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Neighborhood Reputation and Resident Sentiment in the Wake of the Las Vegas Foreclosure Crisis

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Abstract

This study examines how two major components of a neighborhood's reputation—perceived disorder and collective efficacy—shape individuals' sentiments toward their neighborhoods during the foreclosure crisis triggered by the Great Recession. Of central interest are whether neighborhood reputations are durable in the face of a crisis (*neighborhood resiliency hypothesis*) or whether neighborhood reputations wane during times of duress (*foreclosure crisis hypothesis*). Geo-coded individual-level data from the Las Vegas Metropolitan Area Social Survey merged with data on census tract foreclosure rates are used to address this question. The results provide qualified support for both perspectives. In support of the neighborhood resiliency hypothesis, collective efficacy is positively associated with how residents feel about the quality of their neighborhoods, and this relationship is unaltered by foreclosure rates. In support of the foreclosure crisis hypothesis, foreclosure rates mediate the effects of neighborhood disorder on resident sentiment. The implications of these findings for community resiliency are discussed.

Keywords

collective efficacy; community resiliency; disasters; neighborhood change

Introduction

Neighborhood reputations are based on common perceptions of neighborhood disorder and common perceptions about a neighborhood's ability to cope with disorder (Sampson 2012). Once recognized, neighborhood reputations shape individual sentiments about neighborhood quality, these sentiments then guide residential mobility decisions (e.g., Lee, Oropesa, and Kanan 1994; Speare 1974), reinforce stigmas in urban communities and perpetuate urban spatial inequalities, influence growth machine politics (Baldassare and Protash. 1982; Temkin and Rohe 1996), and potentially affect the resiliency of a community in the wake of catastrophe (e.g., Hartigan 2009). Numerous studies examine the determinants that influence individual sentiments regarding neighborhood quality and residential satisfaction (e.g.,

Amerigo and Aragonés 1997; Dassopoulos, Batson, Futrell, and Brents 2012; Galster and Hesser 1981; Grogan-Kaylor et al. 2006; Hipp 2009; Lovejoy, Handy, and Mokhtarian, 2010; Parkes, Kearns, and Atkinson 2002), but research on the dynamic processes that reinforce or alter residential sentiments during a crisis period are largely absent from the literature.

This article contributes to an emerging area of urban community and disaster research by advancing a thesis that helps explain how neighborhood reputations function during crisis periods, when residents are forced to reassess the correspondence between objective circumstances and their residential sentiments. During times of neighborhood crisis—caused for example by natural disasters or sharp economic downturns—neighborhood reputations are more likely to be relied upon to guide the thoughts and actions of residents, and in the process, individual sentiments about their neighborhoods are apt to be altered in more favorable or less favorable ways as residents actively evaluate whether the purported reputation is living up to expectations. To begin to examine this premise empirically, our study uses survey-based data during the most recent housing foreclosure crisis to analyze how objective neighborhood circumstances, together with measures of neighborhood reputation, influence individual assessments of the quality of their neighborhood.

The Great Recession, which officially began in December 2007 (Muro et al. 2009), triggered a housing foreclosure crisis throughout the US. For this study, we focus our examination of the relationship between housing foreclosure rates, neighborhood reputations, and resident sentiment on a strategic location, Las Vegas, Nevada. Following nearly 20 years of the nation's most rapid population growth and urban sprawl (CensusScope 2000), Las Vegas was one of the most heavily impacted metropolitan areas with some of the highest unemployment rates and home foreclosures in the nation (Bureau of Labor Statistics 2011; Center for Business and Economic Research 2011). Yet, Las Vegas is an advantageous area to study the effects neighborhood reputation on the making of resident sentiment, not only because it is an especially hard hit area, but because many newly built master-planned communities throughout Las Vegas have untested and potentially precarious neighborhood reputations (e.g., Knox 2008). In the wake of a deep economic recession, as residents face difficult decisions about their homes and neighborhoods, understanding the how neighborhood reputations shape residential satisfaction will open new ways of thinking about what manifests neighborhood resiliency and neighborhood change.

Boom and Bust: Las Vegas and the Foreclosure Crisis

The Las Vegas metropolitan area led the nation in population growth during the 1990s at 66.3%, almost doubling the rate of population growth of second ranked Arizona (CensusScope, 2000). Population growth in the Las Vegas metropolitan region continued apace in the 2000s with roughly half a million people arriving between 2000 and 2007. In this context of population growth, transiency was also high. In 2000, Nevada ranked highest among all states in residential mobility, where 25% of the population had moved from another state to Nevada within the past five years. Between 2000 and 2004, Nevada had the highest domestic annual rate of net migration in the country (Perry 2006). As a result of such rapid population growth and the attendant economic boom, the Las Vegas housing market

flourished between 1990 and 2006. With approximately 6,000 newcomers per month arriving in Las Vegas at the height of the boom, home prices reached all-time highs in 2006, as many residents moved into newly developed master-planned communities equipped with additional amenities and homeowners associations. The average median price of a single-family home was \$349,500 in January of 2007. Just four years later, following the economic bust and housing crisis, the median price of single-family homes in January 2011 was \$132,000 – an astonishing 62% decline (Greater Las Vegas Realtors Association, 2007, 2011). This is the largest decline of any metropolitan area in the United States (Community Resources Management Division 2010).

Ultimately, problems with subprime lending began to emerge in urban areas that had large racial and ethnic concentrations, mid and low-level credit scores, new housing construction, and high unemployment rates (Rugh and Massey 2010; Mayer and Pence 2008). For Las Vegas, it was a booming housing market, relaxed lending standards, low short-term interest rates, and irrational exuberance about housing prices that contributed to rapid rates of home value appreciation and concentrations of subprime lending (Muro 2011; Mayer and Pence 2008). Recent scholarship has also identified the function of metropolitan residential segregation and racial and ethnic targeting of subprime lending as a primary contributor to the housing crisis (Hyra, Squires, Renner, and Kirk 2013). However, even with a large and growing Hispanic population, Las Vegas ranks relatively low on both black/white and Hispanic/white segregation levels (Frey 2010) – suggesting that the bustling housing market was the most likely driver of subprime lending and the housing collapse in Las Vegas.

With the largest concentration of subprime mortgage originations in the country (Mayer and Pence 2008), the Las Vegas housing market was a ticking time bomb for a housing bust. Subprime mortgage products were designed to provide home ownership opportunities to the most credit-vulnerable buyers, including those with no established credit history, little documentation of income, and/or those with smaller down payments. In addition to subprime lending, mortgage companies also made it easier for current homeowners to refinance loans and withdraw cash from houses that had appreciated in value (Mayer and Pence 2008). As a result, since 2007, approximately 70,000 housing units have been foreclosed upon with nearly 6,000 new foreclosures occurring every quarter (Community Resources Management Division 2010). Up until 2006, Nevada had a very low loan delinquency rate, particularly among subprime borrowers. This was partly because borrowers in the robust Nevada housing market could often avoid foreclosure by quickly selling their homes to eager buyers (Immergluck 2010). However, between 2007 and 2010 the foreclosure rate in Nevada increased by about 3 percentage points a year (Community Resources Management Division 2010). Such rapid and chaotic economic stress raises questions about the changing quality of neighborhood life for Las Vegas residents in this recessionary climate.

Neighborhood Reputations: Disorder and Collective Efficacy

Neighborhoods are often the environment wherein residents develop identities, forge relationships with peers, and create meaning and coherence in their lives. A neighborhood's reputation—shared beliefs among residents about the positive or negative qualities of a

residential area—can influence people’s views about themselves and the broader community. Neighborhoods with positive reputations are vital to the sustainability of healthy cities. When residents feel a sense of pride and satisfaction with their neighborhoods, they report a greater sense of attachment to the local community, higher overall life satisfaction, better mental and physical health, greater political participation, and are more likely to invest time and money in maintaining that positive image of the community (Adams, 1992; Hays & Kogl 2007, Sampson, Morenoff & Gannon-Rowley, 2002; Sirgy & Cornwell, 2002). Consequently, when residents are dissatisfied with their neighborhoods, they report a lower quality of life, are less invested in the community, and are more likely to engage in outmigration, which hinders long-term stability and reduces the capacity of a neighborhood to be resilient when challenges arise (Bolan, 1997; Oh, 2003; Sampson, 2003).

Residents’ shared perceptions about various neighborhood qualities—e.g., convenient location and access to good schools—affect a neighborhood’s reputation, but there are two essential neighborhood characteristics in particular that form the foundation of any neighborhood reputation. The first is whether residents jointly feel physical disorder is problematic for the neighborhood (e.g., abandoned property, broken windows, crime, etc.), and the second are shared expectations of residents in the collective ability of the neighborhood to address problematic issues (Sampson 2012). Through the lens of social disorganization theory, researchers have long studied the effects of neighborhood structural characteristics and physical signs of disorder on crime rates (Hipp 2010; Kurbin and Wetizer 2003; Sampson and Groves 1989), but an important distinction is warranted between objective observations of physical disorder (i.e., whether or not there is graffiti on the buildings and trash and litter on the streets) and *people’s stated sentiments about whether those conditions are problematic*. The latter, people’s shared evaluation of the problem, constitutes an important aspect of a neighborhood’s reputation.

According to Robert Sampson’s recent work on the stability and change of Chicago neighborhoods, “perceptions of disorder” are what “molds reputations, reinforces stigma, and influences the future trajectory of an area” (2012:123; also see Hunter 1974:93). Perceived neighborhood disorder, independent from actual objective measures of disorder, greatly affects the character of a neighborhood over time. Sampson (2012:144–145) finds in predicting future neighborhood conditions (e.g., poverty levels, crime rates, and outmigration), perceived neighborhood disorder is at least as strong a predictor as prior (i.e., lagged) neighborhood conditions. In the case of crime, prior perceptions of disorder are actually a much stronger predictor of future neighborhood crime rates than prior levels of crime. Adams (1992) also finds that residents’ perceptions of crime and disorder have greater influences on neighborhood satisfaction than the actual existence of such crime and disorder.

The second aspect of a neighborhood’s reputation is *collective efficacy*. Collective efficacy is “the linkage of cohesion and mutual trust among residents with shared expectations for intervening in support of neighborhood social control” (Sampson 2012: 127). Neighborhood cohesion among residents is believed to be a local resource for organizing around problems when they occur (Morenoff, Sampson, and Raudenbush 2001; Kubrin and Weitzer 2003;

Larsen et al. 2004). Prior work has shown, like perceived neighborhood disorder, that perceived social trust and neighboring is meaningful to residents in their assessments of neighborhood quality (Grogan-Kaylor et al. 2006; Parkes et al. 2002). Neighboring fosters mutual support and trust among neighborhood residents (Sampson et al. 1989), and forming social ties helps foster attachments to an area (Austin and Baba 1990; Hipp and Perrin 2006; Kasarda and Janowitz 1974; Parkes et al. 2002; Sampson 1988, 1991). Neighborliness reflects attachment through various activities that range from helping a neighbor in need to organizing to address a shared neighborhood problem (Woldoff 2002). As residents participate in neighborhood activities, they develop a shared sense of community and develop positive communal feelings (Ahlbrandt, 1984; Guest & Lee, 1983; Hunter and Suttles, 1972; Kasarda and Janowitz, 1974; Riger and Lavrakas, 1981).

Metropolitan context has implications for neighborhood reputations. Much of the research on neighborhood disorder and collective efficacy has taken place in Chicago, a city with many longstanding and historic neighborhoods. But, Las Vegas is a different kind of metropolitan area with many newly built “master-planned communities” (MPCs). These MPCs typically have homeowner’s associations (HOAs) and additional amenities that are not commonly associated with neighborhoods in cities like Chicago. These newer MPCs are also less likely to have firmly entrenched reputations, and this will likely increase the variability in how residents respond to a crisis. Although new, MPCs in Las Vegas are certainly not without reputations. Many MPCs are actually provided simulacra-based reputations of community life through marketing strategies before any homes are even sold. This is because neighborhood qualities that are associated with communal bonds and collective efficacy have not been lost on the developers of contemporary master-planned communities. Today, developers of MPCs seek to enhance the marketability of their properties by providing amenities and design features that are intended to provide buyers with “a sense of community.” Knox (2008:99) keenly recognizes as a product-branding process where developers synthetically attempt to instill upon a neighborhood a positive community-orientated reputation in order to sell buyers, not only on the quality of the homes, but on the quality of the entire neighborhood (also see Freie 1998). HOAs are also popular with these MPCs because the fees they solicit, and the rules they enforce, are meant to ensure a degree of consistency in the quality of the neighborhood brand.

The high rate of urban development prior to the Great Recession, the magnitude of the foreclosure crisis in the Las Vegas area, and the unique characteristics of MPCs make Las Vegas an advantageous place to study the making of residential sentiments for several reasons. First, the making of residents’ sentiment in an unsettled period is important because these sentiments will likely facilitate neighborhood resiliency or neighborhood change during the recovery period. Second, given the highly volatile conditions in Las Vegas, our ability to discern the effects of objective neighborhood circumstances (like foreclosure rates) on subjective residential sentiments is enhanced. In other words, the objective reality of the crisis is likely to be physically more salient in Las Vegas than elsewhere making the effects more visible. Third, people’s preconceived ideas about their neighborhoods are more likely to be challenged and subjected to dissonance because of the relative newness of many Las Vegas neighborhoods and their relatively unproven statuses. As alluded to above, the stability of a neighborhood’s reputation typically exerts an inertia-type effect on individual

sentiments during settled periods, but when crises strike, newer and older neighborhoods alike, have their reputations tested. We elaborate on this dynamic below. Fourth, homeowners associations common among MPCs are likely to act as intermediate institutions when crises strike. That is, HOAs may take steps to protect property values in ways that bolsters resident sentiments toward their neighborhoods, or conversely, the powerlessness of HOAs to deflect the foreclosure crisis could create an even greater disjuncture in expectations that further erodes resident sentiment. The uniqueness of Las Vegas makes it possible to more clearly observe these key dynamics in action.

Neighborhood Reputations during a Crisis

High foreclosure rates and the accumulation of real estate owned properties (REOs) have detrimental effects on neighborhoods (Apgar and Duda 2005; Immergluck and Smith 2006; Schuetz, Been, and Ellen 2008). In many neighborhoods, foreclosed homes are boarded up and vacant with unkempt yards and real-estate signage to indicate the neighborhood's diminished status. As a result, these properties create opportunities for criminal activity, discourage remaining residents from investing in their properties, potentially damage neighborhood social capital, and ultimately lower a neighborhood's perceived quality (Leonard and Murdoch 2009). These spillover effects result in neighborhood property devaluation as foreclosed homes typically sell at much lower prices and appreciate much more slowly than traditionally sold homes (Forgey, Rutherford, and VanBuskirk 1994; Pennington-Cross 2006). Based on data collected on foreclosures and single-family property transactions during the late-1990s, Immergluck and Smith (2005) estimated that each foreclosure within a city block of a single-family home resulted in a 0.9%-1.4% decline in that property's housing value. Ordinarily foreclosures may pose a serious threat to neighborhood stability and community well-being, and during the Great Recession unprecedented levels of housing foreclosures have become an objective symbol of genuine neighborhood crisis.

Despite the potential effects of housing foreclosures on assessments of neighborhood quality and the remaking of a residential area's reputation, there is little known about how a metropolitan-wide foreclosure crisis affects individuals' perceptions of their neighborhoods. As with high levels of perceived neighborhood disorder and low levels of perceived collective efficacy, we can reasonably expect high levels of foreclosures will be negatively associated with individuals' assessments of their neighborhoods. Yet, new realities and new ways of life emerge during unsettled periods, and these changes can challenge prior views and perceptions (e.g., Swindler 1986; Elder 1974).

To more fully understand the potential for change during these unsettled times, it is important to focus on how objective neighborhood circumstances, like foreclosure rates, may alter the relationship between a neighborhood's reputation and individual sentiments. Neighborhood reputations are generally stable during non-crisis periods, and are highly predictive of future neighborhood change, even more highly predictive than objective measures of neighborhood conditions (as reported above). But, importantly, during a crisis period when objective neighborhood circumstances cannot be easily ignored, the salience of a neighborhood reputation might weaken and come to matter less in shaping people's

perceptions. This could be especially true in Las Vegas where the reputations of many new MPCs are untested. From this perspective emerges the *foreclosure crisis hypothesis*: Housing foreclosures will significantly mediate the relationship between neighborhood reputation (measured via collective efficacy and neighborhood disorder) and (a) individual assessments of neighborhood quality and (b) individual satisfaction with neighborhood property values. Thus, the effects of the crisis will have more influence on the sentiments of residents than perceived neighborhood reputations.

Objective circumstances may carry greater significance during a crisis because residents are forced to evaluate the correspondence between the objective situation and what they thought they knew about their homes, investments, and neighbors. However, disaster research reminds us time and again that individuals, families, neighborhoods, and communities are quite resilient when crises strike. It is common, for example, for areas affected by natural disasters to rebound within a few years to achieve a full functional recovery in terms of returning to, or in some cases exceeding, pre-disaster levels of population, housing, and economic vitality (Cochrane 1975; Friesema et al. 1979; Haas et al. 1977; Pais and Elliott 2008; Wright et al. 1979). A surprisingly unexplored factor that is potentially a major facilitator of resiliency is a neighborhood's reputation, especially collective efficacy as people are much more likely to need to rely on others during a crisis. Positive neighborhood reputations might ward against high foreclosure rates in the first place, or as a crisis unfolds, residents may filter the situation through their commonly shared beliefs about their community. Relying on preconceived beliefs for guidance during a crisis may produce the kinds of behaviors and outcomes consistent with the neighborhood's reputation. From this perspective, families and neighborhoods are more or less resilient because individuals respond to crises in ways that create a correspondence between reputation and reality. In support of this perspective, emerges the *neighborhood resiliency hypothesis*: Neighborhood reputations (i.e., collective efficacy and neighborhood disorder) will significantly mediate the relationship between neighborhood foreclosure rates and (a) individual assessments of neighborhood quality and (b) individual satisfaction with neighborhood home values. Thus, neighborhood reputations will have more influence on the sentiments of residents than housing foreclosures.

The evaluation of the foreclosure crisis hypothesis and neighborhood resiliency hypothesis is an important first step toward a more comprehensive understanding of the reciprocal connection between disasters and neighborhood reputations: Disasters have the power to fundamentally alter neighborhood reputations through the collective changes of individual sentiments, and yet, existing neighborhood reputations are potentially able to mitigate the effects of disasters on individuals and families. Ultimately, individual sentiments regarding their neighborhoods are the intervening link between disaster and changes to neighborhood status. Although we are unable to fully capture the entire reciprocal cycle—from existing neighborhood reputation through the crisis period to the altered neighborhood reputation—we do focus keenly on the linchpin in the process, individual sentiments regarding their neighborhoods.

Data and Methods

Study Area

The data for this study come from the Las Vegas Metropolitan Areas Social Survey (LVMASS). LVMASS provides individual-level data gathered from respondents living in 22 neighborhoods in the Las Vegas metropolitan area of Clark County, Nevada in 2009. Clark County has a population of roughly 1.95 million people and is home to 72% of the population of Nevada (U.S. Census Bureau 2010). Our sample includes neighborhoods in each of the four distinct municipal jurisdictions composing the Las Vegas metropolitan area: eight in the City of Las Vegas, four in North Las Vegas, four in Henderson, and six in unincorporated Clark County. Our data on housing foreclosures came from the Housing and Urban Development (HUD) Neighborhood Stabilization Program (NSP) authorized under Title III of the Housing and Economic Recovery Act of 2008. The data provide the approximate number of *foreclosure starts* for all of 2007 and the first six months of 2008. We use these data to calculate the proximate foreclosure rates at the census tract level, matching the NSP data to the LVMASS survey data by census tract identifiers to create a multilevel data set of individual respondents clustered within Las Vegas neighborhoods.

Sampling Frame

For the LVMASS, we used a stratified cluster sampling design to ensure that our sample included neighborhoods with socioeconomic diversity. Using a stratified (by income quartiles) cluster sample, our study resulted in 22 distinct neighborhoods. Our primary goal was to capture neighborhood-level data from “naturally-occurring” neighborhoods that were geographically identified in the same way that most residents identify with their neighborhood. We diverge from studies that rely strictly on census-based boundary definitions and instead collected information from independent neighborhoods that lie within census tracts. In the fall of 2008, through extensive field work, we identified neighborhoods by key physical characteristics within selected census tracts, including contiguous residences, interconnected sidewalks, common street signage, common spaces, common mailboxes, street accessibility, visual homogeneity of housing communities, and barriers separating housing areas such as gates, waterways, major thoroughfares and intersections.¹

For inclusion as a study neighborhood, we specified that there must be at least 50 visibly occupied homes to avoid non-response and invalid addresses. Our final sampling frame of household addresses was compiled from the Clark County, Nevada Assessor’s Office which maintains electronic records of all residential addresses. We then randomly selected a range of 40 to 125 addresses from the sampling frame in each neighborhood. The final study population included 1,680 households in 22 neighborhoods and resulted in 664 individual

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¹At the time of sampling, there were a total of 345 Census tracts in the Las Vegas metropolitan area. Using data from both the 2000 Census and the 2005–2009 American Community Survey 5-year estimates, we compared our study neighborhoods within the 22 Census tracts to the remaining 323 Census tracts along several socio-demographic characteristics, including median household income, percent poverty, racial composition, percent married, percent 65+, educational attainment, median year house was built, and percent owner occupied housing units. We found no significant differences between our study tracts and those not included in the study, leading us to conclude that the neighborhoods we included in this study are representative of the Las Vegas Metropolitan Area in general.

respondents and a 40% response rate². The household member with the most recent birthday and over the age of 18 was asked to complete the survey. After excluding cases with values missing on our key dependent variables, our final analytic sample for this study was 643 Las Vegas households. Among those that responded to the survey, there were no statistical differences along any of our observed independent variables between those with missingness on our dependent variables and those without missingness.

Survey Instrument

For this study, each household received a letter offering an incentive of a family day pass to a local nature, science, and botanical gardens attraction to participate in the study and a website address for a web-based survey or telephone number to complete the survey by phone. After exhausting the telephone and web-based responses, we used mailed surveys and door-to-door field surveys. The survey was made available in English and Spanish and administered by trained survey administrators.

Sample Characteristics

Table 2 shows descriptive statistics of the total sample. Residents in our sample have a mean age of 54 years old and an average length of residence in their neighborhood of 11.7 years. Our sample is 73% non-Hispanic white and 27% non-white. Most of our respondents were employed (93%) and homeowners (80%). Nearly 33% of our sample held at least a college degree, followed by 41% with some college education, and 26% with a high school degree or less. Our analytic sample characteristics differ slightly from 2010 population statistics of the Las Vegas metropolitan area (U.S. Census Bureau 2010). In addition to our sample being older and slightly more educated than the average resident, we also have more homeowners in our data. Because our random sampling methodology did not discriminate by housing type (single-family housing vs. multi-family housing), our sample returned very few places of multi-family housing. As a result, we have undersampled those most likely to be in renting situations and living in apartment complexes, including younger residents, those with lower incomes, and those with shorter residential tenure. These sampling disparities may bias results toward more established middle-class homeowners in the Las Vegas metropolitan area *if* controlling for demographic and socioeconomic characteristics do not fully capture attitudinal differences concerning neighborhoods between middle-class and working-class households.

Dependent Variables

The majority of our survey instruments were replicated from the Phoenix Area Social Survey (PASS), including our key dependent variables. The first dependent variable in the LVMASS comes from a survey question that captures the perceived quality of life in the neighborhood. Residents were asked to rate the *overall quality of life in their neighborhood* as “Very Good,” “Fairly Good,” “Not Very Good,” and “Not at all Good.” Neighborhood Quality was coded 1(Not at all Good) to 4 (Very Good). The second dependent variable comes from a four-point Likert scale that asks respondents to rate their satisfaction with the

²This is consistent with the response rate of the Phoenix Area Social Survey (Larsen et al. 2004).

economic value of homes in the neighborhood. Specifically, respondents indicated whether they were “Very Satisfied,” “Somewhat Satisfied,” “Somewhat Dissatisfied,” or “Very Dissatisfied” *with the economic value of the homes in their current neighborhood*. We arrange the responses from the most negative response of 1 (Very Dissatisfied) to the most positive response of 4 (Very Satisfied). This measure taps residents’ perceptions of home values, not actual home values, as most home prices were in decline at this time. For the regression analyses we maintain the ordinal level of measurement of these variables.

Key Neighborhood-Level Independent Variables

First, from the 2008 NSP data, we assess census tract foreclosure rates from the number of new foreclosure starts that occurred between 6–18 months preceding the LVMASS. These are the first data since the Great Recession to allow scholars the opportunity to examine the relationships between neighborhood-level foreclosure rates and residential neighborhood sentiments. To test the reliability of HUD’s estimated foreclosure rate at the local level, HUD asked the Federal Reserve to compare HUD’s estimate to data the Federal Reserve had from Equifax showing the percent of households with credit scores that were delinquent on their mortgage payments 90-days or longer. Analysis by the Federal Reserve staff found that when comparing the HUD-predicted county foreclosure rates to the Equifax county level rates of delinquencies, HUD’s data and the Equifax data had high intrastate correlations. For the state of Nevada, the correlations were 0.88 (Department of Housing and Urban Development 2008). After merging the NSP data with LVMASS data, the average neighborhood foreclosure rate is 21.6%, which corresponds closely to the average foreclosure rate of 22% from the 345 census tracts reported for Las Vegas metropolitan from the NSP data.

Harding (2009) identifies three distinct phases of the foreclosure process: a period of delinquency leading to foreclosure, a period wherein the bank takes possession of the property (i.e., it becomes a REO: Real-Estate Owned Property), and the resale period after the REO transaction. Our foreclosure measure best captures the later stages of the first step in this process. Prior research suggests a lagged foreclosure effect on the property values of nearby residents in the neighborhood. Harding et al. (2009) finds that the maximum negative effect of a foreclosure on home values of nearby properties occurs right around the time of the REO transaction, whereas Gerardi et al. (2012) finds that the negative effect of foreclosures on nearby properties peak *before* the distressed properties complete the REO transaction. Our measure of foreclosure starts up to 18 months prior to the launch of the LVMASS should overlap quite nicely with when we would expect there to be peak foreclosure effects on sentiments concerning one’s neighborhood and property values. At a minimum, the temporally variant nature of the foreclosure process (and its effects) means our measure certainly captures a period when the crisis is unfolding, but it may or may not capture the exact peak of the crisis and could therefore underestimate the full magnitude of the crisis. However, the timing of the LVMASS and our foreclosure measure is also advantageous because it captures the first wave of mass foreclosures. If the study was conducted a year or two later at the absolute peak, then there might not have been enough neighborhood variation to detect statistically significant effects.

Second, we construct a measure of neighborhood disorder from an index of five items asked in the LVMASS. We asked respondents whether vacant land, unsupervised teenagers, litter or trash, vacant houses, and graffiti in their neighborhoods are a big problem (coded 3), a little problem (coded 2), or not a problem (coded 1). The index ranged from 5 (Lowest Disorder) to 15 (Highest Disorder), is normally distributed, and has a Cronbach's alpha score of 0.74, indicating sufficient internal consistency among items. To create a neighborhood level measure we then calculated each neighborhood specific mean from this scaled index.

Third, our measure of collective efficacy or "neighborliness" was composed of five items that assessed respondents' evaluations of neighborly interactions. The items were: "I live in a close-knit neighborhood," "I can trust my neighbors," "My neighbors don't get along" (reverse coded to match the direction of the other items), "My neighbors' interests and concerns are important to me," and "If there were a serious problem in my neighborhood, the residents would get together to solve it." Responses ranged from strongly disagree to strongly agree. The index ranges from 5 (Least Neighborly) to 25 (Most Neighborly), is normally distributed, and has a Cronbach's alpha of .79. We calculated neighborhood specific means to create a neighborhood-level measure of collective efficacy for each of our 22 neighborhoods.³

Control Variables

Previous studies indicate that homeownership and length of residence are important predictors of neighborhood attachment (Kasarda and Janowitz 1974; Sampson 1988; Adams 1992; Rice and Steel 2001; Lewicka 2005; Brown et al. 2004; Schieman 2009). Therefore, we included a dichotomous variable for homeownership (vs. renting) and a continuous variable for length of current residence in years. We also controlled for variables that approximate life-cycle stage and indicate socioeconomic status. *Age* is a continuous variable. *Race* is coded White (1) and Non-White (0). *Education* is categorized into "High School Degree or Less," (ref.) "Some College Education," and "College Degree or More." *Marital Status* was a binary variable indicating Married (1) vs. Non-Married (0). Finally, employment status was a dichotomous variable indicating whether the respondent was employed (1) vs. unemployed (0) at the time of survey completion. We find that roughly 7% of the sample was unemployed, which is consistent with the unemployment rate of 7.4% for Las Vegas reported in the 2007–2011 American Community Survey 5-year estimates (U.S. Census Bureau 2011). Additional descriptive statistics are provided in Table 2.

Analytic Approach

Multilevel methods are employed for this study to address the issue of non-independence caused by the clustering of residents within neighborhoods. Multilevel models address the issue of non-independence by appropriately adjusting the standard errors of the independent

³We acknowledge the absence of non-resident input in our measures of neighborhood reputation. Non-resident viewpoints are important to consider when policy decisions are being made about urban development and resource redistribution that affect neighborhoods. However, we assume a good deal of correspondence between resident and non-resident perceptions of neighborhood reputation, and although there is likely to be some slippage between resident and non-resident viewpoints, it is unlikely that these viewpoints would be so discrepant as to render a fundamental misinterpretation of neighborhood reputation. Of course we have no way of testing this directly, but we welcome further empirical inquiry on this matter.

variables. More specifically, for this study we estimated several multilevel models for ordinal response variables. These multilevel ordinal logistic models assess the relationship between neighborhood foreclosure rates, neighborhood disorder, and neighborhood collective efficacy on individual sentiments regarding neighborhood quality and neighborhood property values. The specification of these multilevel ordinal logistic models maintains the proportional odds assumption required by ordinal logistic regression (Raudenbush and Bryk 2002:320). Importantly, by taking a multilevel approach, this study is also able to determine the proportion of variation in residents' sentiments that exists across neighborhoods, and we are then able to determine how much of that neighborhood-level variation is explained by our key independent variables.

The analysis proceeds in five steps. First, for both dependent variables a null model with no predictor variables is estimated to determine the amount of neighborhood-level variation in residents' sentiments toward their neighborhoods. Second, we include individual-level control variables to minimize any conflating of the variance components that may be attributed to the compositional characteristics of the neighborhoods (e.g., socio-demographic characteristics). Third, we introduce into the model our measures of neighborhood reputation—perceived neighborhood disorder and collective efficacy—to (a) assess the total effect of neighborhood reputation on residents' neighborhood sentiments, and (b) determine how much neighborhood variation in the response variables are accounted for by the inclusion of neighborhood reputation (using the model with just individual-level control variables as the comparison model). Fourth, we remove the measures of neighborhood reputation and add neighborhood foreclosure rates into the model to assess the same empirics as for neighborhood reputation. Finally, we estimate the complete model that includes all the individual-level control variables and our measures for neighborhood reputation and neighborhood foreclosure rates. The objective of this final model is to assess the mediation effects of our key neighborhood-level variables. We rely on the KHB-method to examine the statistical significance of these key mediation effects (Breen, Karlson, and Holm 2013).

Results

According to the descriptive statistics in Table 2, a majority of residents (84%) reported a fairly good or very good level of neighborhood quality despite the ongoing foreclosure crisis. Sentiments regarding neighborhood property values are also generally positive in that a slight majority (56%) report being either very satisfied or somewhat satisfied with current home values. Unfortunately, a baseline measure is unavailable to determine whether these reported satisfaction levels are below pre-recession levels. According to the intraclass correlation coefficient (ICC) calculated from the null intercept only model (not shown), approximately 30% of the variation in the sentiments regarding neighborhood quality exists across neighborhoods, and approximately 8% of the variation in sentiments regarding home values exists across neighborhoods. In both instances, there is greater variation in resident sentiment within neighborhoods than across neighborhoods, which is likely to be the case when studying neighborhood effects within a single metropolitan area. Yet, there is sufficient between neighborhood variation for the primary objective of examining the

relative role of neighborhood reputation versus neighborhood foreclosure rates in shaping individual-level sentiments.

Neighborhood reputations are reflected in shared individual perceptions regarding problematic issues in the area and whether there is a common held belief among residents in the collective ability of the neighborhood to address issues if problems arise. On average, neighborhood reputations in Las Vegas during the foreclosure crises are at a 50/50 level on both measures, as the overall means fall approximately halfway on the aggregated scale (e.g., ave. neighborhood disorder = 7.68; ave. collective efficacy = 13.04). This means that half of Las Vegas neighborhoods enjoy a generally positive reputation, whereas the other half generally has poorer than average reputations. There is also noteworthy geographic variation in projected neighborhood foreclosure rates as the range of rates goes from a low of 15% to a high of nearly 30%. The bivariate correlation between the two components of neighborhood reputation—disorder and collective efficacy—and foreclosure rates are high (.809 and -.737, respectively). These correlations indicate a strong positive association of high levels of perceived neighborhood disorder and high foreclosure rates, and the strong negative association of low levels of perceived collective efficacy and high foreclosure rates. Note that collinearity is not a concern in the regression models as the variance inflation factor for the foreclosure rate ($VIF = 3.45$) is below even the modest cut point for concern (e.g., 4).

Table 3 provides the results from an analysis that disentangles the relative influence of neighborhood foreclosure rates and neighborhood reputation on individuals' sentiments regarding the general quality of the neighborhood and regarding property values. The results from six multilevel ordinal regression models (three for each outcome) are presented in Table 3. The null models that contain only individual-level controls (not shown) provide the baseline variance components that are used for comparative purposes with the results that appear in Table 3. First, note that there are several individual-level effects that are generally robust throughout the analysis. More highly educated individuals are more critical of the quality of their neighborhood, whereas age is positively associated with an individual's satisfaction with the current property values.⁴ Homeownership is positively associated with neighborhood quality, although after conditioning on neighborhood reputation, homeownership fails to attain statistical significance. On the other hand, homeownership is negatively associated with the satisfaction level of the neighborhood's property values, suggesting a greater level of insecurity homeowners feel about what is usually their most valuable financial asset. The neighborhood-level variances from the models with only the individual-level controls are 1.004 for neighborhood quality and .200 for neighborhood property values. The respective intraclass correlation coefficients are .30 and .06, which are very similar to the ICCs from the intercept only models, meaning the compositional effects stemming from these individual-level characteristics is minimal.

⁴The negative association between education and perceived neighborhood quality is net of neighborhood characteristics (e.g., disorder, collective efficacy, and foreclosures). This suggests that among residents living in similar neighborhoods, more highly educated people are more critical than less educated people, at least in this context. Without the model adjustment for neighborhood-level characteristics, the effect of high education is positive on neighborhood quality and property values (supplemental models not shown).

Model 1a and Model 1b in Table 3 report the effects of neighborhood reputation on individual sentiments regarding the general quality of their neighborhoods, and their satisfaction toward property values in the neighborhood, before accounting for the foreclosure rate. The effects from perceived problems with neighborhood disorder and collective efficacy on assessments of neighborhood quality are strong and statistically significant beyond a 99.9% confidence level. For example, a one unit difference in perceived neighborhood disorder (i.e., nearly a standard deviation) is associated with a 32% [$1 - (\exp^{(.391)} = .676) * 100$] decline in the average resident's odds of reporting a "not very good" response toward neighborhood quality compared to a "fairly good" assessment. A one unit difference in collective efficacy is associated with a 38% [$1 - (\exp^{(.321)} = 1.38) * 100$] increase in the odds of reporting a positive response toward neighborhood quality compared to a negative assessment. The effect of collective efficacy is also strong when considering assessments of neighborhood property values in Model 1b. There a one unit difference in collective efficacy is associated with a 33% [$1 - (\exp^{(.285)} = 1.33) * 100$] increase in the odds of reporting being "somewhat satisfied" verses "somewhat dissatisfied" with neighborhood property values. The effect of perceived neighborhood disorder fails to attain statistical significance in Model 1b, suggesting a lesser role of perceived disorder on property assessments than collective efficacy. Considering these measures together, we can say that neighborhood reputation does a very good job of explaining neighborhood-level variation. The proportional reduction in neighborhood-level variance is 97% [$(1.004 - .030) / 1.004$] for assessments of neighborhood quality, and 99.5% [$(.200 - .001) / .200$] for neighborhood property values. Even when starting from modest intraclass-correlation coefficients to begin with, the reduction in level-two variance attributed to neighborhood reputation is noteworthy.

Model 2a and Model 2b in Table 3 assess the relationship between foreclosure rates and assessments of neighborhood quality and neighborhood property values prior to adjusting for neighborhood reputation. As expected, the effects of foreclosure are negative and statistically significant. A one percentage point increase in a neighborhood's foreclosure rate is associated with a 22% decline in the average resident's assessment of the quality of their neighborhood and an 11% decline in the average resident's satisfaction with neighborhood property values. Foreclosure rates also explain neighborhood variation in resident's sentiments, but the explanatory power of foreclosure rates is not as impressive as it is for neighborhood reputation. Foreclosure rates account for 74% of the neighborhood variation in assessments of quality, but only 7% of the neighborhood variation in the assessments of property values.

The theoretical motivation for this study concerns the role of neighborhood reputation in shaping individual sentiments during a crisis period. One perspective advanced here, via the foreclosure crisis hypothesis, suggests that the effects of neighborhood reputation may be largely filtered through objective neighborhood circumstances when a crisis strikes causing the effects of neighborhood reputation to be less salient than during ordinary times. In support of this perspective, we should expect objective measures of neighborhood foreclosure during an economic crisis to significantly mediate the effects of neighborhood reputation. According to the results in Model 3a and 3b in Table 3, we find rather limited support for this perspective.

When foreclosure rates are added to the model with the covariates for neighborhood reputation, the effect of neighborhood disorder attenuates by over a third when examining sentiments of neighborhood quality ($b = -.391$ vs. $b = -.250$), and when considering assessments of property values, the mediation effect of foreclosure on perceptions of neighborhood disorder are upwards of 88% of the initial effect [e.g., $(-.056 + .007) / -.056$]. However, several patterns in the results temper these findings. First, although foreclosure rates do attenuate the effects of neighborhood disorder, the initial effect of disorder on property assessments is not statistically significant and the direct effect of foreclosure in Model 3b also fails to attain statistical significance. Second, the attenuation of collective efficacy after adjusting for foreclosure in both Model 3a and 3b is minimal.

Drawing on disaster recovery research, this study also posited an alternative hypothesis regarding the role of neighborhood reputations during a crisis. According to the neighborhood resiliency perspective, the relationship between foreclosure rates and the sentiments of residents may be mediated once adjusting for neighborhood reputation because neighborhood reputations may act as a guide for residents during the crisis. This should be especially true of collective efficacy, as neighbors may be more likely to witness the kinds of behaviors that conform to their preconceived beliefs. According to Model 3a and 3b, we find fairly strong support for this perspective, as the foreclosure rate is notably attenuated in both models ($-.245$ vs. $-.077$ and $-.116$ vs. $-.028$); and rather impressively, the effect of collective efficacy remains robust and statistically significant at a high level ($.321$ vs. $.301$ and $.285$ vs. $.278$). Thus, collective beliefs about a neighborhood's ability to prevent and address problematic issues appear to be a resounding aspect of a neighborhood's reputation that continues to shape individual sentiments during a crisis period.

To formally test the statistical significance of these mediation effects we use the KHB-method (Breen, Karlson, and Holm 2013). We rely on the KHB-method because the method typically used for assessing mediation effects (e.g., the Sobel test) in linear models cannot be used in the context of nonlinear probability models (e.g., those using a logit link) because the change in the mediated coefficient is not only influenced by the mediators but also by a rescaling of the logit coefficients in relation to the error variance. The KHB-method distinguishes the change in the focal coefficient due to true mediation from the change that is due to rescaling. Robust standard errors for the decomposition effects (indirect, direct, and total) are used to get cluster-adjusted p-values.

The results of this formal test confirm our preliminary conclusions. On the one hand, we find that only neighborhood disorder is significantly mediated by foreclosure rates ($-.391 + .250 = -.141$; $p < .05$, one-tail) when assessments of neighborhood quality is the outcome. When satisfaction with neighborhood home values is the outcome, the mediation effect ($-.056 + .007 = -.049$) is not statistically significant at even $p < .10$ level. Collective efficacy is not significantly mediated by foreclosure rates in either model. These findings provide fairly limited support for the *foreclosure crisis hypothesis*: A foreclosure crisis only appears to modestly shape the relationship between a neighborhood's perceived level of disorder and a resident's assessment of neighborhood quality.

Conversely, we find that the effect of foreclosure rates on individual assessments of neighborhood quality and satisfaction with home values are significantly mediated by collective efficacy and neighborhood disorder ($p < .001$, two-tail). Collective efficacy accounts for nearly 58 percent, and neighborhood disorder accounts for 42 percent, of the mediated effect of foreclosure on neighborhood quality ($-.245 + .077 = -.168$). Collective efficacy also accounts for nearly all the mediated effect of foreclosure rates ($-.116 + .028 = -.088$) on home value satisfaction. These statistically significant effects support the *neighborhood resiliency hypothesis*: Neighborhood reputations appear to have mitigated the local response of residents to the foreclosure crisis.

Conclusion and Discussion

The motivation for this study is based on the premise that neighborhood reputations matter in people's lives, and that they matter especially during unsettled times when preconceived beliefs are likely to be more heavily relied upon to guide residents. Yet simultaneously, this study recognizes that the objective realities wrought by a crisis will also force residents to reevaluate and potentially remake in a new light these previously held beliefs. Among those familiar with living in disaster areas, this is known as "the new normal." Understanding this dynamic interplay involves paying close attention to the way collective behaviors and shared beliefs function during a catastrophe. This study advances our understating of this interplay by examining how objective realities and neighborhood reputations shape individual sentiments as a foreclosure crisis unfolds.

Central to our premise, on the one hand, is whether a particular crisis creates a large enough disjuncture between the current beliefs and new realities to significantly alter resident sentiment toward their neighborhood, or on the other hand, whether residents largely respond to the crisis in a manner consistent with the neighborhood's current reputation thereby either minimizing or maximizing the potential harm of the crisis. These are not mutually exclusive possibilities, but these two perspectives do lead to alternative hypotheses. The former perspective—the *foreclosure crisis hypothesis*—posits that commonly held beliefs about a neighborhood are affected by the realities of the crisis, and as a result, the reputational effects of a neighborhood should wane once the crisis-related effects are taken into consideration. The latter perspective—the *neighborhood resiliency hypothesis*—places more emphasis on the durability of a neighborhood's reputation by anticipating a robust, and largely unaffected, correspondence between collective beliefs and individual sentiments despite any objective crisis-related circumstances.

The findings from our study provide qualified support for both perspectives. On the one hand, the effects of perceived neighborhood disorder on the sentiments residents feel toward the general quality of the neighborhood, and their comfort with current property values in the neighborhood, are greatly attenuated once we control for the neighborhood foreclosure rate. In other words, objective realities presented by the foreclosure crisis do affect the collective importance residents place on perceived levels of disorder when assessing, and perhaps reassessing, the quality of their neighborhoods. This finding supports the *foreclosure crisis hypothesis*. On the other hand, we also find that the effects of neighborhood foreclosure rates on the sentiments residents feel toward their neighborhood

are significantly mediated by both neighborhood disorder and neighborhood collective efficacy—with collective efficacy accounting for the majority of the mediation effects in this study. This means that the effects from neighborhood foreclosure rates are in large part filtered through the neighborhood's current perceived status to influence how residents respond to the crisis. This finding supports the *neighborhood resiliency hypothesis*.

Of particular note in this study are the salient and robust collective efficacy effects. It is actually quite remarkable that neighborhood collective efficacy during the foreclosure crisis, not only significantly mediates the effects of foreclosure rates, but collective efficacy also continues to independently shape individual sentiments. This is remarkable because Las Vegas is a highly transitory city with sufficient speculation about the reputational authenticity of some of the area's newer master-planned communities (cf. Knox 2008). If collective efficacy is this salient under nascent conditions, it is also quite possible collective efficacy will be even more important during a crisis for cities with many older well-established neighborhoods. Moreover, collective efficacy might be the key differentiating factor among otherwise homogenous master-planned communities in other areas of the county.

The results of this study should be considered in light of several limitations. First, the LVMASS data are cross-sectional. As such, they represent a snapshot of residents' perceptions of neighborhood quality of life, satisfaction with the economic value of their homes, and attitudes toward neighborliness during the midst of the Las Vegas foreclosure crisis. While the results of this research have demonstrated a robust link between housing foreclosures and residents' sentiments, as well as evidence that neighborhood collective efficacy mediates the effects of housing foreclosures, these data do not allow us test the complete cycle from the crisis event through current neighborhood status to individual sentiments and then back full circle to neighborhood change. Our findings do capture, however, the all-important first stage in this process, and we look forward to collecting longitudinal data that will allow us to model the complete process.

Second, omitted variable bias is always a concern with observational data, and as a result, we caution readers from inferring definitive causality from our results. It is possible that factors other than foreclosure rates and neighborhood reputations affect resident sentiments. For example, residential sorting could bias our foreclosure effects downward if many dissatisfied homeowners had time to relocate before the LVMASS. This also could mean that those residents remaining in hard hit neighborhoods might be more content with their neighborhoods (e.g., for sentimental reasons), biasing the effects of neighborhood reputation upward. However, a more plausible scenario, at least for the beginning of the crisis, would be that dissatisfied homeowners would be unable to move because (a) their properties are underwater (i.e., they owe more than the market value of the property), and/or (b) they simply can't sell because of the lack of buyers. Frustrated residents in this situation would very likely feel resentment for the neighborhood, and importantly, this effect would off-set any downward bias attributed to residential out-migration.

Third, although LVMASS data do not allow us to examine different neighborhood amenities, we suspect that some neighborhoods may be more protected from economic

distress and report less negative neighborhood experiences than others because of particular amenities. Future research should explore in more detail whether master planned communities and/or those with homeowners associations are buffered from the negative effects stemming from housing foreclosures. If these communities are commodified in ways that shield them from property value decline (Le Goix and Vesselinov 2012) through covenants, conditions, and restrictions (CCRs), then they might also be shielded from neighborhood quality decline during an economic downturn. On the other hand, to the extent that master-planned communities produce a housing price premium, and to the extent that HOAs fail to mitigate foreclosures, the effects of major boom-and-bust cycles may be especially pronounced in these types of neighborhoods. Future research should explore these possibilities in more detail.

Lastly, our results need to be put into context. A foreclosure crisis is a relatively weak and slow moving crisis scenario compared to several recent natural disasters. Although the prospects for a full housing recovery in Las Vegas remain very much in question—waver ing somewhere between the “Sunburnt” city envisioned by Hollander (2011) and that of the “business-as-usual” growth machine (Pais and Elliott 2008)—it would be rather surprising for housing foreclosures alone to completely refashion an area’s reputation. In fact, recent evidence suggests that housing values are moving back toward pre-recession levels, with the Las Vegas metro area leading the pack in property value increases (Firki and Muro 2013; Friedhoff and Kulkarni 2013). Comparatively, it is perhaps more difficult to image how collective efficacy, or any other reputational characteristic, can spur resiliency when an entire community is physically leveled and fully displaced. Yet, time and time again, communities are rebuilt from utter devastation, and it would be equally as difficult to imagine how this is possible without an appreciation for the collective trust residents have in their neighbors. What remains entirely unknown are the crisis thresholds and event conditions for when neighborhood reputations matter the most for disaster resiliency.

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Table 1

Individual Level Mean Scores for the Scaled Items from the Las Vegas Metropolitan Social Survey (2009)

Collective Efficacy (alpha= .79)	Mean¹	SD
I live in a close-knit neighborhood	3.05	1.16
If there were a serious problem in my neighborhood the residents would get together to solve it	2.66	1.09
My neighbors interests and concerns are important to me	2.59	0.95
I can trust my neighbors	2.42	1.08
My Neighbors don't get along (reverse coded)	2.33	0.89
Neighborhood Disorder (alpha= .74)	Mean²	SD
Unsupervised teenagers	1.65	0.71
Litter or trash	1.64	0.72
Vacant houses	1.55	0.68
Graffiti	1.49	0.66
Vacant land	1.35	0.58

¹ Items range from 1 to 5: Strongly Disagree; Disagree; Neither; Agree; Strongly Agree

² Items range from 1 to 3: Not a Problem; Little problem; Big problem

Table 2

Descriptive Statistics from the Las Vegas Metropolitan Social Survey (2009), Neighborhood Level (N=22); Individual Level (N=643)

Dependent Variables	Mean	SD
<i>Neighborhood Quality</i>		
Very Good	0.30	
Fairly Good	0.54	
Not very Good	0.12	
Not at all Good	0.03	
<i>Neighborhood Property Values</i>		
Very Satisfied	0.21	
Somewhat Satisfied	0.35	
Somewhat Dissatisfied	0.25	
Very Dissatisfied	0.19	
<u>Independent Variables</u>		
<i>Neighborhood Level</i>		
Neighborhood Disorder	7.68	1.26
Collective Efficacy	13.04	1.69
Census Tract Foreclosure Rate	21.60	3.63
<i>Individual Level</i>		
<i>Marital Status</i>		
Other Status	0.44	
Married or Living with Partner	0.56	
<i>Race</i>		
White, non Hispanic	0.73	
Non White	0.27	
Age	54.13	16.70
<i>Education</i>		
H.S. or Less	0.26	
Some College	0.41	
College Degree or more	0.33	
<i>Employment Status</i>		
Employed	0.93	
Unemployed	0.07	
Years Lived at Current Residence	11.67	9.48
<i>Housing Status</i>		
Own	0.80	
Rent	0.20	

Table 3

Multilevel Ordered Logit Models Predicting Resident Assessments of Neighborhood Quality and Neighborhood Property Values: Las Vegas Metropolitan Social Survey (2009)

Independent Variables	Neighborhood Quality			Neighborhood Property Values		
	Model 1a b/(se)	Model 2a b/(se)	Model 3a b/(se)	Model 1b b/(se)	Model 2b b/(se)	Model 3b b/(se)
<i>Neighborhood Level</i>						
Neighborhood Disorder	-.391 *** (.092)		-.250 * (.099)	-.056 (.089)		-.007 (.108)
Collective Efficacy	.321 *** (.076)		.301 *** (.072)	.285 *** (.071)		.278 *** (.076)
Foreclosure Rate		-.245 *** (.032)	-.077 * (.037)		-.116 *** (.024)	-.028 (.031)
<i>Individual Level</i>						
Married or with Partner (ref=other)	-.213 (.167)	-.148 (.171)	-.201 (.165)	-.147 (.143)	-.098 (.155)	-.142 (.144)
Non-Hispanic White (ref=other)	-.081 (.197)	-.120 (.209)	-.105 (.198)	-.340 (.195)	-.335 (.190)	-.345 (.195)
Age	-.002 (.008)	.000 (.008)	-.003 (.008)	.018 ** (.006)	.020 ** (.006)	.017 (.006)
Education (ref= H.S. or less)						
Some College	-.264 * (.131)	-.266 * (.122)	-.269 * (.133)	-.172 (.182)	-.143 (.184)	-.177 (.183)
College Degree or more	-.471 ** (.140)	-.565 *** (.141)	-.511 *** (.144)	.049 (.168)	.049 (.185)	.028 (.176)
Unemployed (ref=Employed)	-.263 (.309)	-.153 (.304)	-.223 (.313)	.330 (.240)	.305 (.231)	.349 (.238)
Years at Current Residence	-.014 (.010)	-.006 (.010)	-.009 (.009)	-.003 (.008)	.000 (.009)	-.001 (.009)
Homeown (ref=rent)	.342 (.205)	.432 ** (.161)	.338 (.186)	-.604 ** (.226)	-.514 * (.214)	-.604 ** (.222)

Independent Variables	Neighborhood Quality			Neighborhood Property Values		
	Model 1a b/(se)	Model 2a b/(se)	Model 3a b/(se)	Model 1b b/(se)	Model 2b b/(se)	Model 3b b/(se)
<i>Thresholds</i>						
Not at all Good / Very Dissatisfied	-11.424 *** (1.049)	-9.214 *** (.976)	-11.750 *** (.986)	-5.658 *** (.918)	-3.709 *** (.751)	-5.798 *** (.947)
Not Very Good / Somewhat Dissatisfied	-9.688 *** (1.048)	-7.469 *** (.958)	-10.015 *** (.985)	-4.339 *** (.867)	-2.397 ** (.708)	-4.477 *** (.894)
Fairly Good / Somewhat Satisfied	-6.660 *** (.985)	-4.439 *** (.910)	-6.991 *** (.911)	-2.634 ** (.856)	-.709 (.709)	-2.771 ** (.876)
Very Good / Very Satisfied (ref.)						
<i>Neighborhood Variance</i>						
AIC	.030	.265	.010	.001	.060	.001
N Individual Level	1255	1271	1253	1695	1709	1696
N Neighborhood Level	643	643	643	643	643	643
N Neighborhood Level	22	22	22	22	22	22

*
p < .05;

***

p < .01;

***

p < .001 (two-tail)