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Procedural Vulnerability and Its Effects on Equitable Post-Disaster Recovery in Low-Income Communities

Danielle Zoe Rivera Bradleigh Jenkins Rebecca Randolph

ABSTRACT

Problem, research strategy, and findings: Equity is a major goal in post-disaster recovery and reconstruction. However, although extensive research demonstrates the connections between race/class and heightened vulnerability to disasters, few examine or name the mechanisms responsible for this correlation. Such mechanisms are referred to as *procedural vulnerabilities* or historical and ongoing power relations that lead to inequitable outcomes. We interrogate the role of procedural vulnerabilities in generating inequitable recovery by analyzing *LUPE et al. v. FEMA (B:08-cv-487 [2008])*. This legal case emerged from the experiences of *colonia* residents in the Río Grande Valley of South Texas following Hurricane Dolly in 2008. From this case, we found that, first, the Federal Emergency Management Agency's (FEMA's) unclear definitions of *deferred maintenance* and *insufficient damages* negatively affected low-income households. Second, even with clear definitions, post-disaster recovery and reconstruction outcomes would remain inequitable due to historic patterns of disinvestment in the colonias.

Takeaway for practice: From this case, two key implications for planners emerge. First, planners must acknowledge the historic concerns facing low-income communities of color that lead to inequitable outcomes in FEMA funding. Unincorporated communities of color are less likely to be able to access strong environmental planning, placing them at higher risk of disaster. Second, local stigma surrounding communities can greatly influence the efficacy of post-disaster reconstruction and recovery by predetermining who is or is not "deserving" of assistance. Engaging local histories of racism and prejudice is key to addressing and redressing these inequities.

Keywords: colonias, disasters, FEMA, low-income communities, Texas

Equity is a major goal of post-disaster recovery (Appler & Rumbach, 2016; Contreras, 2019; Kim & Olshansky, 2014; Olshansky & Johnson, 2014; Rumbach et al., 2016). However, although numerous studies show the correlations between race and class with increased vulnerability to disaster, few explain the causes of these correlations (Fothergill & Peek, 2004; Peacock et al., 2014; Sun & Faas, 2018; Wisner, 2016; Zandvoort et al., 2018; Zhang & Peacock, 2009). As such, there is a critical need for planners to understand *why* race and class are intertwined with poor disaster recovery outcomes (Jacobs, 2019). Our goal with this study is to shift the conversation

away from viewing disadvantaged communities as inherently *vulnerable*, but instead to recognize the policy and planning processes that generate *vulnerability*.

To illustrate how this operates, we discuss the legal case *LUPE et al. v. FEMA (B:08-cv-487 [2008a])*. La Unión del Pueblo Entero (LUPE) is a grassroots organization representing impoverished communities across the Río Grande Valley of South Texas (Valley). Their lawsuit against the Federal Emergency Management Agency (FEMA) followed inequitable post-disaster recovery in the region after Hurricane Dolly in 2008, whereby an estimated 50% to 71% of applications to FEMA's

Individuals and Households Program (IHP) were rejected due to deferred maintenance (*LUPE et al. v. FEMA, 2014*, pp. 15–16, 2015).¹ *Deferred maintenance* is a term FEMA uses to describe damage that cannot be “directly” attributed to the disaster declaration at hand (FEMA, 2018, p. 19).² Many households that were unable to show how house damages were related to the disaster at hand received a rejection citing “insufficient damages,” a dearth of disaster-related damage resulting in a disqualification for IHP assistance.

To examine procedural vulnerabilities in this case, we first consider the shifting discourse on vulnerability, from social vulnerability indices to procedural histories. We then introduce the case, beginning with histories of racism and xenophobia that existed in the Valley prior to Hurricane Dolly. From this, we examine the communities’ experiences with FEMA and their attempts to achieve equitable post-disaster recovery. Last, we conclude with the results of the lawsuit from a procedural vulnerability perspective. Ultimately, in reorienting our focus from the *vulnerable* to *vulnerability*, we show how history of stigmatization of the local community led to inequitable post-disaster outcomes. We suggest addressing inequitable post-disaster outcomes from both the federal level (FEMA IHP) and from local and regional environmental planning practices.

From “Social” to “Procedural” Vulnerability in Post-Disaster Recovery and Reconstruction

In examining issues preventing equitable recovery, disaster scholars have clearly illustrated that there is no such thing as a “natural” disaster (O’Keefe et al., 1976). As Oliver-Smith (1999) stated, “disasters do not simply happen; they are caused” (p. 74). This vast literature shows, qualitatively and quantitatively, the connections between race, gender, and/or class in heightening one’s risk of disaster (Fothergill & Peek, 2004; Oliver-Smith, 2010; Peacock et al., 2014; Sun & Faas, 2018; Zhang & Peacock, 2009). Examining this research, Hurricane Katrina’s impacts on New Orleans (LA) in 2005 remain a pivotal moment, not in terms of changes on the ground, but in broadening recognition of these issues across academic disciplines (C. A. Woods, 2017; M. Woods, 2017). In the aptly named essay “There’s No Such Thing as A Natural Disaster,” Smith (2006) identified the classism and racism present in the reconstruction following Hurricane Katrina, stating:

... disasters don’t simply flatten landscapes, washing them smooth. Rather they deepen and erode the ruts of social difference they encounter. (para. 8)

As such, much research shows that the net results of disasters disparately affect poorer households and communities, particularly those of color (Oliver-Smith, 2010; Peacock et al., 2014; Sun & Faas, 2018; Zhang & Peacock, 2009).

To determine who is at greatest risk of disasters, social vulnerability indices are often used to assess one’s ability to cope with hazard based upon one’s unique characteristics (Cannon, 1994, p. 19; O’Keefe et al., 1976, p. 567). Social vulnerability measures both risk of and resilience to disaster (Masozera et al., 2007, p. 300). These assessments often elucidate the physical spread of risk in an attempt to locate “hot spots” of social vulnerability across given populations (Cannon, 1994, p. 20). From this (often quantitative) evaluation, specific areas are then targeted for intervention (van Zandt et al., 2012).

Critiquing Social Vulnerability Approaches in Post-Disaster Recovery and Reconstruction

Although social vulnerability work remains valuable to disaster studies, it is increasingly critiqued for rendering invisible the policies and programs perpetuating racism and classism (Faas, 2016; Jacobs, 2019; Sun & Faas, 2018). These studies importantly correlate how the acts of recovery and reconstruction generate inequities across race and class; however, they often struggle to fully state the causation (Masozera et al., 2007, p. 304; Peacock et al., 2014; Rufat et al., 2015, p. 480). The concern regarding social vulnerability is that these measures obscure or minimize pre-existing inequities by solely examining a single case from the moment of a disaster (Fekete, 2019, p. 220; Howell & Elliott, 2019).

In a major contribution to planning theory, Jacobs (2019) explicitly addressed the need for a deeper assessment of the injustices identified through social vulnerability studies:

As it [social vulnerability] has been operationalized, it essentializes race [sic] placing the problem of disasters and inequity at the feet of being Black, being poor and being a woman as opposed to recognizing racist, sexist and classist structures. (p. 34)

Jacobs (2019) identified an emerging current of planning theory that explicitly seeks to name underlying structures of planning that circumscribe inequities. Elsewhere, and on a broader scale, this work has identified issues of White supremacy and colonization operating at the base of planning, in what has been referred to as “racial planning” (Williams, 2020).

Within planning theory, Steil (2018), in his study of Supreme Court cases, named the shift that must occur to institute such ideas in planning practice; namely,

there must be a shift away from anticlassification approaches to antisubordination approaches to planning. An anticlassification approach “proscribes classifications on the basis of arbitrary characteristics and looks to individual intent to prevent discriminatory actions that are based on racial or other prohibited animus” (Steil, 2018, p. 2). This places extraordinary burdens upon disadvantaged communities to prove material discrimination, as anticlassification requires the letter of law and policy to be explicitly discriminatory. Instead, an antisubordination theory of equal protection describes “policies or practices that have a disproportionate adverse impact on a subordinate group should be prohibited, regardless of intent or classification” (Steil, 2018, p. 2). Steil (2018) argued that antisubordination theories are needed to shift planning theories and practices toward recognizing historic marginalization and White supremacy (p. 3). Specifically, issues of power across historical context are persistently named as the culprit in perpetuating inequality across the physical environment (Rivera, 2020a; Steil, 2018). As Steil observed, “to understand justice and what it requires of us, we must understand how systemic unjust advantage is continuously reproduced” (2018, p. 6).

Moving Toward Procedural Vulnerability Approaches to Post-Disaster Recovery and Reconstruction

Our goal in this study is to shift the conversation away from viewing disadvantaged communities as inherently *vulnerable*, but instead to recognize the policy and planning processes that generate *vulnerability*. As such, the conversation must shift away from vulnerable peoples to vulnerability as a historical process that renders particular individuals at higher risk (Marino & Faas, 2020; Rivera, 2020a). The aim, then, should be to identify and rectify those processes. Reflecting this, the concept of *procedural vulnerability* provides a means for recognizing and acting upon racism and classism. Procedural vulnerability relates to a historical view of disaster policies and programs with explicit focus on the power relations leading to lack of self-determination in post-disaster outcomes (Hsu et al., 2015). Procedural vulnerability is widely recognized in Indigenous scholarship on disasters as structural erasure that persists through “... wickedly complex administrative systems...” (Howitt, 2012, p. 820).

However, procedural vulnerability extends beyond overly complex procedures to emphasize relational issues of power. As Hsu et al. (2015) stated, procedural vulnerability “... arises from people’s (and peoples’) relationships to power rather than environment, and the ways that power is exercised” (p. 309). This remains key, as the emphasis is to avoid the essentializing of race

mentioned by Jacobs (2019) and instead focus on the role of power in rendering specific people at risk. From this, a relational (power-based) justice, as opposed to distributive (material-based) justice, framework is needed. As Omi and Winant (1986) stated, “every state institution is a racial institution” (pp. 76–77). It is imperative to recognize how this operates through federal post-disaster recovery and reconstruction initiatives. Procedural vulnerability is a powerful lens with which to do so.

In the discussion that follows, we center planning’s position, from the local to federal levels, in producing procedural vulnerabilities. To do so, we ask the following questions: How are inequitable outcomes entrenched through post-disaster recovery and reconstruction? What planning mechanisms support these inequitable outcomes?

Methods

To address these questions, we deeply engaged a single case study to highlight the peoples’ experiences with relational injustices heightened by a disaster, in this instance a hurricane. The case here involves the Río Grande Valley of South Texas (Valley), a region adjacent to the U.S./Mexico border that encompasses Starr, Hidalgo, and Cameron counties. The region’s name originates from its location along the Río Grande and, as a result, the Valley is also largely defined geographically, socially, economically, and culturally by its shared border with Mexico. According to the 2010 U.S. Census, the population of the Valley was approximately 1.25 million with 88% to 91% of residents identifying as Latinx (almost exclusively Mexican American). In addition, the region has one of the highest poverty rates in the United States (around 30%), making it one of the poorest in the country. The Valley is at high risk of hurricanes and tropical storms due to its proximity to the Gulf of Mexico. With this confluence of border and Gulf proximities, the Valley has historically experienced major procedural vulnerabilities across its history. In our study, we focused on the impacts of Hurricane Dolly, which made landfall in the region in 2008.

Between 2014 and 2017, the lead author undertook a study compiling an oral history of organizing for improved community conditions in the *colonias* (Rivera, 2017, 2020b). Colonias are low-income communities along the U.S./Mexico border, often isolated in unincorporated rural areas, that suffer from a lack of basic services and political representation (Davies & Holz, 1992; Ward, 1999; Table 1). Through the oral history, 30 open-ended interviews with 20 Valley-based colonia organizers were conducted between 2014 and 2017. In these early discussions, colonia organizers emphasized the major impacts of Hurricane Dolly on the local

Table 1. Comparison of colonia socioeconomic statistics with Texas and the United States.

	Colonias	Texas	United States
Population	500,000	27,470,000	320,700,000
Hispanic or Latino (%)	96.0	37.6	16.3
Citizenship rate under age 18 (%)	94.1	95.6	97.0
Citizenship rate ages 18 and older (%)	60.8	86.6	91.4
Foreign born (%)	34.8	16.2	12.8
Median income (\$)	28,928	50,920	52,762
Poverty rate (%)	42.0	17.0	14.3
Near poverty rate (%)	19.4	10.9	9.2
Public assistance or food stamps (%)	40.3	11.6	11.0

Adapted from Federal Reserve Bank of Dallas (2015).

community. During this project we learned of the community's lawsuit (*LUPE et al. v. FEMA, 2008a*) that sought compensation for damage caused by Hurricane Dolly.

To examine this lawsuit, we undertook a single case analysis (Yin, 2009, p. 46), initially reported to the Lincoln Institute of Land Policy (Rivera et al., 2019). The case study triangulated data from the defendants, the plaintiffs, and the previous colonia organizing study to understand the scope of the issues. Documents from both sides of the lawsuit were collected via public archives maintained by Texas and Texas RioGrande Legal Aid (TRLA), a nonprofit law firm serving the Valley. In all, we assessed 21 case-related documents produced between 2008 and 2019 (Table 2). Approximately 70% of these documents originated from TRLA, as they represented the plaintiffs in the lawsuit; as a result, most of the court documents originated from them. We also examined four key acts and policies invoked in the case to clarify the arguments at hand (see Table 2).

Qualitative content analyses were conducted on these documents (Saldaña, 2009). Using multiple coders, we conducted three phases of coding. First, descriptive analysis established the order of events prior to, during, and following the lawsuit. Second, an evaluative analysis was applied to the order of events to understand how the argument in the case unfolded. Evaluative analysis, in this case, ascribed a series of beliefs concerning either side of the legal dispute (Saldaña, 2009, pp. 76, 111). Last, we applied a relational justice framework to understand the explicit and implicit power dynamics between stakeholders.

These analyses were complemented by follow-up interviews conducted with four colonia organizers between 2019 and 2020. These organizers were chosen for follow-ups to clarify any missing or unclear elements from the lawsuit documents. Moreover, they provided an updated account of colonia residents' experiences following the lawsuit.

Case Background: Historic Issues Facing Valley Colonias

LUPE et al. v. FEMA (2008a) concerns the experiences of colonia residents in the Valley following Hurricane Dolly in 2008. In Texas, colonias can be traced to the 1960s Bracero Program, which brought migrant farmworkers to the United States from Mexico (Rivera, 2020b, pp. 6–7). Many farmworkers chose to settle in the Valley because of its numerous agricultural opportunities. Unable to afford housing in the Valley's incorporated cities, many migrant farmworkers found options in the rural, unincorporated areas of the region (Davies & Holz, 1992). There, wealthier White Mexican or non-Mexican landowners subdivided their lands and (legally or illegally) sold plots to migrant farmworkers via contract for deed agreements, in which the seller provides buyer financing. These contracts included only the land with no provisions for basic utilities (such as potable water, electricity, or wastewater management) or a home (Davies & Holz, 1992; Durst, 2014; Housing Assistance Council, 2013). Furthermore, these lands are prone to flooding. This is by design, as Valley farmers graded agricultural fields to retain water and support their crops. However, with the change in land use from agriculture to residential that accompanied the creation of the colonias, these fields were never regraded to shed water, leading to persistent issues of flooding.

The development of these subdivisions continued unabated into the late 1980s, as the Valley's cities have long fought against affordable housing (Federal Reserve Bank of Dallas, 2015; Proyecto Azteca 1, interview, 2014).³ Colonia development advanced unchecked during this time due to lax regulation across the unincorporated territories of Texas (Larson, 1995). As a result, most colonia development is technically legal or, in this case, at the very edge of what is legally permissible or "extralegal" (Larson, 2002).

Table 2. Documents analyzed for the case study.

	Document	Year
1	Complaint for Injunctive Relief	2008
2	Motion for Preliminary Injunction	2008
3	Order Granting Partial Summary Judgment	2009
4	Opinion & Order	2009
5	Defendant's Motion for Stay Pending Appeal	2009
6	Appeal	2010
7	Reply Brief to Appellant	2010
8	Petition for Writ of Certiorari	2010
9	Court of Appeals Decision	2010
10	Supreme Court Denial of Writ of Certiorari	2010
11	Judgment	2010
12	Memorandum Opinion & Order	2011
13	Scheduling Order	2013
14	Complaint of Plaintiff-Intervenors	2013
15	Plaintiffs Motion for Summary Judgment	2014
16	Memorandum Opinion & Order	2015
17	Scheduling Order	2015
18	Supplemental Administrative Record	2015
19	Order	2017
20	List of Attorneys in Case	2008–2019
21	Docket Report	2008–2019
22	FEMA Inspector Training Video and Materials	N/A
23	Individuals and Households Program and Policies Guide	2016
24	Public Assistance Program and Policy Guide	2018
25	Robert T. Stafford Disaster Relief and Emergency Assistance Act	1988

First government recognition of colonias arrived with the Cranston-Gonzalez National Affordable Housing Act (1990). At the time of the act, colonias were identified by meeting the following criteria:

1. "Is in the State of Arizona, California, New Mexico, or Texas."
2. "Is in the area of the United States within 150 miles of the border between the United States and Mexico, except that the term does not include any standard metropolitan statistical area that had a population exceeding 1,000,000."
3. "Is designated by the State or county in which it is located as a colonia."
4. "Is determined to be a colonia on the basis of objective criteria, including lack of potable water supply, lack of adequate sewage systems, and lack of decent, safe, and sanitary housing."
5. "Was in existence and generally recognized as a colonia before the date of the enactment of the

Cranston-Gonzalez National Affordable Housing Act."

After the passing of the Cranston-Gonzalez National Affordable Housing Act, colonias continued developing in rural areas of the border region. In 1995, the Texas government passed the Model Subdivisions Act to outlaw subdivision of unincorporated land without notifying the county office. From this, Texas declared that no new developments after 1995 would be given the designation of "colonias." Instead, the Texan government refers to post-1995 developments as model subdivisions (MSDs; Durst & Ward, 2016). This act, however, essentially rendered the creation of "new" colonias invisible and untraceable as MSDs vary in character and are not tracked by the federal government (LUPE 1, interview, 2015). The result is a proliferation of colonia-like developments that are difficult to identify, track, or assist. Thus, colonias and colonia-like MSDs (hereby referred to

as “colonias”) suffer from several persistent issues that reinforce their poverty and lack of services.

First, colonias suffer from municipal underbounding, or the reluctance of cities to annex low-income communities around them (Mukhija & Mason, 2013, p. 2959). This results in lack of access to local representation and services (Mukhija & Mason, 2013). Even today, colonias experience massive census undercounting and voter suppression, with polling centers located 10 to 15 miles from many colonias (LUPE 2, 2015, interview). Colonia residents struggle for adequate political representation and planning, often engaging in planning advocacy themselves by organizing for basic services (Dolhinow, 2005; Donelson, 2004; Nevárez Martínez et al., 2021; Rivera, 2020b).

Second, due to the nature of their development from former agricultural lands, colonias are highly prone to flooding, even in light storms (Rivera et al., 2019). The soil in the Valley lacks porosity and, as a result, water can easily pool upon or erode the ground. As previously noted, Valley farmers often regraded their land to hold water near crops. However, these systems were not removed when the farmland was subsequently subdivided, making colonias more prone to flooding than surrounding incorporated cities.

Because of these issues, colonias occupy physically and socially marginalized positions within the Valley. Across the Valley, incorporated regions withhold valuable planning services and county governments are under-resourced and understaffed. These power-based inequities are exacerbated by a “stigma of informality” that precedes the colonias. In this context, “informality” becomes synonymous with “illegality.” Colonias, with different urbanization and housing patterns, are cast as informal and therefore illegal. However, colonias are technically legal developments. They are the product of lax subdivision laws in Texas’s unincorporated territories prior to 1995 (Larson, 1995, 2002, 2005). Yet despite their legality, colonias are frequently characterized in media and community meetings as “illegal” developments (Community meeting, San Juan, Texas, January 2020).

As a result, colonias are often imagined as crime-ridden, non-tax-paying communities, and thus a resource drain on the Valley (Community meeting, San Juan, Texas, January 2020). None of this has factual basis. Colonia residents pay taxes and contribute to civic life at the same rates as the rest of the Valley (LUPE 2, interview, 2015). The stigma of informality, however, prevails and leads to an inequitable lack of access to adequate housing, improved basic infrastructure, and political representation. Through their study of California’s colonias, Mukhija and Monkkonen (2007) warned about the limitations of the name “colonia”:

... the evocative name [“colonia”] might have helped garner public attention and funding, but its explicit otherness may jeopardize future funding. Even worse, the alien name risks the possibility of public acceptance and normalizing of poor living conditions in Latino neighborhoods, and of equating all Latino neighborhoods with slums. (p. 476)

This “othering” of colonias and their plight is worsened by disasters. The caustic combination of representational and geographical disenfranchisement is heightened in a post-disaster recovery and reconstruction that deepens the roots of power imbalances.

Case: Colonias and Hurricane Dolly

Hurricane Dolly made landfall in the Valley on July 23, 2008. As a Category 2 hurricane, Dolly produced sustained wind speeds up to 160 km per hour (NASA, 2008), causing damage nearly 140 miles outward from its eye and striking the colonias to its south (National Oceanic and Atmospheric Administration, 2008). Given the force of its impact, President George W. Bush issued major disaster declaration no. 1780 on July 24, 2008, in the Valley, opening up FEMA’s IHP (FEMA, 2008).

Overall, the total damage from Hurricane Dolly was estimated at \$2 billion (National Weather Service, 2008). In the Valley, these costs mostly involved roof damage and widespread flooding, as the Valley sat on the “wet” side of the hurricane (Proyecto Azteca 1, interview, 2015). Floodwaters lingered in some Valley colonias for 4 months, with some colonias experiencing standing water for nearly 180 days (Proyecto Azteca 1, interview, 2014). Following the hurricane, colonia-based organizations made a concerted effort to identify damaged and destroyed homes to connect these households with FEMA’s IHP funding (TRLA 1, interview, 2015). However, FEMA denied an estimated 85% of IHP applications, approximately 50% to 71% these due to deferred maintenance (LUPE et al. v. FEMA, 2014, pp. 15–16, 2015).⁴ The average denial rate for this FEMA program is 26% (Adams, 2018).

In the wake of Hurricane Dolly, colonia residents were confused about the high rejection rate and the term deferred maintenance. Whereas FEMA’s *Individual Assistance Program and Policy Guide (IAPPG)* does not clearly define the term (Hernandez, 2011), it does insinuate that inspectors are charged with assessing “disaster-related losses” (FEMA, 2019). Thus, if FEMA finds that households have deferred maintenance (pre-existing damage) on their homes at the time of post-disaster inspection, it is grounds for IHP rejection, despite the *IAPPG* not stating this in these terms. In addition, when a home is declared to have deferred maintenance, this often leads to a determination that the home is

therefore *habitable*,⁵ a specific term used in the *IAPPG* (FEMA, 2019, p. 78). Since FEMA cannot “see” non-disaster-related damage, this is then referred to as “insufficient damage,” a term, again, not defined by FEMA, but described on post-Dolly IHP denials as follows:

... the disaster has not caused your home to be unsafe to live in. This determination was based solely on the damage to your home that are [sic] related to this disaster. (*LUPE et al. v. FEMA*, 2008a, p. 7)

Upon appealing these initial IHP decisions, colonia residents faced further issues. Residents reported antagonistic interactions with FEMA inspectors, many of whom made little to no attempt to communicate with residents (*LUPE et al. v. FEMA*, 2008a, pp. 7–8). Some inspectors did not even leave their cars or enter homes to assess damage up close. It became clear that the inspectors’ incentive was to complete inspections quickly because they were paid per inspection (*LUPE et al. v. FEMA*, 2014, pp. 18–19). Furthermore, many colonia households could not afford the expensive IHP appeal process, which required an independent estimate of damage costing between \$200 and \$300 (*LUPE et al. v. FEMA*, 2008a, p. 22). In the case of one resident, Mr. Gonzales, his appeal was rejected. Hoping to understand why, he visited the FEMA Disaster Recovery Center in Harlingen (TX) and was told that because his home had deferred maintenance he should “... already be used to living in a home with these conditions” (*LUPE et al. v. FEMA*, 2008a, p. 16). This implied that FEMA knew of the conditions facing these households. It was then revealed that FEMA gave inspectors maps identifying the locations of the colonias and warned them to “expect sub-standard construction [and] deferred maintenance” (*LUPE et al. v. FEMA*, 2014, pp. 17–18). As a result, inspectors likely arrived at colonia homes prepared to assign a deferred maintenance decision.

In light of this, the exceedingly high number of unclear rejections did not go unnoticed by the colonia-based grassroots organizations that had been advocating for households to apply for IHP. In particular, LUPE was one of the first to notice the trend (*LUPE 2*, interview, 2015). LUPE is one of the largest colonia-based and -funded organizations in the nation, with an estimated constituency of 8,000 to 10,000 residents across the Valley (*LUPE 3*, interview, 2015). Founded in 1989 by César Chávez and Dolores Huerta, LUPE is attuned to the needs of colonia residents through their community union model, which places them in near-daily contact with residents (Rivera, 2020b). Identifying the high IHP rejection rate, LUPE sought legal assistance from Texas RioGrande Legal Aid (TRLA). TRLA was originally

founded in 1970 as a means for low-income farmers to have access to legal support. They recently expanded this focus to protect low-income households, particularly colonia residents fighting abusive contract for deed agreements (TRLA 1, interview, 2015). TRLA is primarily funded by two nonprofits that provide funding for legal services in low-income communities: the Legal Services Corporation (LSC), a nonprofit established by Congress in 1974, and the Texas Access to Justice Foundation (TAJF), established by the Supreme Court of Texas in 1984. Working together, LUPE and TRLA found sufficient evidence to bring suit against FEMA on behalf of the Valley’s colonia residents.

LUPE et al. v. FEMA: A Procedural Timeline

We are not saviors; we save ourselves together. (*LUPE 3*, interview, 2020)

On November 20, 2008, LUPE and TRLA filed a civil complaint and motion for preliminary injunction against FEMA (*LUPE et al. v. FEMA*, 2008a, 2008b). The civil suit was originally filed on behalf of 11 low-income households (the plaintiffs) who received IHP rejections following Hurricane Dolly.⁶ The preliminary injunction sought immediate compensation for the affected households and requested that FEMA maintain standards that are equitably applied, which was already a congressional mandate for FEMA (*LUPE et al. v. FEMA*, 2008a, p. 3). Most important, these initial court documents from LUPE and the TRLA raised two key questions:

- What exactly are FEMA’s criteria for determining deferred maintenance in IHP?
- Are the deferred maintenance criteria unclear enough that they institutionalize economic discrimination on the basis of *anticipated* housing disrepair (Southern District Court of Texas, 2009, p. 2)?

FEMA initially attempted to have the complaint and motion for preliminary injunction dismissed (*LUPE et al. v. FEMA*, 2009, 2010). However, the U.S. District Court for the Southern District of Texas ruled that the plaintiffs had standing to dispute the standards FEMA used to determine IHP eligibility, granted the preliminary injunction, and issued a partial summary judgment (Southern District Court of Texas, 2009). FEMA appealed these decisions. In 2010, the U.S. Court of Appeals vacated the preliminary injunction, and the case was remanded to the U.S. District Court for the Southern District of Texas (Southern District Court of Texas, 2010). LUPE and TRLA then appealed, but their proposal for a writ of certiorari was denied by the U.S. Supreme Court (Supreme Court

of the United States, 2010). From this, the case returned to the U.S. District Court for the Southern District of Texas and discovery occurred over 2 years to ascertain the procedures FEMA used to determine IHP eligibility following Hurricane Dolly (*LUPE et al. v. FEMA*, 2014, p. 3).

In 2015, the U.S. District Court for the Southern District of Texas found that FEMA used unpublished definitions for deferred maintenance and shortly thereafter pushed for mediation (Southern District Court of Texas, 2015, 2017, pp. 2–3). The court declared FEMA's deferred maintenance policy "substantively altered the weight and sufficiency of evidence of damage and degree of causation that had to be shown to prove that damage was disaster-related and thus potentially remunerable under FEMA's regulations" (Southern District Court of Texas, 2017, p. 2). The case was settled on June 21, 2017. FEMA was required to reconsider all of the plaintiffs' IHP applications and, by extension, any other LUPE members' applications, with cash settlements to all plaintiffs in the lawsuit (Southern District Court of Texas, 2017, pp. 5–6).

Discussion

Throughout the lawsuit, plaintiffs repeatedly contended that FEMA's deferred maintenance policy constituted economic discrimination against low-income communities. These arguments speak to the inherent issues between anticlassification and antisubordination approaches to legal disputes. Here, we discuss the continuing implications for approaching post-disaster recovery and reconstruction through anticlassification versus antisubordination approaches, leveraging the data unearthed by *LUPE et al. v. FEMA* (2008a) and the histories of the Valley's colonias. First, we cover the results of the lawsuit from an anticlassification approach that emphasizes social vulnerability. Second, we delve deeply into how an antisubordination approach shifts focus toward the inequitable planning histories of the colonias, reifying the continuing issues they face.

Social Vulnerability and Anticlassification

LUPE and TRLA faced a monumental challenge in proving FEMA's IHP did indeed discriminate against the colonias. They needed to show, through an anticlassification framework, that FEMA was biased against colonia residents on the "basis of arbitrary characteristics" (Steil, 2018, p. 2). However, the language of FEMA's IHP made such an argument difficult. FEMA is tasked through the Stafford Act with providing an equitable recovery:

... the processing of [disaster relief] applications, and other relief and assistance activities shall be

accomplished in an equitable and impartial manner, without discrimination on the grounds of race, color, religion, nationality, sex, age, disability, English proficiency, or economic status. (Robert T. Stafford Disaster Relief & Emergency Assistance Act, 1988, p. Sec 308A)

Although economic status is included in the Stafford Act, Hernandez (2011) pointed out, through an initial legal analysis of *LUPE et al. v. FEMA*, that "poverty itself is not a protected status under the Constitution" (p. 233). Instead, the plaintiffs won their case by pointing out the inconsistencies in FEMA's deferred maintenance policy due to its lack of definition. Unfortunately, in an anticlassification approach the plaintiffs could not highlight the reasons why the colonias were targeted in maps. Doing so would require engagement with decades of the colonias' marginalization in local and regional governance and politics. Despite the successful lawsuit, Texas Appleseed, a Texas-based nonprofit, reported that low-income households continue to be denied FEMA assistance at higher rates (Sloan & Fowler, 2015). The reasons they cited for this inequity are varied, but included the lack of civil rights and fair housing concerns in disaster processes, and the lack of specific focus on low-income households (Sloan & Fowler, 2015, p. 2).

The issue here is that anticlassification approaches obscure historic inequities faced by low-income communities of color. From this, many U.S. recovery and reconstruction programs are known to show biases against poorer households and communities (Green et al., 2007; Howell & Elliott, 2019; Rumbach et al., 2016). In fact, in a longitudinal survey from 1999 to 2013 that tracked individuals, not disasters, Howell and Elliott (2019) found that the delivery of FEMA aid correlated to increases in local wealth inequality. This inequality was not equitably distributed relative to race, education, and homeownership. As a result, residents of color, renters, and/or those with lower educational levels received much less FEMA aid overall (Howell & Elliott, 2019, p. 457). These longitudinal studies reached markedly different conclusions than social vulnerability indices. The reality is that for low-income communities of color, disaster entrenches racism and classism through spatial segregation (Green et al., 2007; McKinzie, 2017).

Procedural Vulnerability and Antisubordination

Howell and Elliott's (2019) landmark study highlighted the importance of examining inequities in post-disaster recovery and reconstruction across history, not individual disaster events. For the colonias, poor post-disaster recovery and reconstruction outcomes following Hurricane Dolly cannot be separated from their histories

of disinvestment. FEMA's expectation of "sub-standard construction [and] deferred maintenance" prior to entering the colonias shows a familiarity with these histories (LUPE *et al. v. FEMA*, 2014, pp. 17–18). Their subsequent identification of the colonias spatially, through the maps given to their inspectors, constitutes a serious procedural vulnerability.

What are identified through the maps are areas of historic economic segregation and disinvestment. A "colonia" represents an area of segregated poverty that is routinely denied access to planning and other resources due to its unincorporated status. The development of colonias from highly unregulated, rural Texan county lands has established their continued vulnerabilities to environmental risks and hazards. Most notable is the colonias' development from agricultural lands, designed to flood, with little to no historic intervention from the state. Across the Valley, the differences between incorporated, wealthy cities with access to local government versus unincorporated territories, even within the same county, remain stark. A recent example of this is the "Right to Light" campaign, in which colonia residents worked with LUPE to lobby for the right to streetlights in unincorporated Texan counties (Braier, 2020). Colonia residents successfully lobbied for Texan counties to have the right to tax for, install, and maintain streetlights, all with the support of county government officials. Unlike streetlights, however, access to adequate stormwater management and green infrastructures remains unattainable due to the reluctance of Texan counties, who feel ill equipped to support these infrastructures (bcWORKSHOP 3,⁷ interview, 2017). In light of this, colonias remain susceptible to flooding, even outside major hurricane events.

Furthermore, disempowerment of the "colonia" extends beyond its spatial demarcations to include stigmas surrounding residents. In addition to false rumors of tax evasion, colonia residents are frequently cast as "illegal," a derogatory framing for undocumented residents (LUPE 1, interview, 2015). This framing prefigures the belief that colonia residents are undeserving of aid and assistance. This perception was evinced in the colonia residents' interactions with FEMA inspectors, but also their antagonistic relationships with rural FEMA representatives. Moreover, poor households remain unable to overturn IHP rejections due to the costs, which are difficult to afford even outside a disaster event. As a result, even if FEMA were compelled to clearly define deferred maintenance, these procedural vulnerabilities would persist, an issue presented in a recent report by the National Advisory Council to FEMA (2020). The historic development of the colonias, and the stigmas that precede them, would still remain challenges due to FEMA's lack of charge to help impoverished communities.

Ultimately, colonias would likely still be denied truly equitable access to post-disaster recovery and reconstruction. Despite winning their lawsuit, colonia residents still experienced an inequitable and incomplete recovery and reconstruction. Even before the lawsuit began, some colonia households were forced to move from the Valley (LUPE *et al. v. FEMA*, 2008a, pp. 13–14). This is a detriment to these households because the flooding issues faced by colonias are highly preventable. Standard green infrastructure and stormwater solutions could easily fix the issues; however, county governments show hesitance to build and manage this infrastructure given their limited resources and expertise (bcWORKSHOP 3, interview, 2020). As a result, the spatial segregation of Valley colonias into rural unincorporated territories leads to their increased risks of disaster and flooding. This elucidates the systemic impacts of restricted access to affordable housing in the Valley's incorporated cities.

The issues colonias experienced following Hurricane Dolly are deeply connected to local and regional issues of environmental planning in conjunction with limited affordable housing. Without support for county governments to undertake stormwater management, localized flooding remains a persistent issue in Valley colonias. Without a strong hazard mitigation plan at the regional scale, colonias remain at higher risk of damage from hurricanes. Recognition of colonia-based issues could (and should) occur on a variety of scales, any one of which will assist these communities in enduring future storms. Unfortunately, local cities, county governments, the state of Texas, and FEMA IHP have overlooked or underexamined the issues at hand because the physical issues facing colonias remain highly stigmatized.

Conclusion

In post-disaster reconstruction and predisaster planning, planners need to directly address inequities. To do so, planners need to look beyond the current moment or disaster to see the historic racism and prejudices that generate spatial inequities. From a procedural vulnerability approach, disasters are understood as one force, among many, that compound pre-existing racism and classism (Howell & Elliott, 2019; Hsu *et al.*, 2015; Jacobs, 2019; Marino & Faas, 2020). As Williams (2020) noted:

A central organizing principle of the planning profession should be corrective/reparative/transitional justice—the rejection and dismantling of white supremacy such that life chances become independent of one's ascribed social location. (p. 8)

In the case of FEMA's IHP program, our study identified several specific mechanisms through which

procedural vulnerabilities were enacted. First, the unclear definition of deferred maintenance allowed FEMA to respond differentially across communities. However, even if clearly defined, the concept is rooted in an anti-poor bias that expects homeowners to keep homes repaired, as a recent FEMA National Advisory Council report has noted (2020). Second, the lack of clarity surrounding the roles of home inspectors invited racism, classism, and prejudice. Without clear procedure for each inspection, and oversight to ensure these procedures are being practiced, inspectors could introduce discrimination in the IHP process. Last, with no explicit charge to help those in poverty or historically marginalized, FEMA was bound to replicate historic spatial inequities.

However, it is important to recognize that much can be accomplished outside of IHP to assist communities like Valley colonias that are experiencing heightened risks of disaster. First, we need greater focus on planning practices outside of incorporated cities. Green infrastructure practices are largely oriented toward municipal planners, leaving many rural communities struggling to address environmental concerns. There is a growing need to address environmental concerns facing rural, unincorporated territories across the United States, developing a distinct set of resources for these communities.

Second, there needs to be wider recognition of risks beyond a social vulnerability framework to reflect upon the historicity of disasters. This involves reflecting upon the prejudices and stigmas that can mark certain communities (such as the stigma of informality on colonias). Disaster scholars have correlated individual characteristics of race and class with inequitable post-disaster recovery and reconstruction outcomes. They often point to the importance of history and context in generating these inequitable outcomes (Masozera et al., 2007, p. 304; Peacock et al., 2014; Rufat et al., 2015, p. 480). Yet the specifics of *how* histories and context influence these outcomes in general, from a procedural perspective, remain less well established. In discussing equitable post-disaster recovery and reconstruction, we need to engage with longer timelines and histories to truly understand how disasters “compound” existing inequities. The goal should be to clearly name the historic inequities (racism, classism, etc.) in these communities.

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NOTES

1. Discrepancies in rejection rate values across the court documents may be attributed to the dynamic nature of the data set, given that FEMA was still actively processing applications and considering appeals throughout the case.
2. Please note that FEMA does not directly define “deferred maintenance” in their Individuals and Households Program (IHP), one of the major issue areas identified through *LUPE et al. v. FEMA*. This is why deferred maintenance is defined here, using the *Public Assistance Program Guide* (FEMA, 2018), though the use of the term, in practice, may differ between the two programs.
3. Through our interview, the organizer recounted a planning meeting in McAllen (TX). The topic under discussion was a proposed affordable housing development at the northern edge of the city. The proposal was so contentious that the meeting apparently turned aggressive.
4. See Note 1.
5. In the *Individual Assistance Program and Policy Guide* (IAPPG), FEMA defines the term “habitable” as “safe, sanitary, and functional” housing (FEMA, 2019, p. 78). These three metrics are further defined as follows: “‘Safe’ refers to being secure from disaster-caused hazards or threats to occupants; ‘sanitary’ refers to being free of disaster caused health hazards; and ‘functional’ refers to an item or home capable of being used for its intended purpose” (FEMA, 2019, p. 78).
6. By the end of the lawsuit, the number of represented households would grow from 11 to 30 (Southern District Court of Texas, 2009).
7. BuildingCommunityWorkshop (bcWORKSHOP) is a nonprofit design firm with multiple locations throughout Texas. The interviews referenced here were conducted at their Brownsville location.

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