Vulnerable Populations/Responsible Individuals: Disability and Hurricane Harvey

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Abstract

This research builds upon previous work examining a case study on the roles that ableism and disability rights frames played in the response to Hurricane Harvey (2017) in Houston, Texas. Through qualitative interviewing and a document analysis for the present study, I found that disabled people were simultaneously viewed through two seemingly-disparate but ultimately interconnected frames: individual responsibility and populational vulnerability. Fjord (2010) has previously critiqued the vulnerable population concept for essentializing and biologically inscribing socially-produced vulnerabilities by focusing on the populations themselves rather than on structures that produce vulnerability. Likewise, Ray's (2013) notion of the ecological other shows how nature has been a backdrop through which Americans have crafted an identity of rugged individuality and fitness that relies upon the inverse image of the unfit, dependent body. I argue that the concepts of rugged individualism and vulnerable populations have been used to support and reinforce one another and that following Harvey, disabled Houstonians were caught between the belief that they were inherently vulnerable (unfit) and the expectation that they be self-reliant. Through this study, I examine how emergency management systems continue to be shaped by these narratives in ways that perpetuate inequitable disaster outcomes.

Introduction

"Only the Strong Will Survive"

In February 2021—while people across Texas were without power, water, and gas during a historic winter storm—Tim Boyd, the then-mayor of Colorado City, used Facebook to tell his constituents that no help—or as he put it, "handouts"—was coming. Speaking directly to constituents, he stressed that the government and privately owned power companies "owe you NOTHING!... Only the strong will survive and the weak will perish" (Brito, 2021). Boyd was swiftly rebuked and resigned shortly thereafter. Nevertheless, his advocacy for personal responsibility in a time of crisis created by state negligence is revealing. While his tone was vitriolic, his message was, if anything, quite common.

The view that individuals—rather than the state— are responsible for their own safety during crises was present throughout my preliminary research on Harvey and people with disabilities. State employees working within programs designed to aid people with disabilities consistently emphasized the necessity of individual preparedness and that state services were not guaranteed. Online materials created by community centers taught disabled residents how to be personally prepared for a disaster in case the state was unprepared to meet their needs. Disabled residents who evacuated emphasized the importance of their self-reliance. While it is certainly good to be individually prepared for a disaster, this is not a substitute for strong social systems and emergency management policy.

Disability thinkers and activists have shown increasing interest in climate justice as a disability justice issue (Berne & Raditz, 2019). However, my previous research focused on disability *rights* as a critical point of interest as opposed to disability *justice*. Disability rights

involve a state-sanctioned system of social recognition, whereas disability justice movements are comprised of intersectional, grassroots efforts that are "too messy and wild to fit into those structures" (Piepzna-Samarasinha, 2018, p. 124). Specifically, my Houston-based research has focused on assessing the functioning and/or misfunctioning of the state and non-profit systems that have developed out of a disability rights framework and the Americans with Disabilities Act (ADA), not the community-organized systems of care that define mobilization for disability justice. My question is, has this system of disability rights yet provided material safety for disabled people living through climate disaster? I do not believe that it has.

There are access barriers preventing disabled people from receiving critical services at all stages of emergency management. Inaccessible evacuation transit and shelters make the response stage more difficult for wheelchair users. The risk of losing expensive durable medical equipment also adds significant stress to the evacuation process, and the mental health and social risks posed by disaster recovery are overall worse for disabled people (Stough et al., 2017). People with functional needs are at far greater risk of losing their independence after a disaster because of a combination of disruptions to in-home assistance services, inability to access funds to rebuild home accessibility equipment, and/or significant delays in receiving recovery money (Stough et al., 2016). Emergency management in the United States has a long way to go toward making its disaster response and recovery systems accessible and anti-ableist. This gap will only grow increasingly urgent as the climate continues to rapidly change.

I contend that the attitude of individual responsibility during disaster is not just a reflection of small-government ideology, but is in fact connected to older, dominant U.S. attitudes valuing rugged individualism. While it would intuitively make sense that the rights-

claims of populations considered vulnerable during disaster—like disabled communities—

would counteract this narrative, I found that notions of social vulnerability and individual

responsibility actually uphold one another. The virtue of self-reliance has been a major part of

the United States' identity for much of its history, including the nation's environmental

attitudes. I argue that it also informs our systems of disaster recovery. I contend that the

association between self-reliance, fitness, and nature has been transposed into how individuals

are expected to care for themselves during crises. Boyd's words make the social Darwinism

from which these attitudes emerge quite plain: "Only the strong will survive" (Brito, 2021).

<center>**Literature Review**</center>

Vulnerable Populations/Responsible Individuals

Both disasters and disabilities have been conceived of as tragic acts of nature or god,

separate from social conditions. Likewise, both disability and disaster studies have shown how

this understanding serves to remove responsibility from the structural failures that unevenly

produce harm. Priestley and Hemingway (2007) connect the distinction between "hazards"

(storms, earthquakes, disease) and "disasters"—which are the hazard's impacts as they

encounter uneven social systems (Wisner et al., 2003; Wisner et al., 2012)—to a social model of

disability—which distinguishes between the material conditions of impairment and the

disability produced by living in an ableist world not built for a variety of body and minds. Put

another way: Deafness is not the reason that deaf people evacuating during Hurricane Katrina

were unable to communicate with Red Cross volunteers at a local shelter; rather, the issue was

that American Sign Language (ASL) interpreters were barred from entering the shelter (National

Council on Disability, 2021).

In much the same way that the built environment has been designed in an inaccessible manner, the U.S. emergency management system has been designed for the benefit of a "standard person." In what Fjord (2007) calls a "one-size-fits-all" method of disaster response, the "size" in question is that of the white, able-bodied man of financial means. Rather than trying to address as many types of needs as possible, this system relies on framing anything beyond its scope as "'special needs' that in the U.S. at least, are the responsibility of the individual to know and fulfill" (Fjord, 2010, p. 13). The individual responsibility script attributes this harm to natural causes in that they are perceived to be the result of the disabled person's nature as well as the violence and uncontrollability of nonhuman nature.

In *The Ecological Other*, Ray (2013) described a similar "model" person as the "ecological subject" and traced attitudes about self-reliance to the earliest roots of American environmental identity. She illustrated how the enclosure of the National Parks, social Darwinist notions of racial purity and fitness, and the medicalized understandings of disability all emerged contemporaneously; thus, she argued, these developing ideas were not mere historical parallels but in fact "converged to support an emerging sense of a fit, pure national identity" (Ray, 2013, p. 15). This model of white, masculine self-reliance parallels the model for the one-size-fits-all disaster response that Fjord (2010) articulates. The National Parks were one part of the solution to a crisis of masculinity after the closing of the frontier and served as a "safety valve…to replace the role that the frontier had played" (Ray, 2013, p. 11-12.). In other words, nature became a space where men could prove themselves fit.

Ray's (2013) analysis showed the ways in which the values of ruggedness and self-reliance that were tied to national identity also became tied to wilderness. In reality, of course,

some of the key authors who came to represent this masculine, self-reliant individual

encountering nature were never really alone at all. When Edward Abbey was in his place of

desert solitude in Arches National Park, his wife and children were actually staying nearby

(Irvine, 2018). While at Walden Pond, Henry David Thoreau visited the nearby village where his

family lived almost daily (Solnit, 2013). This is not to excoriate these writers but to point out

that the notion of their total self-reliance in nature is a mythology. Abbey and Thoreau have

become symbols of solitude and rugged individualism, but they were in fact—like all of us—

actually living in community. It's helpful to keep this mythology in mind as we consider

contemporary emergency management, which has been built for and around the narrative of

the self-reliant man encountering nature.

In more recent examples, notions of individual responsibility have been used to obscure

state culpability and shift the blame for harm onto those harmed during disaster (Tierney,

2015). In her article about media representation of New Orleanians after Katrina, Fjord (2007)

showed how disability was used as a way to do just this. She connected disability to race,

arguing that disability became a narrative frame used by the media to cast Black New

Orleanians who stayed behind as somehow impaired. Fjord argued that the media made this

perceived impairment the cause of harm, as opposed to the state's failure to protect New

Orleans. She read these images through David Mitchell and Sharon Snyder's (2014) concept of

"narrative prosthesis," saying that the media led "viewers along a preferred plotline to an

inevitable outcome tied to the impairment" (Fjord, 2007, p. 10). This inevitable outcome is that

disability will ultimately lead to harm. "Disability's power as a narrative prosthesis ensures its

enduring capability to predict negative outcomes for those cast as disabled" (Fjord, 2007, p.

10). Images of a Black man wading through the floodwaters with a bucket of beers exemplified perceived '"inabilities' to plan ahead or even to take care of one's basic needs. Whatever negative outcomes come to him, the frame leads us to suppose, are deserved" (Fjord, 2007, p. 11). Thus, impairment and social vulnerability become categories that protect state agencies from responsibility for the death of those categorized as such. In this framing, impairment and illness (real or projected) are understood as a cause of death rather than any governmental failure. Citizens who were unable to evacuate for a variety of reasons can then retroactively be cast as at fault for their own endangerment for having stayed.

Rather than asking viewers to question the social and economic factors that positioned individuals for harm, these images push the narrative that the harm that a disabled person could come to during a hurricane is "natural" rather than social. This script hides the structural failures that unevenly produce harm across race, class, and ability (Thomas et al. 2013; Peek et al. 2021). For instance, during Hurricane Harvey, neighborhoods whose residents were predominantly Black, Hispanic, or low-income were significantly more likely to have flooded, and these same neighborhoods have the highest concentration of the city's disabled residents (Chakraborty et al. 2019; Flores et al. 2020).

Scholars in the field of disaster studies have challenged these structural failures by highlighting how they are socially produced (Wisner et al. 2004; Peek et al. 2021). Vulnerability has been used to describe how broad populations of people who already face structural inequalities in everyday life—people of color, low-income people, disabled people, undocumented people, women, among many others—on the whole have worse impacts from disasters than other groups, and the research on vulnerability has highlighted the relationships

between these pre-disaster inequities and the post-disaster outcomes. However, because

vulnerability relies upon a populational model, the concept also risks being misused to further

disenfranchise those described as vulnerable (Marino and Faas 2020). As a result, it became

possible to use this concept like a "biogenetic classifier with disheartening explanatory power"

(Fjord, 2010, 13). Used like this, vulnerability as a concept can act as an emergency

management passive voice in which harm can be described without ever mentioning who did

the harming and could be co-opted into the powerful script of individual responsibility.

Vulnerability can be inaccurately framed as stemming from the populations themselves rather

than their conditions.

This framing is perhaps especially problematic for disabled people whose disabilities are

still often understood through a medical model that solely understands disability as an

individual condition (Erevelles, 2011; Kafer, 2013). "Vulnerability" can slip into describing what

Fjord (2007) calls "the expected dead," which are those populations who are understood to be

unfit for survival, "whose infirmities and age are imagined as the cause of their deaths" (p. 14).

While this sort of social Darwinist use of the vulnerability concept is clearly not what scholars

have intended, the use of a populational model to describe vulnerability has created the

possibility for such a slippage to occur. When a hazard becomes a "natural disaster," "nature"

and "disability" become the reasons for harm rather than the structural inequities that set

some populations up for harm when compared to others (Puttick et al. 2018). Said differently,

the perceived "vulnerability," or personal "unfitness" that disability is believed to represent,

becomes the explanation for harm, rather than the inequities that positioned someone in

harm's way.

It is within the interlocking positions of "vulnerability" and "personal responsibility" that many marginalized Americans, including disabled people, find themselves during a disaster. I argue that these two frames are mutually constructed and uphold dominant understandings of fitness that attribute "vulnerability" to populations and bodies rather than weak social systems. I will show that Tim Boyd's attitude is not, in fact, shocking, but quotidian, and that the rhetoric of individual responsibility works in tandem with the concept of "vulnerable populations" to shift focus away from emergency management failures. Through this rhetoric, blame for harm and responsibility for safety are placed upon populations that have been deemed vulnerable rather than the systems purportedly designed to assist them. During the response to Hurricane Harvey, this led to, among other things, a distinct lack of preparation to serve Houston's disabled community.

Research Questions

To expand on this research, this study seeks to answer:

1. What are the conditions under which this rhetorical move of overemphasizing the role of the individual in disaster and deemphasizing the role of the state occurs?

2. How have attitudes about vulnerability and individual responsibility shaped aspects of the official emergency management system in Texas?

Research Design & Methods

This paper uses data I collected as part of a qualitative study of Hurricane Harvey's impacts on disabled communities in Houston. Data collection for this study occurred during the summer and fall of 2020. Although this study had originally been designed using participant-observation and in-person interview methods, I felt it was my ethical imperative to move my

research online at that time, particularly given the heightened systemic precarity disabled people were facing during the COVID-19 pandemic. This meant I had to seek interviews with people I could recruit online and who I could reach by word of mouth. Given this, I was mostly able to interview people at higher levels of power with an online presence—public figures, state employees, and people working in non-profit and private institutions advocating for disability rights. Missing from my interview set are those doing the less highly-publicized, community-organized disaster recovery and disability justice work addressing the gaps our emergency management systems leave behind.

Thus, this study is less about the individual experiences of disabled Houstonians and more about the roles that state powers and ableism played in shaping the response to Hurricane Harvey. Josiah Heyman, whose research has focused on immigration officers on the U.S.-Mexico border said that "a stronger theoretical approach to organized power enhances applied anthropology's ability to address the behavior of state and private bureaucracies with respect to the rights and interests of nonbureaucrats" (McC. Heyman, 2004, p. 487). It is in this vein that I address the frictions between policy, practice, and rights claims surrounding disability during Hurricane Harvey.

Participants were identified using a mix of purposive and snowball sampling. In total, for this study I conducted nine interviews with ten people, with interviews averaging an hour in length. Prior to being interviewed, all participants had the scope of this research study explained to them and signed consent forms. Given the public roles most of my participants occupy, pseudonyms were not used.

In addition to interviews, I incorporated document analysis in order to gain additional insights into the rhetoric surrounding the issues discussed here. Documents included Texas Department of Emergency Management (TDEM) websites, pamphlets and websites related to the State of Texas Emergency Assistance Registry (STEAR), publicly and privately produced guidance aimed at helping disabled people be more prepared for environmental hazards, and various news media. These documents provided key insights that might otherwise have been missed.

Documents and interview transcripts were all analyzed using a qualitative coding approach. Coding happened in multiple rounds, beginning with an open-coding method that allowed themes to emerge followed by focused coding using these initial emergent themes.

Findings

Harvey hit Houston hard and fast in August 2017. Angela, an elementary school teacher, was prepping her classroom for the upcoming schoolyear the day that the storm made landfall. At the time, Harvey just didn't seem like it would be especially bad, and neither Angela nor her then-fiancé were especially worried. Their house had never previously flooded to their knowledge, and Angela was used to big storms having grown up outside of Houston. Talking about her personal preparedness, Angela laughed, describing it as "minimalist."

When it became clear that the storm might be more serious than they'd anticipated, they still stayed at home, in part because a rapid evacuation would be harder for Angela as a wheelchair-user. She had no interest in participating in a mass-evacuation and taking the risk of getting stuck on the highway without access to medical care or a wheelchair accessible restroom. When the water hit their backdoor though, the two of them realized they'd need to

evacuate and that they'd need help to do it. "I can move so very little of my body," Angela explained, "that process of evacuation, what does that really look like for me?" She put out a request for help on her social media accounts; by the time they were rescued, the posts had been shared hundreds of times.

Eventually, a firefighter came by to let Angela and her fiancé know that someone would be coming to get them when they had the means but to take another route out if it presented itself. So, when a man pulled up to their home in a boat large enough to carry Angela's wheelchair, they took the opportunity. It turned out the man—who was a stranger—had heard about Angela through a mutual friend sharing her post on social media. Later, a neighbor would inform her that a rescue helicopter came for Angela and her fiancé shortly thereafter.

Angela's story exemplifies the material dangers and concerns disabled people face during disasters. She tells it in a way that quite clearly relates her vulnerability in terms of her physical body but also the agential ways through which she created and chose a route to safety for herself via social connections.

She loves her hometown too. To her, it does not matter that she was ultimately evacuated by a fellow citizen and not emergency services—

> I would not criticize anyone over how it was handled. The fact that a good Samaritan had to rescue me versus the fireman—I understand there are hundreds of thousands of people that needed to be rescued… I recognize that everybody has special circumstances, right? But I *am* those special circumstances and I needed to solve my own problems.

For her, it was intuitive that if she had the means, she needed to do all she could to assist herself. She positions herself as agential as she secures herself a rescue, but she also identifies

to an extent with material vulnerability ("I *am* those special circumstances."). Angela clearly articulates the narrative tension of being both self-reliant and at-risk.

Her story is illustrative of an important aspect of vulnerability: despite how it's framed, vulnerability remains both social *and* material, structural and personal. The reasons that evacuation is made more difficult for her as a wheelchair-user are structural. At the same time, the flood materially poses a particular form of risk to her body because of her limited mobility and inability to swim. Vulnerability actually emerges at the nexus of complex and intersecting levels of access to social, monetary, structural, and embodied security. Applying "vulnerability" at the level of populations can replace this complexity with a reductive framework that easily slips into biologically-determinist ideas of fitness. It is only through this flattening, however, that "individual responsibility" can take hold as a dominant framework of emergency management and vulnerability be seen as a solely personal, not structural, problem.

This framework is certainly reflected in how The State of Texas Emergency Assistance Registry (STEAR) understood itself. The program that would become STEAR was created by Texas governor Rick Perry in 2006 following criticism leveraged at the neighboring state of Louisiana over the handling of Hurricane Katrina. STEAR is a statewide registry of disabled people and people with access needs seeking assistance during disasters. People who wish to be included in the registry must sign up themselves and provide contact information and descriptions of their access needs to the Texas Department of Emergency Management (TDEM). This information is then shared with local governments.

Interviewees expressed to me that there was a significant push by private citizens as well as Houston officials like the Mayor's Office for People with Disabilities (MOPD) to register

disabled Houstonians with STEAR ahead of the 2017 hurricane season. My participants who

worked in the MOPD informed me that despite their involvement in pushing the community to

sign up with this state program, the MOPD had been excluded from Houston's emergency

management planning up to that point. They pushed Houstonians to register believing STEAR

would lead to a better quality of care for those who registered. However, STEAR has no policies

for how local officials should use the data they collect, and Houston never developed an

operating procedure for how to use it. My interviews with a STEAR employee, members of the

MOPD, and private citizens confirmed that that data went unused by Houston's Office of

Emergency Management during the response to Harvey.

The response to this among Houston's disabled community has been justifiably angry.

Gabe Cazares—who was the director of MOPD when I interviewed him—described it to me as a

"catastrophic failure." Lex Frieden, a researcher and disability rights activist who was involved

in the writing of the ADA and now lives in Houston, was still clearly upset about it: "All I can say

is they better get their act together next time." The damage that this has caused to the

community's trust of the city as well as STEAR has been quite profound. Gabe and Angel

Ponce—another member of the MOPD—were trying to recover that trust through their dual

roles as city officials and disability community members. Gabe and Angel saw it as part of their

jobs to act as conveners between the city, its office of emergency management, and the

disability community, but healing the rifts that were made by neglect during Harvey will take

time.

Lex has spent most of his life working in local and national policy and advocacy,

including running a hotline for disabled people in need of aid during disasters for about seven

years. While running the hotline, he directly helped to connect people throughout Texas and Louisiana to emergency services and coordinate their rescue. He's experienced first-hand that effective disaster response requires experienced people directing collective systems of emergency management:

> I would say that you gotta have a certain degree of experience to be able to know where to start to solve some of these weird situations. I gotta tell you, every situation that somebody faces in a disaster is complicated by personal issues, personal needs, personal expectations, and personal circumstances. It's not a one-size-fits-all solution for anybody, much less people with disabilities.

That there are diverse needs during disasters events is not, according to Lex, a reason to narrow the services designed to meet those needs. He rejected the idea that there is any "standard person" for whom these systems can be designed. If a one-size-fits-all solution doesn't work, then the systems responding to needs during a disaster must be more flexible and dynamic.

Rather than dynamism though, STEAR has limited its own capacities. STEAR's Austin office in the TDEM has just a handful of employees, and their jobs center around collecting volunteered data, organizing it, and giving cities and towns access to it. When I spoke with one of their employees about the role STEAR should play during a crisis like Harvey, they were emphatic that the program doesn't expressly promise any kind of service to people who register. This is in keeping with STEAR's messaging online, which they tell me has really focused on communicating that lack of promise ever since Harvey. Instead, the program projects, and indeed is structured around, individual responsibility as the most important piece of emergency management. In our interview, the STEAR employee I spoke with said that people assisting others to register with the program…

> Need to make sure these individuals have an emergency plan in place because it's not guaranteed [that they will receive aid]. And that's what happened with

Harvey… they thought they were getting this service and they're going to get rescued and no one showed up.

STEAR's response to the potential of overpromising services has been to refuse to promise any services at all. Indeed, in absence of any real regulations about how the data should be used, the program seems designed to tell disabled Texans that they are entirely responsible for every aspect of their own care, up to and including advocating for how their local government uses the data the program collects.

Not every county in Texas participates in STEAR. Those that don't participate have no established way to access that data and may not even know about the program, but STEAR does not inform people who register and live in non-participating counties that their information goes unused. When I pressed this particular point in an interview with the STEAR employee, asking why registered people were not informed if they lived in a non-participating city or county, I was told that this is because this information is available on the site. Thus, it was decided that registrants could figure this out for themselves:

If an individual registers into the program, and they notice that their area is not participating, then they need to reach out to them and say, "Hey, you know, I registered to STEAR. I noticed that you're not actively participating into it."

However, it is not easily accessible to see which counties participate in STEAR and which do not. A downloadable PDF that listed the counties and cities with "active custodians" could, at the time of this study, only be found under the part of the STEAR site designed for local government rather than the public-facing section of the site.[1] Nowhere on this document did it say that counties without custodians do not use STEAR data in their emergency management

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[1] A link to the latest version of this document has recently been added to the public-facing webpage.

or that such counties do not have access to that data to begin with (State of Texas Emergency Assistance Registry, 2024). My interviewee from STEAR referenced this map as part of the reason that setting up a system to inform registrants their area doesn't participate in STEAR hasn't been prioritized: "They need to go to that map and see if that area is participating or not." This response makes clear how an organization ostensibly designed to meet material needs ultimately upholds an idea of individual responsibility that relies on seeing vulnerability as inherent to disability rather than socially produced. Without policies on how local governments should use the system and with a main office that takes a largely hands-off approach, the life-saving potential of the system remains largely untapped.

Though these types of registry programs have been advocated for as a way to account for the needs of disabled people during disasters, Fjord (2010) argues that there is no compelling evidence that programs like STEAR actually inspire or even meaningfully support the kinds of individual preparation they encourage because they don't provide the material support needed to do so. Despite STEAR's focus on individual preparedness, there is shockingly little information on their website about how someone with a disability should prepare for an emergency. United Spinal Houston has made a webinar that goes over some of the things a person with a disability might need to have prepared in case of a disaster (Wiggs, 2019). These range from the universally practical—like an emergency grab bag and extra medications—to suggestions specific to particular disabilities and access needs—such as a backup battery for an electric wheelchair or a spare manual chair. I spoke with Laura, a member of United Spinal Houston's team, and she emphasized that they have been trying to close the financial gap that makes these kinds of preparations impossible for some people—they've created kits that will

be going to disabled community members throughout United Spinals' national network designed specifically for chair users. This is an apt representation of the next stage of Fjord's (2010) argument: that community organizations (like United Spinal Association) are stepping in to provide the material support necessary to build resilient communities in the face of systemic gaps.

STEAR's messaging is framed such that *all* responsibility is upon the individual—to register themselves annually, to confirm that their jurisdiction uses the data, to have the economic means to gather supplies ahead of a disaster, to secure personal transit—so that no true responsibility falls upon the program itself. However, the efforts of both the MOPD and United Spinal show that these kinds of needs cannot solely be met by individual efforts. Rather, as Fjord (2010) argued, resilience emerges from strong communities. There was systematic failure at the time of Harvey to address the needs of disabled Houstonians, and the MOPD along with the nonprofit sector had to step up to fill gaps left in care by a system designed to meet the needs of one kind of body. The program believed to address the shortcomings of a one-size-fits-all disaster response went unused, and disabled Houstonians often found themselves caught between the understanding that they were vulnerable and the expectation that they be self-reliant. These dual expectations revealed that vulnerability cannot be easily ascribed to whole populations but is in fact a more complex arrangement of material, corporeal, social, and monetary access.

Discussion and Conclusions

While impairment certainly creates different kinds of material or functional needs in individuals, policies and built spaces that are not made to accommodate these kinds of

everyday differences are what can make every stage of disaster from preparation to long-term recovery more dangerous for disabled people. We need emergency management that accounts for a variety of access needs and supports individual disabled people in getting those needs met. If someone is a wheelchair user who needs temporary housing after a flood, they will need housing that is wheelchair-accessible inside and out; if someone is deaf, they need an ASL interpreter at every emergency announcement; if someone is autistic and needs to seek shelter, they need shelters that can address needs like stimulation regulation. These are all needs that our disaster system is capable of addressing and needs to anticipate.

As my study illustrates, STEAR's attitude about its own responsibilities is in line with a social script that sees impairment as the reason disabled people are more vulnerable during disasters rather than ableism. Because personal impairment is understood to be the cause of vulnerability, the solution must also be individual, and thus the responsibility of care is placed upon the disabled person. This script parallels a much older mythology of American ruggedness that used eugenicist, colonial notions of the survival of the fittest and racial purity to justify itself. It cannot be understated that the history Ray (2013) has traced is one in which *fitness*— which is to say ability—is the defining feature Americans are trying to prove in wilderness encounters. It should be unsurprising, then, that a culture so fixated on proving individual ability would also apply pressure to its disabled people to do so.

Since Harvey, the MOPD has become a more direct partner with the city's Office of Emergency Management. When Gabe Cazares accepted his position as MOPD director, one of his first actions was to ensure there was a standard operating procedure in place for how to use STEAR data during an emergency. In the absence of clear messaging from the State about how

STEAR should be used, the city has started an advisory committee that sets clear policies in place for how to use its data.

The MOPD is now also involved in evacuation simulations. These exercises, meant to prepare city officials to quickly and efficiently respond during an emergency situation, include practicing evacuation and assistance for people with a variety of disabilities. They are also working collaboratively with the Houston Commission on Disabilities in their emergency preparation and messaging. According to Gabe, the fact that there are disabled folks leading these changes gives them additional credibility within the community. With the MOPD and the Commission involved, these plans are also now being prepared and vetted collaboratively between emergency management officials and disabled people, combining their expertise and experience and offering a hopeful image for how the city might be prepared for future storms. Gabe is clear that these developments are not perfect, but they are movement in the right direction.

These changes have also been tested during COVID-19. The city was able to use STEAR data to reach out to registrants to see if they had any specific needs that weren't being met and to inform them that home testing was available to them. Seeing that care attendants for disabled Houstonians were unable to get personal protective equipment (PPE) at the beginning of the pandemic, United Spinal started a program to meet that need. Collaborating with the MOPD and the Food Bank, they sent out over three hundred packages of PPE and food to those in need of them. These stories speak to the true necessity of collective preparation rather than a reliance on individual responsibility during crises and challenge the dominant framework of self-reliance (Tierney 2015).

Disaster sociology scholarship has called for researchers to turn greater attention towards the capacities of vulnerable communities during and after disasters, not just their vulnerabilities (Peek, 2021). This reflects work in disability studies that rejects the framing of disabled people as "passive recipients of harm" (Johnson, 2017, p. 83) as well as Eve Tuck's resistance to "damage-centered research" (Tuck, 2009). A vulnerability-focused framing alone does not show the agential ways in which communities and disabled people create systems of care for themselves and others. The collaborative nature of these systems shows that it is not individuals, but collectives that can meet a range of needs. As Fjord put it, "all people live in interdependent kin and larger social networks…no one is truly independent, while for some the strings are more transparent than for others" (Fjord, 2007, p. 24). While this particular paper has focused on the formal systems developed by government and non-profit institutions to remediate vulnerability, my findings speak to the necessity of highlighting the power of these informal systems of care as well.

The concept of individual responsibility is loaded with assumptions about ability (to evacuate, to afford preparation, to have contacts for help, to recover) as the necessary rubric for survival. It ignores the material, economic, and social factors that all determine an individual's ability to face crisis. It is built upon the image of a fit, able body and casts needs beyond those of a "standard person" as extra. Unfortunately, the concept of vulnerable populations has in some cases been misappropriated through this lens of individual responsibility in order to treat vulnerability like an embodied and inherent classification rather than a socially produced and dynamic phenomenon. This is a problem that requires further attention from disaster researchers. This interpretation of vulnerability has been used to

scaffold claims about individual responsibility. This produces an ableist system of disaster response, even and especially within the systems purportedly intended to assist disabled people. This is what allowed for the significant gaps in care that emerged during Hurricane Harvey.

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