Precarity, Poverty, and Predatory Lending:
Post-Flood Survival in Colonias of the Rio Grande Valley

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Dedication

The author wishes to dedicate this text to the people of the colonias. He hopes that whoever reads it will come away with a greater sense of empathy for the struggles they face and unfair treatment they are subjected to.

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Abstract of Thesis

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Informal housing settlements along the US-Mexico border, known as colonias, developed in the latter half of the 20th century and are characterized by poverty, a lack of infrastructure, and spatial marginalization. The marginalization of these communities is multifaceted: these vulnerabilities come from socioeconomic poverty, racial and spatial stigma, lack of infrastructure and enforcement, and environmental hazards. The result is a layered vulnerability that compounds a lack of access to traditional financial institutions and an increased risk of flooding. Given this multilayered vulnerability, how do colonia residents financially cope with environmental hazards such as flooding? My research explores the nexus between flooding, economic precarity, informal and predatory lending, community-institution relationships, and survival in the Rio Grande Valley. This thesis uses a mixed-methods approach, combining qualitative data gained through focus groups and interviews with quantitative spatial data pertaining to housing finance, poverty, and colonias.

Keywords: Flooding, Housing, Natural Hazards, Colonia, Poverty, Race, Predatory Lending

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Introduction

The journey to the Rio Grande Valley, the southern tip of the Texas-Mexico border, involves flying from Washington, DC to San Antonio, Texas, renting a car, and driving 3 to 4 hours. It is a journey I have taken before, but never as a researcher. At first, I found the landscape calming and familiar. The unending sea of Mattress Firms, taquerias, and multi-lane highways quickly segued into suburban and then exurban development mixed with barbed wire ranches and the cloudless Texas sky. However, this time I noticed something different – along the highway were mobile home vendors with large signs announcing, 'No Credit, No Problem', 'Hablamos Español', and 'Low Monthly Payments'. The focus of my thesis, post-flood predatory lending in the colonias of the Rio Grande Valley, made these businesses particularly relevant. Questions raced through my mind: Who is buying these mobile homes? What kind of financing are they getting and with what interest rate? Is this an opportunity for home buyers to buy their dream home or is this another trap of abusive lending with a long history in Texas? The mobile home vendors are not the topic of my thesis, but they certainly paint a backdrop for the kinds of questions this thesis hopes to answer.

Pedro's Story

The inspiration for this research came from an anecdote in the book *Colonias in Arizona and New Mexico; Border Poverty and Community Development Solutions* by Adrian X. Esparza and Angela J. Donelson. The authors describe a young man named Pedro who lives in the *Colonia* of Cerrito in New Mexico: "Pedro wonders if he will ever quality for a loan. He cannot get federally subsidized financing because the property is in a floodplain, like most of those in Cerrito. Because of his limited credit history, he is tempted to go to what some call 'predatory' lenders" (Esparza and Donelson 2008, 110). Pedro's story exemplifies certain aspects of the *colonia* experience: lack of access to traditional financial institutions, poverty that leads to the use of predatory and unregulated lending practices, and the environmental injustice of a floodplain. The floodplain on which Pedro lives has the twin effect of making him ineligible for Federal Housing Authority (FHA) backed financing and the environmental hazard of natural disasters. There is a system of overlapping vulnerability in Pedro's story that is reflected in the lives of many colonia residents; my research explores this intersection of these various overlapping vulnerabilities with a focus on informal and predatory financial systems and environmental injustice.

Informal housing settlements along the US-Mexico border, known as colonias, developed in the latter half of the 20th century and are characterized by poverty, a lack of infrastructure, and spatial marginalization. In Texas, colonias developed because of unregulated land use, population pressures, high poverty rates, and an unregulated housing finance mechanism called Contract for Deed (Ward 1999). While many scholars (Richardson 1999; Ward 1999, 2012) have engaged with predatory and informal home purchase lending, a gap in the literature remains. My research focuses on non-home purchase predatory lending, loans that are used to repair and replace property after a natural disaster. These informal communities are often on the urban periphery, in unincorporated and loosely regulated county land, and often on fallow farmland in floodplains (Esparza and Donelson 2008). The marginalization of these communities is multifaceted: these vulnerabilities come from socioeconomic poverty, racial and spatial stigma, lack of infrastructure and enforcement, and environmental hazards.

This layered vulnerability is concisely summarized by Núñez-Mchiri (2009), "Not only must colonia populations contend with their ecological vulnerabilities to natural disasters, but they must also contend with the physical, economic, and political marginalization and alienation from larger urban cores and other centers of power" (Núñez-Mchiri 2009, 70). Put bluntly, these communities face multi-faceted challenges that require sweeping and comprehensive action to solve. This research engages with the overlap between the ecological vulnerability of flooding, the economic marginalization of predatory lending, and the history and legacy of poverty and racism in South Texas. The intersection of these challenges leads to the question: How do *colonia* residents cope with this trifecta of vulnerability: environmental injustice, financial exclusion, and pervasive poverty and racism? Using both quantitative and qualitative methodology, this research seeks to understand the overlapping vulnerabilities experienced by colonias in the Rio Grande Valley.

Positionality

My first experience with a 'colonia' came about as a result of my undergraduate studies. A sociology professor took us to the US-Mexico border in the Spring of 2012 and, in collaboration with the local community development organization La Union del Pueblo Entero (LUPE), we toured a colonia and handed out flyers for a local community meeting. I was struck by the familiarity of the landscape. To my eyes, colonias seemed to be rural, poor, Mexican trailer parks. They were familiar to me because every year, since I can remember, my family would take the 3-hour drive from Austin to my Abuelitos' home in Coleman, Texas. The neighborhood my Abuelitos live in, the poverty that they still experience, the rurality and precarity of their housing, reminded me of the colonias I was seeing in South Texas.

Despite my familiarity with the colonias, I have a privileged life. To honor my Abuelitos, and anyone in marginalized communities, it's important to discuss my positionality as it relates to the communities that this research studies and the way that I am seen and understood in colonias. While I am Latino, my biracial identity gives me skin that is often light enough to pass for White. While I visited my Abuelitos home throughout my life I could always return to suburban Austin. While I heard their financial struggles, frustrations, and concerns, I have a college degree and a steady job. While I am the grandson of Mexican immigrants, I have a social security number, US citizenship, and American-accented English. My experience gives me a unique cultural understanding of these communities, but it certainly does not make me a member of these communities.

Another important point about my positionality is my job. I work for a federally funded national affordable housing non-profit in Washington, DC. The institution I work for gives grants, support, and technical assistance to local affordable housing organizations across the country. I utilized my existing work connections to gain access to the communities that I was interested in working with. Within this it must be recognized that I, despite my best intentions, represent a powerful federal institution with influence on funding and access. This research would not have been possible without the support, buy-in, and generosity of local community development organizations. In order to distance myself from potentially coercing their participation, I made it clear that I was reaching out solely as a graduate student and in no way represented any institution besides The George Washington University. I used my school email during communications and always began the non-profit background interviews by stating, unequivocally, that participation would have no bearing on any institutional decisions that might positively or negatively impact the organization.

Methodology

The quantitative aspect of this research includes spatial and statistical analyses with a variety of publicly available data sources. The principal dataset used was HMDA (Home Mortgage Disclosure Act) data provided by the Consumer Finance Protection Bureau, race/ethnicity and poverty data provided by the US Census Bureau, 100 Year Flood Plains provided by FEMA and county floodplain databases, and a database of *colonias* in Texas provided jointly by the Texas Attorney General's office. These myriad data sources enable an understanding of the spatial patterns of housing refinance and rehabilitation loans, often used for natural disaster recovery (Gallagher and Hartley 2017), and the spatial relationship between housing finance mechanism regarding rurality, poverty, and predominant racial/ethnic groups within the context of *colonias.* Utilizing both logistic and logarithmic regression I establish a statistically significantly correlation between *colonias* and floodplains as it relates to housing refinance/home improvement loan access within context of the Texas-Mexico border. Chapter 3 contains a more detailed quantitative methodology.

The methodology for the qualitative analysis began with background interviews with subject matter experts. These included non-recorded interviews with two federal policymakers, at the Housing Assistance Council and the Center for Responsible Lending. In addition, local community development organization staff located in the Rio

Grande Valley took part in background interviews as both subject matter experts and local stakeholders; in lieu of recording these interviews thorough notes were taken during and after the interviews. These background interviews were completed in collaboration with the following local institutions: Community Development Corporation of Brownsville, Proyecto Azteca, La Union del Pueblo Entero (LUPE), and BC Workshop. These interviews established a connection with these communities and gave feedback on the focus group/interview protocols used with colonia residents. In total, 9 local community development and policymaker professionals were interviewed between May 2019 and January 2020. These interviews established a connection with these communities and gave feedback on the focus group/interview protocols used with colonia residents. In total, 9 local community development and policymaker professionals were interviewed between May 2019 and January 2020. These interviews took place over video conference and in-person during site visits. The information was not recorded and was largely for background and contextual information. During these interviews I took notes and this background information formed the backbone of the focus groups and interviews I conducted with local community residents.

The bulk of qualitative data came from four focus groups and in-depth interviews I facilitated in December 2019. These recorded conversations were held in Starr, Hidalgo, Willacy, and Cameron Counties – also known as the Rio Grande Valley. Each of the focus groups had between 8 – 11 people each. In total there were 37 (n = 37) focus group participants, most focus group participants were female (n = 34), and the majority were homeowners (n = 30). The focus groups were approximately 1.5 hours in length and all focus groups were recorded and conducted in Spanish, although English was occasionally used. I recruited specific individuals after the focus groups for more in-depth one-on-one interviews to better understand their individual experience with flooding and financial hardship. Afterward I transcribed and translated focus groups and interviews.

The questions for the focus group attendees and the interviewed participants ranged but generally could be divided into the following categories: basic community information, experience with flooding, post-flooding recovery efforts. The basic community information included questions around homeowner/renter, tenure in community, home type, and general home location. The colonia name was collected, but not the address of participants. Questions related to flooding were directed toward understanding who had experienced a flood, the frequency of the flood, home and property damage as a result of flooding, danger/health impacts as a result of flooding, forced relocation as a result of flooding, and broadly the negative impacts of flooding in the lives of the participants. The post-flood recovery questions asked if the participants fixed/replaced the damaged home/property the flood destroyed, the extent of the fix/replacement, and how the participants financially covered the cost of repair/replacement. Finally, the focus/group interviews asked about future flood preparedness.

Focus group participants were recruited via a Spanish/English flyer that asked for participants who had experienced flooding in their colonia; the flyer incentivized participation with food and beverages. Community organizers in the organizations LUPE, Proyecto Azteca, and CDC Brownsville recruited heavily in the colonia footprints in which they worked and were community members. In the case of LUPE and Proyecto Azteca, staff of these organizations who were also colonia residents, took part in focus groups. In one case a religious leader participated in a focus group who was not a community member. However, all participants, regardless of organizational affiliation, gave a verbal ‘yes’ or ‘Si’, and in one case a ‘that’s fine’, in terms of confidentiality at the start of the focus groups. The interviews or focus groups took place in three South Texas Counties – Starr, Hidalgo, and Willacy but included participants from Cameron County. Focus groups were held at local community centers and were incentivized with food and non-alcoholic drinks. The focus group topics concentrated on the finance, health, and social impact of flooding. The qualitative study focused primarily on the Rio Grande Valley. For a map of the region of the qualitative study please see Figure 1.

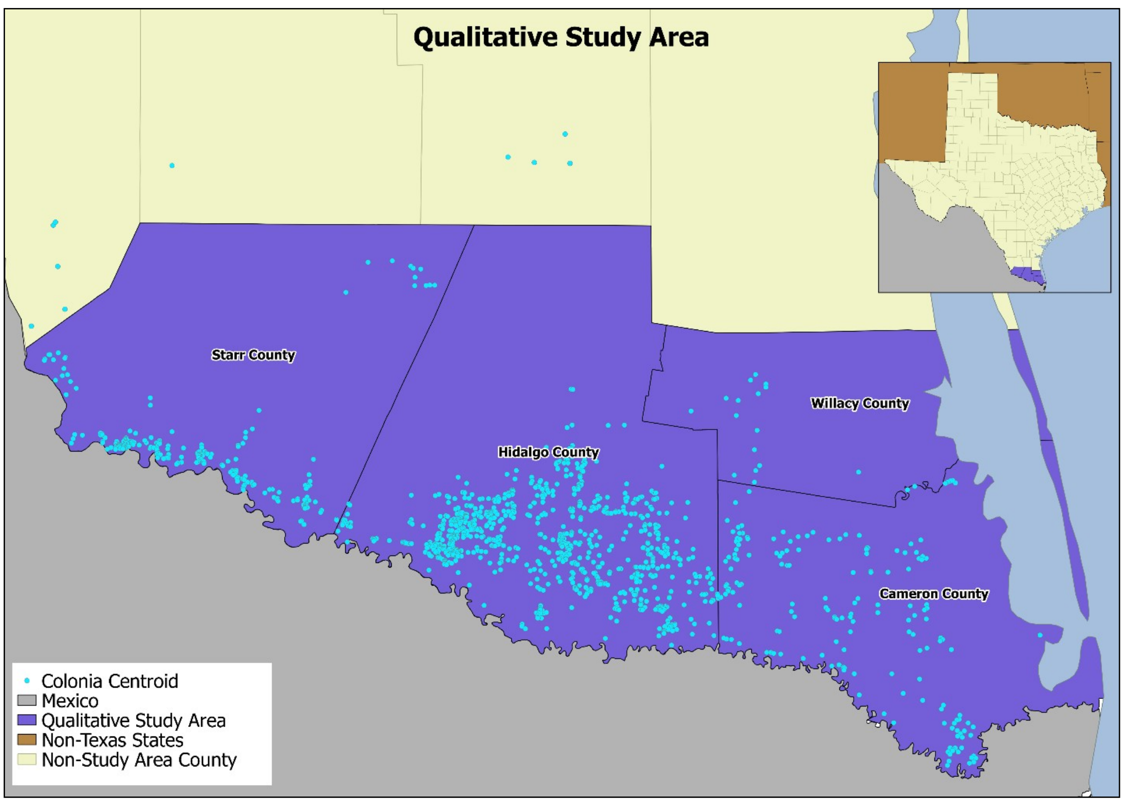

Figure 1:1 Qualitative Study Area – This map represents the focus of my qualitative research, the Rio Grande Valley.

Theoretical Framework: Overlapping Vulnerabilities

In this section I divide colonia vulnerability into categories: ecological, political, economic, infrastructural, and spatial marginalization. These categories are interconnected and are often worsened in combination with one another. For example, the economic vulnerability of an underbanked and impoverished community is exasperated by the political vulnerability of a racial minority in a place with a long history of violent racism. Each of these vulnerabilities will be addressed in turn and in connection with other vulnerable modalities.

One of the most omnipresent colonia vulnerabilities is ecological. The history of the formation of colonias is that they reside in low-lying flood-prone areas outside of incorporated cities (Ward 1999, Richardson and Pisani 2012). As a result, flooding is common to the extent that it is less a natural 'disaster' and more an omnipresent threat. Rivera (2014) describes the propensity for flooding in the following way, "The overwhelming majority of colonias in the Lower Rio Grande Valley reside on severely flood-prone lands. In even the lightest rainstorms, many colonias households flood, an issue compounded by the lack of stormwater systems" (Rivera 2014). Rivera demonstrates that this ecological vulnerability is directly connected with the political vulnerability of colonias in a variety of ways.

A clear example this overlapping vulnerability is the lack of political integration of colonia residents with broader power systems such as the local and federal government. Donner and Lavariega-Montforti (2018) demonstrate a mistrust of institutions by low income minorities in the Rio Grande Valley, "Psychologically, ethnic minorities may ignore or distrust the information provided by emergency management and public health institutions which oftentimes are the main sources of preparedness communications" (Donner and Lavariega-Montforti 2018, 721). This is supported by Ward's (1999) concept of vertical and horizontal integration. Núñez-Mchiri (2009) citing Ward (1999) explains this horizontal versus vertical integration in the following way, "Ward (1999) … calls horizontal integration the informal and formal networking strategies that take place among individuals and households in the community, while he calls vertical integration the colonias' ability to link to people and institutions of power that can craft and lead initiatives to support the communities' growth. Vertical integration emphasizes community links with people and institutions of power and privilege, while horizontal integration refers to inter-community cohesiveness and organization" (Núñez-Mchiri 2009, 85). The mistrust of colonia residents, apparent in both the focus groups and in Donner and Lavariega-Montforti's (2018) study of disaster preparedness in the Rio Grande Valley, demonstrate how that the lack of vertical integration harms the colonias regarding ecological protection in the form of infrastructure development.

The connectedness between ecological vulnerability, political marginalization, and infrastructure is made clear by Collins' (2010) assertion that the threat to undocumented immigrants in the colonias limits the environmental mitigation of flood risk in these places. "By denying access to 'public' and 'individual' assistance to repair damaged elements of the built environment (eg roads, homes) and by invoking the threat of deportation to undocumented US residents, state institutions have estranged *colonia* residents from their just share of the social surplus" (Collins 2010, 279). Here the connection is made between ecological vulnerability, political vulnerability, and the built environment as infrastructural vulnerability.

Bath et al. (1998) also connect systemic political marginalization with infrastructural vulnerability when they observe, “The question raised was whether the failure to provide services, specifically water and sewage, was the result of environmental racism. Given the past segregation and discrimination of Mexican Americans found in Texas and El Paso, there is sufficient historical evidence to support … institutional racism” (Bath et al. 1998, 134). Drawing from Pulido’s (2000) argument connecting white privilege with environmental racism and Collins (2010) argument regarding the social surplus as a mitigating factor for environmental hazard for the wealthy but not the disenfranchised, it is clear that the political vulnerability of poor communities of color is tied with the ecological vulnerability of flooding. This ecological vulnerability is, in turn, exasperated by the infrastructural vulnerability in which colonias lack quality housing, drainage, and paved roads.

Colonias are also vulnerable economically. Community members are often un- or under-banked and typically do not have access to traditional financing systems, as the Federal Reserve Bank of Dallas (2006) has noted, “The contract for deed has been the most frequently used financing mechanism in the colonias because many individuals have neither a credit history nor the resources to qualify for traditional bank or credit union financing. A contract for deed is a financing arrangement, often at high interest rates, whereby land ownership remains with the seller until the total purchase price is paid” (Federal Reserve Bank of Dallas 2006, 7). The issue is not simply access to finance, there is also a history of entrenched poverty in these communities that is linked with poor housing quality (infrastructural vulnerability) and being an ethnic minority group (political vulnerability). As the Housing Assistance Council (2013) has said, “The border region between the United States and Mexico is dotted with thousands of rural communities characterized by extreme poverty and severely substandard living conditions. These communities, commonly called colonias, are overwhelmingly inhabited by individuals and families of Mexican heritage. Poor housing conditions are common in the colonias with an old, deteriorating housing stock, combined with newer units that do not meet building codes" (Housing Assistance Council 2013, 1).

The final aspect of vulnerability in the colonias is the spatial marginalization they experience due to their rurality. Lusk et al (2012) argues that a key aspect of the political and economic vulnerability of Colonias results in an 'out of sight, out of mind' mentality in which low income, substandard housing lacks visibility and interconnectedness. "*Colonias* serve as the safety nets for the border region's low-income and working poor residents…Without *Colonias* the border region would arguably experience much higher rates of visible homelessness and despair" (Lusk et al. 2012, 114 – 115).

Ward (2004) agrees with this assertion and argues that, "[Colonias] are settlements of the working poor, tied primarily to urban economies, representing a rational response to low wages and a lack of viable housing alternatives offered by either the public or private sector" (Ward 2004, 263). As unaffordable land price pushed colonia housing to the periphery of urban centers along the borderlands, a spatial otherization has taken root. This practice is historically represented by Engels (1844), "the money aristocracy can take the shortest road through the middle of all the laboring districts without ever seeing that they are in the midst of the grimy misery that lurks to the right and left" (Harvey 1973 citing Engels 1844, 132). By placing low income housing on the urban periphery, the borderlands hide the urban poor in less visible ways. Here, economic vulnerability and spatial vulnerability result in political marginalization.

Spatial vulnerability is also linked with political and infrastructural vulnerability. The informality of colonias is a result of loose and unenforced development regulations outside of incorporated cities in peri-rural county land (Ward 1999, Richardson and Pisani 2012). As Colonias are outside of incorporated cities (spatial vulnerability), they are also more vulnerable politically, infrastructurally, and ecologically. Collins (2010) connects the social surplus with infrastructural vulnerability, ecological vulnerability, and the political vulnerability that results from spatial vulnerability,

> Following the floods, unequal access to the social surplus in the US was most clearly evident between residents of incorporated areas and those of unincorporated colonias. The City of El Paso … demonstrated social infrastructural capacity in stimulating flood recovery and risk reduction through bond financing, property buy-outs, and the creation of a "Stormwater Utility" to manage flood hazards ... In contrast, colonias are typically not eligible for FEMA "public" assistance because features of the built environment are self-constructed by residents and, thus, considered "private"—beyond "public" purview (Collins 2010, 277).

Despite these clear linkages between ecological, political, economic, infrastructural, and spatial vulnerability, a gap in the literature remains. This research hopes to better understand how these various vulnerabilities relate to post-flood financial coping mechanism and the potential furthering of economic vulnerability. Additionally, this research attempts to understand how the three major results of this study, *poco a poco*[1] recovery, institutional failure and mistrust, and community-centered solutions connect to the broader theme of colonias as places of overlapping vulnerabilities. As

[1] *Poco a poco* means 'little by little' or 'slowly' in Spanish. It was a common phrase used by focus group participants.

Nunez-Manchiri says, “Not only must colonia populations contend with their ecological vulnerabilities to natural disasters, but they must also contend with the physical, economic, and political marginalization and alienation from larger urban cores and other centers of power” (Núñez-Mchiri 2009, 70) This thesis stands on the shoulders of previous researchers who have documented the various overlapping vulnerabilities of colonias ranging from ecological to infrastructural. The intention of this research is to uncover a less understood aspect of colonia vulnerability and to engage with possible solutions.

Chapter 2 Literature Review:

Colonias, Predatory Lending, Environmental Injustice & Informality

Colonias

Colonias are a unique housing phenomenon in the American Southwest, namely along the US-Mexico border, and are characterized by their lack of infrastructure – unpaved roads, no streetlights, low quality housing, and in extreme cases no running water and electricity. *Colonias* developed in the latter half of the 20th century as a result of a host of factors such as surging urban land prices, high rates of poverty, unregulated development in unincorporated county land, and housing finance schemes known as Contract for Deed housing (Ward 1999). Colonias, due to their rural or peri-rural nature, are distinct from traditionally low-income inner-city neighborhoods. Arreola (2002) documents the geographic pattern of colonias and demonstrates a clear difference between traditional Mexican-American barrios and colonias. A barrio refers to an inner-city, predominantly Mexican American neighborhood near a central business district and is typified by relative density and often poverty; conversely colonias are on the periphery of cities and are often rural or semi-rural (Arreola 2002).

In Texas alone, colonias house over 400,000 of the border's poorest residents (Lusk et al 2012). Scholars have investigated a multitude of social injustices for colonia residents. The history and formation of colonias, as well as the infrastructural challenges these communities faced, have been well documented. Among the injustices studied is the prevalence of both flooding and predatory lending schemes among these communities. While there has been a great deal of discussion surrounding the overlapping vulnerabilities within colonias, little research has investigated the intersection of environmental injustice and economic exclusion (Lusk et al 2012, Núñez-Mchiri 2009). My research question asks how colonia residents financially cope with this overlapping vulnerability? Furthermore, what kinds of financial systems are utilized when disasters such as flooding, necessitate access to external capital? And if these financial schemes are indeed predatory, how is poverty reproduced within colonias?

Ward (1999) and Richardson (1999) detail exactly how colonias formed and the public policies, at both the national and state level, that shaped Colonia development in the 1980's and 1990's. The rise of *colonias* is, in part, economic. US-Mexico border cities from San Diego to Brownsville exploded in population from 1960 onward (Herzog 1990). The rapid urbanization of the US-Mexico border in the latter half of the 20th century resulted in skyrocketing land values. In Texas, and many states in the American Southwest, unincorporated county land had very little regulation. This unregulated land enabled developers to sell vacant tracks of land, fallow farmland in floodplains, with no supporting infrastructure. In addition, cities could not afford, or were not willing, to extend utilities to these unincorporated communities (Ward 1999, Richardson 1999, Arreola 2002, Bath et al 1998). These parcels of land, without infrastructure or a home, sold for a few thousand dollars each. However, despite this relatively low price in comparison to the traditional US housing market, buyers still needed a level of housing finance (Ward 1999, Richardson 1999).

Two clear patterns arise within the history of colonia development, the first is spatial marginalization and the resulting environmental injustice, the second is the historic and continued use of predatory lending within colonias. The home purchase finance system most often utilized in colonias is known as Contract for Deed (CFD) housing and is an informal and predatory housing finance system where the seller retains the deed to the land and the buyer pays a monthly installment. The utilization of this informal housing finance system is largely due to the lack of credit, equity, or available down payment funds from the purchasers, unsurprising given the high poverty rate of the US-Mexico border. In other words, traditional financial institutions such as banks are largely out of reach for many colonia residents (Dudensing 2017). As the buyer makes the final payment, they receive the deed to the home. The reality is that CFD provides little to no protection for the buyer and any growth in equity on the property either through speculation or home construction is returned to the seller (Ward 1999, Richardson 1999). As Ward describes, "The Contract for Deed arrangement was the key to land development in Colonias… However, it is problematic, since the seller is heavily favored, while the purchaser is vulnerable to forfeiture" (Ward 1999, 91).

The 1990 Cranston-Gonzalez act and Texas' SB 336 and HB 1001 radically altered the treatment of colonias by the state and federal government (Ward 1999). These bills made it necessary to register CFD's with county governments, forced sellers to disclose CFD's fine print regarding foreclosure in both English and Spanish, and converted CFD's into traditional mortgages after 40% (or 100 payments) of the loan was paid (Ward 1999, 2012). Despite this attempt to regulate a predatory housing finance scheme these interventions were limited to the counties along the Texas-Mexico border (Ward 1999). The effects of this legislation have not stopped new colonias from forming nor has it ended the informal and predatory housing finance schemes known as Contract for Deed housing[2].

In 2012 Peter M. Ward studied contemporary Unregistered Contract for Deed (UCFD) and Registered Contract for Deed (RCFD) housing finance schemes with a publication entitled *The Contract for Deed Prevalence Project*. This research shows that UCFDs are still common throughout Texas and that RCFD's still have an incredibly high rate of foreclosure, "Buyers with RCFDs appear to have very low success rates in eventually obtaining a deed… According to the title histories we reviewed, 45% of the CFDs recorded since 1989 had been cancelled… Fewer than 1/5th of… buyers with RCFDs made the transition to a deed, and 37% still hold an active RCFD" (Ward 2012, VI - VII). Regardless, the long history of CFD's establish a pattern of an informal and predator lending culture in the colonias of South Texas.

Predatory home purchase loans are not limited to colonias. Wyly Et Al.'s (2006, 2009) study of HMDA (Home Mortgage Disclosure Act) data found evidence that subprime mortgage lending was particularly targeted toward minority communities, even while controlling for factors such as income and credit score, "African Americans are 1.6 times more likely than non-Hispanic whites to have subprime credit in 2004, and 2.3 times more likely in 2006. For Latinos, the corresponding increase is from 1.1 to 1.9. This result aligns with the aggregate, metropolitan-level analysis, and confirms that the subprime boom consolidated African American segmentation even as the industry made new inroads into Latino communities" (Wyly et al. 2006, Wyly et al. 2009, 346). Clearly,

[2] For more information on the racist and predatory history of Contract for Deed housing finance throughout the US see Ward (1999, 2012) and Whitehouse (2019).

there is a pattern of predatory home purchase lending in low income communities of color across the US.

Non-Purchase Predatory Lending

While informal predatory home-purchase lending has been thoroughly assessed by the researchers above, there seems to be little academic research on non-purchase predatory lending in Texas Colonias. The US federal government, along with the state governments that border Mexico, have acknowledged the increasing issue of predatory lending in the colonias. As the Department of Housing and Urban Development has noted, "Without access to the conventional banking system, colonia families often turn to payday loans with interest rates as high as 300 percent out of desperation, triggering a cycle of untenable economic burden. As a result, the conventional benefits of homeownership, such as wealth building, often do not materialize for colonia households" (HUD User 2020). While this statement acknowledges the economic trap of predatory lending in colonias, it does not propose a policy solution, nor does it factor in the issue of natural disasters that plague this community. The Dallas Federal Reserve quotes a Senior Loan Officer Marlene Rodriguez stating that in "Starr County (which contains over 230 colonias), most colonia residents don't know their credit score, and they assume they would not qualify for a bank loan. … They get hooked in the predatory loan cycle in order to make ends meet and don't see other options" (Barton et al. 2015, 15). While both statements by these federal institutions are supported by this research, there is no analysis of the mechanics of predatory loans. How colonia residents acquire, use, and are dependent on these predatory systems are not contextualized nor are these statements supported by empirical case studies.

State governments have also recognized the common practice of non-purchase predatory loans. In a 2010 report the state of New Mexico said the following about predatory loans, “Predatory lending is a pervasive problem for colonia communities. Predatory lending involves a wide range of abusive and unethical business practices designed to exploit people in need of money by marketing loans that trap borrowers into a cycle of debt. The most frequent types of predatory loans experienced by colonia residents include payday loans and title loans” (Legal Issues in New Mexico’s Colonia Communities 2010, 7). Again, how the state of New Mexico knows this is unclear. The state-published paper provides no evidence of ethnographies, quantitative research, or series of interviews done with colonia residents to support these statements. Again, while it may be true, it does not provide context for the microprocesses that lead residents to rely on these loans or to the financial results.

However, plenty of research does exist on the detrimental effects of predatory lending broadly. Predatory lending in Texas has a long and aggressive history; a 2016 report by the Texas-based financial justice organization Texas Appleseed has showed that low income Texans are some of the most economically vulnerable to predatory lending. “Single payment payday loans continue to have … [an] average loan amounts just under $500. Fees have steadily increased over the past four years and, at $23.58 per $100 borrowed for a two-week period, are significantly higher than the national average of $15.00 per $100 borrowed. Texans continue to pay some of the highest fees in the country” (Baddour et al. 2016, 10). The study goes on to say that the average APR for a predatory loan between 2012 and 2015 was 567% (Baddour et al. 2016, 3).

Post-disaster predatory lending is a concern as this is when individuals are at their most desperate for an influx of financial support. Titford and Simmons (2013) give an example of predatory businesses taking advantage of consumers in post-Katrina New Orleans, “Louisiana’s attorney general saw a drastic increase in housing repair-related complaints following Hurricane Katrina—from 150 per year to more than 44,000 in the two years following the storm.” (Titford and Simmons 2013, 307). In looking at the global south, there are other examples of predatory lending as a means for post-flood home reconstruction (Tran 2015). This is particularly relevant as colonias, while residing in the US, are also in the global south in terms of their level of development.

Colonias residents are also overwhelming people of color. The connection between predatory lending and communities of color was made clear in a 2009 report from the Center for Responsible Lending in which it was demonstrated that communities of color in Los Angeles are particularly targeted by predatory lenders. As the study said, “Payday lenders are nearly eight times as concentrated in neighborhoods with the largest shares of African Americans and Latinos as compared to white neighborhoods, draining nearly $247 million in fees per year from these communities” (Li et al. 2009, 10). Despite these examples, little research exists on the intersecting issues of non-home purchase predatory lending in the colonias its relation to the ecological vulnerability of flooding.

Environmental (In)justice

Colonias exist within overlapping systems of vulnerability where environmental justice is exacerbated by predatory lending schemes, poverty, and a lack of infrastructure. There is significant scholarship on environmental injustice and environmental racism in the *colonias* which tackle topics ranging from poor infrastructure, industrial runoff, trash, and sanitation (see Bath et al. 1998, Esparza and Donaldson 2008, Lusk et al. 2012, Núñez-Mchiri 2009, Ward 2007, Johnson and Niemeyer 2008, Dean et al. 2011). These myriad facets of environmental injustice have been well established by previous research and demonstrate the continuing racialized environmental injustice prevalent in *colonias*. While research has been written on flooding in *colonias*, much of the environmental injustice work focuses on public health and infrastructure inequality. Little research exists on the intersection between predatory lending and environmental injustice.

Some scholars have engaged with environmental racism in colonias head on. Bath et al. (1998) explore the racially violent history of El Paso, Texas and argues that the decision by El Paso's water board to not provide water services to colonias in unincorporated areas of the county was racism. As Bath et al. notes, "The question raised was whether the failure to provide services, specifically water and sewage, was the result of environmental racism. Given the past segregation and discrimination of Mexican Americans found in Texas and El Paso, there is sufficient historical evidence to support … institutional racism" (Bath et al. 1998, 134). However, in applying Pulido's (2000) critical lens of white privilege, I would argue that this is an example of color-blind environmental racism based solely on the statistic given by Bath et al., "In the *Colonias*' region, 96 percent of the inhabitants came from Mexico" (Bath et al. 1998, 128).

More contemporary examples of environmental injustice and colonias are drawn from Esparza and Donelson (2008) and Lusk et al. (2012). Esparza and Donelson discuss environmental injustice, predatory lending, and infrastructural challenges within colonias. Their research on environmental injustice focuses on structural issues related to housing infrastructure, "Colonia residents must… rehabilitate substandard housing units to federal health and safety standards. Residents rarely can do so when they lack access to adequate water and sewer infrastructure, and *colonias* residents may choose not to do so if they have to tear down their homes and rebuild to qualify for federally subsidized financing" (Esparza and Donelson 2008, 111). The overlapping vulnerabilities of colonia residents from running water to poor home quality to poverty, is exemplified in the quote above.

In addition, Lusk et al. (2012) conceptualizes environmental injustice from multiple standpoints including industrial runoff, trash and debris, and access to clean water. Lusk et al. connects the environmental injustice of colonias to infrastructural issues, "Many Colonia communities continue to wait for potable water to be delivered to their homes; unfortunately, the decision to deliver water to many Colonia*s* lies in the hands of local water boards who must decide on whether or not this service will be eventually delivered" (Lusk et al, 116). The lack of clean water access that Lusk et al. describes is further complicated by flooding as colonia residents are often unable to drink the water, even when there is the infrastructure, due to floods overrunning septic tanks and polluting the drinking water pipes (Interview).

Pulido's (2000) work on brown sites and anthropomorphic pollutants in Southern California exemplifies how the environmental racism experienced by the colonias of the Texas-Mexico border is not a unique experience. While this literature review does not delve into the long and violent history of racism along the Texas-Mexico border due to space and time, Pulido's argument that environmental racism needs neither intentionality nor malice also applies to the colonias of Texas. "The data suggest that people of color's disproportionate exposure to pollution in Los Angeles is not by chance. Although the geography of environmental racism is the result of millions of individual choices, those choices reflect a particular racial formation, and are a response to conditions deliberately created by the state and capital" (Pulido 2000, 25). There are certainly similarities between Pulido's research area and the Texas-Mexico border – majority minority, large Mexican-American population, high rates of poverty, spatial proximity to the US-Mexico border – but there are numerous examples of environmental racism throughout the US.

Collins et al. (2019) discusses the outsized impact of environmental hazards on neighborhoods of color in post-Harvey Houston, "Hispanic, black and other racial/ethnic minority households experienced more extensive flooding than white households, and lower SES households faced more extensive flooding than higher SES households…Since flood events in Greater Houston are expected to increase in frequency and magnitude …socially disparate impacts are likely to become an increasingly salient public policy issue" (Collins et al 2019, 1). Additionally, scholars have discussed environmental racism from the standpoint of green space access in Baltimore (Boone et al. 2009) and Chicago (Coursey et al. 1994). While the overlapping vulnerabilities of poverty and environmental precarity in colonias along the Texas-Mexico border may be particularly horrific, they are a common experience for low income people of color across the US.

Colonias as Informality in the Global North

Housing informality is integral to the history and contemporary experience of the Texas-Mexico borderland; *Colonias*, in turn, are an integral part of the US-Mexico border experience. In Texas alone *Colonias* house over 400,000 of the border's poorest residents (Lusk et al. 2012). While many claim that they are bastions of poverty and low-quality housing, to colonia residents themselves they are often proud of their homes. The residents of these community's report appreciating the incremental nature of home construction and this is largely possible because of the unregulated nature of Colonias (Ward 1999, Richardson 1999, Richardson and Pisani 2012). This development model - informal sweat equity over time - is in many ways a prototype of housing development around the world. This may historically have been limited to the Global South but increasingly researchers like Peter M. Ward have found that Informal Homestead Subdivisions are popping up on the urban periphery of major cities across the United States (Ward 2007).

While informality is generally a subject that is relegated to the global south, many scholars are increasingly observing informal economic practices in developed countries. As Mukhija and Loukaitou-Sideris (2014) notes, "Informality is… a result of globalization, deregulation, and increasing immigration flows… a response to economic instability and increasing unemployment and underemployment, and partly because of the inadequacy of existing regulations … informal activities have proliferated in U.S. cities and are clearly reflected in their built environment" (Mukhija and Loukaitou-Sideris 2014, 8). The informality of colonias is part of a broader shift in scholarship toward uncovering informal practices in the US as a response to neoliberalism and the shrinking of state services in the face of austerity measures across the globe.

The nuance of colonias as places of informality within the space of the global north, further contextualizes this informality as a survival mechanism in a system of capitalism that does not serve this particularly vulnerable population. Parnell and Robinson (2012) have noted, "urban theory now has little choice but to address a much wider range of modes of urbanism than it has to date, including conditions in which poverty, informality, and traditionalism are the norm. Our suggestion is that… existing theories and critiques of urban neoliberalism are ill-equipped for the task of illuminating the conditions of poorer cities" (Parnell and Robinson 2012, 600). This argument, that informality and the global south are the pioneers of urbanism, is rooted in a paradigm shift of the global order in a post-colonial society. This is particularly relevant to colonias because the colonia mode of urbanism is increasingly becoming the norm. Indeed, in looking at the policy issues surrounding poverty and informal lending in the colonias of South Texas, lessons can, and should, be extrapolated to other parts of the country. Recent research has shown that colonia-like communities, known as Informal Homestead Subdivisions, are developing across the country (Ward 2007).

The relegation of informality to the global south ignores the prevalence of prevalence of informality in the US. As Ward (2004) writes, "The US legal system is not yet ready to address the concept of informality sensibly; instead, it sees informality as a fundamental abuse of the law. Clearly, the idea of informal and formal markets coexisting alongside each other, with flows and interactions between them, is not one that sits comfortably in the United States" (Ward 2004, 245). The tension that Ward references can clearly be seen in other places along the US-Mexico border. Cruz's (2007, 2012) exploration of the flow of goods from San Diego to Tijuana in the form of trash and recycling is an example of informality in the global south as a product of formality and consumption in the global north. "The leftover parts of San Diego's older subdivisions, standard framing, joists, connectors, plywood, aluminum windows, garage doors, are being disassembled and recombined on the other side, across the border" (Cruz

2012, 185). Cruz demonstrates how informality does not operate in isolation from formality and the global north, but rather argues the two are intimately linked.

While trash and recycling material travel south to Mexico from the US, and more broadly trash and recycling are traveling from the global north to the global south immigrants have, historically, traveled in the opposite direction (Cruz 2012). As part of this immigrant flow, undocumented immigrants are another form of informality. Ward (2004) demonstrates this by describing the experience of undocumented, and thus informal, migrants the following way, "Most common are … labor groups …forced to live in unacceptably poor conditions by virtue of their informality (illegal status)… in an emerging transnational family context … [where] *within* families one may find different levels of informality … exposing them to higher levels of risk than their siblings or partners" (Ward 2004, 245 – 246). Yet again, informality and formality lie along each other. Indeed, many undocumented immigrants are connected to the global north by family members who are legal residents or citizens. The precarious nature of undocumented immigrants further complicates the post-disaster coping strategies of colonia residents in South Texas.

Informality in the global north has become an increasingly important topic. As Mukhija and Loukaitou-Sideris (2014) demonstrate the growth of informality in the context of the US has grown tremendously. In their anthologized book *the Informal American City* Kettles (2014) engages directly with the informality of street vending. He argues that street vending lies in a nebulous space between informal and formal. This ambiguity lies in the interpretation of law itself. "Whether informality is viewed as law avoiding or law breaking, law is an indispensable aspect of it…. Informality is the result of laws that overburden some… informality, at least in the context of the US… is the product of a regulatory vacuum" (Kettles 2014, 228).

Subaltern Urbanism and Informal Economics

Roy (2011) categorizes urban informality as 'subaltern urbanism' and marks the increasing importance of recognizing informal urbanity by describing it as a new frontier of geography, "I have argued that the study of the twenty-first-century metropolis requires new geographies of theory… Subaltern urbanism is indeed one such approach. It is a vital and even radical challenge to apocalyptic and dystopian narratives of the megacity" (Roy 2011, 231). Roy, in a similar way to Gottdiener et al. (2015), seeks to reframe informality as neither a good nor a bad, but rather as a complicated process resulting from systems of violence such as capitalism and colonialism. The tension of glorifying informality, she argues, ignores the violent histories that made informality in post-colonial spaces necessary.

> I am taken with the worldliness of the subaltern, with the unbounding of the global slum, with the new solidarities and horizontalities made possible by such transmodern exchanges. But I am also taken with … [the] occasion for a host of postcolonial centerings, for violent practices of domination and hegemony. In this transmodernity, postcolonial experiments inaugurated by emergent nation-states and their megacities generate and stage global value. Such experiments cannot be read as a reversal of colonial power; instead they demonstrate the brutal energy of the postcolony (Roy 2011, 230).

As it relates to colonias, it is important to understand that informality is both a result of overlapping vulnerability and is the very pathway toward surviving that same structural violence.

Roy (2005) frames the tension between informality as both a positive and negative by referencing De Soto (2000) and Hall and Pfeiffer (2000). Where De Soto romanticizes informal entrepreneurship as 'heroic', Hall and Pfeiffer characterize informality as violent, dangerous, and problematic. Regardless, these contrasting views are overlapping. As Roy says, "At first glance, these two frames—one of crisis and the other of heroism—seem to be sharply at odds with one another. Yet a closer look reveals some striking similarities… [both] converge on the idea of enablement, helping the poor help themselves. This celebration of self-help obscures the role of the state and even renders it unnecessary" (Roy 2005, 148).

Ward (2004) engages with the violence of informal economic systems in his description of the rise of colonias, "[Colonia development] involves informal financing outside of regular mortgage and credit markets… this is articulated … under a process called Contract for Deed….it is a way to finance a real estate purchase if one cannot afford a down payment or if one's income does not quality for more conventional methods" (Ward 2004, 248). Here we see a multitude of informalities intersecting, informal housing settlements, informal infrastructural practices, and informal financial services. This is an example of what Roy (2005) describes; the exclusion of colonia residents from traditional financial institutions, creates an informal lending system known as contract for deed. However, while this exclusion is categorically predatory, it also enables cash-strapped families to purchase a home with a very small down payment (if any). The lack of housing finance options available to *colonia* residents means that informal financial practices are utilized, and these informal practices in turn create a semblance of opportunity.

While this research focuses on the informality of the Texas-Mexico border, examples of the informal economy abound across the global south. Gidwani's (2014) description of Indian waste pickers follows Gottdiener et al (2015) and Roy (2005) in that the informal economy does not neatly fit into Marxist Structuralism, "the informal economy in fact should give us pause because maybe what's at stake here is a completely different story that has to be told about capitalist development in countries like India over the last 50 to 60 years, an account that re-imagines the status, the contributions, and the work of the informal economy" (Gidwani 2014, 6). Gidwani goes on to describe the hegemony of 'capitalist development' as a process by which informality is a temporary step toward new and more formal economic engagement. "The dominant narrative was one of a transition, from the traditional to the modern sector, where the primacy of the modern sector, which was conflated with the industrialized urban sector, was simply taken for granted" (Gidwani 2014, 6).

Post-Natural Disaster Resilience

Beyond the scope of colonias, the Rio Grande Valley region is an amalgamation of vulnerabilities. A principle aspect of this vulnerability is the ecological experience of living in a flood prone space. This is true on a regional and hyper-local scale. As Donner and Lavariega-Montforti (2018) have described, "This area, otherwise known informally as the Rio Grande Valley, is an empirically and theoretically compelling setting in which to evaluate vulnerability … the region hosts one of the youngest and poorest populations of the US while … bearing comparatively higher flood and hurricane-related risks" (Donner and Lavariega-Montforti 2018, 719). Narrowing to the more local scale, colonias are particularly flood-prone and impoverished, making their vulnerability particularly acute, "The overwhelming majority of colonias in the Lower Rio Grande Valley reside on severely flood-prone lands. In even the lightest rainstorms, many colonias households flood, an issue compounded by the lack of stormwater systems" (Rivera 2014). In addition, Donner and Lavariega-Montforti (2018) have analyzed resilience in the Lower Rio Grande Valley from the standpoint of race, class, age and gender. They have found, unsurprisingly, that lower income people of color are less prepared for disasters (Donner and Lavariega-Montforti 2018).

Wisner et al. (2005) maintains a perspective on environmental hazard geography that positions lower socioeconomically powerful groups as ecologically marginalized as a result of their limited power. "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 2005, 11). While this theoretical framework is a logical point of origin, other natural hazard theorists have challenged that this simplifies a more complicated phenomenon.

In another study looking at resiliency and flooding along the Texas-Mexico border, Collins (2010) challenges Wisner et al.'s (2005) conception that the poor are more vulnerably simply because they live in ecologically hazardous spaces. He argues that, from a Marxist structuralist standpoint, the wealthy also live in environmentally hazardous places but have the power and privilege to influence local institutions to mitigate these risks. "Many [wealthy] residents … may choose to live in hazardous locations. They do so only under the condition that state and market investments… are provided to maximize positive environmental externalities and minimize negative ones. While such households may be exposed to flood hazards, they are not socially vulnerable. ... In contrast, other households live in hazardous colonias of El Paso County … such households suffer from acute hazard exposure and social vulnerability" (Collins 2010, 282). This reframing argues that, not only are marginalized groups forced to endure ecological hardship due to their inability to live in less vulnerable places, but also inequitable social surplus gives more privileged classes sway over the use of collective resources to mitigate their spatial choices.

Collins (2010) also argues that colonias, which reside outside of the incorporated city of El Paso, are further vulnerable because federal actors, namely FEMA, spatially and socioeconomically exclude marginalized groups, “Incorporated areas also became eligible for Federal Emergency Management Agency (FEMA) reimbursements totaling 75% of recovery expenses. In contrast, colonias are typically not eligible for FEMA ‘public’ assistance because features of the built environment are self-constructed by residents and, thus, considered ‘private’—beyond ‘public’ purview” (Collins 2010, 277).

While Collins (2010) pushes the limits of Wisner et al (2005), Jon and Purcell (2018) argue that both of these theoretical frameworks are limited in that they position marginalized communities as passive receivers of the violence of the market and political systems that are disincentivized to mitigate the ecological vulnerabilities of marginalized groups. They propose a radical epistemology of planning in which these marginalized groups are often actively agonistic toward top-down planning and argue that post-disaster recovery needs to be a bottom-up phenomenon (Jon and Purcell 2018). “Conventional wisdom assumes … that expertise and resources for aid and recovery can only be effectively organized by external actors or organizations. But … people affected by disasters are not merely passive victims ... [they] show remarkable cohesion, solidarity, and cooperation [following] a disaster” (Jon and Purcell 2018, 237).

While I certainly agree that a community-centric planning viewpoint is critical toward building effective resilience, the philosophical end point of this argument is problematic. Jon and Purcell (2018) write the following about agonistic post-disaster resiliency, "While disasters bring chaos and disorder, it is possible also that those affected can take them as an opportunity to invent alternative ways of life…it can also open up possibilities for new forms of planning, planning carried out by people themselves" (Jon and Purcell 2018. 238) This idea, that destruction and disaster can disrupt systems of violence, rather than further systems of violence, is not reflected in my findings. I argue that, without the support of institutions like local county and city governments and federal agencies like FEMA, marginalized groups, such as colonias, turn toward necessary yet harmful coping mechanisms like predatory loans. While Jon and Purcell (2018) have an intriguing framework with valid points, it is reminiscent of another philosophy, "Accompanying her husband, former President George H. W. Bush, on a tour of hurricane relief centers in Houston, Barbara Bush said today, referring to the poor who had lost everything back home and evacuated, 'This is working very well for them. And so many of the people in the arena here, you know were under-privileged anyway, so this - this [she chuckles slightly] is working very well for them" (Gunewardena and Schuller 2008, 117).

Immigrant Precarity

While colonias have a large immigrant population, they are not exclusively immigrant spaces. Data varies, but according to the Dallas Federal Reserve colonias along the Texas-Mexico border over a 1/3rd of those residing in colonias are foreign born (Barton et al. 2015). The demographics of colonias along the Texas-Mexico border do shower much higher than average rate of foreign-born residents than similar rural communities across the US (Housing Assistance Council 2013). Given the large immigrant population in the colonias, and the precarity of colonias, it is important to engage with the literature surrounding immigrant precarity.

The Texas-Mexico border is one of the most highly militarized spaces in the world due to the, real or perceived, ‘threat’ of immigration (Spener 2009, Nevins 2010). This high level of militarization has only amplified in intensity with the recent increase of aggressiveness by Immigration and Customs Enforcement, or ICE (Blue et al. 2020). The result of this crackdown is an uptick in the precarity experienced by immigrants, their families, and colonias overall. Rosenberg et al. (2019) demonstrates that, as a result of fear of ICE and deportation, family food insecurity and medical access suffer, “Deportation looms as a real and persistent threat for these families, and … impede[s] … seeking medical care to physical fear of traveling to grocery stores” (Rosenberg et al. 2019, 26). Williams and Mountz (2018) along with Spener (2009) demonstrate that this intensified border militarization increases immigrant precarity in the actual act of transnational migration, resulting in more migrant deaths en route to the US and Europe (Williams and Mountz 2018, Spener 2009).

Economic immigrant precarity has also been documented by scholars including Gallmeyer and Roberts (2009) and May et al. (2007). May et al. (2007) focuses on the exploitive labor practices of immigrants and demonstrates that, in the global north, many immigrants are relegated to the low wage, often informal sector (May et al. 2007). Gallmeyer and Roberts (2009) has demonstrated that, spatially, immigrant communities are more at risk for predatory lending and that, in fact, predatory lenders often target immigrants due to their financial precarity. “Immigrant communities offer a potentially lucrative market for payday lenders. The precarious financial situation of many immigrants and the barriers to traditional banking and lending may make payday lending a necessary resource in immigrant communities” (Gallmeyer and Roberts 2009, 524).

In addition to these immigrant precarities centered on financial and political vulnerability, Jordan (2017) adds that immigrant precarity is not always so authoritative. “Precarity... is not always an imposed condition but sometimes a potential strategy for longer term goals” (Jordan 2017, 1456). Indeed, in the context of the colonias many residents specifically choose these places, arguably places of higher precarity, because they are places where they can afford to live without regulation driving up housing costs (Ward 1999, Richardson and Pisani 2012). However, Jordan (2017) also argues that, in addition to the economic precarity experienced by immigrants, the withdrawal of the welfare state leads an increased precarity and exclusion for immigrants. This precarity is especially relevant for the colonias, as this community’s experience is rooted in economic, political, and ecological vulnerability, contributing to a state of heightened precarity.

Chapter 3:

The Statistical Significance of Spatial Marginalization

Introduction

Colonias have a long history of exclusion from the traditional housing finance market. Ward (1999, 2012) demonstrates that the origin of colonias in the latter half of the 20th century is a direct result of an informal and predatory housing finance known as Contract for Deed (CFD) lending in which a predatory rent-to-own model is employed. Dudensing (2017) and Richardson and Pisani (2012) also speak to the history of the informal economy in the colonias.

> "…colonias exist for three basic reasons. First, colonia residents are pushed into informality by the failure of formal systems … Second, colonia residents are pulled into … informal housing because colonias make it easier to hide economic informality. And third… because of some of the cultural and social benefits they provide to Mexican-origin people in the South Texas borderlands" (Richardson and Pisani 2012, 174 – 175).

Richardson and Pisani argue that the informal culture of colonias is a result of both economic necessity and preference for colonia residents.

One aspect of informal economic systems in colonias that has not been studied in detail is the secondary mortgage market, defined here as refinance and home improvement loans. While the federal government's pseudo-independent agency Fannie Mae and Freddie Mac have recognized that colonias are underserved in housing finance (Duty to Serve 2019) there is no direct reference to secondary mortgage access (Duty to Serve 2019). This question, if colonia residents have access to the secondary mortgage market is critical to understanding how colonias respond to natural disasters because there is evidence that suggests that secondary mortgage loans are tools homeowners use to repair/rehab their homes post-disaster. Non-home purchase predatory lending is the focus of this research.

As Billings et al. (2019) found in the case of Post-Harvey Houston, secondary mortgages often supplement FEMA funds. However, the evidence is mixed as Gallagher and Hartley (2017) found that household debt *decreased* post-Katrina due to households using FEMA funds to pay off housing debt rather than make post-disaster improvements. While peered-review research on the financial implications of post-disaster housing finance in the colonias of the Texas-Mexico border is limited, there is evidence from investigative articles that low income communities in Texas are deeply underserved in the post-disaster home finance market (Fernandez 2018; Hersher and Benincasa 2019). In addition, Gallagher and Harley (2017) have argued that it was a result of FEMA funds that brought down household debt, but in the context of colonias very few applicants receive FEMA funds. This was a subject of research during the qualitative interviews with both local non-profit workers and colonia residents themselves (Collins 2010; Goldstein 2019).

Given the ambiguity relating to colonias along the Texas-Mexico border and their access to secondary mortgage markets, this section will try to understand, quantitatively, the extent to which colonias have access to the secondary mortgage market. In addition, this chapter tries to understand the extent to which predatory lending institutions are more or less spatially accessible than traditional lending institutions.

Access to the Secondary Mortgage Market: Methodology

The scope of this quantitative analysis focuses on the secondary mortgage market in colonias along the Texas-Mexico border. This process was limited by the availability of geospatial data. Table 1 demonstrates the various data sources used. A shapefile of colonias was received from the Texas Attorney General's Office as of June 17th, 2019. Only counties along the Texas-Mexico border with colonias were chosen (see Figure 3:1). FEMA floodplain data was downloaded from FEMA's website[3]. Immediately there were gaps in the data, of the 32 Texas counties with colonias, 16 had no FEMA floodplain data and 2 had incomplete data (Nueces County and El Paso county). Of those 18 counties that lacked complete data 3 contained over half of the colonias in Texas (Hidalgo County, El Paso County, and Nueces County). Given this challenge, I prioritized data collection from these three county governments and received hand digitized floodplain data from the local county governments. While this creates a level of human error in the process, it is an invaluable part of the analysis. Ultimately, I excluded 15 counties because of their lack of FEMA data and because they, collectively, only contained 80 out of more than 2000 statewide colonias (see Figure 3:1 for more details). Table 3:2 shows the counties, number of colonias per county, and the source of the data FEMA floodplain in that county.

[3] https://msc.fema.gov/portal/advanceSearch

Data Sources, Table 3:1

Data Name	Data Type	Source	Description
HMDA Secondary Mortgage Data	CSV file at the census tract level	CFPB	2013 - 2017, Owner occupied clients, all originated mortgages, all housing types
FEMA flood plains	Shapefile	FEMA	FEMA 100 Year Flood Plain, most recent available
FEMA flood plains	Shapefile	Local County Governments	Where FEMA Flood data was unavailable county datasets took their place
Census Tracts	Shapefile	US Census Bureau	2010 census tracts
Poverty Rate	CSV file at the census tract level	US Census Bureau	American Community Survey 2013 - 2017 5-year estimates
Colonias	Shapefile	Attorney General of Texas	Most up-to-date shapefile of colonias available

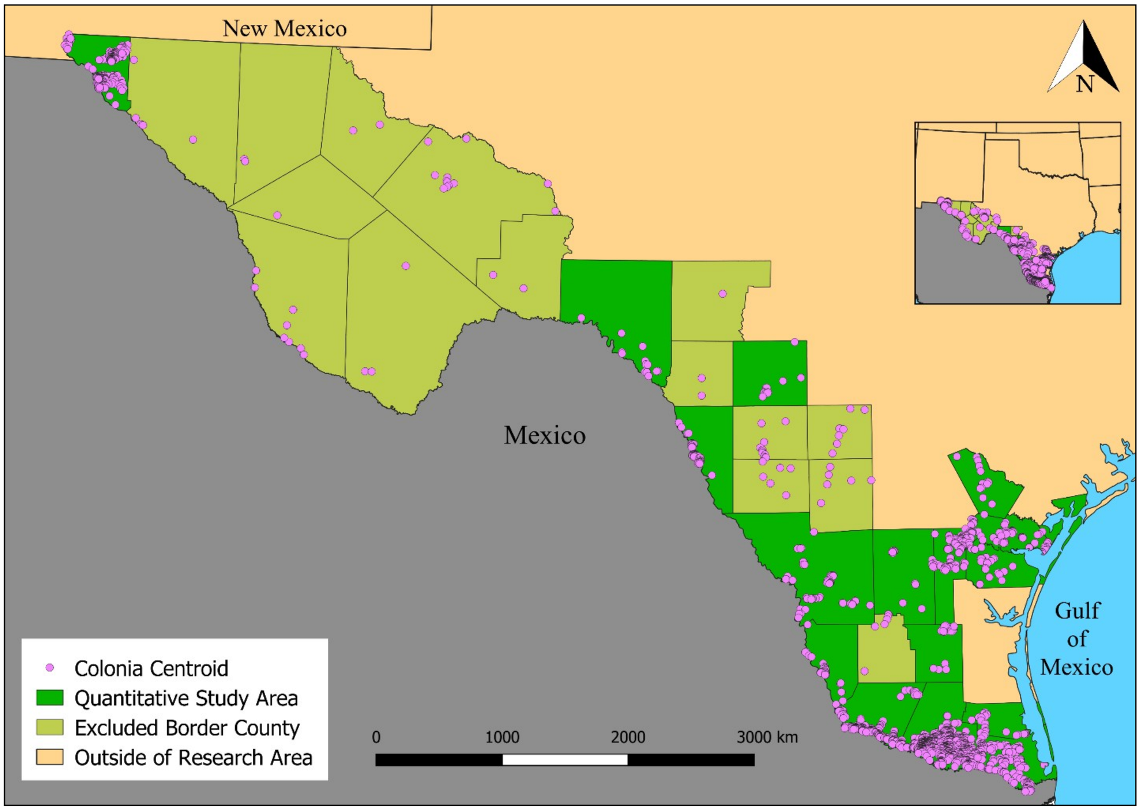

Figure 3:1 Quantitative Study Area – Demonstrates areas analyzed and excluded in quantitative study.

Colonia Counties and FEMA Floodplains Table 3:2

Texas Counties with Colonias	FEMA Provided floodplain	County Provided Floodplain	Excluded from Analysis	Number of colonias
Aransas County				0
Uvalde County				11
Bee County				14
Val Verde County				15
Willacy County				16
Duval County				21
Brooks County				23
Zapata County				33
Webb County				55
Maverick County				69
San Patricio County				73
Jim Wells County				99
Cameron County				173
Starr County				232

Nueces County	26
El Paso County	296
Hidalgo County	849
Edwards County	1
Jeff Davis County	1
Kinney County	2
Terrell County	2
Reeves County	2
Culberson County	2
Brewster County	3
Dimmit County	6
Hudspeth County	6
La Salle County	7
Jim Hogg County	7
Frio County	8
Presidio County	8
Pecos County	12
Zavala County	13
Sum of colonias	**2085**

This analysis used a combination of Home Mortgage Disclosure Act data (HMDA) at the census tract level, FEMA floodplains, poverty by census tract, population by census tract, and a shapefile of colonias. The census tract shapefile in this analysis comes from the US Census Bureau.[4] The HMDA data is based on the last 5 years of available data (2013 to 2017) and include all originated mortgages for owner occupied clients; this data originated from the Consumer Finance Protection Bureau (CFPB) website[5]. This included all mortgage recipients regardless of housing type but did not include those who were using the mortgages for secondary homes or investment properties. Data was excluded from 2018 for two reasons, firstly the data is in a different format from the pre-2018 data and the data were not available when this analysis was

[4] https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html
[5] https://www.consumerfinance.gov/data-research/hmda/historic-data/

performed. Poverty Rate and Population both came from the American Community Survey's 5-year estimates 2013-2017[6]. This analysis was done on the census tract level. Secondary Mortgage HMDA data, Poverty Rate, and Population were table joined to the census tract shapefile. The amount of secondary mortgage funds originated was normalized by Population so that the factor is USD amount per person across five years within a census tract.

Colonias, as informal settlements, do not follow linear pathways or census tracts; often colonias span multiple census tracts and/or are only a small part of a census tract. Floodplains, similarly, tend to ignore census tract boundaries. Given this irregular spatial data two geospatial methods were used to incorporate colonias and FEMA floodplains into the dataset. The spatial join tool gave a result of yes/no binary on whether the census tract contained any FEMA floodplain or any colonia. A second geospatial process determined the percentage of a census tract that is either a FEMA floodplain or a colonia. This calculation found the area of the census tract, the area of the colonia/floodplain in the census tract and divided the two measures respectively.

Access to the Secondary Mortgage Market: Results

A logarithmic regression was run between the amount of Secondary Mortgage loans per person in a census tract and the percent of a census tract that is a colonia. This was repeated excluding census tracts that did not contain floodplains. A logistic regression was also run if a census tract contained a colonia (yes/no binary); again, this was repeated after excluding census tracts that did not contain floodplains. While both

[6] https://www.census.gov/programs-surveys/acs/data.html

logistic and logarithmic regression were statistically significant, logarithmic regressions had much lower P-values and a much higher R-Squared values. Table 3 shows the various P-Values and R-Squared values.

The logarithmic regression showed that the presence of a colonia in a census tract led to a statistically significant decrease in the Secondary Mortgage amount per person within a census tract. Additionally, the logarithmic regression showed a statistically significant negative correlation associated with a colonia in which every 1% increase of a colonia in a census tract leads to a decrease of approximately $309 in secondary mortgage loans per person. This analysis was run again in census tracts that only contain floodplains, the results demonstrate a similarly statistically significant p-value and model fit (R-Squared Value). While the causality of this statistical significance is unknown, this model shows that the colonias that are most vulnerable to flooding also have access to less housing finance capital as percentage of colonia within a census tract increases. In looking at figure 3:3 and 3:5, there is still heteroscedastic. Further research is needed to build a model that reduces this heteroscedasticity and increases the adjusted R-Squared value. Figure 3:2 and 3:4 visualize the result of the logarithmic regression on all census tracts in the study area and floodplain-specific census tracts in the study area.

Statistical Significance Table 3:3

Type of Analysis	P-Value	Coefficient	R-Squared Value (McFadden R-Squared for Logistic Regression)
Logarithmic Regression (all tracts)	< .0001	-308.52	.468
Logarithmic Regression (floodplain tracts only)	< .0001	-304.9	.459
Logistic Regression with all tracts	0.000422	-2.09e-04	0.01849
Logistic Regression (floodplain tracts only)	0.000153	-2.433e-4	0.02717

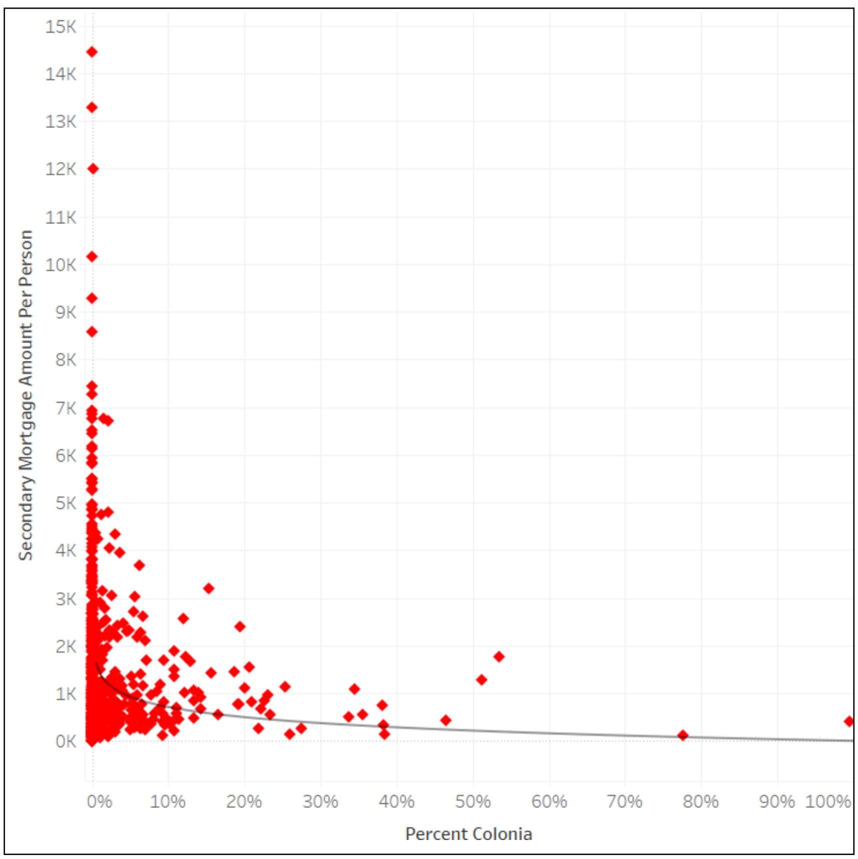

Figure 3:2 Logarithmic Regression – This scatterplot demonstrates the % of a census tract that is a colonia and the 2nd Mortgage Amount per person (across all Census Tracts). The data is logarithmic in nature.

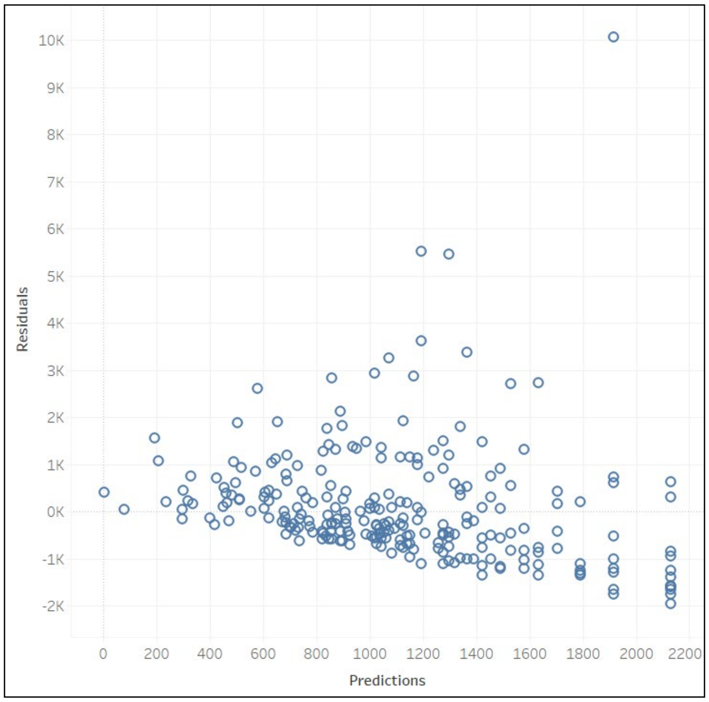

Figure 3:3 Residuals – Scatter plot of the residuals as a result of logarithmic regression on all census tracts.

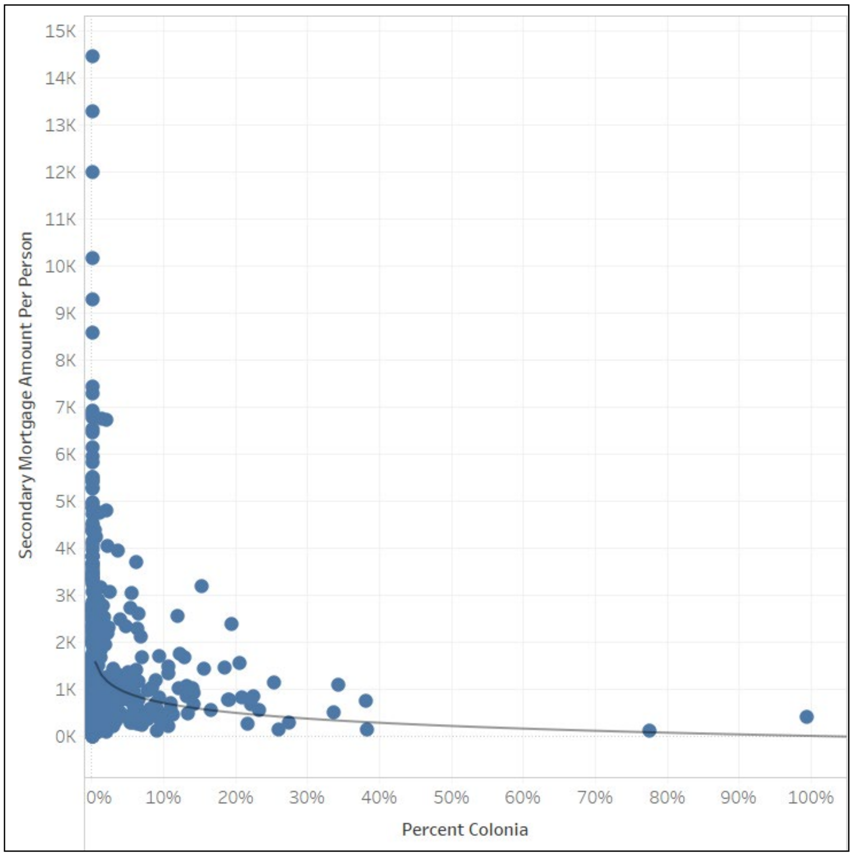

Figure 3:4 Logarithmic Regression, Flood Plain Only - This scatterplot demonstrates the % of a census tract that is a colonia and the 2nd Mortgage Amount per person (across Census Tracts with floodplain). The data is logarithmic in nature.

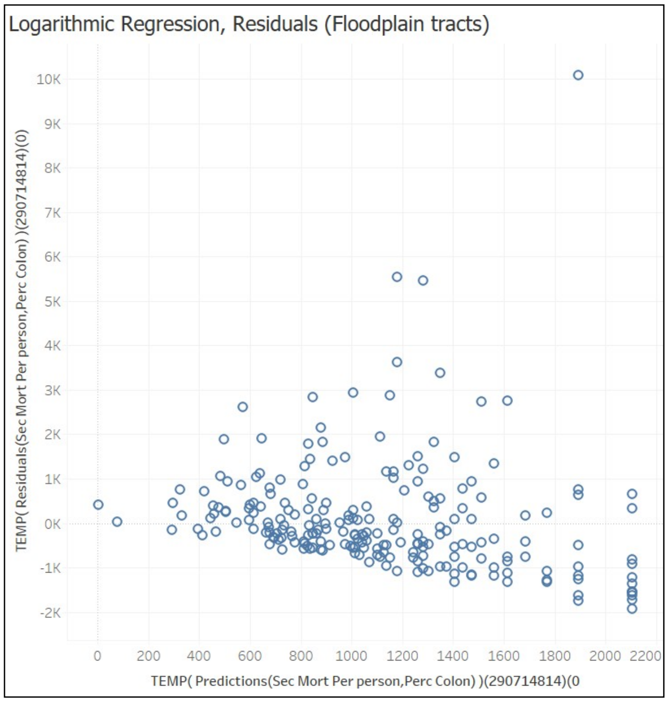

Figure 3:5 Residuals– Scatter plot of the residuals as a result of logarithmic regression on census tracts with flood plains.

In addition, a logarithmic regression analysis was run between poverty rate and secondary mortgage amount per person. The results demonstrate that poverty rate had a very significant influence on access to the secondary mortgage market with a p-value of less than .0001 and an Adjusted R-Squared of .492. This result creates concern for the validity of the previous analysis because colonias generally have very high poverty rates. In the study area the average poverty rate for non-colonia census tracts is 25.4% while in census tracts containing colonias the poverty rate is 29.7%. Running a t-test on this data revealed that the difference in poverty rate was statistically significant (P-value of .00023).

Therefore, a logarithmic multiple regression was run on a subset of the data that contained colonias (.01% to 100%) to determine the influence of colonias, controlling for poverty. The results demonstrate that the adjusted R-Squared value increased from .475

to .488. In addition, the statistical significance of colonias remained in this multivariable model. By using an ANOVA analysis on the two models, the addition of colonias as a factor led to a P-value of .017, demonstrating that the addition of colonias as a variable is statistically significantly improved the regression model.

This analysis shows that colonias are statistically significantly underserved by the secondary mortgage market, controlling for poverty. This finding is consistent with work of other researchers (Donelson and Esparza 2008; Ward 1999, 2012) around the disinvestment of home purchase mortgages in colonias. Specifically, Ward (2012) argues that the continuing prevalence of informal and predatory home purchase loans in colonias is a result of the lack of access to traditional financial institutions. This analysis builds on Ward's (2012) finding and adds that the secondary mortgage market is also not accessible in colonias. Figure 3.6 takes these results to the extent of the Rio Grande Valley. The map below demonstrates that many census tracts on the outskirts of the urban areas, with high concentrations of colonias, also have very little secondary mortgage financing.

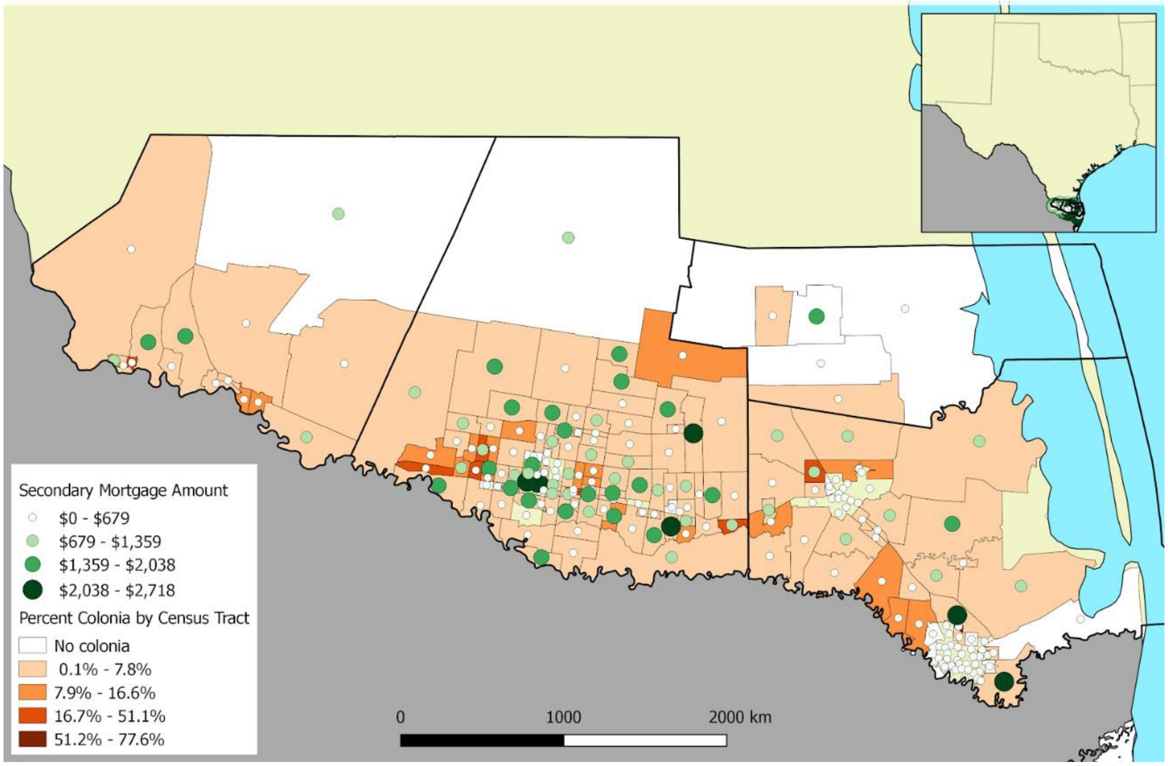

Figure 3:6 Percent Colonia & Secondary Mortgage Amount – This map spatially connects the high concentration of colonias and secondary mortgage financing by census tract.

Overlapping Vulnerability: Economic and Ecological

The research above demonstrates the multiple levels of economic marginalization experienced by colonia residents. Colonias are economically marginalization as demonstrated by a statistically significantly increase in poverty rate and by the demonstration that colonia residents are statistically significantly underbanked in terms of the secondary mortgage market. Ward (1999, 2012) has also demonstrated that colonias are underbanked, and thus economically marginalized, as it relates to home purchase (first) mortgages. Wyly et al. (2009) studied a subset of the same HMDA data from previous years which also shows the predatory nature of home purchase loans for communities of color across the US (Wyly et al. 2009). While this analysis focuses principally on non-home purchase predatory lending as a response to environmental hazards, there is relevant overlap. These forms of economic marginalization are especially relevant in combination with other forms of vulnerability that colonias experience.

As Rivera (2014) has demonstrated, flooding is a common occurrence for colonias in the Rio Grande Valley, by extension Billings et al. (2019) demonstrate that secondary mortgages were a lifeline of credit for post-Harvey recovery in Houston, TX. As a result, the ecological vulnerability of omnipresent floods described by Rivera (2014), the need for secondary mortgage funds for post-disaster recovery discussed by Billings et al. (2019), combined with the statistical research above (demonstrating a lack of access to this specific kind of secondary mortgage capital), provides robust evidence that these overlapping vulnerabilities severely limit access to the secondary mortgage market – a critical resource for post-flood recovery. These twin vulnerabilities, ecological and economic, deepen the economic vulnerability of colonia residents as they turn toward predatory lending systems to finance their recovery.

Unsurprisingly, poverty and access to the secondary mortgage market are statistically significantly linked. However, this research also demonstrates that colonias by themselves, controlling for poverty, are a statistically significant factor. This suggests that there is a pattern of spatial marginalization, rooted in place, in which colonias themselves have less access to the traditional secondary mortgage market. While there may be multiple reasons for this marginalization, a likely reason is the geographic isolation of colonias. Given their rural nature, traditional lending institutions may simply be less accessible to colonia locations, and when combined with their other forms of vulnerability, this marginalization is notable.

Infrastructural marginalization is another a critical component of overlapping vulnerability. The Housing Assistance Council (2013) has described the poor housing quality throughout the colonias. These poor housing conditions are, in some ways, the result of a self-help housing development system where families build their own homes over time with the quality varying based on resources, skill and time (Ward 2007). This infrastructural vulnerability is then deepened by the ecological vulnerability of persistent flooding and storms that damage homes putting them in a state of continuous disrepair. For the HMDA data analyzed above, the secondary mortgage markets include mortgages for home improvement and housing refinance. As a result, colonia residents are unable to access to a key resource to improve their damaged homes and the quality of the home continues to decline. This infrastructural vulnerability is exacerbated by economic vulnerability in the form of colonia residents without access to this key resource to improve their homes.

From a data and mapping perspective, infrastructural vulnerability is also clear. Huge swaths of the Texas-Mexico border do not have digitally available floodplain data, and what is available dates to 1979 and must be hand-digitized from PDF images in order to recreate the dataset in a useable format. In order to run the geospatial analysis above, I had to call county GIS offices along the Texas-Mexico border to see if the missing federal data was available locally. The result was a hodge-podge of suspect geospatial floodplain data.

The data are suspicious for two reasons, the first is that hand-digitizing floodplains introduce human error, the second is that the data are very old to begin with, and as discussed in Chapter 4, many colonia residents have experienced worsening floods in recent years. Figure 5 demonstrates the lack of floodplain data available in large sections of the Texas-Mexico border, particularly where large concentrations of colonias are present. As a result of this infrastructural marginalization, the ecological vulnerability of flooding is worsened as families cannot make accurate decisions about less flood prone places.

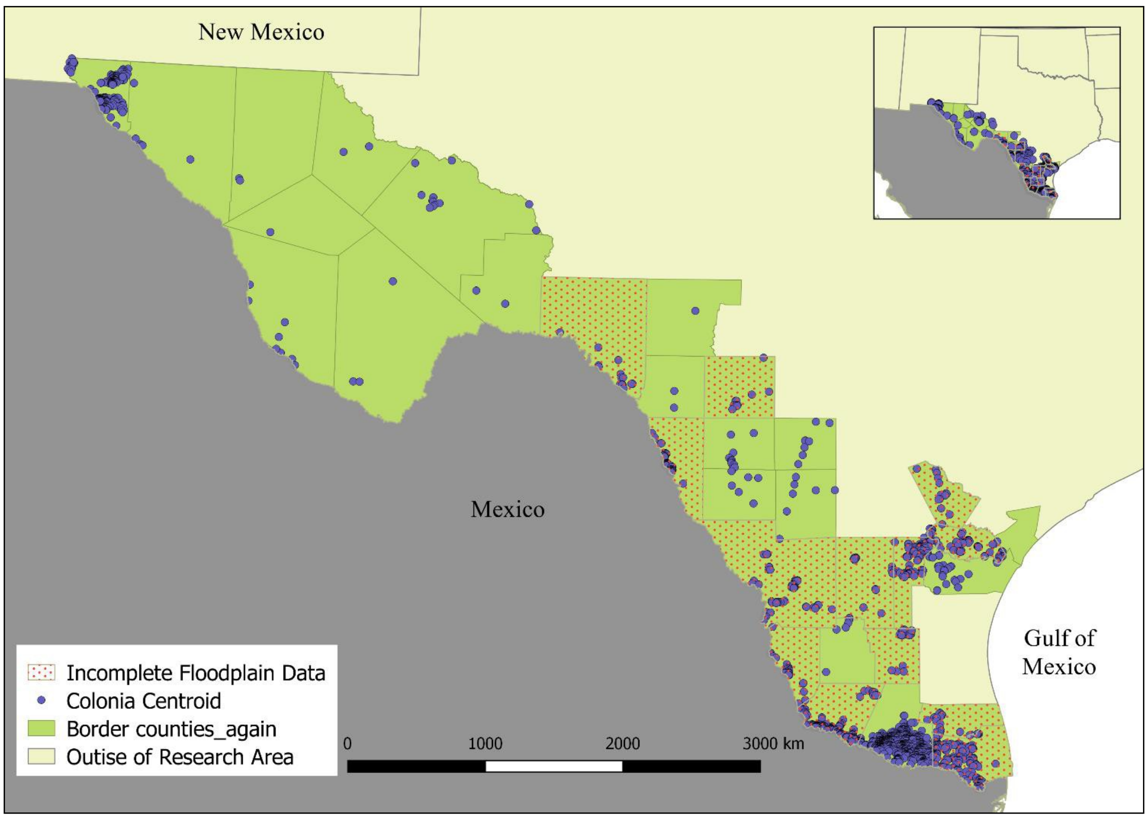

Figure 3:7 Floodplain Availability and Colonias – This map demonstrates that two counties with very large number of colonias, Hidalgo and El Paso, lack FEMA floodplain data. In addition, huge swaths of rural colonias also lack FEMA floodplain data.

This chapter has quantitatively analyzed the economic and ecological vulnerability of colonias along the Texas-Mexico border. It has demonstrated that colonias in the quantitative research area are statistically significantly underserved by the secondary mortgage market, a critical piece of post-disaster recovery financing. The next three chapters will analyze, qualitatively, how colonia residents of the Rio Grande Valley cope with the ecological vulnerability of flooding and the economic vulnerability of an underserved housing finance market.

Chapter 4 *Poco a poco*:

Predatory Lending, Prioritization and Precarity

> We fixed the flooded car a little one month and a little the next month. One month we fixed the tires, and the next month we fixed the radiator. So, we fixed the car part by part [poco a poco]. We fixed the car every time that we had some money. Since the seat of the cars were flooded too, we had to clean the car seats by hand (Focus Group 12/16/19).

This chapter marks a shift from Chapter 3's quantitative methodology on the Texas-Mexico border to the qualitative research in the Rio Grande Valley. The qualitative research, a series of interviews and focus groups, was conducted with local non-profit organization staff and colonia residents, themselves. This chapter will discuss a major theme emerging from this qualitative research, it is what I refer to as the *poco a poco* or 'little by little' approach to disaster recovery. There are three main aspects of *poco a poco*: predatory lending and debt, prioritizing immediate needs with long-term consequences, and the worsened precarity caused by post-disaster the slowness of disaster recuperation.

In order to survive post-flood property and home destruction colonia residents are forced to make difficult decisions with few good options. The focus groups and interviews highlighted how community members relied on predatory lending as a means of recovery from flooding. In addition, colonia residents prioritized what was paid, what was fixed, and the direction of capital (both labor and financial) in a resource-tight environment. Participants often used the Spanish phrase *poco a poco* to describe their experience; this term translates to 'little by little' or 'slowly'. And it is this slowness of recovery that results in a heightened precarity. *Poco a poco* is a coping strategy that represents a critical form of post-flood recovery for a community with limited resources.

Poco a poco results from a system of overlapping vulnerabilities including economic, ecological, spatial, political, and infrastructural. *Poco a poco* is emblematic of a precarity created when other vulnerabilities overlap. This section illustrates how various types of marginalization work as an interconnected system, trapping communities in cycles of violence, poverty, and precarity.

Poco a Poco and Predatory Lending

Poco a poco describes the process by which many colonia residents finance their post-flood recovery. Focus group participants discussed using *poco a poco* methods to pay off debt, typically from predatory lenders. There were two major forms of predatory lending that focus group participants used: payday and car title loan businesses, colloquially known as *financieras*, and replacing destroyed household items via layaway or a 'rent-to-own' finance model. During the focus group I polled the participants and, by a show of hands, more than two-thirds had used, or were using, *financieras.* While researchers such as Ward (1999, 2012) and Richardson (1999) have focused on predatory home-purchase lending in the colonias, known as Contract-for-deed, this section details a distinct form of predatory lending. Rather than purchasing a home, colonia residents use these predatory loans as a form of disaster survival.

The use of *financieras* is *poco a poco* because residents are often forced to choose which of their many debts to pay, refinance existing loans for astronomical interest rates, or live without a critical item. In this way *poco a poco* refers to how communities interact with a financial system that has been designed to take advantage of them. As one focus group participant describes, for many, the only way to survive a flood and make repairs is to accept a predatory loan, despite the high interest rates, "I have taken out a loan from a *financeria* and the interest rates are very high, but you have to pay because there aren't other options. Sometimes I need to repair my house or my car, so for that I needed to ask for a loan because we don't have savings. It helps get us out of trouble" (Focus Group 12/16/2019).

There are many reasons why colonia residents take out predatory loans after a disaster. Chapter 3 demonstrates that colonia residents are economically excluded from the secondary mortgage market, this statistical finding was corroborated with the focus group participants. The colonias of the Rio Grande Valley, are not only economically vulnerable, but also ecological vulnerability due to persistent flooding (Rivera 2014). This economic and ecological vulnerability combines with the political marginalization of Texas law as it relates to consumer protection. Indeed, Texas has some of the weakest laws in the US when it comes to protecting low-income borrowers from predatory lenders. As of 2016, Texas had the second highest average interest rate of pay day lenders of any state in the US (Baddour, Tegeler-Sauer, & Fowler 2016). Another reason colonia residents use predatory lending is the lack of financial support from federal institutions like FEMA which have historically denied colonia residents post-flood aid, the exclusion of colonia residents from FEMA funds adds a layer of political vulnerability (Henneberger 2017). Given this, colonia residents have little option than to use predatory finance mechanisms to survive flooding.

The use of these predatory lending systems is *poco a poco* because the interest payments are so high that the borrowers are only able to pay little by little, this results in consumers paying many times the principal amount (Baddour, Tegeler-Sauer, & Fowler 2016). These predatory lending systems are a perilous aspect of *poco a poco* post-flood survival because they trap residents in a system of paying extreme interest rates and loan refinance as a means of not defaulting and losing their home or car – furthering economic vulnerability. The use of predatory loans by low-income people, who are trapped in cycles of indebtedness, is not unusual in the state of Texas. As the Texas-based financial justice organization Texas Appleseed said in 2016, "An analysis of … payday loan[s] …shows the number of loans that were taken out back-to-back before a loan was either paid in full or closed, finds that four out of five loan transactions were generated by borrowers who refinance at least once. One-third of the loan volume was generated by loans that were part of a sequence of five or more loans" (Baddour, Tegeler-Sauer, & Fowler 2016, 11). In other words, payday lending borrowers must keep borrowing to pay off debt, leading to increased fees and high APRs. Given the existing precarity of Texas colonias, these communities are some of the least financially protected communities in the US.

The layaway model of household item replacement is also *poco a poco* because the model requires recipients to paydown appliances little by little in a rent-to-own model that includes a substantial interest rate. Many focus group participants cited using rent-to-own as a method of replacing appliances destroyed during floods and electrical storms and described the predatory nature of layaway as expensive and something to be avoided. This focus group participant used rent-to-own without fully understanding the cost and predatory nature of the financing product, "I bought a $450 TV [that was destroyed during a flood] but they charged me $1500. I didn't understand why it was so expensive. A year later the TV broke and I bought another TV for $460 from Best Buy. I used Rent-to-town the first time and I didn't know why it was so expensive" (Focus Group 12/18/19). Layaway is a little discussed form of predatory lending that was very common with focus group participants. Indeed, many colonia residents described the layaway/rent-to-own system as unnecessarily expensive, but also the only form of accessible credit. One focus group participant compared *financieras* with rent-to-own as they replaced household items after a flood:

> *Financiera*: "We applied for a loan but didn't get approved for much money and they asked us for too much in the interest rate. I didn't have another option than to take the smaller loan with the larger APR. So, we had to fix the home part by part [*poco a poco*] because we didn't get a large loan. We had to get the money together little by little in order to begin to fix the bathroom."
>
> Rent-to-own: "I replaced my television with rent-to-own. It cost $450 originally, but I was charged $1000 to use rent-to-own. In these places, when you buy a television or fridge on layaway, they always approve your credit, but it's so expensive" (Focus Group 12/17/19).

The participant above describes the predatory nature of both rent-to-own and the *financieras*, and the limited access to credit many colonia residents experience after a flood. Predatory entities capitalizing on post-disaster desperation goes beyond the colonias of the Rio Grande Valley. There are numerous examples in both the US and the Global South (Titford and Simmons 2013, Tran 2015). In addition, disaster capitalism in the US is highly racialized and often targets the most historically vulnerable communities (Gunewardena and Schuller 2008). While, little research exists on the intersection of post-flood predatory lending and race in the US, there is ample evidence that low-income communities of color experience predatory lending in a heightened fashion (Wyly et al. 2006, 2009; Li et al. 2009).

The racialized post-disaster predatory lending experienced by colonia residents is a continuation of historical disaster capitalism and predatory lending that has been well documented in the US. The experience of colonia residents is made especially acute in combination with other vulnerabilities. Politically, the lack of regulation from the state government demonstrated by Baddour, Tegeler-Sauer, & Fowler (2016) signifies that this community is further at risk. Another component of political vulnerability is the exclusion of colonias from post-flood FEMA funds. From the standpoint of ecological vulnerability, the omnipresent flooding of colonias adds an additional layer of vulnerability (Rivera 2014, Núñez-Mchiri 2009). These overlapping vulnerabilities mean that predatory post-disaster schemes frequently have repeat customers.

Certain types of predatory lending were not often utilized by the focus group participants because they lacked a critical temporal nature. The use of *poco a poco* is the result of colonia residents need for a flexible timetable in paying off debt little by little; in other words, they had a fixed fiscal temporality. An example of this is the uncommon use of *prestamistas* or loan sharks among focus group participants. While many participants knew a loan shark or had family/friends utilize a loan shark, very few people had personally used one. While loan sharks are an informal and predatory lending, they are not utilized because they are, in fact, not *poco a poco*. The payment structure for *prestamistas* is typically all at once. As one participant describes, "For the *prestamistas* you have to pay them all the money in one payment, but if you don't have the money you can pay them a fee (an interest amount), but you still owe them the full amount. With the *financieras* you can pay the loan little by little [*poco a poco*] and then pay off the full loan over time, not all at once" (Focus Group 12/17/19). And given the economic precarity of colonia residents, a poco a poco payment system is critical.

The *poco a poco* post-flood recovery process reflects the housing development of colonias, and of informal settlements throughout the global south. Ward (1999, 2004) described the little by little development of colonia housing as 'urbanization by stealth' while Roy (2005) uses the word 'incrementalism' to describe the same process (Ward 1999, 2004; Roy 2005). Ultimately, both scholars are engaging with the same concept as *poco a poco*, a development style utilized by marginalized people in vulnerable places to survive. Colonia residents engage with this piecemeal recovery style because that is their best option for survival. While Chapter 6 will reference policy directly, it is critical that colonia policymakers think about the necessity for *poco a poco* inclusive strategies.

The political vulnerability of low-income Texas residents is exacerbated by the immigration status of many colonia residents. Many focus group attendees discussed the increased difficulty of using both traditional housing finance mechanisms and predatory lending systems due to lack of immigration documents. One resident's sentiments echoed the experiences of many, "My husband and I took out a loan, but we don't have social security numbers, so the interest rate is higher. Because we don't have Social Security numbers, we don't have other options to get a loan with a lower interest rate. We had to get our loan with a *financiera*" (Focus Group 12/16/19). This finding supports Gallmeyer and Roberts' (2009) research that predatory lenders intentionally target immigrant communities due to their economic precarity and exclusion from traditional financing. As a result of these systems of exclusion, the economic vulnerability, and precarity, of immigrants is deepened.

The political marginalization of undocumented immigrants, in turn, relates to the economic marginalization of many colonia residents. This is mirrored by Collins (2010) research on flooding in the colonias of El Paso as it relates to undocumented immigrants. Collins (2010) demonstrates that the immigration status of many colonia families in El Paso County hindered their ability to receive post-flood FEMA funds. This exclusion not only harms immigrants, but also US citizens, as many families have are mixed status (Castañeda 2019).

Poco a Poco as Prioritization

Several residents discussed prioritizing immediate and basic needs, such as replacing a car in a rural, transit-sparse place, rather than repairing a home. One mother with a young, asthmatic daughter detailed her daughter's worsening health condition as a result of moldy walls the family could not afford to fix. Instead the family had to replace their car, "My daughter's room was flooded and everything got wet, afterward the sheet rock became moldy. My daughter has asthma and it can be hard for her to breath, but we cannot afford to fix the sheet rock." Later during a follow-up interview she also said, "I can't afford to fix the sheet rock because our car was also flooded, and I had to fix the car so that I could go to work" (Focus Group 12/16/19 and Follow-up Interview 12/18/19). This quote exemplifies that post-flood recovery often forces families to choose between where their resources must go. Many focus group participants had a similar experience in which repairing a home was deprioritized over fixing a car or replacing a necessary appliance like a stove.

One focus group participant explains why colonia residents prioritize the immediate needs of a car over health. She describes her commute to work after a flood destroyed her car the following way, "When I was taking the bus it took me three hours to get from work to my house. My son and I had to walk 20 blocks to get to the bus. My son had to walk 25 blocks from our house to school" (Focus Group 12/18/19). The rurality that many colonias experience is a form of spatial vulnerability. Colonias are distinctly rural, low-income communities (Arreola 2002, Housing Assistance Council

2013). The result of this spatial vulnerability is that families must prioritizing repairing and replacing a car over their home.

A functioning car is a necessity for colonia residents to go to work, school, buy groceries or access any amenities that are simply too far away. In addition, the lack of mass transit, a form of infrastructural vulnerability, heightens this spatial otherization. Thus, the spatial marginalization of needing a car overlaps with the infrastructural vulnerability of low-quality housing and the ecological vulnerability of unhealthy housing. These overlapping vulnerabilities, in collaboration with economic vulnerability, produce a *poco a poco* response to flooding that hinders home repair and endangers the physical well-being of colonia residents. Ward (2004) and Lusk et al. (2012) engage with the spatial otherization of colonias from the standpoint of political marginalization, as an out-of-sight housing for the poor, colonias operate beyond the gaze of the middle class (Ward 2004, Lusk et al 2012). The focus group results build on this existing concept and add another layer of ecological vulnerability as colonia residents are forced to deprioritize health and safety over access.

As a result of prioritizing basic needs (car, clothing, beds), families deprioritize moldy walls, bathrooms, and damaged floors. Ignoring home repair often leads to unintentional health consequences for families. This, in turn, creates an unexpected expense for resource limited community members in the form of healthcare costs. The resulting health issues detailed by the focus group participants include insect infestations, asthma, bronchitis, allergies, etc. As one participant described, "Our situation was made worse by our health problems. We had to decide if we pay the doctor to get medicine, or buy food, or pay for light, or pay for water, or leave and pay for a different place to live.

It was a very bad situation. Sometimes we tried to drink tea instead of going to the doctor to help with our allergies and asthma" (Focus group 12/18/19). Home health remedies, such as tea, were mentioned repeatedly throughout the focus groups as a way of both saving money and trying to stay healthy. While, my thesis focuses specifically on the housing-specific health problems, almost all the participants discussed the health issues associated with the floods themselves such as flooded septic tanks, mosquitos, and dangerously flooded roads.

The *poco a poco* survival mechanism is, at its surface, a product of economic and ecological vulnerability. That is, families have very few economic resources (Dallas Federal Reserve 2006, Housing Assistance Council 2013) and are flood prone (Rivera 2014, Núñez-Mchiri 2009). However, as families are forced to prioritize elements of their recovery another form of ecological vulnerability takes root, that of unhealthy housing. The negative health ramifications of living in a floodplain go beyond the actual flood as families struggle do deal with the negative health consequences of moldy walls, warped floors, and shifting foundations.

As we discuss the negative health ramifications of flooding on the families of the colonias it is important to remember that these communities are overwhelmingly of color. The negative health outcomes found in the colonias of the Rio Grande Valley may be acute, but it is not unique for low income people of color across the US. Bath et al. (1998) discusses the environmental racism of water access in the colonias of El Paso County. However, it is Pulido's (2000) work on the geography of brown sites and race in Los Angeles County that is germane. While the focus group participants did not mention racism, the fact that they are people of color, and that they suffer unjust health consequences makes this an issue of environmental racism (Bath et al. 1998, Pulido 2000).

P*oco a poco* also means families are forced to choose between competing priorities. This participant directly connects her poverty, flood risk, and the negative health consequences that go beyond the immediate danger of a flood:

> When it rains too much … the house gets wet and the roof leaks all the time. The house has a lot of mold and we are starting to get sick. My children have a lot of allergies, asthma and lung infections all the time…I have a little girl who is 1 year old, she has a lot of allergy problems because of the mold in the house. We've fixed somethings but we can't afford to fix the whole house because it's so old. (Focus Group 12/18/2020).

Here, the overlapping vulnerabilities are complex. On the one hand, this is an issue of infrastructural vulnerability as the home itself is older and has been severely damaged due to flooding. Additionally, as many colonia residents are built incrementally, over time, another aspect of *poco a poco* through sweat equity, the quality of the home varies greatly depending on the skill of the family and access to resources; meanwhile quality enforcement by city and county governments is largely hands-off (Ward 1999, 2007). This infrastructural vulnerability is made worse by the ecological vulnerability of high flood risk. The result is that the housing itself, as a deprioritized but necessary commodity, deepens ecological vulnerability in the form of negative health effects.

The temporality of, *Poco a poco*, that is, the slow speed of repairing a home little by little, also engages with vulnerability at multiple levels. This focus group participant talks about the damage to her home and the health risks as a result. However, this focus group participant also engages in the time it will take to repair the floor, and if that will happen before the next flood.

> In my house the roof and floor were damaged because of flooding. One day I was walking in the house and I fell through the floor because the wood floor was rotted. I got cut and scratched on my leg. Another time my husband was taking a shower and him and the tub fell through the floor. After that we fixed the bathroom but we're afraid to complete the floor in case it floods again (Focus Group 12/18/2020).

The effects of the *poco a poco* home repair process are rooted in this temporality and are especially relevant given the ecological issues of seasonal flooding. The next section will detail how, as a result of the *poco a poco* flood-survival technique, many colonia residents are nervous to sink funds into their home given the possibility of the next flood on the horizon.

Poco a Poco as Precarity

Poco a poco also translates as 'slowly', this reveals a temporal dimension to the disaster survival approach taken by many colonia residents. Given the pre-flood financial precarity of many colonia residents, flooding adds to the length of time it takes to achieve a semblance of financial recovery after a flood. In fact, the very first time I heard the *poco a poco* phrase was not in relation to predatory lending or prioritization, but the slow process of post-flood recuperation. Here a focus group participant describes her friend's experience with the slow pace of their recovery:

> I know someone who … couldn't go to work because of the flooding … so she was fired. A lot of people are in the same situation. Right now, they have a job again, but the recovery is very slow [*poco a poco*] because they had a lot of trouble finding another job (Focus group 12/16/2019).

The ecological vulnerability of persistent flooding exasperates the need of resource sparse residents to seek out emergency loans that predatory lenders provide. A critical aspect of this is to view flooding not as a disaster, but rather as an omnipresent threat under which colonia residents live. Rarely did focus group participants talk about a specific, large flood that they are recovering from. Rather, residents discussed flooding as a perpetual problem:

> Participant 1: The problem of flooding is getting worse: areas that didn't used to flood are flooding, where the floods happen is changing. I'm worried because sometimes if the flood is really strong, like a hurricane, it will even affect people who are not in a flood zone because they aren't prepared. We don't have a good drainage system.
>
> Participant 2: Floods are getting worse. I've lived in this community since 1979 and the worst floods have happened in the last few years, besides 2000 (Focus Group 12/18/19).

Finally, *poco a poco* applies to the slow and piecemeal economic recovery of colonia residents after a flood. This economic recovery, and thus the furthering of economic marginalization, is a result of overlapping spatial and infrastructural marginalization. Focus group participants universally discussed the mobility challenges of leaving a colonia after a flood. Below is an excerpt from one of the focus groups:

> Me: After a flood, did anyone have problems going to work?
>
> Participant 1: Yes, after a flood no one can leave. After a flood the streets are useless.
>
> Participant 2: No one can leave for weeks afterward. The closed streets really affect us because we can't get to our jobs or to school. Part of the problem is also all the mosquitos that come after the floods. It's hard to go outside because there are so many mosquitos
>
> Participant 3: My brother-in-law couldn't go to work because the car was damaged during the most recent flood and the streets were flooded, so he didn't want to risk driving. We waited a week for the county to say the roads were open again (Focus Group 12/17/19).

Persistent flooding, an example of ecological vulnerability, is exacerbated by unpaved roads and lack of drainage, a form of infrastructural vulnerability. The result makes leaving the colonia to go to work or school impossible, and the spatial vulnerability is evident in the car-dependent rurality that characterizes colonias. These overlapping vulnerabilities are compounded into economic vulnerability as colonia residents lose income and sometimes jobs. If a colonia resident cannot leave their neighborhood due to floods, and their boss does not believe them and fires them as a result, the result is a deepening of economic vulnerability.

However, a more critical question is, why did the boss not believe their employee? Is it, perhaps, because the boss's experience with the passing storm is markedly different? Lusk et al. (2012) argues that colonias operate as an 'out of sight, out of mind' low-income housing community in which the working class of the US-Mexico border are relegated beyond the gaze of the middle class. Taking the argument of Lusk et al. (2012) against the backdrop of a critical framework rooted in overlapping vulnerabilities, I argue that the spatial marginalization of 'out of sight, out of mind' coupled with the mixed infrastructural vulnerability and ecological vulnerability that traps colonia residents post-flood, in turn produces another level of economic marginalization. As a result of this overlapping spatial, infrastructural, and economic marginalization, colonia residents recover from flooding *poco a poco,* whereby employers may not even be impacted by floods. Given the frequency of storms, this furthers precarity in an already precarious community. Furthermore, Lusk et al.'s (2012) thesis might be applicable to the argument that this spatial marginalization also produces a political marginalization of colonias due to a lack of shared experience with colonia residents.

Conclusion

This chapter demonstrates that, as a result of overlapping economic, ecological, spatial, political, and infrastructural vulnerabilities, colonia residents are forced to use post-flood survival techniques, that create a deepening of vulnerabilities. These various coping techniques generally fit within the overarching theme of *poco a poco*, in which residents are forced to engage with predatory financial systems and repair and replace damaged property little by little. The result is a *poco a poco* recuperation that is categorically not disaster recovery, but rather post-flood survival. Ultimately, *poco a poco* refers to a strategy, often predatory in nature, that enables colonia residents to survive their vulnerable positionality. Choosing correctly between different necessities, understanding that there are not enough resources to fund them all, enables families to survive omnipresent environmental disaster. The next section explores the various overlapping vulnerabilities that result in a *poco a poco* post-flood recovery.

Chapter 5 Mentiras tras Mentiras:

Institutional Failings and Mistrust

> It has been lie after lie [Mentiras tras mentiras] The county gave permission for construction of the colonia and said it wasn't in a floodplain, but it was. The same thing happened with paying taxes and not receiving services. The county gave the developer permission to build but they didn't say the area would flood. We are working with our county to improve the drainage in the colonia, but nothing has changed (Focus Group 12/18/19).

As illustrated by this opening quote from a focus group participant voicing her frustration with the county government, colonia residents repeatedly discussed feelings of mistrust and suspicion toward institutions they see as out of touch and apathetic toward their vulnerable position. This chapter discusses the mistrust between colonia residents and institutions of power at various levels including local and federal government, and financial institutions such as lenders and insurance companies. This chapter also details various forms of institutional failings ranging from federal policy to local governments that inflame this community's mistrust and suspicion of these institutions. Finally, this chapter connects this mistrust to overlapping economic, political, infrastructural, and ecological vulnerability and demonstrates that this mistrust is reinforced by the failure of federal and county governments, as well as non-governmental for-profit institutions.

Federal Institutional Failings

A key issue within the colonias of the Rio Grande Valley is not just proximity to floodplains, but it is lack of knowledge about floodplains overall. When I asked focus group participants if they lived in the floodplain, occasionally the answer was affirmative, but more often it was akin to what this participant said, "I don't know [if I live in a floodplain], but floods are common. I believe the flood zone is changing and that floods are getting worse” (12/16/19). This quote reflects two common responses from focus group participants: that the boundary demarcating a floodplain is generally unknown, and regardless of if they are technically in a floodplain or not, the flooding has worsened. One participant, who has lived in the colonia since 1979, indicated that the worst floods were in the last few years (Focus group 12/17/19).

In chapter 3 the GIS-based analysis of poverty, capital access, and flooding, was based on the availability of geospatial data from Federal Emergency Management Agency (FEMA), the Census Bureau, and the Home Mortgage Disclosure Act (HMDA). However, one major obstacle I encountered is that FEMA has not updated the floodplains for many of counties along the Texas-Mexico border since 1979, in addition this out-to-date data is not available digitally. The missing data includes Nueces, El Paso, and Hidalgo counties which, together, contain more than half the colonias in Texas (see Table 3.2). This outdated and largely unavailable data made access for a trained GIS analyst difficult, let alone the lay community who need this information to avoid purchasing homes in flooded areas.

Additionally, there are clear limitations to HMDA mortgage data, as indicated in a 2013 report by the Housing Resource Council which found rural areas lack quality mortgage data (Housing Resource Council 2013). Furthermore, the granularity of the HMDA data, the census tract level, is inadequate when dealing with small rural communities such as colonias. Additionally, the high rates of informal Contract for Deed finance schemes, which are not available in the CFPB’s mortgage data set, also complicates a rigorous data methodology. Put simply, the Rio Grande Valley, and much of the Texas-Mexico border, lack viable economic or ecological data. What is available is highly suspect. I argue that the lack of quality, federal data along the Texas-Mexico border is a form of infrastructural vulnerability because, without the necessary information, decision makers, from policy makers to colonia residents themselves, cannot make fully informed choices. This infrastructural vulnerability, therefore, exacerbates existing economic and ecological vulnerabilities experienced by colonia residents.

An example of this overlapping vulnerability is Hidalgo County, which contains over 800 colonias (Texas Attorney Generals Office June, 2019; see table 3:2). This infrastructural vulnerability further complicates the ecological vulnerability of flood prone places, as neither the county government nor the colonia resident know if they are in a true 100-year floodplain. In addition, the lack of information hamstrings county governments from stopping developers from creating new low-income neighborhoods in flood prone places, deepening political and ecological vulnerability. As the quote below describes, not knowing if a colonia is in a floodplain causes financial hardship and reinforces infrastructural and ecological vulnerability.

> We don’t have electric lights, we don’t have drainage, and we don’t have sewage. When we pay taxes, the people in the county government said they would connect the colonia with electricity and water but haven’t done so yet. We complained to the county about continuous flooding, but the county government said that the colonia was not officially in a floodplain. Therefore, we were not entitled to drainage help from the county. The county said they could change our status to become a floodplain, but that our home values would decrease (12/16/19).

Not only does this quote demonstrate the mistrust and frustration between county government and colonia resident, it also reifies the crux of my research, that infrastructural, ecological, political and economic vulnerability are overlapping and reified in combination with one another.

Núñez-Mchiri (2009) describes the colonia experience as an "alienation from larger urban cores and other centers of power" (Núñez-Mchiri 2009, 70). This is certainly true in the context of federal data availability. Colonias residents are a historically marginalized group, occupying marginalized territory, within an already marginalized region. The race of colonia residents, in addition to the large immigrant community along the Texas-Mexico border, makes colonias particularly vulnerable to political vulnerability. These communities are nestled within a region, the Texas-Mexico border, that experiences some of the highest poverty rates in the US (Housing Assistance Council 2013). Furthermore, the rurality of colonias, a form of spatial and political vulnerability, again decenters the needs of colonias to the 'centers of power' (Núñez-Mchiri 2009, 70). The result is that federal institutions fail to provide even a modicum of infrastructural support in the form of timely and accurate data.

FEMA's institutional failure to provide quality floodplain data may be overshadowed by another institutional failing in the form of assistance denials for those who have suffered flood damage to their home. The reason for FEMA's denials represents two forms of vulnerability, infrastructural and ecological. From an infrastructural standpoint, FEMA has argued that denials are a result of low housing quality or what they call 'deferred maintenance'. According to interviews with local community development professionals, FEMA, despite being sued for this practice in 2008, continues to deny FEMA aid throughout the colonias of the Rio Grande Valley (Henneberger 2017, Interview). As a result, the infrastructural vulnerability of poor housing quality results in a deepening of political and economic marginalization in the form of post-flood denials of FEMA assistance.

In part, the lack of FEMA support in the colonias may be because colonia residents have simply given up on applying. Of the focus group participants only 11 of 37 had applied to FEMA after experiencing a flood because they believed they would not qualify. Of those who applied for FEMA assistance, only three received aid. This belief, that residents would not qualify for FEMA, was supported by their neighbors who had not received FEMA funds despite applying, a time-intensive process. For those who did apply and were denied, the denial reason given by FEMA centered on a lack of absolute destruction, as illustrated by the following two participants:

> Well, I didn't qualify for FEMA after the most recent flood. Some people in the colonia received FEMA funds, but I didn't because FEMA told me that you don't need to leave your home and therefore you won't receive funds (Focus Group 12/16/19).

> FEMA will only help us if we have lost everything, not if our home is damaged. For example, my floor was damaged, but FEMA said that our floor still worked. So, they didn't help us (Focus Group 12/17/19).

Another common denial reason, according to many focus group participants, is the type of flood damage to their home. As described above, many colonia residents were told by FEMA that because the destruction to their home was not total, they would not be receiving assistance. The result of partially destroyed homes with no federal support is demonstrated in Chapter 4 - many colonia residents are forced to live in dangerous homes with costly health consequences and rely on predatory loans. Thus, not only are colonia residents politically and economically marginalized by this federal agency, they are also ecologically more vulnerable as a result of living in unhealthy housing. The political and economic marginalization of the Rio Grande Valley from FEMA results in a deepening of ecological vulnerability from the context of unhealthy housing, infrastructural vulnerability in the form of flood mitigation and lack of information and data, and economic vulnerability in the form of denied disaster relief. Additionally, the ecological vulnerability of the Rio Grande Valley-specific flooding type, which is to say a flood that damages, but does not destroy a home, does not fit into FEMA's assistance model. Thus, FEMA's policies create a form of political marginalization in which its policies are, intentionally or otherwise, not designed to benefit a specific populace within the US.

While none of the focus group participants mentioned explicit racism, the colonia experience is a racialized one. Their frustrations and feelings of mistrust were, it seemed, a result of dismissive and unaware federal and local institutions that turned a blind eye, rather than were actively prejudicial. Pulido's (2000) framework of environmental racism and white privilege argues that even though environmental racial inequality might not be intentional, the very fact that it more negatively affects a community of color makes it racist (Pulido 2000). With that in mind, the institutional failings by FEMA in which their assistance model does not work in the colonias of the Rio Grande Valley, an area that is overwhelmingly of color, demonstrates that this too is a form of racism, albeit potentially color-blind. This racism, in turn, reproduces violent systems of infrastructural, political, ecological, and economic vulnerability.

The high denial rate of FEMA funds to colonia residents is not the only example of a federal authority marginalizing the colonias Rio Grande Valley. Numerous residents brought up immigration and a fear of Immigration and Customs Enforcement (ICE) as a concern. The specific challenges confronting undocumented immigrants in a post-flood environment was an important topic in the focus groups. Below is an example of the focus group participants discussing flood-induced displacement:

Me: Did you have to leave after the most recent flood? If so, where did you go?

> Participant 1: “In our community the churches asked people what they needed and tried to help where they could. The firefighters came and helped a little, but the big problem was that no one wanted to leave. Many people were afraid of ICE and being deported because the authorities were showing up. It made it hard for a lot of people to get help.”
>
> Participant 2: “Many people did not want to leave because of fear of being arrested by ICE. Others didn’t want to leave because they were afraid that their homes would be robbed” (Focus Group 12/16/19).

The fear and stigma against ICE, including arrests after a flood, were common. Residents were fearful of ICE detention and that fear influenced their decision to not seek out a safer post-flood location. This decision, in-turn, deepens ecological vulnerability as residents are unable to go to a safer location, buy amenities such as food and water, and receive support from local organizations as they arrived to help.

The political marginalization experienced by undocumented immigrants along the colonias of the Rio Grande Valley is profound. In organizing these focus groups and interviews local partner organizations insisted on having the locations as close as possible to the communities themselves. While there are logistic reasons for this, local organization staff specifically cited the focus group participants’ fears of arrest and deportation by ICE in leaving their neighborhood. Rosenberg et al. (2019) found a similar fear in their study of food access and fear of deportation in Hidalgo County, a subsection of the Rio Grande Valley (Rosenberg et al. 2019).

The militarization of the Rio Grande Valley by ICE hinders access to post-flood recovery. While the fear of arrest and deportation creates an obvious level of political vulnerability, it also reinforces spatial vulnerability as colonia residents are fearful of traveling outside of their communities. While traveling for this thesis I, myself in a position of relative power, was stopped and questioned by border patrol each time I entered and exited the Rio Grande Valley on the highway northbound to San Antonio, another example of spatial vulnerability at a larger scale. This spatial vulnerability, in combination with high flood risk, forces residents to choose between staying in an unsafe flooded environment, ecological vulnerability, or leaving their community for help and risking deportation, political vulnerability. Spener (2009) and Nevins (2010) found that the militarization of the US-Mexico border increased danger to transnational immigrants; this research builds on that foundation and argues that the aggression between immigration authorities and colonia residents, causes further harm and a deepening of post-disaster precarity.

Local Governmental Mistrust

At a local scale, county officials are often seen as at odds with the needs of colonia residents. As the chapter title indicates, many colonia residents feel lied to and cheated by the county government and developers. Local community development professionals echoed this concern, describing many colonia residents as frustrated and feeling misled. Focus group participants felt dismissed and belittled by county officials. One participant, with other members of her community, went to the local county government after a lightning storm caused much of the community to lose household appliances, however her concerns were not taken seriously by county government officials.

> I lost my fridge because it was short circuited from lightning and in my colonia two whole streets also lost appliances from the storm. When I went to the county office and told them that I needed help, I went together with other people in the colonia. They didn't believe me. We even had photographs of the disaster. They laughed at us and told us they would only help if everyone was affected, not just two or three streets, that we needed someone 'important' to come with us and my neighbors (Focus group 12/17/19).

This quote exemplifies the failure of local governmental institutions to provide support to a community under constant ecological threat, which in turn fuels the mistrust felt by colonia residents.

Another issue with local government was not just county officials, but with public service officials such as social workers who are perceived as out-of-touch outside forces who lack an understanding of the constraints residents experience. This participant described her experience with a social worker who told her that she needed to fix her house:

> A social worker came because of the quality of the house. She told us we needed to fix the roof and paint the walls for my children. Many times, we had to spend money on the house instead of spending money on our health. I received a loan from the *financieras* for $2000 but I had to spend it all on the house because I had to fix the roof. Because of these problems I don't have enough money to get medication for the asthma or sinus problems caused by the mold. The social worker doesn't help and she creates more problems for us. How am I supposed to paint my walls if I don't have any money? I told the social worker you can't tell me what to do, I'm always fighting with the government workers (Focus group 12/18/19).

The social worker was threatening to take away her children if she did not fix her home. Residents often felt patronized by local government officials. This quote highlights two key aspects of colonia residents' experiences with local governments, an out-of-touch understanding of the limited resources available to this community, and an aggressive tension between the community and local government authorities.

Ward's (1999) describes the concept of horizontal versus vertical integration in which he argues that horizontal integration consists of neighbor-to-neighbor social interactions while vertical integration refers to the connection between communities and institutions (Ward 1999). This framework is critical to understanding how colonia residents interact with institutions, “In Texas… there is minimal horizontal social interaction among neighbors, and little or no organizational linkage into supralocal authorities and organizations” (Ward 2004, 261). His findings are, to an extent, replicated in this study. As the focus groups have demonstrated, colonia residents are mistrustful and feel misunderstood by local authorities. To reframe this finding using Ward’s (1999, 2004) terminology, focus group participants lacked vertical integration with both federal and local governments. In this way, colonia residents experience another level of political vulnerability. However, as I argue in the next chapter, a high degree of informal horizontal community does exist in the colonias and is a critical piece of post-flood survival.

The failure by local institutions, namely county governments, to adequately support infrastructural improvements is also a result of spatial marginalization. As Arreola (2002) and Collins (2010) describe, most colonias reside outside of city limits in peri-rural county land. This means that city governments, which in the context of Texas typically have more resources and authority than county governments, are not obligated to support colonia infrastructural development to the same extent as incorporated neighborhoods (Ward 2004). Thus, colonia residents must rely on the county governments, an institution with limited resources and power to support infrastructural development. Focus group participants view of their local government and infrastructural status quo is mired in distrust, frustration, and a feeling that the county government does not understand or care about their situation. The spatial vulnerability of residing in county land, a political space with less infrastructure resources, results in the infrastructural vulnerability of low-quality drainage and unpaved roads. Ultimately, these two vulnerabilities, spatial and infrastructural, create more destructive floods, thus deepening of ecological vulnerability.

Non-Governmental For-Profit Institutions

Mistrust of institutions extends beyond the federal and local government and includes financial institutions such as flood insurance and *financieras*. While these institutions clearly are not government bodies, they are institutions that exercise power over the colonia residents and are frequently perceived as misleading, unfair, and more broadly not helpful after a disaster. One focus group participant explained:

> My fridge was damaged [by electrical storms] and I had insurance but when I went to the insurance company they said I would need to find a technician to fix my fridge, and then they'd refund me the cost. But I didn't have the money to pay a technician. It would cost me $700 to repair the fridge. I said no because it was so expensive, and it was better to buy another used fridge. I paid the insurance for a year before that. Now I don't have insurance (Focus Group 12/17/19).

Despite the prevalence of floods in the colonia, few focus group attendees had flood insurance policies. This was, in part, due to the general experience of not being able to receive compensation. In a poll of focus group attendees only nine of the 37 attendees had flood insurance. Of those with flood insurance, several said that because of the type of the flood, they did not end up receiving any insurance money. As one focus group participant said, "Why are we paying for insurance if they don't want to help us. We are paying for nothing and the insurance company will be rich with our money. And in the end, we have to fix our own home" (Focus Group 12/18/19). Another common complaint, about both insurance companies and FEMA, was the overwhelming bureaucratic hurdles to help. "I would pay the insurance, but the insurance has a lot of bureaucracy, and there's a lot of problems with certain papers at certain times. FEMA also didn't help me. In the past my house flooded, and some parts of the house were underwater, and FEMA said oh it's ok. You don't need the help" (Focus Group 12/18/19).

The institutional mistrust of insurance companies is reified by the insurance companies themselves, which are not designed to support colonia residents. Insurance companies fail colonias due to complicated, English-only bureaucracies, up-front payments with future reimbursement, and flood insurance terms that are not designed for the kind flooding that occurs in the colonias. This institutional failure results in an economic vulnerability in which colonia residents are unable to access another critical component of disaster recovery. For colonias that are confirmed to be in floodplains, the cost of flood insurance is too high for many to pay; thus, spatial vulnerability and economic vulnerability intertwine to produce reduced disaster preparedness.

The failure of insurance companies, along with local and federal governmental institutions, is, in many ways, the cause of the informality that typifies colonias in the Rio Grande Valley. As Richardson and Pisani (2012) have described, informality rose in colonias as a result of failed formal economic and political systems (Richardson and Pisani, 174 – 175). In addition, Mukhija and Loukaitou-Sideris (2014) argue that informality is a response to neoliberalism and the shrinking of state services in the face of austerity measures across the globe (Mukhija and Loukaitou-Sideris 2014, 8). Given the failure of governmental institutions to support colonias after a flood and the failure of for-profit institutions, such as insurance companies and banks (see Chapter 3), to provide post-flood financing, it is not surprising that colonia residents turn to predatory *financieras* to survive.

While focus group participants felt *financieras* were misleading and mistrustful financial institutions, they were still used due to desperation. Many focus group attendees reported accepting a loan from *financieras* without fully understanding the terms, and later many were shocked at the interest rate they ended up paying. In addition, there is a lot of misinformation among community members; one persistent myth among focus group attendees was the belief that, in order to be financially successful in the US and to build credit, one *needed* to take out a loan from a *financiera* and therefore build a credit history. Below is an example of this myth trickling down inter-generationally:

> When my son turned eighteen, he asked 'How do you get a loan, how do I start this?' I asked my neighbor they said, 'go to the payday lender and apply for a 100 dollar loan in order to start your credit.' And I went to the payday lender with my son and I didn't know anything. My son got a loan for 100 dollars, and in the end, he paid $150, I think. And I asked, why is it so much money? We went to an event with banks and other financial institutions and I took cards from one of the banks because she wants to investigate if the rates are legal at the payday lenders (12/18/19).

This quote describes the lack of accurate information about the US financial system, the trust this participant put in her neighbor, and the feeling of being taken advantage of by the *financiera*. It is not surprising that the focus group participant above asks her neighbor for advice. The repeated failure of institutions to not only not protect colonia residents, but to actively prey on them, reinforces the social informality and trust between neighbors over outside institutions. As Kettles (2015) has described, the failure of state actors has created a 'regulatory vacuum' that is filled with informal social interdependence (Kettles 2014, 228). Given the systemic marginalization that colonia residents experience, it is not farfetched for them to believe that the only way to build credit worthiness is to participate in costly alternatives to disaster recovery, *financieras*.

While many focus group participants did not like or trust *financieras*, they were still heavily utilized as the only source of post-flood financing. Like insurance companies, the *financieras* financing scheme are designed in a way that harms colonias. While insurance companies may be less overt in their intentionality, *financieras* have been shown to actively work to trap loan recipients in cycles of lending that force them to refinance their original loans for astronomically high interest rates (Baddour, Tegeler-Sauer, & Fowler 2016). In addition, Gallmeyer and Roberts (2009) have demonstrated that immigrant communities are targeted by predatory lenders and Li et al. (2009) has shown that predatory lenders cluster in low-income communities of color (Gallmeyer and Roberts 2009, Li et al. 2009).

Utilizing the critical framework of overlapping vulnerabilities described in Chapter 1, the mistrust between colonia residents and institutions is a result of political, economic and spatial marginalization. As mistrust deepens, the intensity of vulnerability also deepens. These forms of neglect then reproduce and deepen economic, ecological, infrastructural vulnerabilities as described above. The direct result of the mistrust by colonia residents and validation of that mistrust by institutional failings, causes yet more vulnerabilities as community-members feel isolated and abandoned. As one focus group participant said, "Nadie que puede ayudar", or no one can help us (Focus Group 12/18/19).

Conclusion

The mistrust by colonia residents, and the reinforcement of that mistrust via institutional failings, deepen the vulnerability experienced by colonias in the Rio Grande Valley. In the absence of institutional support, colonia residents engage with complicated, and often harmful, post-flood coping mechanisms. In Roy's (2011) (re)conceptualization of post-colonial precarity and poverty in the 'slums' of the global south, she argues that informality is both a result of colonialist violent practices and is a 'brutal energy of the postcolony'. In doing so Roy articulates a tension surrounding informality, subjugation, and resilience, in which slums are both places of resistance and violence (Roy 2011, 230). While Chapter 4 and 5 have focused on the violent and predatory nature of this exclusion, Chapter 6 will illuminate the opportunities and strengths in the colonias of the Rio Grande Valley.

Chapter 6 Chiste Negro;

Creativity, Solidarity and Community as Survival

> After my washer and dry flooded I used my neighbor's fence to dry my clothes. When the wind was too strong the clothes would blow in the street and sometimes, I had to run in the streets to pick them up! [everyone laughs] It's just a little bit of dark humor [chiste negro] that we use (Focus Group 12/18/19).

While colonia residents are constrained by overlapping vulnerability, they engage with creative problem solving and work collaboratively to improve their lives. Colonia residents are not simply passive recipients to the whim of external stakeholders, such as federal and county governments, but rather are actively and dynamically trying to improve their situation and work toward building a better future. My favorite example of this resiliency is the quote above; this participant laughed at her situation and, through her use of dark humor, made everyone else laugh too.

I have argued that overlapping and compounding vulnerabilities make post-flood recovery difficult for colonia residents in the Rio Grande Valley. Instead colonia residents survive in a precarious state with damaged homes, health, and finances. However, colonia residents also survive despite these overlapping vulnerabilities through diverse forms of compassion, creativity, and kindness. In this chapter I draw a line between externally imposed and violent forms of post-flood survival mechanisms where *poco a poco* strategies such as predatory lending, piece by piece repair and replacement, and prioritizing immediate needs with long term consequences fall on one side and creative, often community-based, post-flood survival techniques fall on the other. This chapter will focus on three kinds of activities: creative informal repair and replace solutions, solidarity economy, and community-based lending.

Solidarity Economy

This first section reveals how colonia residents rely on one another for survival, a solidarity economy enables this community to survive through sharing, support, and lending helping hands. The story above exemplifies both the vulnerability of colonia residence and their resiliency. In contrast to the violence of the *poco a poco* coping strategy, the rise of a powerful solidarity economy in which residents help, share, and support one another is as ubiquitous as predatory loans and demonstrated the social resiliency and compassion of this community. As Miller (2010) has noted, the origins of a solidarity economy came about as a class struggle in the face of economic and political disaster (Miller 2010). The marginalized experience of colonias in the Rio Grande Valley is similar with its own forms of economic, political, and ecological vulnerability.

While the interconnectedness of the community cannot overcome the marginalization faced by colonias, it is another post-flood coping mechanism. Among the focus group participants there were numerous examples of family and friends working together to repair homes, move out of damaged homes, giving rides, etc. An example of the generosity of neighbors is below, "I asked neighbors for rides after my car was destroyed in the flood. My neighbor gave a ride to my children to go to school and twice took me the grocery store when we could leave the colonia again" (Focus Group 12/16/19). As mentioned in Chapter 4, car-access is critical to for colonia residence to get groceries, attend school and go to work. This assistance means families can go to school, buy groceries, and visit the doctor.

However, colonia residents were not always willing to discuss their use of neighborly help. During an interview one elderly woman insisted that, after a flood destroyed her car, she simply had her children deliver her groceries until she could buy another car. Afterward, a community organizer present for the interview told me that she had, in fact, received many rides from neighbors. This reticence to acknowledge the help of neighbors may also be connected to the preferred help of family over neighbors. Most of the support focus group participants described came from family, while fewer mentioned a neighbor's help. One focus group participant described how she did not particularly know her neighbors, but her brother came to help, "My colonia is very quiet and everyone works a lot, so we aren't very close… My only brother had to come here, and he helped us clean out the house and dry what we could" (Focus Group 12/16/19).

One form of solidarity economy arose from focus group participants as they described family members working as construction and repair crews without pay. While the cost for post-flood repair was still substantial, as a result of familial support colonia residents were able to fix their home at a much lower cost. One focus group participant describes the valuable support her brother-in-law gave after a flood destroyed the floor and bathroom:

> My brother-in-law tried to fix the floor by filling the broken parts of the floor. If I wanted to fix all of the floor, I would have to put in a new one and it would be so expensive! It cost $700 dollars to fix my bathroom, but it was only that amount because my brother-in-law didn't charge us for the manual labor. I only paid for the materials (Focus Group 12/18/19).

While familial support was common in the construction industry, the inability of family to reach their flooded family members due to the impenetrable flood waters created a necessary support system among neighbors. This is best understood in the context of overflowing septic tanks that contaminate the local water supply, a constant problem for colonias after a flood. Chapter 4 demonstrates that colonia residents are often trapped in their neighborhood for days or weeks after a flood. There are numerous examples of residents, trapped by flood waters and unable to drink contaminated water, who were offered food and clean water from neighbors. One focus group participant described the extent of the layered vulnerabilities of colonias face and the support they give one another:

> When my home was flooded all the sewage came up into the houses. And we couldn't use the water or the bathrooms or anything in the house. We had to fix practically everything. We also couldn't drink the water for weeks after the flood. Luckily my neighbors had bottled water that they shared until we could leave the colonia" (Focus Group 12/18/19).

Ward (2004) has argued that colonias have neither horizontal integration, collective efficacy across neighbors, nor vertical integration, social connectiveness between communities and institutions of power, and that this twin social vulnerability harms colonia residents (Ward 2004). The focus groups reveal a more nuanced understanding of horizontal and vertical integration within the colonias of the Rio Grande Valley. Ward's (2004) assertion about vertical integration was emulated in this study, the relationship between colonia residents and institutions are tense and mistrustful. In contradiction to the lack of horizontal integration described by Ward, colonia residents voiced numerous examples of community-based solutions such as sharing, helpfulness and support across families and neighbors. This finding, however, is tempered by the preference by focus group participants who favored family-based help, rather than relying on their neighbors.

Latinx Cultural Norms

Next, I will detail how colonia residents utilize existing Latinx cultural norms as a subversive survival strategy to cope with their overlapping vulnerabilities. A very common practice among focus group participants was modifying the structure of their home in order to withstand flooding. This happened in a variety of ways, but often it involved using pillars or cement blocks to lift the home a few feet off the ground. Many homes are mobile homes, trailer homes, or prefab homes that have been shipped to the owner's lot and modified to fit the family's needs (Ward 1999, Richardson and Pisani 2012). One participant describes how she put rocks and sand underneath her house in order to lift it higher off the ground and to keep her mobile home from moving during high winds:

> There's always flooding in my home but I have been putting rocks and sand underneath the house in order to fix the issue. I live in a mobile home and because of that I can put rocks and sand under the house. The rocks and the sand work when the floods aren't as big, but when there's a lot of rain it doesn't work (Focus Group 12/18/19).

Home modifications to mitigate flood destruction was common among focus group participants and are in line with other scholarship on the colonias. Ward (1999), Richardson (1999) and Richardson and Pisani (2012) describe an incremental development style in which colonia residents build their housing overtime given their shifting needs (Ward 1999, Richardson 1999, Richardson and Pisani 2012). Other scholars have described this process as families expand to improve a home's quality and value (Richardson 1999). However, in the context of floods, these alterations often serve as ad hoc flood mitigation in the absence of infrastructure development by county or federal authorities. In this way, community-based infrastructural development has attempted to supplement the failure of institutions in providing support.

In the situation above, the homeowner did the work herself, but other creative solutions are done in collaboration with neighbors and relatives. Another focus group participant was having issues after storms damaged her roof. It was leaking and causing mold in her house, but she could not afford to have it fixed or replaced:

> After a big storm my roof started leaking. So, I went to my neighbor and he helped me put steel sheets over the roof. He also told me to give him a pair of jeans, and I asked why. He said I'll put asphalt in it and put it up in the insulation of your roof to stop the leak. He told me that would last for 10 years (Focus Group 12/18/19)!

These creative solutions to problems of economic and ecological vulnerability are a deep-rooted part of Mexican American, or Chicanx, culture. The quote above describes a neighbor using jeans stuffed with asphalt to prevent the roof from leaking after a flood. When I heard this during the focus group, the description conjured up a single word for me, r*asquache*. Medina-Lopez, (2018) citing Ybarra-Frausto (1989) describes *rasquache* in the following way, "'An underdog perspective' that stresses making do 'in an environment always on the edge of coming apart [where] things are held together with spit, grit, and movidas [movement]'… Rasquache emerges from a sociocultural imperative to recycle, upcycle, make do, and make new meaning through whatever available bits and pieces" (Medina-Lopez 2018 citing Ybarr-Frausto 1989, 3-4). In this way the colonia culture of the Rio Grande Valley uses existing Chicanx cultural norms, such as *rasquache*, to not only combat ecological and infrastructural vulnerability, but to survive despite institutional malfeasance.

Tandas are a community-based lending practice that run in the face of predatory lending. These informal lending circles are a widely known culture norm in Latin America. As one focus group participant said, "I have a group of family and friends and we do a *tanda*, doing *tandas* is really a loan that we pay every week. It's a way for us to fix our homes" (Focus Group 12/18/19). Put another way, *tandas* are a lending circle of friends and/or family in which everyone pays a little, “Each month, a new member of the [tanda] receives the loan until everyone in the group gets their chance.” (Mission Asset Fund website accessed 3/5/2020) While focus group participants were generally aware of *tandas*, only a handful actively used the practice.

Tanda use, or lack thereof, reflects the preference for colonia residence to utilize family, rather than neighbors. Below was an exchange during one of the focus groups in which the risk and tension of doing a *tanda* is on full display:

> Participant #1: “I have a group of family members and we do a *tanda*. We do a *tanda*, really, with payments that we make weekly and someone gets paid out every week. It’s a way that we can fix up our houses.”
>
> Participant #2: Why haven’t you invited me?
>
> Participant #1: I told your friend about, so I don’t know
>
> Participant #2: I said me, not my friend
>
> Participant #1: “It’s easier within a family because we never know how the other people are, and we aren’t paying interest like a bank. We organize these *tandas* for free, and only for close friends and family that we know will pay each other back… We made the *tandas* weekly and we have almost three years of it going” (Focus Group 12/18/19).

In my opinion, *tandas* and other community-based lending solutions have significant potential in the post-flood recovery space, however based on the focus groups they are not being used for that purpose. Other focus group participants who used a *tanda* typically did so within a family-based context, such as this participant who used the *tanda* system as a way of financing parties, “I only use *tandas* for birthday parties because we have such a big family” (Focus Group 12/17/19).

Richardson and Pisani (2012) discuss the use of *tandas* as a form of informal lending that helps colonia residence with emergencies (Richardson and Pisani 2012). While this form of community banking is well-known amongst focus group participants, it is a rarely used form of post-flood recuperation in the colonias of the Rio Grande Valley. One of the reasons cited by focus group participants was trust and a concern with getting paid when it was their turn to receive the payout. The issue of trust and preference for extended family, rather than neighbor-based support, is in line with other findings around creative post-flood survival.

Policy Implications

I would like to conclude this thesis with the policy implications of this work. Given the vulnerable lives of colonia residents, shifting their experience from post-flood survival to recovery is an issue of social justice. There are myriad policy changes necessary to undo the overlapping vulnerability experienced by colonia residents. Given the interactive nature of vulnerabilities within the colonias it is important to recognize that these policies need to be done in a comprehensive way that address a multitude of structural violence including ecological, political, economic, infrastructural, and spatial vulnerability. This assessment is not exhaustive but is meant to serve as an overarching survey of policies that would support post-flood colonia recovery.

On a national level the federal government needs to fund the civil engineering surveys necessary to have accurate and up-to-date FEMA floodplains, especially in an environment where, due to increased development and climate change, floods are increasing in strength and frequency. In addition, FEMA needs to be less restrictive with its qualification standards to ensure funds are being distributed equitably, namely to low income communities of color. FEMA should also apply an equity lens to low income communities of color so that more support is directed to those communities than would be normally distributed to a wealthier community.

The federal government needs to create immigration-forward policies where undocumented immigrants can move freely and access basic resources such as health care, financial services, and post-flood housing assistance. Beyond the obvious humanitarian issues this would solve to non-US citizens, the current policies also keep legal US residents and citizens from accessing these services as many colonia households are mixed status families (Castañeda 2019). In addition, the federal government needs to direct more support toward infrastructural improvements including adequate drainage, paved roads, and improved housing quality. These policies are in line with the findings of Collins (2010) on his work in the Paseo del Norte floods in the El Paso – Juarez area of the Texas-Mexico border. His analysis found that the middle class directs social surplus toward mitigating the environmental hazard of wealthy suburban communities, but not impoverished colonias on the urban fringe (Collins 2010). Ultimately, my recommendations are in line with Collins, that social surplus, ie taxes and governmental financial services, need to target the colonias of the Rio Grande Valley, who are among the most vulnerable communities in the US.

Similarly, local and federal governmental authorities need to strengthen their connections with colonia residence. In order to overcome these overlapping vulnerabilities trust and mutual respect need to be established. One way to do this would be to follow the Mexican government's model, as Ward (1999) describes, to infrastructurally integrate colonias into a network of paved roads, water, sewage, and drainage (Ward 1999).

From a regulatory standpoint, the state of Texas needs to enact state-wide consumer protection against predatory lending for low income borrowers. For a successful model of this policy see Davis and Standaert (2016) analysis of anti-predatory lending laws across the US. In addition, more support needs to be given to institutions developing access to non-predatory lending opportunities including home purchase mortgages and secondary mortgages designed for low income people. While the Federal Housing Finance Agency has developed a 'Duty to Serve' initiative that 'requires' Fannie Mae and Freddie Mac to invest in the secondary mortgage market of the colonias, the reality is that this initiative lacks teeth (Duty to Serve 2019, interview). An example of this inclusive lending policy was developed by Community Development Corporation of Brownsville's Community Loan Center[7] in which a lending product was designed specifically as a replacement for predatory lending products. The model, which is now used by organizations across the country, connects employees of registered employers to a direct withdrawal system and the payments come directly out of the paycheck (CDC Brownsville website accessed 3/21/20). However, an issue with this solution is that many colonia residents work in the informal economy and thus do not have regular paying jobs or formal paychecks (Richardson and Pisani 2012).

This issue brings up another critical aspect of policy solution, the need to change institutional policies of insurance and financing models to adjust to the needs of colonia residents who need *poco a poco*-centric policies. While CDC Brownsville's product is a step in the right direction, there needs to be loan products available for informal workers as well, who are often the most at risk. The tension between informality and policy has been documented by other researchers. Both Ward (1999, 2004) and Roy (2005, 2012)

[7] It should be noted that not only was CDC Brownsville a partner on this project, but also is a network member at NeighborWorks America, where I am currently employed.

have argued that policy makers in the US need to adapt to the informality of colonias, rather than forcing colonias to formalize. Parnell and Robinson (2012) have, similarly, argued that informality, as a form of urbanism in the global south, needs policy makers who are willing to engage with these communities in new ways (Parnell and Robinson 2012).

This framework for viewing informality as a legitimate form of urbanism, rather than an aberration, are especially relevant as it pertains to policy creation in the colonias of the Rio Grande Valley. Initiatives need to be developed that ensure colonia residents can still build their homes incrementally and with sweat equity. While incorporating a colonia into a city may improve access, it also might bring expensive regulation, in turn pricing out the low-income people who make the colonias their homes. Rather, regulation should provide support for building homes that are safer and able to better withstand floods and storms, without pricing out residents.

For CDC Brownsville's RAPIDO program, this comes in the form of post-flood homes, in which the homeowners themselves do much of the work (CDC Brownsville website accessed 3/21/20). Another example of this kind of support would be the tool library developed by Proyecto Azteca[8] which enables residents to build their home with more tools than they might normally have (Proyecto Azteca website accessed 3/19/20). This kind of bottom up approach utilizes the existing strengths of the colonias without relying on institutional support that, at the present time, is nonexistent.

[8] It should be noted that Proyecto Azteca was a partner on this research.

Another form of this community-centric model is the *tanda*. While not favored by the participants in the focus group due to trust issues, if local community development organizations hosted these lending circles and assumed some of the risk, they could be utilized with less fear by more community members. Mission Asset Fund, a local financial justice organization in San Francisco, takes the risk away from the individual community member but still enables a culturally grounded solution to help families in an emergency. By hosting *tandas* for local community members this organization takes on some of the risk while allowing those with little or no credit to take part (Mission Asset Fund website accessed 3/5/2020). Ultimately, policies that truly serve colonia residents need to holistically prioritize the needs of this precarious and marginalized community while utilizing the existing strengthens of a community that has managed to survive despite its vulnerability.

Works Cited

Acuña, A. A. R. L. (2019). Power, planning, and the right to the post-disaster city: exploring opportunities for long-term housing affordability and resilience in earthquake recovery (Doctoral dissertation, Massachusetts Institute of Technology).

Arreola, D. D. (2002). Tejano south Texas: a Mexican American cultural province. Austin: Univ. of Texas Press.

Attorney General of Texas (2019). Colonia shapefile [shapefile file]. Emailed.

Baddour, A., Tegeler-Sauer, J., & Fowler, D. (2016). Payday and Auto Title Lending in Texas: Market Overview and Trends 2012-2015.

Barajas, M. (2019, April 20). Payday Lenders Are Working Hard to Keep Texas the 'Wild West' in Trump Era. Retrieved February 4, 2020, from https://www.texasobserver.org/groups-sue-to-keep-texas-fertile-ground-for-predatory-lending/

Barton, J., Ryder Perlmeter, E., Sobel-Blum, E., & Marquez, R. (2015). Las colonias in the 21st century: progress along the Texas-Mexico border. Monograph.

Billings, S. B., Gallagher, E., & Ricketts, L. (2019). Let the rich be flooded: The unequal impact of hurricane harvey on household debt. Available at SSRN 3396611.

Cranston-Gonzalez National Affordable Housing Act of 1990, Pub. L. No. 101-625, § 218, 104 Stat. 4079, 4109-10 (codified at 42 U.S.C. § 12748 (Supp. 11 1990)).

Boone, C. G., Buckley, G. L., Grove, J. M., & Sister, C. (2009). Parks and People: An Environmental Justice Inquiry in Baltimore, Maryland. Annals of the Association of American Geographers, 99(4), 767–787. doi: 10.1080/00045600903102949

Bromley, R. (2004). Power, property and poverty: Why De Soto's "mystery of capital" cannot be solved. Urban informality: Transnational perspectives from the middle East, Latin America and south Asia, 271-88.

Camacho, D. E. C. (1998). Environmental injustices, political struggles: Race, class, and the environment. Duke University Press.

Castañeda, H. (2019). Borders of belonging: Struggle and solidarity in mixed-status immigrant families. Stanford University Press.

Castro Baker, A., & Keene, D. E. (2016). "There's a Difference—I Own This": Negotiating Social and Financial Services under Threat of Mortgage Foreclosure. Social work, 61(4), 321-330.

Collins, T. W. (2010). Marginalization, Facilitation, and the Production of Unequal Risk: The 2006 Paso del Norte Floods. Antipode, 42(2), 258–288. doi: 10.1111/j.1467-8330.2009.00755.x

Cox, R. S., & Perry, K.-M. E. (2011). Like a Fish Out of Water: Reconsidering Disaster Recovery and the Role of Place and Social Capital in Community Disaster Resilience. American Journal of Community Psychology, 48(3-4), 395–411. doi: 10.1007/s10464-011-9427-0

Collins, T. W., Grineski, S. E., Chakraborty, J., & Flores, A. B. (2019). Environmental injustice and Hurricane Harvey: A household-level study of socially disparate flood exposures in Greater Houston, Texas, USA. Environmental research, 179, 108772.

Consumer Finance Protection Bureau. (2019). Home Mortgage Disclosure [Data file]. Retrieved from https://www.consumerfinance.gov/data-research/hmda/historic-data/

Coursey, D., Geer, A., Hagerbaumer, C., Hammond, D., & Mendelsohn, B. (1994). Environmental racism in the City of Chicago: The history of EPA hazardous waste sites in African-American neighborhoods (No. 9408).

Cruz, T. (2007). Levittown retrofitted: an urbanism beyond the property line. Writing urbanism: a design reader, Routledge, New York.

Davis, D., & Standaert, D. (2016). Payday and Car Title Lenders Drain $8 Billion in Fees Every Year. Available at SSRN 2856815.

Desmond, M. (2016). Evicted: Poverty and profit in the American city. Broadway Books.

Donner, W. R., & Lavariega-Montforti, J. (2018). Ethnicity, income, and disaster preparedness in Deep South Texas, United States. Disasters, 42(4), 719–733. doi: 10.1111/disa.12277

Dudensing, R. (2017). Ten-Gallon Economy: Sizing Up Economic Growth in Texas Edited by Pia M. Orrenius, Jesús Cañas, and Michael Weiss, New York: Palgrave

Macmillan. 2015. xvii, 248 pp. 120(hardcover), 89 (eBook). ISBN 978-1137530165.

“Duty to Serve Underserved Markets Plan for the Rural Housing Market Effective 07.02.2019,” Federal Housing Finance Agency, July 2019 https://www.fanniemae.com/resources/file/aboutus/pdf/dts-rural-housing-final.pdf

Desmond, M., & Shollenberger, T. (2015). Forced displacement from rental housing: Prevalence and neighborhood consequences. Demography, 52(5), 1751-1772.

De Soto, H. (2000). The mystery of capital: Why capitalism triumphs in the West and fails everywhere else. Civitas Books.

El Paso County (2019). FEMA Floodplain [shapefile file]. Emailed.

Esparza, A. X., & Donelson, A. J. (2008). Colonias in Arizona and New Mexico: Border poverty and community development solutions. University of Arizona Press

Federal Emergency Management Agency (2019). FEMA Floodplains [Shapefile file]. Retrieved from https://msc.fema.gov/portal/advanceSearch

Federal Reserve Bank of Dallas. (2006). Texas Colonias: A Thumbnail Sketch of the Conditions, Issues, Challenges and Opportunities.

Fernandez, M. (2018, September 3). A Year After Hurricane Harvey, Houston’s Poorest Neighborhoods Are Slowest to Recover. Https://Www.nytimes.com/2018/09/03/Us/Hurricane-Harvey-Houston.html.

Gallagher, J., & Hartley, D. (2017). Household finance after a natural disaster: The case of Hurricane Katrina. American Economic Journal: Economic Policy, 9(3), 199-228.

Gallmeyer, A., & Roberts, W. T. (2009). Payday lenders and economically distressed communities: A spatial analysis of financial predation. The Social Science Journal, 46(3), 521-538.

Gidwani, V. (2014). Waste Matters: Informal Economies and Commodity Detritus in Delhi, India.

Goldstein, Z. (2019, August 27). Why 800,000 applicants were denied disaster assistance loans. Retrieved January 23, 2020, from https://publicintegrity.org/environmenfflavet/new-data-reveals-why-800000-applicants-were-denied-federal-disaster-assistance-loans/

Gunewardena, N., & Schuller, M. (2008). Capitalizing on catastrophe: neoliberal strategies in disaster reconstruction. Lanham, MD: AltaMira Press.

Hall, M., Crowder, K., Spring, A., & Gabriel, R. (2018). Foreclosure migration and neighborhood outcomes: Moving toward segregation and disadvantage. Social science research, 70, 107-114.

Harvey, D. (1973). Social Justice in the City. The Johns Hopkins University Press.

Harvey, D. (1978). The Urban Process under Capitalism. The Johns Hopkins University Press.

"HUD 4155.1, Mortgage Credit Analysis for Mortgage Insurance" (PDF). p. 152. Retrieved 19 November 2018.

Hersher, R and Benincasa, R (2019, March 5). How Federal Disaster Money Favors The Rich. https://www.npr.org/2019/03/05/688786177/how-federal-disaster-money-favors-the-rich

Hidalgo County (2019). FEMA Floodplain [shapefile file]. Emailed.

Henneberger, J. (2017, February 23). Court rules for colonia residents over FEMA denial of post-disaster home repair help. Texas Housers. Retrieved from https://texashousers.net/2017/02/23/court-rules-for-colonia-residents-over-fema-denial-of-post-disaster-home-repair-help/

"Housing in the Border Colonias," Rural Research Report, Housing Assistance Council, August 2013, http://ruralhome.org/storage/documents/rpts_pubs/ts10_border_colonias.pdf

Jon, I., & Purcell, M. (2018). Radical Resilience: Autonomous Self-management in Post-disaster Recovery Planning and Practice. Planning Theory & Practice, 19(2), 235–251. doi: 10.1080/14649357.2018.1458965

Jordan, L. P. (2017). Introduction: understanding migrants' economic precarity in global cities.

Kelly, P. (2008). Lydia's open door: Inside Mexico's most modern brothel. Univ of California Press.

Kun, J., & Montezemolo, F. (Eds.). (2012). Tijuana dreaming: life and art at the global border. Duke University Press.

Lamadrid, Enrique. 2018. Review of Border Folk Balladeers: Critical Studies on Américo Paredes. http://www.jfr.indiana.edu/review.php?id=2287

Lash, K. A., & Morse, R. (2007). Mitigating Disaster: Lessons From Mississippi. Miss. LJ, 77, 895.

Li, W., Parrish, L., Ernst, K. S., & Davis, D. (2009). Predatory profiling: The role of race and ethnicity in the location of payday lenders in California. Available at SSRN 1531333.

Lusk, M., Staudt, K., & Moya, E. M. (2012). Social justice in the US-Mexico border region. In Social justice in the US-Mexico border region (pp. 3-38). Springer, Dordrecht.

May, J., Wills, J., Datta, K., Evans, Y., Herbert, J., & McIlwaine, C. (2007). Keeping London working: global cities, the British state and London's new migrant division of labour. Transactions of the Institute of British Geographers, 32(2), 151-167.

Medina-López, K. (2018). Rasquache Rhetorics: a cultural rhetorics sensibility. Constellations: A Cultural Rhetorics Publishing Space, 1(1), 1-20.

Miller, E. (2010). Solidarity economy: Key concepts and issues. Solidarity economy I: Building alternatives for people and planet, 25-41.

Mukhija, V., & Loukaitou-Sideris, A. (Eds.). (2014). The informal American city: Beyond taco trucks and day labor. MIT Press.

Nevins, J. (2010). Operation gatekeeper and beyond: The war on" illegals" and the remaking of the US–Mexico boundary. Routledge.

Nueces County (2019). FEMA Floodplain [shapefile file]. Emailed.

Núñez-Mchiri, G. G. (2009). The political ecology of the colonias on the US-Mexico border: human-environmental challenges and community responses in southern New Mexico. Southern Rural Sociology, 24(1).

Parnell, S., & Robinson, J. (2012). (Re) theorizing cities from the Global South: Looking beyond neoliberalism. Urban Geography, 33(4), 593-617.

Pulido, L. (2000). Rethinking environmental racism: White privilege and urban development in Southern California. Annals of the Association of American Geographers, 90(1), 12-40.

Richardson, C. (1999). Batos, bolillos, pochos, and pelados: Class and culture on the South Texas border. University of Texas Press.

Richardson, C., & Pisani, M. J. (2012). The informal and underground economy of the South Texas border. University of Texas Press.

Rivera, D. Z. (2014). The Forgotten Americans: A Visual Exploration of Lower Rio Grande Valley Colonias. Michigan Journal of Sustainability, 2(20181221). doi: 10.3998/mjs.12333712.0002.010

Rosenberg, J., Sudanagunta, S., & Griffin, M. (2019). Survey of Latino/Hispanic Adult Immigrants Living in the Colonias of Hidalgo County, Texas Evaluating Reported Food Insecurity and Immigration-Related Fear. Journal of Applied Research on Children: Informing Policy for Children at Risk, 10(1), 10.

Roy, A. (2005). Urban informality: toward an epistemology of planning. Journal of the american planning association, 71(2), 147-158.

Roy, A. (2011). Slumdog cities: Rethinking subaltern urbanism. International journal of urban and regional research, 35(2), 223-238.

Southwest Border Colonias: Housing And Sustainable Development in the 21st Century: HUD USER. (n.d.). Retrieved from https://www.huduser.gov/portal/pdredge/pdr-edge-trending-072516.html

Spener, D. (2009). Clandestine crossings: Migrants and coyotes on the Texas-Mexico border. Cornell University Press.

Titford, K. and Simmons, R. "Wolf at the Door: Protecting Homeowners from Predatory Housing Activities in the Wake of a Disaster," in Building Community Resilience Post-Disaster: A Guide for Affordable Housing and Community Economic Development Practitioners, Forum on Affordable Housing and Community Development Law (Chicago: American Bar Association, 2013), 303–18.

Tran, T. (2015). Post-disaster housing reconstruction as a significant opportunity to building disaster resilience: a case in Vietnam. Natural Hazards.

United State Census Bureau American Community Survey. (2019). Poverty Rate [Data file]. Retrieved from https://www.census.gov/programs-surveys/acs/data.html

United State Census Bureau American Community Survey. (2019). Population [Data file]. Retrieved from https://www.census.gov/programs-surveys/acs/data.html

United State Census Bureau TIGER file. (2019). Census tract shapefile [shapefile file]. Retrieved from https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html

Ward, Peter M. (1999) Colonias and public policy in Texas and Mexico: Urbanization by stealth. University of Texas Press.

Ward, P. M. (2004). Informality of housing production at the urban-rural interface: The "Not So Strange Case" of the Texas Colonias. Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia, Lanham, Maryland, Lexington Books, 243-270.

Ward, Peter M. (2007). Colonias, informal homestead subdivisions, and self-help care for the elderly among mexican populations in the United States. In The health of aging Hispanics (pp. 141-162). Springer, New York, NY.

Ward, P. M., Way, H. K., & Wood, L. (2012). The contract for deed prevalence project. A Final Report to the Texas Department of Housing and Community Affairs (TDHCA).

Williams, K., & Mountz, A. (2018). Between enforcement and precarity: externalization and migrant deaths at sea. International Migration, 56(5), 74-89.

Wisner, B. Blaikie, P., Cannon, T., & Davis, I., (2005). At risk: natural hazards, people's vulnerability and disasters. Routledge.

Whitehouse, Mark. “Black Poverty Is Rooted in Real-Estate Exploitation.” Bloomberg.com, Bloomberg, 17 June 2019, www.bloomberg.com/opinion/articles/2019-06-17/how-housing-finance-enriched-whites-at-expense-of-black-borrowers.

Wyly, E. K., Atia, M., Foxcroft, H., Hamme, D. J., & Phillips-Watts, K. (2006). American home: Predatory mortgage capital and neighbourhood spaces of race and class exploitation in the United States. Geografiska Annaler: Series B, Human Geography, 88(1), 105-132.

Wyly, E., Moos, M., Hammel, D., & Kabahizi, E. (2009). Cartographies of race and class: mapping the class-monopoly rents of American subprime mortgage capital. International Journal of Urban and Regional Research, 33(2), 332-354.

Ybarra-Frausto, Tomás. “Rasquachismo: a Chicano sensibility.” Chicano Aesthetics: Rasquachismo, edited by Rudy Guglielmo et al., MARS, 1989.