & t.e.j.a.s. 2016; Whitworth et al. 2008). Research also shows a link between poor health outcomes and challenges like chronic stress and poor nutrition caused by the systemic injustices of poverty (Kelly & Doohan 2012). Therefore, the potential link between the chronic illnesses that plague Port Houston residents and the social

determinants of health that influence neighborhood health outcomes could be an important avenue for future research.

At the same time, every household I spoke to struggles with mental and emotional health concerns, including trauma from the torments they fled from in their countries of origin (i.e. Lucy's story, Annex 5); the horrors they experienced coming to the U.S. (i.e. Sofia's story, Annex 5); depression from family tragedies and loss that they have had to navigate with little to no support (i.e. Silvia and Maria's stories, Annex 5); the anxiety and distress they experience as they try to be both a financial provider and a source of emotional support for their families back in their countries of origin, and the challenges this presents at a distance; and even the anguish and emotional impact of struggling with a chronic illness (i.e. Angela and Paula's stories, Annex 5).

Finding support for mental and emotional health concerns is challenging in a neighborhood setting because the issue tends to be a taboo topic in the Latinx community, and because people do not easily trust neighbors and acquaintances with these subjects (Rodriguez 2018). In these circumstances, CBOs occupy a space in the social fabric of the community that gives them an advantageous position to support residents. On the one hand, CBOs are 'insider' enough that residents trust CBO representatives to understand the nuances of their struggle and provide support and guidance toward relevant solutions. On the other hand, they are 'outsider' enough (and hold status as an organization rather than as an individual) that residents are likely to reach out to them for support without fearing that their trust and confidentiality will be violated. Supporting mental health in communities is an important part of the work CBOs do, because only by helping people with these challenges can they free the mental and emotional

space that it takes to develop community leadership capacity and ownership of disaster preparedness and response efforts (i.e. Sofia's story, Annex 5).

What makes life good in Port Houston?

When I spoke to Port Houston residents about the things that provide comfort and support when dealing with life's challenges, the three main factors that came up were relationships with family and friends, spirituality, and involvement with CBOs.

For all the residents who discussed this subject with me, sharing a household with immediate and extended family was a key factor in providing them with a sense of purpose and belonging in Port Houston. When Angela and Silvia struggled with depression during their long recovery from different chronic illnesses, the presence of their children and grandchildren in their lives lifted their spirits and kept them going. Sofia views herself as her family's resource broker, and her family's recognition of the care work she performs toward the family's wellbeing is important to her sense of purpose. Residents also valued being in touch with their immediate and extended families back in their countries of origin, although these relationships tend to be more fraught because of the emotional, material, and financial support that relatives expect from family members who live in the U.S. Nevertheless, staying in touch with family is an important way in which Port Houston residents hold on to their roots and to their more extended social support networks.

Being in touch with friends back in their countries of origin, as well as developing friendships with neighbors, was also a key source of emotional support and belonging for Port Houston's immigrant residents. It is important to note that, when it comes to friendships (both back in their countries of origin and in Port Houston), residents tend to be cautious of sharing their personal struggles with friends and neighbors for fear of becoming the object of

neighborhood gossip or being taken advantage of. For this reason, most residents tend to be friendly with neighbors, but prioritize their immediate family relationships as a main source of support and comfort. However, for residents who struggle with family conflicts within their household, friendships with neighbors can be an important source of support. In Silvia's case, she shared that one of the more heartbreaking moments of her life occurred when someone broke into her house on Christmas Eve and stole the presents she had worked hard to purchase for her young children. When this happened, a friendly neighbor stepped in and helped her replace the lost presents. More recently, Silvia has developed a close friendship with a neighbor who she views as a kindred spirit and a source of emotional support as she navigates the conflicts within her immediate family.

Spirituality was another key factor that makes life good in Port Houston for all of the residents I spoke to, providing a sense of purpose and a source of comfort when coping with difficult life experiences. While navigating various life challenges, the residents I spoke to held on to the belief that they would not be faced with obstacles that would be too great for them to overcome. They drew on their spiritual beliefs for strength and perseverance, expressed gratitude for what they had (i.e. their family, a roof over their head, food to eat, etc.), and found comfort in the belief that a higher power is watching over them.

Not every resident I spoke to was involved with local CBOs, but those who were considered them a crucial piece that made life in Port Houston better for them. Residents who were highly involved with CBOs expressed appreciation for the holistic way in which they offered support in the community, with residents' friendships and spirituality often deeply enmeshed with CBOs. Sofia, who has received leadership training and social, financial, and spiritual support from PHCC, expressed that she views the community center in general, and its

coordinator in particular, as an extension of her family. While she has received material and financial support from PHCC when her family was facing various hardships, it is the constant emotional and spiritual support and the friendships of the community center leaders that she values most. Her trust in PHCC as an organization comes from her personal relationships with the center's leaders, who from the beginning of their relationship have acknowledged and validated the extent of Sofia's family's struggle as they provide support in ways that are informed by a deep understanding of the nuances of Port Houston families' daily challenges.

Discussion

Each Port Houston household I spoke to faces a unique combination of overlapping challenges surrounding their immigration and cultural minority status, housing circumstances, livelihood and income stability, access to aid, and health and environmental hazard exposures. These elements intersect in contexts shaped by social, political, and economic inequalities, resulting in variations in community residents' experiences of vulnerability and resilience while preparing for, enduring, and recovering from Harvey. Each household I spoke to had different resources and capabilities at its disposal to prepare for the storm, experienced storm impacts of varying severity in different areas of their lives, and had access to different resources and capabilities to recover from storm impacts.

Powerful social actors in government and the private sector can make decisions and implement policies that perpetrate unequal social dynamics, marginalize communities, erect barriers to community capabilities, and hinder people's capabilities to mitigate risk, prepare for a disaster, and recover from its impacts. (Bode 1989; Browne 2015). For households navigating the struggles described in this chapter, a market-driven approach to employment and social benefits can add to household distress rather than helping to ease burdens.

In order to address these issues and support the social resilience of communities, we must shift the market-based discourse that hinders disaster recovery. Powerful social actors must acknowledge the areas within social processes and relationships that systematically reproduce inequalities and choose to approach them as opportunities for transformative action. A more holistic, people-based social resilience model of community development and disaster recovery can serve as a framework to protect people's capabilities and enable them to live a full life by recognizing the basic, context-specific minimum resources they need to thrive.

A first step toward these shifts in vulnerability and social resilience thinking in disaster recovery can be to acknowledge the cultural gaps that exist between communities and the culture-laden bureaucratic logic of government agencies that is often rendered an invisible, unchangeable baseline that communities must adapt to. As the more powerful actor in the relationship, government agencies must be held accountable for their responsibility to adapt their bureaucracy to the cultural, social, economic, and political contexts of the communities they serve (not the other way around).

This task is not an impossible ask. Many CBOs already approach each day of their work with communities in this way, nurturing relationships as a basis for social resilience and demanding that more powerful actors take responsibility for the outcomes of their decision-making. CBO expertise in this matter presents an opportunity for partnership and organizational learning on the part of government organizations. In the following chapter, I will examine these cultural gaps and discuss opportunities for government agency-CBO collaboration in greater detail.

CHAPTER 3: ORGANIZATIONAL APPROACHES TO DISASTER RECOVERY

Government agencies can operate from a baseline of dominant cultural assumptions that can clash with the cultural, social, political, and economic realities of the communities they work with (Browne 2013; 2015). Human suffering occurs within these gaps between organizational and community cultures, hindering community resilience and reproducing conditions of vulnerability. Government agencies can avoid causing harm to minority culture communities by developing awareness of these cultural gaps and the ways in which the lived experience of minority culture disaster survivors can be rendered invisible when dominant cultural baselines are taken for granted in the disaster recovery process. This awareness can also serve as a starting point for agencies to take transformative action and better serve cultural minority communities in culturally competent ways.

In the following section, I will explore how the official disaster recovery pipeline is supposed to work and what happens when people fall through the cracks in the system. I will then discuss examples of culturally competent disaster recovery work conducted by local CBOs. I will compare the strengths and shortcomings of both government agency and CBO responses to Hurricane Harvey and I will argue for the importance of collaboration between the two. I will conclude this chapter with a discussion of how the culturally competent, relationship-based approach to community building and disaster recovery employed by CBOs can leverage government agency resources and structures to enhance effective and compassionate disaster recovery outcomes.

The disaster recovery pipeline

When an acute disaster strikes in the U.S., the federal government leads short-term emergency response through the Federal Emergency Management Agency (FEMA). At the same

time, short-term emergency aid is available through nonprofit organizations like the Red Cross, faith-based groups, and local CBOs. When communities transition toward long-term rebuilding, state organizations take over recovery activities. In Texas, the organizations responsible for overseeing long-term disaster recovery are the Texas General Land Office (GLO) and the U.S. Department of Housing and Urban Development (HUD) through its Community Development Block Grant Disaster Recovery Program (CDBG-DR). Most often, the different organizations involved in disaster recovery operate independently and there is limited coordination between federal, state, city, and nonprofit actors (Flores 2019; Lee 2018). While aid options are available to community residents through these different organizational channels, government agencies require households to rely first and foremost on privately purchased flood insurance. This requirement leaves households in flood-prone areas who cannot afford insurance (i.e. those who most need aid and are most often and systematically denied support) ineligible for aid.

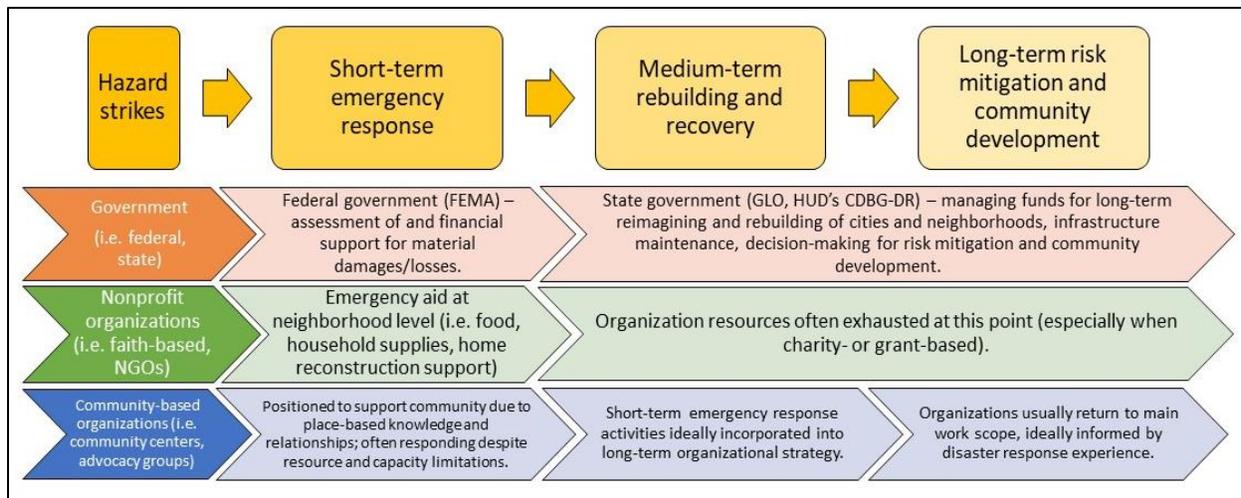


Figure 2. The disaster recovery pipeline.

A key advantage that government agencies have in their disaster response work is their access to abundant resources that have the potential to make a big difference in household and community disaster recovery experiences and outcomes. However, confusing bureaucratic structures can make it difficult to deliver these resources to the people who need them most.

Residents seeking support during disaster recovery encounter obstacles from the beginning of their attempts to contact agencies like FEMA. Long wait times over saturated phone lines, language barriers, and lack of internet access to navigate disaster recovery procedures are some of the main challenges that cause people to abandon their quest for aid before they even establish contact with a FEMA representative.

For residents who manage to apply for aid, a FEMA agent visits the home to assess structural damage and determine aid eligibility and the amount of aid the household will receive. At this point in the process, some residents receive vital aid from FEMA that allows them to move forward with their household's recovery activities. For instance, Lucy commented that her neighbor, whose street-level home flooded knee-high, received timely, sufficient aid to rebuild his home. Six months after the hurricane, the household appeared to have fully recovered from the structural damages caused by the storm. However, families that struggled with pre-existing vulnerabilities prior to the disaster can find themselves at a disadvantage, with FEMA determining that the household is ineligible for aid because the home was not up to code before the hurricane struck. For example, Isabel's household was deemed ineligible for aid because FEMA assessed storm impact in terms of flooding from the ground-up. The roof damage that Isabel's home sustained during the storm was considered a sign of pre-existing structural deficiencies that the family was expected to address on their own. Isabel's experience illustrates the gaps that low-income, cultural minority families can fall through when a dominant, market-serving culture conflates purchasing power with personal responsibility in disaster preparedness. Rather than seizing the opportunity to enable Isabel's family to improve their living condition (and to mitigate the risk of the family suffering further damages and losses in future storms), the disaster recovery system punished the family by leaving them to figure out – while still reeling

from other material and livelihood losses in the aftermath of the hurricane – how to pay for home repairs far greater than the roof fixes they could not afford before the storm.

Other challenges that residents face when trying to secure aid to rebuild their homes include having a damaged home deemed habitable, or receiving funds to address only the bare minimum in repairs to get the house to a habitable state by FEMA standards, regardless of how uncomfortable or hazardous the space may remain in comparison to the home’s state before the storm (Flores 2019; Lee 2018). These determinations constitute the basis for countless aid application rejections or insufficient funding, limiting households’ ability to return to a decent standard of living after the storm.

Meanwhile, long-term recovery programs run by state government agencies (GLO and HUD) can take over a year to deliver reconstruction funds to impacted communities. At this point, competing interests are often vying for these resources. Market actors tend to have the capacity to lobby city halls and secure these public recovery funds for development projects that tend to displace low income communities and gentrify neighborhoods. Community residents, on the other hand, often need guidance or representation from CBOs to contend with market interests in order to secure public recovery funds to rebuild homes and allow residents to stay in their neighborhoods (Browne 2015; Flores 2019; Lee 2018). Moreover, government agencies can harm the chances for communities to rebuild their homes and remain in their neighborhoods through expensive risk mitigation requirements for home reconstruction plans that place the financial burden of risk mitigation on individual homeowners and drive out low-income families who cannot afford the repairs (Lee 2018):

If you have a certain percentage of damage to your home, you have to get a permit to repair it and they won’t give you the permit [unless your repair plans] include raising

your home. Flood prevention [should be] a government function, it shouldn't be up to each individual. Raising homes can cost \$100,000.00. How are you gonna get \$100,000.00 to raise your home? We have a member who lives near the bayou... Her family bought her house 30 years ago for like twenty-something thousand dollars. Before the hurricane, the house was valued at more than \$100,000.00... [Now] they can't afford to [raise the house]. So what do you do? You sell. But then you get a fraction [of its value]. Right now, [the government is] offering \$30,000.00 cash. You had finally built some equity, you had finally built some wealth, and it was wiped out by Harvey. You look at your home, and you're like, I can't fix it, I can't live in it, what do I do? For a lot of people, it's easier to sell and just give up on it, and then you get moved out, someone else buys your home and they build something else there, and they're gonna sell it for a lot of money, because it's a nice area (Lee 2018).

Throughout the disaster recovery process, nonprofit organizations (including organizations like the Red Cross, local faith-based church groups, and local CBOs) are also interacting with communities and providing support. These groups tend to work more closely and at a smaller scale with neighborhoods and households. As a result, they can be more effective at reaching people in context-appropriate ways. These organizations also rely on their pre-existing relationships with communities to conduct their disaster recovery work, so residents tend to trust them more than they trust government organizations when they need to ask for help. However, while CBOs can have a deeper understanding of community needs and the best mechanisms to deliver support, they often lack the resources to respond on a larger scale and reach everyone who needs help.

Contrasting approaches: government agencies and CBOs

Government agencies and local CBOs work at different administrative levels and rely on varying resources and structures to pursue different, often complementary disaster recovery and community development objectives. In this section I will contrast the strengths and shortcomings between the disaster recovery approaches of government agencies and local CBOs. I will then discuss the opportunities for collaboration between the two as a way to bring these organizations' different strengths together to improve disaster recovery outcomes.

Government agencies (FEMA, GLO, and HUD's CDBG-DR) produced publicly available reports detailing their Hurricane Harvey response activities, priorities, lessons learned, and recommendations. I reviewed these documents to gain insights into the cultural baseline from which these organizations approach their disaster recovery work. I also conducted interviews with representatives of two local CBOs (Port Houston Community Center (PHCC) and Texas Center for Social Justice (TCSJ)) to gain a better understanding of how these organizations view their supporting roles in their communities before, during, and after a disaster.

FEMA: emergency response and short-term recovery

FEMA is an agency of the U.S. Department of Homeland Security charged with coordinating the response to disasters that overwhelm local and state resources (FEMA 2018). As a federal agency that responds to multiple, sometimes simultaneous disasters at the national level, FEMA's evaluation of its response to Harvey was aggregated with other disasters that occurred at the same time – including Hurricane Maria, Hurricane Irma, and California wildfires (FEMA 2018). As a result, the place-specific nuances of disaster response in Houston, Texas were lost to the complexities of coordinating a national response across concurrent incidents.

FEMA's 2017 Hurricane Season Report emphasizes the need for a transformative approach to disaster recovery through three key recommendations: building a national culture of preparedness, readying the nation for catastrophic disaster, and reducing the complexity of the agency. FEMA highlights several areas for improving future disaster response and short-term recovery, including the need to support local residents and organizations as crucial first responders in disaster situations; the need for capacity building and empowerment of state and local governments so they can respond to disasters without the need for federal presence; and the need to make the aid application process easier to navigate. These recommendations reflect a degree of awareness of the place-based nuances of disaster response and can serve as a starting point to prioritize flexibility for the system to accommodate place-specific needs within the federal disaster recovery aid system.

On the other hand, there are contradictions between FEMA's recommendations and the agency's practices. Crucially, FEMA's approach to building a culture of preparedness does not mention disaster prevention or mitigation through public policy. Instead, the agency calls for more people to purchase private flood insurance. In other words, rather than pushing for widely accessible public support to address household and community needs, FEMA's conceptualization of a culture of disaster preparedness relies on the market-based allocation of resources to those with sufficient purchasing power. This approach continues to leave behind households who do not fit the role of market-visible consumers and cannot afford private insurance. Similarly, the agency highlights the importance of helping communities fit aid eligibility requirements, rather than questioning whether existing eligibility requirements fit communities' needs and circumstances. Although the agency acknowledges the need to make the aid application process more accessible for survivors, there is no mention of the cultural gaps

that must be addressed or the importance of culture brokers to bridge the cultural and communication divide between recovery agencies and disaster survivors (Browne 2013). Finally, it is worth questioning whether the call to reduce the complexity of the agency seeks to make the aid process easier for communities to navigate, or whether its main objective is to make space for the increased privatization of disaster recovery.

State organizations and long-term recovery

As FEMA's short-term disaster response gives way to the long-term recovery efforts led by HUD's CDBG-DR and GLO, the organizations' focus shifts from the vast federal administrative puzzle toward disaster recovery programs and policies informed by place-based experience. These state organizations emphasize the importance of providing permanent attention to infrastructure maintenance, improved building codes, code enforcement, and the need for information campaigns to ensure public understanding of the scope of government aid. Additionally, they make several recommendations to address gaps in existing programs, such as expanding eligibility criteria for reconstruction under FEMA housing funds and rewriting the formula for fund allocation to local governments to better reach low- and moderate-income people.

On the other hand, while these state organizations have established the intention to provide aid to those in greatest need, their leading recommendation following Harvey was for aid providers to respect the private sector's territory during disaster recovery activities, helping disaster survivors without taking business opportunities away from private businesses (Natsios 2018). It is important to challenge how these organizations distinguish between human need as a call for action to relieve suffering versus as a profitable opportunity to be preserved for private sector interests. It is also important to question how these organizations ensure that the suffering

of people who are not market visible does not go unnoticed, especially when working with communities who have already been chronically denied resources and support prior to a disaster.

Federal and state disaster recovery agencies provide crucial resources and services to disaster-ravaged communities. However, the market-serving values and assumptions that structure much of American society need to be rendered visible and challenged at every point in the disaster recovery process to keep them from harming government agencies' disaster recovery objectives. In their Hurricane Harvey response reports, government agencies consistently refer to disaster survivors as 'customers.' This language is telling of the dynamics at play in disaster recovery and the kind of (consumer) capacities that these agencies expect survivors to fulfill in order to successfully engage with the disaster recovery system. It is important to recognize the risk of market-driven disaster recovery prioritizing the return of survivors to their social role as 'customers' in order for them to acquire recovery 'commodities' through market exchange. Such an approach neglects those who cannot engage in this market dynamic and reinstates the conditions of vulnerability that increase future disaster risk for marginalized groups.

CBOs: community advocacy and ownership in disaster recovery

Throughout disaster response and recovery, CBOs can work to push back against the market-driven return to pre-disaster inequalities by identifying and seeking to disrupt the processes whereby disaster recovery can place marginalized groups at further disadvantage (i.e. a household that must face the next storm in a severely damaged house because their damages from the previous disaster did not qualify for aid due to pre-existing conditions of vulnerability). In this section, I will discuss the experiences of two local CBOs that worked to assist households that fell through the gaps of government recovery programs and fostered community ownership of disaster response initiatives.

Short-term emergency response and community aid ownership

Port Houston Community Center (PHCC) is a faith-based community center located in Port Houston. The center plays a key role in the community, serving as a space for spiritual gatherings and community connection. One of the main initiatives through which PHCC fosters community empowerment is through its local mothers' group, where Port Houston women receive leadership training and courses on various life skills. During Harvey, Port Houston's only two access roads were submerged for several days, making it impossible for residents to leave or for PHCC staff to reach the neighborhood. Due to PHCC's emphasis on community ownership of center activities, the mothers' group took on a leadership role using PHCC resources to coordinate relief activities during the initial disaster response and short-term recovery phase. By empowering and trusting in community members to organize the relief effort themselves, PHCC was able to put its resources to work toward supporting the community without delay. This approach also allowed the center to inform its aid coordination activities with community insiders' knowledge of the challenges facing neighborhood households, allowing them to proactively reach out to residents with the emergency resources they most needed in culturally appropriate ways.

While PHCC provides crucial community building support for Port Houston residents, the center remains a small charity organization. A lack of connection to larger advocacy groups and government organizations, as well as limited and unpredictable funding, restrict PHCC's capacity to strategically scale assistance in line with their understanding of community needs. Due to these limitations, PHCC struggles to link residents to the full range of resources that could be available to them through city, state, and federal programs.

Supporting community development in long-term disaster recovery

Texas Center for Social Justice (TCSJ) is an organization that works on community and electoral organizing to promote social and economic equality for low-income communities of color in Texas. TCSJ approaches their work through six core campaigns that span criminal justice, immigration, education, neighborhood standards, healthcare, and voting and civic engagement. The organization explicitly acknowledges the correlations between disaster vulnerability and historical disadvantages based on race and ethnicity, emphasizing that their focus on organizing communities of color signifies that “in Houston that means organizing people impacted by Harvey” (Lee 2018).

While TCSJ implemented a Harvey-focused campaign in the storm’s immediate aftermath to respond to communities’ short-term recovery needs, the organization transitioned the campaign towards a long-term focus on fair housing. In this way, TCSJ is tackling systemic issues and chronic inequalities that were aggravated by Harvey, but which existed prior to the storm.

TCSJ works closely with Texas Housers, a nonprofit organization that aims to support low-income people and communities in solving housing and community development problems, specifically “to achieve the American dream of a decent, affordable home in a quality neighborhood” (Texas Housers 2018). In their joint post-Harvey work, TCSJ and Texas Housers followed a guiding framework that directed all disaster recovery actions around the following recovery rights: the right to choose, the right to stay, the right to equal treatment, and the right to have a say in what happens to their community.

TCSJ approaches its community organizing work from a participatory, holistic perspective that reflects a deep understanding of the intersecting issues facing marginalized communities. TCSJ frequently responds to neighborhood requests for support even if the request

lies outside of the organization's core campaign areas. This choice is deliberate, meant to demonstrate the organization's commitment to supporting community needs. Furthermore, the organization's immigration advisor attends neighborhood meetings across all of TCSJ's core campaigns, addressing residents' questions regardless of their direct relevance to the meeting's focus issue. This recognition of immigration concerns as all-encompassing challenges that cannot be compartmentalized reveals TCSJ's respect for the complexities of communities' lived experience.

CBOs like PHCC and TCSJ are engaging in a transformative approach to aid that applies a social justice framework to seize disaster recovery as an opportunity to protect human dignity and bolster community empowerment in disenfranchised neighborhoods. Such a framework could provide useful guidance for federal and state agencies whose administrative structures can risk excessive focus on compartmentalized material needs and may cause them to neglect the bigger picture of community life and wellbeing in disaster recovery.

Bridging the cultural divide between recovery agencies and disaster survivors

Natural hazards work in tandem with cumulative, socially constructed vulnerabilities that reduce communities' capabilities to prepare for, endure, and recover from disaster. Spatial and cultural context complicate our understanding of the toll that disasters take on communities (Browne 2015; 2016). Sense of place and cultural integrity are key building blocks to community resilience, providing sources of comfort and support during disaster recovery. The loss of place, cultural space, and identity in a disaster's aftermath can cause profound distress and lasting detrimental effects on current and future generations (Browne 2015; 2016; Marino 2015; Peterson & Maldonado 2016).

An effective, compassionate approach to disaster recovery can seize the opportunity to heal collective cultural wounds at the same time as it addresses more practical recovery matters (such as material and financial aid). In order for government agencies to adopt such an approach, it is important for them to develop awareness regarding their organizational assumptions about what people need, what are the best procedures for getting things done, and the language used to talk to people and oversee disaster recovery activities (Bode 1989; Browne 2013; 2015).

Anthropologists have noted that disaster recovery efforts often neglect local cultures, knowledge, and capacities. This disregard can lead to a disconnect between practitioner assumptions around disaster recovery and the cultural reality of survivors' needs. Human suffering occurs in this cultural gap between recovery agencies and disaster survivors (Browne 2013; 2015). Browne (2013) states that while "we need not attribute malice to those who intended every good," government agencies need to become aware of their own cultural baseline and how it shapes their institutional systems, procedures, values, and expectations. Furthermore, these organizations need to be cautious of the harm they can cause when they impose their own institutional culture on disaster survivors.

The communication failures that arise in these interactions between recovery agencies and disaster survivors have a compounding effect on communities' collective sense of frustration and alienation during disaster recovery. The communication style that institutional hierarchies of government recognize as worthy of respect can place cultural minority communities at a disadvantage in speaking effectively to representatives from large, impersonal bureaucracies (Browne 2013). This cultural divide, coupled with the power asymmetries between government agencies and disaster survivors, can lead to survivors feeling degraded and 'shattered doubly (Bode 1989, xli)' by both the disaster and the challenges that follow as they attempt to navigate a

recovery system that is often blind to their place- and culture-specific needs (Bode 1989; Browne 2015).

Disaster recovery agencies can support the healing process by taking care of matters of immediate survival without neglecting the resilience-rich quality of culture (Bode 1989). Browne (2016) argues that we have an obligation to reduce human suffering in disaster recovery by pushing disaster recovery systems in more culturally sensitive directions. Recovery efforts that nurture the resilience of cultural groups can help prevent the fragmentation of communities that undermines their resilience to adversity. In order for disaster recovery agencies to cross the cultural divide between themselves and disaster survivors, Browne (2013) argues for the need to prioritize the role of the ‘culture broker’ in disaster recovery.

In the case of Port Houston, government agencies can discover a new paradigm for disaster recovery by learning from the CBOs that worked closely with the community to secure resources and provide holistic support for the households who were affected by Harvey. CBOs often empower residents to take ownership of the disaster response and recovery process. These organizations’ relationships with the community allow them to recognize their needs and how to best support them “from the inside out” (Browne 2013). CBOs can mediate the disaster for affected households thanks to their understanding of the community’s language, attachment to place, rituals, reliance on each other, and how to best provide comfort and guidance. At the same time, these organizations know how to navigate the bureaucratic world beyond the community. This dual cultural skillset positions these CBOs to help bridge the divide between the cultures of disaster survivors and the institutions assigned to recovery.

Browne points out that in every disaster “there are people who can be tapped to work with agents of recovery – people who understand local cultural systems and values, and who

could help broker communication with outsiders” (2013). Collaboration between government agencies and local CBOs has the potential to increase the effectiveness and responsiveness of disaster recovery authorities while giving local people a reason to trust agencies that may otherwise be viewed suspiciously as outsiders. Such a collaboration can help pave the way for more culturally competent disaster recovery that considers the culturally specific ways in which individuals and communities experience suffering, trauma, and recovery, and prioritizes allowing communities to maintain their collective identities, dignity, and ways of life while healing collective devastation (Bode 1989; Browne 2013).

Collaboration between government agencies and CBOs to address disaster recovery gaps

The way federal, state, and community organizations approach disaster response and recovery is shaped by the scale and scope of their respective missions. The bureaucratic structures of government agencies respond to the demands of coordinating responses across concurrent crises at state and national levels. However, when operating at these broader levels, these agencies run the risk of creating bureaucratic barriers that can hinder their ability to address community needs in place- and culture-appropriate ways. Communities can struggle to feel supported while navigating aid bureaucracies where confusing application processes, uncertain aid eligibility requirements, and unclear reasons for application rejections lead them to feel discontent and question organizational transparency (Flores 2019). By fostering collaboration with CBOs during disaster response and recovery, government agencies can draw on CBO knowledge and expertise to better inform their approaches in ways that are cognizant and respectful of place-specific nuances and the intersectional nature of the various challenges that influence community life and disaster experience.

The CBO representatives I spoke to consider the nurturing of community relationships to be the core of their work. While CBOs understand the need for material and financial aid – and often broker the procurement of such resources for community residents who struggle to secure the aid they need – these CBOs prioritize facilitating aid in a way that is informed by the multidimensional life contexts in which aid resources will be received. This prioritization of community relationships extends into CBO perspectives on community resilience. The CBO representatives I spoke to view resilience not as static material resources that withstand disaster impacts in isolation, but rather as a process where social relationships serve as a base to preserve community identity and support recovery after a disaster (Rodriguez 2018; Fernandez 2018; Flores 2019).

Trust is the key element that allows CBOs to play a leadership role in social resilience building. The CBO representatives I spoke to emphasized that they have worked hard to position themselves as reliable, accessible, and understanding entities in their neighborhoods by being present during daily community life (Rodriguez 2018; Fernandez 2018; Flores 2019).

Additionally, CBOs often push the scope of their work to acknowledge and accommodate the full and evolving needs of the communities they serve. While their scope eventually returns to its original focus, this flexibility allows them to remain aware of the shifting nature of community needs, modify their approach where necessary, and broker support with more specialized actors when appropriate. A flexible organizational scope keeps these organizations from becoming alienated from the realities of the communities they serve by fostering engagement for a better understanding of community lived experience.

The CBO representatives I spoke to also expressed the importance of fostering visibility and trust with the community as an essential part of their work as community support providers.

Lee (2018) and Flores (2019) questioned the lack of consistent government agency visibility and trust building with low-income minority communities in general, and with Latinx neighborhoods especially. While community experiences with government agencies and representatives are not always negative, the main association Latinx communities have with the government is one of discrimination and persecution. Martinez (2018) explained that Latinx residents, regardless of their immigration status, often keep their distance from government entities due to the fear of being racially profiled and detained.

Everybody knows someone who has been deported, and everyone knows someone who has been detained because they didn't have their papers on them. People won't leave dangerous living conditions when an ICE agent is at their door telling them they need to evacuate. When the mayor announces on TV that nobody will be detained, and that if anyone gets detained that he himself will see that they are released, nobody's buying it (Martinez 2018).

Language is another important component of trust-building – it is the reason residents move to and stay in Port Houston even if they could afford to move elsewhere, and it is the language in which the CBOs I spoke to conduct community relationship-building work. Government representatives have a history of showing a lack of interest in Spanish-speaking community members' issues, even during everyday activities (i.e. acting bored and checking cell phones while Spanish-speaking people are speaking at town hall meetings (Flores 2019)). These experiences make it less likely that community residents will feel comfortable reaching out to government agencies in the aftermath of a disaster (Lee 2018; Flores 2019).

CBOs have a valuable strength in their culturally competent approach to community support and social resilience building. However, their capacity for positive impact is often

restricted by a lack of material and financial resources and limited political influence. In the aftermath of a disaster, these limitations present a challenge as CBOs struggle to balance the need to meet immediate post-disaster household and community needs while prioritizing their organizational objectives for long-term risk mitigation and community development. The contrasting strengths between federal, state, and community organizations present opportunities to foster collaboration and leverage capacities at each administrative level to improve disaster recovery outcomes. Such improvements can include minimizing community suffering and maximizing wellbeing in the aftermath of a disaster; providing emergency relief to all who need it in a timely and culturally competent manner; and supporting risk mitigation and social resilience to reduce vulnerability in the face of future hazards.

In order to make space for these collaborative opportunities, it is important for government agencies to acknowledge the biases and gaps that exist between their organizations' cultural baselines and the lived experiences of the communities they serve (Browne 2015; Browne et al. 2019; Clingerman 2011; Marino & Faas 2020). CBOs that already approach their community work through a culturally competent framework can serve as culture brokers and allies for government agencies that seek organizational learning opportunities to better tailor their disaster response and recovery activities. Such a collaboration can help government agencies to better accommodate community needs, further enhancing the positive impact that government resources can have on the lives of disaster impacted communities. A critical social justice framework can help disaster recovery organizations at federal, state, and community levels to identify and transform the structures, policies, and practices that shape choice availability for communities that have been marginalized by dominant cultural, social, political, and economic systems (Clingerman 2011; Marino & Faas 2020; Nussbaum 2003). Collaboration

between government agencies and CBOs has the potential to guide powerful structures and resources through a cultural competence lens to improve disaster recovery outcomes by promoting engaged discourse and collaborative problem solving to direct public and political attention toward the need to mitigate acute disaster risk by alleviating chronic disaster conditions for marginalized communities before natural hazards strike (Browne 2015; Browne et al. 2019; Clingerman 2011; Marino & Faas 2020).

CONCLUSION

Disasters reveal the historical patterns of vulnerability and existing power structures that marginalize communities and place them in harm's way. Rapid-onset disasters (i.e. hurricanes) are a compounding challenge on top of chronic, slow-onset disasters (i.e. poverty, discrimination). In order to target root causes of vulnerability we must demand transformative action from social actors who actively marginalize and render people vulnerable. Such a transformation can only happen if we acknowledge and address the market-driven framework that structures power in the U.S. As long as American society holds the market as the superior welfare maximization mechanism and values people first and foremost in their market-visible roles as producers and consumers, the inequalities needed for the well-being of a market society will continue to reproduce injustice, both in everyday life and during disaster recovery.

In the case of Houston Ship Channel communities like Port Houston, unregulated market-driven urban development has created a high-risk living situation for groups of people who have been systematically oppressed as a labor underclass whose risk exposure the city deems justifiable for market interests. The daily challenges of discrimination, poverty, and neglect by broader society's power structures actualized Harvey's potential for damage and loss on Port Houston households. We need to render visible the relationships, mechanisms, and ideologies that produce, reproduce, and sustain the social, political, and economic systems that mediate resource access and relegate certain groups of people into vulnerable life circumstances in both pre- and post-disaster contexts. This change in perspective shifts the burden of vulnerability away from the marginalized and onto the perpetrators of inequalities, holding powerful social actors accountable for the problematic outcomes of the ways in which they wield their power over different groups of people.

A social resilience approach to community development and disaster recovery offers an alternative that challenges the dominant, market-serving discourse of resilience that seeks to re-establish market roles and structures as the main objective of disaster recovery. Instead, a social resilience approach pushes for a people-centered recovery discourse that recognizes the minimum basic resources needed to support people's adaptive capacities, relationships, and sense of belonging to place and community through a context-aware, culturally-competent social justice framework. Disaster recovery can provide an opportunity for powerful social actors to take transformative action to address the socially constructed barriers that hinder community resilience in the face of a natural hazard. Through strategic collaboration with local people and CBOs, government agencies can improve disaster recovery outcomes by addressing the cultural divide and the power asymmetries that exist between themselves and disaster survivors.

In the case of Port Houston, many of the households I spoke to lacked the material, financial, social, political, and (dominant) cultural resources that would enable them to act in their families' best interest to better prepare for, endure, and recover from Hurricane Harvey. Residents' interactions with government agencies were often frustrating, degrading experiences where residents were held responsible for their disadvantaged position within a social system that denies them basic social status and resources. These agencies can prevent these issues – and the harm they cause marginalized communities – by working with local CBOs to nurture community relationships and inform their policies and procedures with place- and culture-specific knowledge to better address the varied, intersecting challenges that Port Houston households navigate in the areas of cultural minority and immigration status, housing, livelihood and income, aid access, and health and environmental hazard exposure.

Recommendations and directions for future research

I approached this research as an initial exploration of disaster recovery for disadvantaged cultural minority households to identify areas for further study regarding how households, CBOs and official government organizations can best use their resources to mitigate community vulnerabilities and support resilience in the aftermath of a disaster. My conversations with Port Houston residents and local CBO representatives revealed various avenues for future research that can help to better inform disaster response and recovery initiatives aimed at supporting low-income, minority-culture communities like Port Houston.

The first step toward transformative action is to identify gaps between community needs and organizational practice. Further ethnographic research regarding risk mitigation, disaster preparedness and disaster recovery experiences at household and community levels can help pinpoint the root causes of community disaster vulnerability and barriers to recovery. Ethnographic research can shine a light on the chronic disaster factors that are most likely to push families into vulnerable circumstances after an acute disaster (i.e. subpar housing conditions, lack of a stable livelihood or financial savings, and the potential link between the chronic illnesses that plague Port Houston residents and the social determinants of health that influence neighborhood health outcomes). This understanding can provide an important framework to identify organizational practices that ignore the historical and systematic marginalization of different groups of people, harm communities and hinder their capabilities to prepare for and recover from disasters.

Ethnographic research that dives into community experience and organizational practice can also shine a spotlight on the human suffering that results from a lack of culturally competent disaster response and the potentially harmful attempts to address this capacity gap through the

privatization and militarization of disaster response. With regard to the privatization of disaster recovery, further research can conduct a useful exploration into where recovery agencies draw the line – and what mechanisms oversee this line – between human need as a call for action to relieve suffering versus as a profitable opportunity to be preserved for private sector interests. Furthermore, this research avenue can also reveal alternatives to ineffective disaster recovery approaches by providing a wealth of information regarding community values and what brings joy and purpose to people’s lives. This information can serve as a foundation for a social resilience approach to disaster recovery that acknowledges the myriad factors that are required to make individuals, households, and communities whole again after a disaster.

Another useful avenue for future research can be to investigate the role of trust between recovery organizations and communities during disaster recovery. Research into this matter can explore the ways in which local CBOs (and other organizations) nurture community relationships and develop place-based knowledge and cultural competence in an effort to position themselves in a way that allows them to better serve a community in times of crisis. In order to learn from these insights, recovery organizations must develop an awareness of their own cultural baseline and how it differs from the cultures of the communities they serve. Research into institutional cultures and assumptions can provide valuable insights into the ways that powerful social actors can (re)produce conditions of inequality and how they can transform these default institutional frameworks to produce more socially just disaster recovery outcomes.

The subject of culturally competent disaster recovery also presents research opportunities around organizational learning. If government agencies value culturally competent and socially just disaster recovery, it is fundamental for them to define the capabilities that are at the core of disaster preparedness, endurance, and recovery. Moreover, it is key to assess disaster recovery

policies and procedures to determine whether they effectively work toward enabling these capabilities for communities that must navigate acute disaster impacts within chronic disaster contexts (and what changes need to be made if they do not). Research in this area can help shine a light on organizational intent on paper versus real-world recovery outcomes, challenge problematic recovery practices, and propose meaningful, transformative avenues for positive change.

Research into organizational learning in disaster recovery can also bolster opportunities for government agency-CBO collaboration by exploring the ways in which the contrasting strengths of organizations working at varying scales can complement each other to achieve a more powerful, positive impact in disaster survivors' lives. This avenue for research can also help to identify areas where government and CBO disaster recovery efforts duplicate or conflict because of a lack of coordination. The creation of a government-CBO collaboration platform for disaster recovery can make both government and CBO short-term disaster response and long-term community recovery and development work more efficient and effective.

Disaster recovery authorities are socially powerful entities that are vulnerable to producing (and reproducing) patterns of disadvantage. As the more powerful actor in the government-community relationship space, these agencies have the power – and the responsibility – to ease human suffering, prioritize the nurturing of social and cultural resilience, and enable communities to better prepare for future disaster risk in compassionate, culturally competent ways. Local CBOs can often provide guidance, and in some cases can serve as culture brokers, to bridge the cultural divide between government agencies and disaster impacted communities. Collaboration between government agencies and local CBOs can improve disaster recovery experiences for disaster survivors by helping powerful social actors identify the areas

where they are vulnerable to perpetuating systems of oppression, and allowing them to choose a different, socially just outcome.

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APPENDICES

Appendix 1. Cultural minority and immigrant status

Interviewee	Birth Country	Reason for leaving birth country	Immigration status/circumstances	Time in Port Houston	Attachment to Port Houston
Ana	United States	N/A	US citizen; while immigration issues are not a major concern for her household, these issues impact her life through members of her extended family and friends in the community who are affected by immigration policy.	9 years	Ana moved away from Port Houston seeking more affordable housing, but has fond memories of growing up in the neighborhood. In her new neighborhood, her sense of belonging comes from her active participation in community organizing activities, which allows her to learn about what needs people have in her community and what types of resources and support are available to address those needs.
Sara	United States	N/A	US citizen; while immigration issues are not a major concern for her household, these issues impact her life through members of her extended family and friends in the community who are affected by immigration policy.	Since birth (40 years)	Sara was born in Port Houston and feels a sense of belonging linked to home ownership, having her family nearby, and having a life history connecting her to the neighborhood. She also emphasized that her lifelong, place-based knowledge regarding how to mitigate the risks of living in Port Houston adds to her attachment to the neighborhood.
Sofia	Honduras	Drug violence, need to ensure family's safety	Pending asylum application after life-threatening drug violence drove the family to flee Honduras. Their immigration process has been violent and harmful to the family's wellbeing.	4 years	Sofia expressed that she used to be suspicious and withdrawn, but she has found support and belonging through her involvement with the local community center Port Houston Community Center (PHCC). Her attachment to Port Houston is linked to the relationships she has built through her engagement with PHCC. Sofia also has neighbors on her street who she knew from her neighborhood in Honduras, which adds to her sense of community.
Isabel	Mexico	Drug violence	Did not comment, but referenced her mother's social security benefits as a resident.	18 years	Isabel's family settled in Port Houston because of affordable home ownership opportunities. Her attachment to the neighborhood is linked to having her mother and her brother there with her. She also has neighbors on her street who she knew from her neighborhood in Mexico, which adds to her sense of community.
Paula	Mexico	Marriage	Obtained residency through marriage.	1 year	Paula's attachment to Port Houston is linked to it being the place where she joined her husband, whose livelihood is based in the neighborhood. Paula sees herself as an open and friendly person, and she intentionally nurtures friendships with her neighbors. She is also involved with the local community center Port Houston Community Center (PHCC) and values the relationships she has built with the PHCC and community leaders she views as mentors.

Maria	Mexico	Drug violence, poverty	Did not comment on her own status, but mentioned that her ex-husband was deported.	8 years	Maria struggles with depression and is withdrawn and isolated from her community; she fears being taken advantage of or becoming the object of neighborhood gossip if she were to share her struggles.. Her family was displaced after Hurricane Harvey and she struggled with the loss of place familiarity. In her new neighborhood she became involved with Texas Center for Social Justice (TCSJ), which contributed to a sense of belonging. However, Maria's isolation and resentment from her experience in her old neighborhood still weights on her.
Silvia	Mexico	Drug violence, poverty, need to provide for family	Her husband died when she was in process to obtain residency through marriage; she did not complete the process and has no legal immigration status.	20+ years (did not specify)	Silvia settled in Port Houston because of affordable home ownership opportunities. She struggles with depression and is isolated from her community. Health challenges and conflicts with her immediate family are the main issues that cause her distress. She has nurtured a few friendships through the local community center Port Houston Community Center (PHCC) but, although she appreciates the support she can access through those friendships, she remains cautious; she fears being taken advantage of or becoming the object of neighborhood gossip if she were to share her struggles.
Angela	Mexico	Drug violence, poverty, need to provide for family	Does not have legal immigration status (could not afford to undergo the immigration process).	18 years	Angela's family settled in Port Houston because of affordable housing and livelihood opportunities in the area. While Angela is friendly with her neighbors, she does not rely on them for support; she fears becoming the object of neighborhood gossip if she were to share her struggles. Angela's sense of belonging is linked to her church community and to her immediate family. She especially values having her grandchildren nearby, and these family relationships give her a sense of purpose.
Lucy	Mexico	Drug violence, marriage	Obtained residency through marriage.	5 years	Lucy struggles with depression and the challenge of adjusting to life in a new country while processing the traumatic events that drove her to flee her hometown in Mexico. She is withdrawn and isolated from her community; she fears becoming the object of neighborhood gossip if she were to share her struggles. Lucy does not feel a sense of belonging in Port Houston.

Appendix 2. Housing

Interviewee	Type of housing; Own/rent	Pre-Hurricane Harvey housing conditions	Home disaster preparedness/mitigation measures	Resources for disaster preparedness/mitigation measures	Hurricane Harvey home impacts	Post-Hurricane Harvey home recovery experience
Ana	House; own	Ana's home was up to city building codes thanks to her stable income and to her husband's role as a stay-at-home spouse – both financial and labor resources available to stay on top of home maintenance. The family had also weathered Hurricane Ike in their home, so they had some flood mitigation measures in place.	Ana's family weathered Hurricane Ike in their home and had placed their washer and dryer on stilts to protect them from floodwaters. Upon receiving warning that Hurricane Harvey would affect the area, Ana's husband dug drainage trenches around the house to direct the flow of water away from the house. The family also stocked up on food and drinking water.	Ana's family had the financial resources, place-based knowledge, and hurricane experience necessary to prepare for Hurricane Harvey. The family also benefited from Ana's husband's physical ability and skills to dig drainage trenches, which was a key factor in limiting home damages.	While Ana's home was saved from severe damage by the drainage trenches that her husband dug around the house, the room that held their washer, dryer, and deep freezer flooded a few inches. The washer and dryer they had placed on stilts after Hurricane Ike were saved from any damage, but the deep freezer, which they had purchased after and had not thought to place on stilts, was lost, along with the food that was stored in it. This loss of food was a significant hit for the family. The house also suffered minor roof damage.	Ana's family replaced the deep freezer and paid for it out of pocket, taking advantage of favorable prices in stores. They relied on food aid to replace the food that was lost when the freezer was damaged. Ana's husband repaired the damaged roof; the family paid out of pocket for the materials, which Ana stated was less expensive than hiring someone to do the work for them. Ana considered that paying for these (relatively small) damages out of pocket was better than risking an increase in their insurance premium were they to file a claim with their insurance company.
Sara	House; own	Sara designed and built her house on a plot of land she inherited from her father. Her professional knowledge and stable income as a trained building designer mean that her home is well-designed and maintained up to city building codes.	Sara's professional knowledge as a trained building designer, coupled with her lifelong place-based knowledge regarding hurricane risk in Port Houston, informed the design and construction of her home. She raised the house approximately 6 feet. In preparation for Hurricane Harvey, she also purchased a waterproof container to store valuable items,	Sara had the knowledge (i.e. place-based and professional), material (i.e. a well-built and maintained home), financial (i.e. to purchase food, drinking water, plywood to board up her windows, and a waterproof container to protect valuable belongings), and social (i.e. family support to prepare for the hurricane and to check in on each other	Although the area surrounding Sara's house experienced some flooding and the water reached her front porch, her house was raised enough to avoid damage.	Sara did not consider that her family had needed a recovery period to address structural issues in their apartment after Hurricane Harvey.

			boarded up her windows with the help of family members, and stocked up on food and drinking water for herself and her son.	during the storm) resources to effectively mitigate the flood risk her home is exposed to in Port Houston and prepare herself for an acute disaster like Hurricane Harvey.		
Isabel	House; own	Isabel's family struggles to keep up with mortgage payments and home maintenance expenses that would ensure the home could withstand a storm.	Isabel's family stocked up on food, drinking water, and medications in preparation for the storm. They also filled up their vehicle gas tanks in case they might need to evacuate, but when they considered evacuation might be necessary it was too late for them to leave – the neighborhood exits were submerged.	Isabel' family had the material and financial resources necessary to purchase extra food, drinking water, medications, and gas in preparation for Hurricane Harvey. However, the family's material and financial resources did not allow them to address structural deficiencies in their home prior to the storm.	Hurricane Harvey caused severe roof damage to Isabel's home. The roof leak caused structural damage and destroyed furniture and personal belongings. After the storm, the house developed black mold.	The damages to Isabel's home were not covered by the family's insurance policy or post-disaster reconstruction aid options. The damage was also too expensive for the family to repair and pay for out of pocket. Six months after the storm, the family was still living with black mold in their house and a roof that leaked every time it rained.
Lucy	House; husband owns	Lucy and her husband live in a trailer that they have expanded, adding rooms and a covered back porch. Lucy has no legal ownership over the house, and fears that if anything were to happen to her husband, she would have no legal recourse should his family turn her away from the home.	The house that Lucy shares with her husband is raised on concrete blocks to mitigate for flood risk. Lucy's husband planned to weather the storm in the house, but Lucy's daughter insisted they evacuate and wait out the storm at her home in a different, less flood-prone city.	Lucy and her husband had some material resources (i.e. having raised their home on concrete blocks) to mitigate for flood risk. Through Lucy's family relationships, the couple also had access to social resources for risk mitigation and disaster preparedness (i.e. having a place to evacuate to).	The street that Lucy and her husband live on flooded, damaging neighbors' homes that were on ground level. However, their home was raised enough that the floodwaters did not reach the structure. The house sustained a minor leak around their wall air conditioning unit.	Lucy and her husband did not address the leak around their wall air conditioning unit; they considered it a minor enough issue that they could ignore it. The couple did not consider that their family had needed a recovery period to return to normal after Hurricane Harvey.
Sofia	Apartment; rent	Sofia's family rents an apartment in a small apartment complex of less than	Sofia's family prepared for Hurricane Harvey by stocking up on one week's supply of food.	Sofia's family relied on food aid from local food banks and their own financial resources to	Sofia's apartment did not suffer any damages from the storm. However, another apartment in the complex	Sofia did not consider that her family had needed a recovery period to address structural

		10 units. She considers the apartment to be in minor disrepair but sufficiently comfortable, although she wishes it were bigger to accommodate her family of 4.	Sofia mentioned that her young son packed an emergency bag with clothing and a water bottle after news anchors on television advised the public to do this as part of their preparedness strategy. Although the rest of the family did not follow suit, Sofia was amused and joked that packing the family's personal/immigration documents was more important than packing clothing.	stock up on food in preparation for Hurricane Harvey.	sustained severe roof damage. Sofia was relieved that her family's apartment made it through the storm without any issues. She was unclear whether the unit that sustained roof damage was repaired.	issues in their apartment after Hurricane Harvey.
Paula	Apartment; rent	Paula and her husband rent an apartment in a small apartment complex of less than 10 units. She considers the apartment to be in minor disrepair but sufficiently comfortable for her and her husband.	Paula and her husband prepared for Hurricane Harvey by stocking up on a two weeks' supply of food.	Paula and her husband relied on their own financial resources and savings to stock up on food in preparation for Hurricane Harvey.	Paula's apartment did not suffer any damages from the storm. However, another apartment in the complex sustained severe roof damage. Paula was relieved that her family's apartment made it through the storm without any issues. She was unclear whether the unit that sustained roof damage was repaired.	Paula did not consider that her family had needed a recovery period to address structural issues in their apartment after Hurricane Harvey.
Maria	Apartment; rent	Maria lived in a ground-level apartment with her husband and four children when Hurricane Harvey struck.	Maria and her husband stocked up on food and drinking water in preparation for the storm. They also moved their vehicle to higher ground to save it from damage by floodwaters.	Maria's family relied on their own financial resources and place-based knowledge to prepare for Hurricane Harvey and mitigate for flood risk (i.e. precaution measures with their vehicle). When their apartment flooded during the storm, Maria resented	Maria's apartment flooded ankle-high, ruining most of the family's furniture. After the floodwaters receded, the house developed black mold.	Maria sought out reconstruction aid from FEMA, but she was told that it was her landlord's responsibility to apply for aid and take care of the necessary repairs. The landlord never made the repairs; the family continued to live with water damage and black mold until the building burned down due to an electrical fire six months later.

				the lack of support from her community (i.e. lack of social resources).		Maria's family found a new apartment which is more expensive but is also bigger and more comfortable than the previous one. The family prioritized a second-story apartment as a preventive measure in case of future floods. Maria struggled with the loss of her familiar environment and feels unmotivated to replace the family's lost furniture and belongings, fearing they could lose everything again in a new disaster.
Angela	House; rent	Angela rents the house that she lives in with her partner and siblings. Her daughter rents the house next door from the same landlord, who owns several houses on the same block. Angela considers that the house is in a state of moderate disrepair but sufficiently comfortable for her and her family.	Angela's family did their best to stock up on food in preparation for Hurricane Harvey, although the family's financial limitations meant they could not purchase more than a several days' supply of food at one time. The family could not afford to stock up on drinking water.	Angela's family relied on food aid from their church and on their own financial resources to stock up on food.	Angela's house flooded knee-high and sustained severe damage during the storm. Pre-existing structural problems in the house exposed Angela to an injury during the flood – she was electrocuted by a live wire that came into contact with the floodwaters. This injury left her with mobility issues that, combined with chronic health challenges, limited her ability to return to work after the storm. The family lost several appliances, furniture, and other personal belongings.	Angela's family fell behind on rent payments after Hurricane Harvey; it took them a year to catch up. While their landlord replaced some of the lost appliances, he had yet to make any structural repairs to the severely damaged house a year and a half after the storm. Angela mentioned that all of his properties on the block were damaged, and that he was struggling to replace the lost appliances and make the necessary repairs in each of them. However, Angela's family appreciated his flexibility when they could not pay rent on time and value their relationship with him enough to tolerate his delays in addressing the structural issues in the house.
Silvia	House; own	Did not discuss	Did not discuss	Did not discuss	Did not discuss	Did not discuss

Appendix 3. Income and livelihoods

Interviewee	Household provider(s)	Livelihood/income sources	Household income stability	Household savings	Post-Hurricane Harvey income and livelihood experience
Sara	Sara	Full-time commercial building designer	Sara had just been laid off from her job days before Hurricane Harvey struck, for reasons she considered related to unfair gender dynamics in the workplace. Her job had been stable up until that point.	Sara's job stability had allowed her to build up her household's savings, which enabled her to effectively prepare for Hurricane Harvey. However, she stated that the household could not purchase more than two weeks' worth of food because of financial limitations.	Sara did not consider that her family had needed a recovery period to address household income challenges after Hurricane Harvey.
Paula	Paula's husband	Full-time work in surrounding industry	Paula's husband works for a local metal processing company located a short walk from their apartment. He receives a consistent weekly income. He was also granted a week of unpaid leave while the city rode out Hurricane Harvey.	Paula's husband's consistent weekly income, combined with the couple's frugality, allowed them to accumulate some savings. While these savings allowed the couple more financial flexibility to prepare for the storm, Paula emphasized that one of the more stressful points while weathering the storm was the possibility that they would be impacted to a degree that their savings and resources would not be able to bounce back from.	Paula's husband was able to return to work immediately after Hurricane Harvey because he did not need to leave the neighborhood to reach his workplace. This factor minimized the household's income loss during Hurricane Harvey's aftermath. Since the couple's apartment did not sustain any damages as a result of the storm, they were able to absorb the loss of a week's income through their savings.
Maria	Maria's husband	Full-time work, did not specify livelihood	Maria's husband receives a consistent monthly income. He travels around the country for his work and had just returned from a job when Hurricane Harvey made landfall. Since he did not miss any scheduled jobs during the storm and its	Maria stated that the family had some savings, which allowed them to replace essential items (i.e. mattresses) immediately after the storm. However, the impact of these unplanned expenses on the household's finances was	Because Maria's husband did not miss any scheduled jobs during the storm and its aftermath, the family did not have any gaps in their income after Hurricane Harvey. The financial impact of the unplanned expenses to replace essential items damaged by the floodwaters (i.e. mattresses) was a source of distress for Maria.

			aftermath, the family did not have any gaps in their income.	not insignificant, and they were concerned by the possibility that they would be impacted to a degree that their savings and resources would not be able to bounce back from.	
Lucy	Lucy's husband	Retirement pension	Lucy and her husband rely on his retirement pension as their main source of income. The pension allows them to live comfortably as long as they follow a strict budget.	Lucy and her husband have some savings, which allow them to take frequent trips to visit extended family in nearby cities and states, as well as in Mexico. However, their savings were not a significant consideration when preparing for Hurricane Harvey, because their evacuation was supported by Lucy's daughter.	Lucy and her husband did not suffer any financial setbacks due to Hurricane Harvey because Lucy's husband's pension remained stable throughout the storm and its aftermath, and because they did not consider they needed to spend any money on home repairs after the storm. It is worth noting that, while Lucy's husband is the main household financial provider, Lucy's family relationships are closer to them than his. This family support network would be the likeliest source of support for the couple in case of financial insecurity.
Sofia	Sofia's husband	Full-time work in surrounding industry	While Sofia's husband's job provides a consistent weekly income and was secure during the storm, he could not access his workplace (outside the neighborhood) for several weeks after the storm. He was placed on unpaid leave until he was able to access his workplace again.	Sofia's family lives paycheck to paycheck and did not have savings that could help them prepare for the storm and absorb the loss of several weeks' income.	Sofia's family fell behind on rent payments as a result of losing several weeks' income during and after Hurricane Harvey. Sofia reached out to the local community center Port Houston Community Center (PHCC) for support and received financial aid, which allowed her family to catch up on their rent payments in four months' time.
Ana	Ana	Full-time phone systems manager	Ana's job provides a consistent monthly income for her family. However, she could not access her workplace (outside the neighborhood) during the storm because the neighborhood exits were submerged. She also could not access her workplace for several weeks after the storm because the coworker she relied on for transportation to	Ana's family had sufficient savings to repair minor roof damage and replace a damaged deep freezer out of pocket. However, these savings were not enough to absorb the loss of several weeks' wages.	Ana's family chose to pay for home repairs and appliance replacement out of pocket rather than risk increased premiums were they to file a claim with their insurance company. However, the family felt the loss of wages in other areas, such as buying food and replacing the food that was lost when the deep freezer was damaged.

			and from work had severe home damages and did not go to work during that time. Ana's company placed her on unpaid leave and denied her request to use her paid vacation time to make up for the days she could not make it into work.		
Angela	Angela, her partner, and her siblings	Angela cleaned houses before her health deteriorated; she now makes and sells tamales on occasion; her partner and her siblings take odd jobs and work in surrounding industry	For Angela and her family, many of the jobs they relied on for significant portions of their income did not provide consistent income and did not recover after Hurricane Harvey. When Angela's health allows it, she makes tamales and sells them in the neighborhood to make some extra money, but this initiative yields limited profits relative to the time, labor, and resource investment it demands.	Angela's family had no savings and frequently went without when household income fell short of meeting the family's basic needs.	Angela's health condition and the injury she suffered during the storm kept her from returning to her job cleaning houses. Angela's family lost wages and livelihoods after Hurricane Harvey, which caused them to fall behind on their rent payments. It took the family a year and a half to catch up on rent, and they continued to struggle to return to a place they could recognize as financial normalcy. Angela considered that the family has never known financially stable circumstances where money was not a constant source of stress.
Isabel	Isabel, her brother, and her mother	Isabel works cleaning houses; Isabel's brother works as a construction painter; Isabel's elderly mother receives a retirement pension	Prior to Hurricane Harvey, Isabel's household had a consistent income between her elderly mother's pension and her and her brother's livelihoods.	Isabel's family had some savings, which allowed them to stock up on food, medication, and gas in preparation for Hurricane Harvey. However, their savings were not enough to absorb the severe damages that their house sustained during the storm.	While Isabel's household retained a portion of their monthly income through her elderly mother's retirement pension, many of the clients that used to hire Isabel for house cleaning stopped calling her or moved away after the storm – she went from having work every day of the week to having work only 2-3 days per week.
Silvia	Did not discuss	Did not discuss	Did not discuss	Did not discuss	Did not discuss

Appendix 4. Resource availability and access to aid

Interviewee	Aid reliance pre-Hurricane Harvey	Personal resources available for disaster prevention/mitigation/recovery	Aid experience post-Hurricane Harvey
Sara	Sara did not rely on aid to meet her household's needs prior to Hurricane Harvey.	Sara had the knowledge (i.e. place-based and professional), material (i.e. a well-built and maintained home), financial (i.e. to purchase food, drinking water, plywood to board up her windows, and a waterproof container to protect valuable belongings), and social (i.e. family support to prepare for the hurricane and to check in on each other during the storm) resources to effectively mitigate the flood risk her home is exposed to in Port Houston and prepare herself for an acute disaster like Hurricane Harvey.	Sara stated that her household income was enough to allow her to prepare for Hurricane Harvey, while her savings allowed her to weather the period of uncertainty following the storm. Sara was aware of her household resource limitations, and she was concerned by the possibility of suffering storm impacts beyond her material/financial capacity to cope. However, Sara had no knowledge of the types of aid that were available to Port Houston residents post-Harvey, because she did not feel she needed it.
Paula	Paula did not rely on aid to meet her household's needs prior to Hurricane Harvey.	Paula and her husband relied on their own financial resources and savings to stock up on food in preparation for Hurricane Harvey. The couple also benefited from living in a relatively solid apartment that withstood the storm without sustaining any damages. However, another unit in their apartment complex experienced severe roof damage, so their lack of structural home damages after Hurricane Harvey was arguably due to chance rather than purposeful risk mitigation.	Paula stated that her household income was enough to allow them to prepare for Hurricane Harvey, while their savings allowed them to weather the period of uncertainty following the storm. Paula was aware of her household resource limitations, and she was concerned by the possibility of suffering storm impacts beyond their material/financial capacity to cope. However, Paula had no knowledge of the types of aid that were available to Port Houston residents post-Harvey, because she did not feel her household had needed it.
Lucy	Lucy did not mention any reliance on aid to meet her household's needs prior to Hurricane Harvey.	Lucy's close ties to her family were her main resource to prepare for Hurricane Harvey. Rather than preparing to weather the storm in their Port Houston home, Lucy and her husband evacuated to Lucy's daughter house and waited out the storm in company of Lucy's children and grandchildren. Back in Port Houston, Lucy and her husband benefited from the material risk mitigation (i.e. raising their home on concrete blocks) that saved their home from flooding.	Lucy applied for FEMA reconstruction aid after Hurricane Harvey because her neighbor – whose house was on ground level and flooded several feet – suggested they apply together. Lucy stated that she received a letter from FEMA explaining the steps to receive assistance. However, she and her husband decided that their home had not been severely damaged (they decided they could patch up the leak around their wall air conditioning unit themselves) and that they preferred for public assistance resources to go to people who had lost everything.
Isabel	Isabel did not mention any reliance on aid to meet her household's needs prior to Hurricane Harvey.	Isabel's family relied on their own financial resources as their main resource to prepare for Hurricane Harvey. However, the family did not have the material (i.e. a well-built and maintained home) resources to effectively mitigate for potential storm damage to their home, and their personal financial resources were insufficient to make the necessary home repairs.	Isabel's family applied for FEMA reconstruction aid after Hurricane Harvey to repair the roof and address the black mold issue in the house. However, their claim was denied because FEMA was recognizing hurricane damage solely as ground-up flooding – structural damage due to the heavy rains did not qualify Isabel's family for assistance. Isabel's family then filed a claim with their insurance company, which was also denied.
Maria	Maria did not mention any reliance on aid to meet her household's	Maria's family relied on their own financial resources as their main resource to prepare for Hurricane Harvey. However, the family lacked the social (i.e. community support to navigate disaster preparation and recovery) resources necessary to	Maria applied for FEMA reconstruction aid after Hurricane Harvey to address the water damage and black mold in her family's apartment. She was told that, as a renter, it was her landlord's responsibility to work with FEMA to address repairs to

	needs prior to Hurricane Harvey.	effectively mitigate flood risk and recover from the storm's impact. Maria's family also relied on their own financial resources to recover from the storm.	the apartment building. The landlord never addressed the building damages and Maria did not attempt to access any other kinds of aid. She weathered the hurricane's aftermath alone, growing resentful and further isolating from her community.
Ana	Ana relied on food aid from her local food bank on a weekly basis to feed her family prior to Hurricane Harvey.	Ana's family had the knowledge (i.e. place-based and from previous hurricane experience), material (i.e. a well-built and maintained home), financial (i.e. to stock up on food in preparation for the storm), and social (i.e. family support to prepare for the hurricane, including the physical ability and skill to perform the labor needed to take risk mitigation measures around the house) resources to effectively mitigate the flood risk that their home is exposed to and prepare themselves for Hurricane Harvey.	Ana applied for unemployment benefits to make up for the several weeks' wages she lost during and after Hurricane Harvey. It took three months for her to receive half of her total lost wages. While receiving the funds was ultimately helpful, the family still had to fend for themselves during the time when this income gap was most pressing. Ana relied on food assistance to replace the food that was lost when their deep freezer was damaged. Ana also participated actively in community-led relief efforts.
Sofia	Sofia relied on food aid from her local food bank and from the local community center Port Houston Community Center (PHCC) on a weekly basis to feed her family prior to Hurricane Harvey.	Sofia and her family relied on their own financial resources to stock up on food in preparation for Hurricane Harvey. The family also benefited from living in a relatively solid apartment that withstood the storm without sustaining any damages. However, another unit in their apartment complex experienced severe roof damage, so their lack of structural home damages after Hurricane Harvey was arguably due to chance rather than purposeful risk mitigation.	When Sofia's husband lost several weeks' wages and the family fell behind on rent payments after Hurricane Harvey, financial assistance from the local community center Port Houston Community Center (PHCC) allowed them to catch up on rent payments and overcome the crisis period in three months' time. Sofia was also actively involved with PHCC's post-Harvey relief effort. While PHCC staff could not access the community because neighborhood access points were submerged, Sofia organized with other members of the PHCC mothers' group to assess community needs and coordinate aid distribution in the neighborhood. Sofia's experience requesting assistance through PHCC contrasts with her experience requesting aid through government channels. She applied for government food assistance after Hurricane Harvey despite her fear of being rejected. This fear was based on past experiences of rejection for government benefits due to her immigration status. She witnessed people being rejected for post-Harvey food assistance but did not know on what grounds. She sought out aid despite her fear of being turned away because her family's need was so great, but she believes that a lot of people in similar situations avoid seeking assistance because they fear being turned away.
Angela	Angela relied on food aid from her church on a biweekly basis to feed her family prior to Hurricane Harvey.	The family did not have the material (i.e. a well-built and maintained home), financial (i.e. to purchase enough food, drinking water, and reinforce their home to withstand the storm, or social (i.e. community support to navigate disaster preparation and recovery) resources necessary to effectively mitigate the flood risk of their home in Port Houston and prepare themselves for Hurricane Harvey.	Angela's family sought out aid when certain resource gaps became apparent in the aftermath of Hurricane Harvey. These gaps included home repairs that were too expensive to cover out of pocket, replacing lost belongings, buying food, and making up for lost wages (including catching up on late rent payments). While the needs that Angela's family faced were varied, the only aid they were able to access was

Silvia	Did not discuss	Did not discuss	Did not discuss
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Appendix 5. Health and environmental hazard exposure

Interviewee	Household physical health challenges	Household mental/emotional health challenges
Ana	Ana has a family history of various chronic health conditions, including breast cancer, cervical cancer, heart attacks, strokes, diabetes, kidney disease, liver disease, chronic migraines, and high blood pressure. Ana has not had a health checkup in a long time because the family cannot afford it. She does not think a checkup would be useful anyway, because she would not be able to afford treatment if she were to receive a diagnosis. Her last health checkup revealed she was borderline diabetic with possible high blood pressure, and needed to be tested for cells that may or may not have been a sign of cervical cancer. While the children have access to health care through Medicaid, Ana and her husband do not have health insurance – their household income is too high to qualify them for Medicaid, but they cannot afford alternative health insurance.	Ana did not discuss her household’s emotional health challenges.
Isabel	Isabel’s elderly mother suffers from high blood pressure, glaucoma, and arthritis. Isabel has been diagnosed with diabetes and high blood pressure. She takes medication for her conditions and tries to exercise and stick to a controlled diet plan. Isabel is able to access care for herself and for her mother through Medicaid.	Isabel did not discuss her household’s emotional health challenges. However, she mentioned that weathering Hurricane Harvey and its impact on their home was an emotionally taxing experience, especially for her elderly mother.
Sofia	Sofia’s household does not suffer from any physical health challenges.	Sofia’s husband suffered a psychiatric breakdown, attempted suicide, and has continued to struggle with depression as a result of the abuse he endured at the hands of ICE agents when he was detained while the family’s asylum application was pending. Sofia suffered emotionally through the initial phases of his crisis before he shared with her what he had been subjected to in detention. Sofia then sought out support through the local community center Port Houston Community Center (PHCC) to access psychological and psychiatric care for her family. Sofia continues to be the emotional pillar for her family; she sometimes struggles with anxiety and stress due to the weight of the responsibilities surrounding the care work she performs for her family. PHCC leadership who are familiar with her family’s situation offer emotional and spiritual support, reminding her to take care of herself so she can care for others. Her husband’s acknowledgment and appreciation of the care work she performs for the family is also an important source of support for her.
Angela	Angela had a respiratory infection that went untreated for a long time because she lacked access to affordable health care. After her condition deteriorated considerably, she paid cash to see a doctor who works with undocumented immigrants. She does not fully understand what the	Angela suffers under the stress of struggling to make ends meet. The family struggles to send money back to family members in Mexico, and the inability to do so when money is tight is a source of distress. Angela’s family also suffered greatly doing their best to emotionally and financially support their (Angela’s) mother, who died in Mexico after a long and painful illness. Angela suffered

	<p>diagnosis and medication were, but she believes it was a serious case of pneumonia. She was bedridden for months and could not work.</p> <p>Angela also had adverse reactions to harsh chemicals she used at her house cleaning job. These reactions, combined with her respiratory illness, kept her from returning to work cleaning houses.</p> <p>Additionally, during Hurricane Harvey, Angela was helping her daughter (who lives next door and who had just given birth) walk back to her house in knee-deep floodwaters. When she waded back into her house, Angela was electrocuted by a live wire that came into contact with the water nearby. Her partner saw what was happening and used a broomstick to push her away from the wire, but the electric shock damaged her legs, further debilitating her in her quest to return to work.</p>	<p>with severe migraine headaches and depression as a result of these overlapping stressors.</p> <p>During these hardships, Angela found support in her family relationships and through spirituality. She expresses that everybody suffers, that everybody has needs, and she feels grateful for the roof over her head, the food on her table, and for her relationship with her family, which gives her a sense of purpose.</p>
Paula	<p>Paula suffers from poly-cystic ovarian syndrome (PCOS), a disorder that has affected her fertility.</p>	<p>Paula longs for a peaceful home atmosphere and struggles emotionally when she argues with her husband, tempers flare, and hurtful things are said. Paula and her husband want to have children but are having trouble conceiving due to her PCOS. Paula tries to find relief through spirituality and relies on the leaders of the local community center Port Houston Community Center (PHCC) for support. However, she continues to struggle when people ask her why she has not had children yet after several years of marriage. This societal pressure to have children, on top of not being able to fulfill her desire for a family, is painful.</p>
Lucy	<p>Lucy is a heavy smoker and suffers from cardiovascular disease, including poor circulation to her legs which limits her mobility. Lucy and her husband have access to health care through Medicaid as part of her husband's retirement benefits.</p>	<p>Lucy struggles with depression and suicidal thoughts linked to a lifetime of domestic abuse in her previous marriage and to the loss of her son, who was kidnapped and killed by drug cartels in her hometown in Mexico when the family could not pay his ransom. Lucy sees a psychologist, but she does not think it helps. She resents the therapy approach and wants to see a specialist who will prescribe her medication. Lucy also struggles with anxiety due to the care work she performs for her children and her siblings. She expresses that she is incapable of helping them without internalizing their issues as her own. Lucy also struggles with feelings of depression and isolation in relation to her lack of place attachment and sense of community in Port Houston.</p>
Silvia	<p>Silvia's life in Port Houston has been marked by the tragedy of her husband's death due to a heart attack. Years later, Silvia spent many years of her life fighting cancer which metastasized and had affected her stomach, throat, ovaries, uterus, and colon. It was a long and painful recovery, but she eventually made a full recovery and has been in remission for seven years.</p>	<p>Silvia struggles with depression due to various family conflicts that severed treasured emotional ties between family members and destroyed her family relationships. Additionally, Silvia worries about her family back in Mexico, who have also been victims of violence and corruption; several of her family members have been killed by corrupt police officers. The chronic instability of continuous health problems, family tragedies, and family conflicts are a constant source of stress that exacerbates Silvia's depression.</p>

		Silvia has relied on a couple of neighborhood friendships for emotional support and values her relationship with spiritual leaders from the local community center Port Houston Community Center (PHCC). However, she is hesitant about sharing with the wider group at the community center because of the suspicion that some people that go to the group meetings do so to gather fodder to gossip about their neighbors rather than to be supportive.
Maria	Did not discuss	Did not discuss
Sara	Did not discuss	Did not discuss