Housing Studies

Movin', But Not Up To The East Side: Foreclosures and Social Disorganization in Orange County, Florida

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Movin', But Not Up To The East Side: Foreclosures and Social Disorganization in Orange County, Florida

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ABSTRACT *The recent foreclosure crisis in the USA has called for a revival in social disorganization research to examine how communities are being affected. While a number of studies have examined the direct relationship between social disorganization and crime in communities plagued by foreclosure, they have failed to look at the link between social disorganization and real estate indicators. This study fills this gap by examining Orange County, Florida in 2010 using realtor-reported transactional information, a type of data that are rich in transactional information but has yet to be utilized. The findings of this study indicate that negative social capital significantly predicts areas with higher concentrations of foreclosures (positive relationship) and traditional sales (inverse relationship). The proportion of Fair Housing Administration/Veterans Administration loans, the average days on market and the proportion of affluent households in the community also significantly predict these transactions. Limitations of the study as well as directions for future research are also discussed.*

KEY WORDS: Foreclosures, social disorganization theory, mortgages, real estate, communities

Following the September 11, 2001 terrorist attacks, the economy in the USA began a decline that later would near the effects of the Great Depression of the 1930s (Gerardi & Li, 2010; Levitin, 2009; Tatom, 2008). Indicators of economic decline included a drop across the stock market (Chen & Siems, 2004; DeLong & Summers, 2001) and disruptions in the banking, financial, insurance, and tourism markets (Chen & Siems, 2004; Looney, 2002), all of which led to economic instability (DeLong & Summers, 2001; Looney, 2002). In response to the financial crisis, the Federal Reserve implemented a new plan designed to bolster mortgage lending and stimulate the environment (Gerardi & Li, 2010). For five years, the initiative worked, and the housing market was in a perpetual boom. However, this real estate 'bubble' burst in early 2007, sending shockwaves through the market and leading to a foreclosure crisis with which the nation is still struggling.

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A number of theories have been reconfigured to explain the community level impact of the foreclosure crisis. Criminologists have added to this emerging literature as well. While researchers traditionally used Social Disorganization theories to explain varying crime rates, recently criminology scholars have used these theories to explain other social problems such as the housing crisis. Many of these particular explanations stem from Shaw & McKay's (1942) Social Disorganization theory and Wilson & Kelling's (1982) Broken Windows hypothesis. Each perspective can provide important frameworks for understanding the impact of the foreclosure crisis on community changes, as well as for understanding how the resulting disorganization can impact the housing market. Indeed, this relationship may be cyclical and/or reciprocal. Social disorganization, for example, explains how people moving in and out of communities can create instability, which in turn may translate into increased uncertainty in that real estate market. Broken windows theory describes how physical decay in a community, such as abandoned homes, vacant lots, trash and litter in the streets, and overgrown lawns, also can negatively impact potential real estate transactions. Both provide that these disordered communities are unable to recover because residents are apathetic or lack the social and economic capital necessary to address the community problems that have cropped up. This may ultimately suggest to the majority of potential buyers that they should purchase in other areas; places where it appears that residents are more actively engaged in their communities and are less affected by the foreclosure crisis. This constant cycle of negativity serves only to perpetuate the housing crisis, not help to remedy it.

This study seeks to examine which aspects of social disorganization are associated with different types of real estate transactions (both positive and negative transactions) in an area hit hard by the foreclosure crisis. Specifically, we examine the impact of social disorganization and neighborhood decay on the real estate market in Orange County, Florida. In total, 19 155 real estate transactions occurring in the county in 2010 are examined to determine which community characteristics of social disorganization (low social capital, economic disadvantage, and residential instability) and demographic composition have the greatest impact on the struggling real estate market.

Review of the Literature

The Foreclosure Crisis in the USA

In response to 9/11, the Federal Reserve of the USA reduced the rate on federal loans to promote borrowing in an effort to stimulate the struggling economy (Crump *et al.*, 2008; Gerardi & Li, 2010; Madar *et al.*, 2008; Tatom, 2008). Beginning in 2002, the rate at which homes were selling, as well as the prices they sold for, began to significantly increase (Bram, 2003), thanks in part to interest rates that were lower than the nation had seen in about 40 years (Crump *et al.*, 2008). The rate of homeownership peaked at a record 69.2 per cent in 2004, up over 5 per cent from a decade earlier (Bianco, 2008). Additionally, the criteria to be approved for a mortgage was reduced or overlooked, and many people who should not have qualified for mortgages were approved through subprime lending (Been, 2008; Bianco, 2008; Crump *et al.*, 2008; Langley, 2009; Levitin, 2009; Madar *et al.*, 2008; Tatom, 2008; Wachter, 2009). In fact, subprime lending, which had once been a small fraction of the housing financing industry (just $35 billion in 1994),

was now one of the most prominent components of the industry, originating $665 billion in loans in 2005 (Lin *et al.*, 2009).

The mortgage companies were also able to capitalize on the real estate boom (Gerardi & Li, 2010; Levitin, 2009; Tatom, 2008). Banks were bundling their mortgages using the properties as collateral, and leveraging the mortgage payments collected to guarantee securities (Crump *et al.*, 2008; Gerardi & Li, 2010; Levitin, 2009). Credit agency ratings would sign off on the portfolios as a safe investment (Tatom, 2008). These financial arrangements allowed investors to acquire secure diversified portfolios (Langley, 2009; Levitin, 2009), and banks to increase their cash flow and be able to offer new loans.

Between 2005 and early 2006, the real estate market peaked, calling for the need for new approaches to entice borrowers to take out mortgages (Crump *et al.*, 2008; Gerardi & Li, 2010; Langley, 2009; Levitin, 2009). The introduction of balloon payments with teaser rates, adjustable rate mortgages, and interest-only loans came as mortgage companies were packaging subprime loans and selling them off to investors, thus increasing their liquid capital (Crump *et al.*, 2008; Gerardi & Li, 2010; Langley, 2009; Levitin, 2009). New homes were built at record rates and stocks on Wall Street (primarily for homebuilders) soared (Crump *et al.*, 2008; Langley, 2009).

However, late 2006 was the turning point in the real estate market (Crump *et al.*, 2008; Gerardi & Li, 2010; Tatom, 2008). There was a sharp decline in new home sales, the climbing sales prices for new and existing homes froze, and interest rates began to increase (Tatom, 2008). There was also a dramatic increase in the number of defaulted loans, which were less attractive for selling off by the banks to investors (Gerardi & Li, 2010; Langley, 2009; Levitin, 2009). In July and August of 2007, foreclosure activity had increased by 93 per cent and 115 per cent respectively over the same timeframe in the year prior (Bianco, 2008). The mortgage industry bubble burst in early 2007 sending over a million homes into foreclosure that year (Levitin, 2009; Tatom, 2008). The rippling effects of delinquency on payments and foreclosures continued to increase in the following years, reaching 14.01 per cent combined at the end of the first fiscal quarter of 2010 (Mortgage Bankers Association, 2010).

Social Disorganization

Traditionally, theories from a social disorganization perspective have examined crime in general as well as more specific types of illegalities. Theoretically, community disorganization occurs when there is an absence or breakdown in social institutions within the community (Kornhauser, 1978; Sampson *et al.*, 1997; Shaw & McKay, 1942). These institutions, viewed as parts making up the structure of neighborhood, are such elements as families, schools, religious centers, and local governments. When in place, these institutions act as forms of informal social control—maintaining cooperative interactions and lawful behavior among residents. Yet when these stabilizing structures are absent, ineffective, or disrupted by external influences, this leads to increases in criminal activities, delinquency, neighborhood incivility, and/or socially inappropriate behaviors. Also resulting are decreases in cooperation, neighborly concern, and community efficacy (Sampson *et al.*, 1997; Shaw & McKay, 1942). In turn, this becomes a cyclical self-fulfilling prophecy, where the increases in crime and delinquency further disrupt the already disordered community structures, thereby rendering them even more disorganized, ineffectual, and less able (or willing) to repair neighborhood decline. In addition to the

impact that the resulting social disorganization has on crime (e.g., Cui, 2010; Harris, 2011; Hipp, 2010; Immergluck & Smith, 2005, 2006a; Kirk & Hyra, 2012; Pandit, 2011; Teasedale *et al.*, 2010), other social problems such as bullying (Bradshaw *et al.*, 2009), alcohol, drug use, child maltreatment (Freisthler, 2004), fear of crime (Markowitz *et al.*, 2001), and lack of attachment between residents (Lee, 2008; Sampson & Raudenbush, 1999; Sampson *et al.*, 1997; Taylor, 1996) are also possible, if not likely. Given this theoretical link between social disorganization and various social problems, it is likely that the current foreclosure crisis is another social dilemma that is related to community decline and disorder. Also, the relationship between community disorder (resulting from social disorganization and broken windows) and foreclosures may be reciprocal in nature—social disorganization can perpetuate the foreclosure crisis, yet at the same time, the foreclosure crisis could influence disorder within the community.

Social Disorganization and Foreclosure Rates

Sampson & Raudenbush (1999) suggest that the level of social disorganization within a neighborhood, as witnessed with the foreclosure crisis, has a direct impact on the real estate market in that it 'changes the calculus of prospective home buyers, real estate agents, insurance agents, and investors and shapes the perceptions of residents who might be considering moving' (p. 604). For example, instability within a neighborhood resulting from the foreclosure crisis dissuades mortgage lenders from offering new loans out of fear of default (Lauria & Baxter, 1999). At the same time, property valuations within a community also decline as neighboring properties sell at discounted rates (e.g., short sales) (Been, 2008; Immergluck & Smith, 2005; Lee, 2008; Lin *et al.*, 2009; Madar *et al.*, 2008; Pennington-Cross, 2006). This not only affects the immediate neighborhood, but also radiates outwards to other communities in the area (Been, 2008; Lee, 2008; Wilson & Paulsen, 2010). In addition, decreasing property valuations not only cause people to be upside down on their mortgages as they will owe more than the property is worth (Baxter & Lauria, 2000; Pennington-Cross, 2006; Wachter, 2009), but it also increases the denials of mortgage refinancing by owners who are trying to maintain their properties (Bullard, 2009). In addition to an impact on property valuations, increased foreclosures has a broader impact as it also leads to a reduction in the local governments' tax bases (Lee, 2008; Lin *et al.*, 2009; Madar *et al.*, 2008; Wilson & Paulsen, 2010).

Increased social disorganization also decreases the attractiveness of the neighborhood to potential residents. For prospective homebuyers, physical cues of disorder such as broken windows, trash and litter, and unkempt lawns and homes translate into a measure of that particular unit's value (Been, 2008; Bernasco & Luykx, 2003; Pandit, 2011). Physical disorder also provides cues to homebuyers about the problems a community is currently experiencing and that community's ability to maintain order and prevent crime (Pandit, 2011; Sampson & Raudenbush, 1999; Sampson *et al.*, 1997; Wilson & Kelling, 1982; Wilson & Paulsen, 2010). In addition to the physical disorder linked to vacant, foreclosed properties, other owners in the community, including those who are also at risk of foreclosure or those who believe they will not recoup their investment, are less likely to maintain their homes, which further exacerbates the issue of neighborhood decay (Been, 2008; Pennington-Cross, 2006; Wilson & Paulsen, 2010).

For investors, communities ridden by social disorganization have dual opportunities. On one hand, properties exhibiting traits of Wilson & Kelling's (1982) broken windows

hypothesis can typically be purchased for pennies on the dollar, providing a lower cost investment (Been, 2008; Madar *et al.*, 2008; Pennington-Cross, 2006; Wilson & Paulsen, 2010). In some instances, investors who purchase and renovate such units can indirectly increase low socioeconomic status, which leads to an increase in organization and affluent residents (Madar *et al.*, 2008; Van Wilsem *et al.*, 2006). This improvement also can lead to the stabilization of neighborhoods, which can make them more attractive to residents, prospective buyers, and other investors (Van Wilsem *et al.*, 2006). On the other hand, investors may choose to minimize the repairs they carry out in order to maximize their profits (Baxter & Lauria, 2000; Wilson & Paulsen, 2010) or minimize expenditures while they resell the property for a higher price (Been, 2008; Madar *et al.*, 2008). At the same time, however, the process decreases social cohesion by increasing tensions between incoming buyers and existing residents, which perpetuates the disorganization of the community (Sampson *et al.*, 1997; Van Wilsem *et al.*, 2006).

Linking Theoretical Indicators of Social Disorganization with Foreclosures

Disorganization in communities can be attributed to three main factors—concentrated disadvantage, residential (in)stability, and heterogeneity. Indeed, areas with concentrations of low income and less educated residents, coupled with lower value housing stocks, have been found to have increasing social problems that may be unattractive to both prospective buyers and current residents (Wilson & Paulsen, 2010). Metzger (2000) also notes that neighborhoods characterized primarily by low income and highly mobile residents are quicker to decline than neighborhoods with more stable residents. These also are the areas that are most negatively impacted by the foreclosure crisis (Pandit, 2011).

Research further suggests that of these three factors, concentrated disadvantage is the greatest predictor of neighborhood disorder (Morenoff *et al.*, 2001; Sampson, 2004). Concentrated disadvantage, or the close spatial proximity of low-income groups, increases social disorganization, primarily due to a lack of resources needed to regulate the community (Bursik & Webb, 1982; Sampson *et al.*, 1997, 1999; Skogan, 1990; Van Wilsem *et al.*, 2006). This lack of resources perpetuates issues of physical and social disorder, such as broken windows, vandalism, and other signs of neglect (Lee, 2008; Pandit, 2011; Tuthill, 2008; Wilson & Paulsen, 2010). For example, Bursik & Grasmick (1993) posit that a neighborhood where 'the area is becoming characterized by a growing number of signs of disorder and incivility (such as loitering groups of unsupervised teenagers, vandalism, graffiti, abandoned buildings, and public drug and alcohol use)' exhibits reduced informal social control and thus an increase in fear and a decrease in cooperation among residents (p. 101; see also Sampson & Raudenbush, 1999; Sampson *et al.*, 1997; Van Wilsem *et al.*, 2006). This, in turn, interrupts any social networks that have been established and reduces communication, support, and assistance between residents (Berry & Kasarda, 1977; Bursik & Grasmick, 1993; Kornhauser, 1978; Sampson, 2004; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989; Sampson & Raudenbush, 1999).

Further, areas with high levels of concentrated disadvantage also have high levels of population turnover (Pandit, 2011; Shaw & McKay, 1942; Tuthill, 2008). The increasing turnover of population leads to less stability within the neighborhood (Pandit, 2011; Sampson *et al.*, 1997; Tuthill, 2008; Wilson & Paulsen, 2010) as, to quote Wilson & Kelling (1982), 'families move out, unattached adults move in' (p. 31). Residential

instability is caused by a number of sources. On one hand, instability is caused by homeowners who are forced to vacate their homes because they can no longer afford their mortgages and opt for foreclosure (Baxter & Lauria, 2000; Been, 2008; Pandit, 2011). This has a trickle-down effect, whereby the resulting disorder makes other residents want to move out as well (Rountree & Land, 1996; Wilson & Paulsen, 2010), again furthering instability in the neighborhood. In order for neighborhoods to stabilize, Sampson et al. (1997) suggest that *increased* residential homeownership with longer periods of tenure is needed. This will increase collective efficacy and the social control necessary to maintain and stabilize the community (Sampson et al., 1997; Sampson & Raudenbush, 1999).

In addition to homeowners, residential instability also is greatly impacted by renters. In many cases, foreclosed homes are renter occupied (Been, 2008; Bess, 2008; Pandit, 2011). Bess (2008) found that in areas characterized by high rates of foreclosures, at least one out of every four homes was a rental property. Not only do renters have a much higher turnover rate than owners, but this constant flow of new tenants makes it difficult to form a strong neighborhood network (Bess, 2008; Pandit, 2011). Further, in cases where properties that are renter-occupied foreclose, the tenants will face eviction (even if they are current on their rent), which in turn increases the instability within the community (Been, 2008; Bianco, 2008; Madar et al., 2008).

Instability within a community is not solely characterized by the movement of its residents. Broken windows that are left unrepaired are a sign of neighborhood decay and a lack of caring by residents (Wilson & Kelling, 1982). Skogan (1990) also notes that physical disorder in the community 'involves visual signs of negligence and unchecked decay: abandoned or ill-kept buildings, broken streetlights, trash-filled lots, and alleys strewn with garbage' (p. 4). Instability in the neighborhoods, exhibited by broken windows as well as overgrown lawns and abandoned homes that are commonplace in communities plagued by foreclosures, leads to an increase in a variety of social problems and effectively harms a neighborhood (Bradshaw et al., 2009; Freisthler, 2004; Markowitz et al., 2001; Skogan, 1990; Taylor, 1996; Wilson & Kelling, 1982).

Taken together, the presence of one or all of these social disorganization factors has the ability to impact neighborhood cohesion and networks (Lee, 2008; Sampson & Raudenbush, 1999; Sampson et al., 1997). These networks are vital to the success of the community and allow residents to maintain order (Bursik, 1988; Kornhauser, 1978; Sampson et al., 1997; Sampson & Groves, 1989; Sampson & Raudenbush, 1999). Neighborhood cohesion is particularly important because it discerns how well a community can regulate itself (Shaw & McKay, 1942). It also helps to reduce crime and other outcomes in the neighborhood as residents are more invested in the good of the community (Pandit, 2011). The recent foreclosure crisis, however, has shown to adversely affect the ability of a community to regulate itself.

The Present Study

As noted, a number of studies (e.g., Cui, 2010; Harris, 2011; Hipp, 2010; Immergluck & Smith, 2005, 2006a; Kirk & Hyra, 2012; Pandit, 2011; Teasdale et al., 2010) have examined the effects of the foreclosure crisis on crime rates of various cities including Chicago, Pittsburgh, Akron, and Houston. This body of research, however, has two distinct gaps which are the focus of this study. First, this body of research examines the

complex and presumably simultaneous effects of both foreclosures and social disorganization on crime without consideration of the effects either of these two predictors may have on one another. In order to fully understand how they impact crime, one must first know how they impact each other. Second, this body of research has failed to examine an area that is at the height of the foreclosure crisis, such as Florida, which is the setting for at least one-third of all defaulted or foreclosed mortgages (Langley, 2009). In particular, Orange County (Figure 1) was one of the hardest hit counties by foreclosures in 2010 (FloridaRealtors.org, 2011), and of the 19 155 residential real estate transactions that occurred during the fiscal year, approximately 47 per cent were bank-owned, foreclosed sales, and an additional 25 per cent were short sales of homes in pre-foreclosure status (MarketLinx, 2010).

Theoretically, given the impact economic deprivation has on levels of social (dis)organization in communities, characteristics of social disorganization should also be related to real estate transactions such as foreclosures and short sales (those homes sold

Figure 1. Orange County, Florida.

once pre-foreclosure proceedings have commenced but prior to the home being foreclosed). In turn, both types of factors (social disorganization and real estate transactions) should be related to rates of crime and other social problems. It is important, however, to examine these links separately in order to get the full impact of the relationship between the real estate crisis and social disorganization. Given the importance that social disorganization plays in a host of social problems (crime being just one such problem), identifying the factors of social disorganization that impact the housing market, apart from their likely simultaneous influence over crime, is crucial. Specifically, it may be that the current real estate market is related to crime (although it may not), but if it also is influenced social disorganization in general, then the crisis will be more influential and longer lasting than criminologists have originally considered. This study examines the first aspect of these relationships: the linkages between social disorganization and real estate market conditions.

Methodology

Data

This study seeks to examine the impact of factors of social disorganization and real estate characteristics on rates of various types of real estate sales in Orange County, Florida. Specifically, the research questions are *what social disorganization factors and which characteristics of real estate sales impact the proportion of sales—foreclosures, short sales, and traditional sales—in communities?* The unit of analysis for the present study is census tracts. Census tracts are approximately the size of neighborhoods, and research has found that neighborhood characteristics influence the crime levels within tracts (Bursik & Grasmick, 1993).

Two sources of data are used in the first portion of this study. The first source of data is real estate sales transactions records for the year 2010. These data were downloaded from the Multiple Listing Services (MLS) database (MarketLinx, 2010). The MLS database is a centralized location for real estate agents to access listings, market properties, and record any sales transactions. In total, 19 155 records were downloaded, representing the number of realtor-assisted transactions in Orange County, Florida in 2010. Pertinent information recorded in MLS includes the full address of the property sold, specifications of the home (e.g., square footage, year built, and number of bedrooms and bathrooms), and how long the property was on the market between the listing and sale dates. Financial information in the form of both list and final sale price of the property as well as the type of financing used to purchase the home (e.g., conventional, private, or Fair Housing Administration/Veterans Administration (FHA/VA) mortgage, all cash, or combination financing) is also included. Finally, the type of real estate transaction (traditional sale, short sale, or REO sale) is also available in the database.

The second source of data included in the study is demographic and community data by census tract. These data were compiled using software from the Federal Financial Institutions Examination Council (FFIEC).[1] Data in the program come directly from the US Census Bureau (FFIEC, 2011). Information relative to indicators of social disorganization from three categories (income, housing, and demographic data) was retrieved. These data are available both at the county level and then further broken down by census tract. Although the data are quick to download, one drawback of the program is

that the changes in census tracts had not been updated based on the boundary changes in 2010 from 2000. Therefore, for tracts that were split into two new tracts, census data for the original tract were used for both of the new tracts. For a new tract created from the merging of two pre-existing tracts, the data were averaged and the mean for each variable was utilized as the value for the newly formed tract.

Measures

Dependent variables. Three dependent variables are used this present study. These variables are the proportions of foreclosed homes sold, of homes short sold, and homes sold in the traditional manner (regular sales). Based on the variation between tracts in Orange County in the number of sales as well as the number of properties available for sale (in both metropolitan and rural areas of the county), rates of sales types by tract are used rather than raw counts to allow for comparison between the tracts. Each continuous variable is calculated by taking the total number of transactions for that type of sale and dividing by the total number of real estate transactions that occurred in the calendar year. Each of these variables is then entered into separate models against the same set of independent variables for analysis.

Explanatory variables. There are several explanatory measures used in this analysis. The first are factors created from the census data using principal component analysis. A number of measures identified in previous research (e.g., Morenoff *et al.*, 2001; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989; Sampson & Raudenbush, 1999), such as educational attainment, poverty, residential instability, and race and ethnicity were loaded into the analysis. The results of the factor analysis are presented in Table 1.

The first factor, Economic Hardship (also known as concentrated disadvantage), illustrates that, consistent with prior research and theories of social disorganization, the poverty-related variables utilized in the study are highly correlated. This first factor shows that the majority of poverty variables—families living below the poverty line,

Table 1. Varimax rotated (with Kaiser normalization) factor loadings in 205 Orange County Census Tracts[a]

Variable	Factor loading
Economic hardship (concentrated disadvantage)	
Unemployed	0.47
Below poverty line	0.94
On public assistance	0.89
Female-headed households with children below poverty line	0.94
Social capital	
Males with education less than BA/BS	0.94
Females with education less than BA/BS	0.94
Hispanic	0.63
Minority	0.81
Residential instability	
Total units vacant	0.79
Total units renter occupied	0.68
Foreign-born children	− 0.46

[a] Data presented are from the 2010 census.

female headed households with children below the poverty line, and households receiving public assistance—have high factor loadings (>0.85). The first variable in the factor, per cent unemployed, has a lower factor loading (0.47), although this is still considered moderately strong.

The second factor, Social Capital, represents a merger of components from previous research that utilized measures of immigrant concentration (e.g., Morenoff *et al.*, 2001; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989; Sampson & Raudenbush, 1999) and low socioeconomic status (e.g., Kornhauser, 1978; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989).[2] This factor includes the percentage of the population that is Hispanic and the percentage of the population that is minority. Educational attainment is measured by the proportions of males and females with education below a bachelor's degree. Rather than economic hardship, this factor measures potential; or, more specifically, residents having the social capital to improve their circumstances. This linkage is parallel, conceptually and theoretically, to previous research (e.g., Kornhauser, 1978; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989). Further, it is comparable, statistically, to previous research as the majority of the variables for social capital also have high (>0.80) loadings. Only the proportion of the population that is Hispanic loads at a moderately high (0.63) score. It is important to note, however, that the variables included in this factor represent characteristics of people found to have lower levels of social capital. Social capital in its more abstract form (e.g., individual-level interactions) is difficult to measure directly, particularly with macro-level data.

Unlike previous research (e.g., Morenoff *et al.*, 2001; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989; Sampson & Raudenbush, 1999) that examines residential stability that can mitigate social disorganization, the present study incorporates a factor for Residential Instability that is posited to result from the bursting of the real estate bubble and subsequent foreclosure crisis. This factor includes two variables with high factor loadings (>0.65): percentage of total units vacant and the percentage of renter-occupied units. A third variable, the percentage of foreign-born children, also loaded onto this factor with a moderate score (-0.46).[3] Table 1 highlights the measures in each factor and their loadings.

In addition to the factors created, several other explanatory measures are used in the analysis. From the census data, the percentage of males within the total county population is incorporated. As a measure of affluence consistent with previous research (Morenoff *et al.*, 2001), the proportion of households with an annual income of \$50 000 or greater is also included. The remaining independent variables are drawn from the real estate data collected from MLS. These include the proportion of the total sales that occurred in each tract, the average age of the unit sold (computed as the year of sale minus the year of build), the average number of days the property was on the market, and the proportion of sales that were financed with either a FHA or VA mortgage (combined into a single measure). FHA loans are government-sponsored loans for first-time homebuyers, and VA loans are a type of financing geared toward buyers with previous military service.

Data Analysis Strategy

In order to provide an overall understanding of the real estate market in Orange County, descriptive statistics are the first step of the analysis process. Specifically, measures of central tendency are used to describe both the property and financial characteristics (Tables 2 and 3) of the full data-set ($N = 19\,155$). The second phase of the analysis utilizes

Table 2. Descriptive statistics of property characteristics for 2010 Orange County Sales Transactions ($N = 19\,155$)[a]

	N	Per cent
Style of property		
Single family home	11 861	61.9
Condominium	5426	28.3
Townhome	1437	7.5
Other	431	2.3
Number of bedrooms		
Studio/0 bedroom	15	0.1
One bedroom	1482	7.7
Two bedrooms	4145	21.6
Three bedrooms	7801	40.7
Four bedrooms	4538	23.7
Five or more bedrooms	1174	6.2
Average age of unit	19.8 years	–

[a] Percentages may not total to 100% due to rounding error.

Ordinary Least Squares (OLS) regression. This technique is utilized because the variables are continuous and are assumed to vary in a linear fashion. It is also a technique well suited to examine cross-sectionally the linkages between indicators of social disorganization and foreclosures (and other real estate transactions) across the census tracts.

Analysis and Findings

In 2010, 19 155 real estate transactions occurred in Orange County, Florida totaling nearly $3 billion in business. Table 2 depicts the property characteristics for these transactions.

Table 3. Descriptive statistics of financial characteristics for 2010 Orange County sales transactions ($N = 19\,155$)[a]

	N	Per cent
Type of sales transaction		
Regular real estate sale	5523	28.8
REO/Foreclosed	8991	46.9
Short sale	4641	24.2
Type of financing		
All cash	10 242	53.5
Conventional mortgage	3626	18.9
FHA/VA loan	4863	25.4
Private mortgage	69	0.4
Combination financing	60	0.3
Other financing	295	1.5
Sales prices		
Minimum sale price	$3347	–
Maximum sale price	$7 250 000	–
Mean sale price	$145 870	–
Total sales for county	$2 794 148 434	–
Average ADOM	74 Days	–

[a] Percentages may not total to 100% due to rounding error.

The largest proportion of transactions (61.9 per cent) involved the sale of single-family residences. Properties ranged between one and eight bedrooms, although those with three bedrooms were the most commonly sold (40.7 per cent) with a mean size of 1722 square feet. The average age of the property sold was approximately 19.8 years.

Table 3 describes the financial aspects of the real estate transactions. Sales figures in Orange County ranged from $3347.00 to a staggering $7.25 million. On average, however, the typical sales price was around $145 000. Interesting, the largest proportion of financing (53.5 per cent) came from all-cash buyers, while conventional mortgages only accounted for 18.9 per cent of the transactions. However, this is not entirely surprising when examining the types of sales that occurred. In total, nearly half of the real estate transactions (46.9 per cent) involved the sale of a REO (bank owned) property, which are typically purchased by investors in quick, all-cash transactions.

Such accounts are helpful in providing the context for the multivariate analysis. Table 4 presents the results of OLS regressions over three separate models. Model 1 represents the results whereby the independent variables measuring social disorganization and real estate characteristics were regressed on the proportion of real estate sales in a census tract that were foreclosures. In this model, five out of the eight predictors had significant effects on the rate of foreclosure sales, specifically, the factor of Social Capital, rates of FHA or VA mortgages, average number of days residences sat on the market, the percentage of the population that are males, and the proportion of the affluent households within each tract. To elaborate, as negative Social Capital increased in communities, there was a corresponding increase in the sales of area foreclosures ($b = 2.81$). Further, with each percentage increase in the proportion of males in a census tract, there was a 0.77 unit increase in foreclosures. Conversely, the average days on the market, the rates of FHA/VA mortgages, and the proportion of affluent households in the community were negatively associated with foreclosures. In particular, as the amount of FHA/VA mortgages increased, the number of foreclosure sales decreased ($b = -0.25$). Also, with every day increase in the average number of days on the market, an area experienced a 0.24 unit decrease in foreclosure sales. The affluence measure was also inversely and significantly related to foreclosure sales. As the level of affluence rises within a community, the number of foreclosure sales in that area decreases ($b = -14.77$).

Model 2 represents the regression results for the analysis of the effects of social disorganization and real estate characteristics on an area's proportion of sold properties that were short sales. Short sales include those properties sold in pre-foreclosure or foreclosure status, but prior to the completion of the foreclosure process. In this model, social disorganization theory is not a particularly good explanation, as only the average age of the unit sold had a significant effect. Specifically, with each year increase in the average age of the units sold in a neighborhood, there was a 0.14 unit decrease in the proportion of real estate sales that were short sales.

The final model, Model 3, represents the regression results for assessing the influence of social disorganization and real estate characteristics on the proportion of transactions that were sold in the traditional manner. In this model, the variables that are significant are nearly identical to Model 1 for foreclosures (and reflect both social disorganization and real estate characteristics), but the direction of influence is the opposite as Model 1. Here, the factor of Social Capital is again significant, though in this model the relationship is negative: as areas' negative social capital increases, the proportion of real estate sales that are traditional decreases by 2.58 units.

Table 4. OLS regression results for selected predictors on foreclosures, short sales, and regular real estate sales

	Model 1 (Proportion of sales that are foreclosures)	Model 2 (Proportion of sales that are short sales)	Model 3 (Proportion of sales that are regular sales)
Economic hardship	2.137/1.198 (0.130)	−0.100/0.633 (−0.012)	−1.032/1.291 (−0.060)
Social capital	2.811/0.855** (0.171)	−0.015/0.633 (−0.012)	−2.579/0.922** (−0.149)
Residential instability	−0.814/0.820 (−0.050)	−0.239/0.573 (−0.029)	1.100/0.884 (0.064)
Proportion of OC sales in tract	−2.104/1.874 (−0.065)	2.084/1.307 (0.129)	−0.159/2.019 (−0.005)
Average age of unit sold	−0.093/0.074 (−0.077)	−0.135/0.051** (−0.222)	0.244/0.079** (0.191)
FHA/VA mortgages	−0.249/0.058*** (−0.235)	0.062/0.040 (0.117)	0.181/0.062** (0.162)
Average days on market	−0.243/0.027*** (−0.504)	−0.003/0.018 (−0.012)	0.236/0.029*** (0.465)
Population percentage—males	0.766/0.288** (0.132)	−0.213/0.201 (−0.073)	−0.556/0.310 (−0.091)
Proportion of affluent households	−14.765/7.206* (−0.155)	0.062/0.040 (0.117)	23.985/7.766** (0.240)
(Constant)	42.457**	35.957**	20.473
Global F	26.565**	3.349**	24.177**
SEE	11.278	7.888	12.153
Adjusted R^2	0.530	0.084	0.506

Notes: Results are presented as unstandardized B coefficient/standard error with standardized Beta in parentheses.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

There also are several predictors measuring real estate characteristics that have positive significant effects on the proportion of traditional real estate transactions. The first is the average age of the unit sold. Here, with each increase in the average age of units sold in an area, there is a 0.24 unit increase in the proportion of real estate sales that are traditional. Continuing, census tracts with greater proportions of sales financed through FHA or VA loans also had greater proportions of traditional sales ($b = 0.18$). The average number of days on market was also significant in relation to the proportion of traditional sales. Here, with each increase in the number of days units were on the market before sale, there was a corresponding 0.24 unit increase in the proportion of sales in that area which were traditional transactions. Finally, households with annual incomes of \$50 000 or greater were also positively and significantly related to traditional real estate transactions. As affluence in a community increases, so too does the number of regular real estate sales ($b = 23.99$).

These findings suggest that communities with greater proportions of traditional real estate sales also have older homes, slower sales, more affluent residents, and less social disorganization. Conversely, communities with greater proportions of real estate sales that are foreclosures also have quicker sales, less affluent residents moving into the community, and greater amounts of social disorganization. This is very supportive of the thesis that social disorganization and troubled real estate markets are related at the community level.

Discussion

Though a considerable body of literature (e.g., Bursik & Grasmick, 1993; Bursik & Webb, 1982; Shaw & McKay, 1942; Sampson, 2004; Sampson *et al.*, 1997, 1999; Sampson & Groves, 1989; Sampson & Raudenbush, 1999; Skogan, 1990; Wilson & Kelling, 1982) exists that examines social disorganization and broken windows within residential communities, these studies often focus on two potential correlations—poverty and crime. The present study expands on this literature by examining a third potential correlation—real estate transactions. Examining any relationships between social disorganization, broken windows, and real estate transactions, particularly foreclosures, is especially important given the impact of the foreclosure crisis not only on the housing market, but on related industries such as banking and construction. Further, understanding the relationships between social disorganization, broken windows, and the housing market also can provide greater insight as to the impact of these measures, both independently and collectively, on crime and poverty.

By looking at Orange County, Florida, one of the areas most devastated by the foreclosure crisis, a number of interesting and important findings emerge that can illuminate the impact of community level disorder on the housing market or vice versa. In first examining the social disorganization indicators, Social Capital is a significant influence over the proportion of sales involving both foreclosures and traditional real estate transactions. In areas where negative social capital is more prevalent, real estate transactions that are sales of foreclosed and bank-owned homes also are more prevalent. In areas where social capital is stronger, the proportion of traditional real estate sales is greater. This suggests that social organization is an important element in the real estate market, one that can have positive or negative impact on the types of home sales that occur in a community. However, another potential explanation for this finding is that the relative

disorganization found within census tracts in Orange County, Florida, rather than being clear indicators of community strength and efficacy, is more indicative of the racial bias that exists in the real estate market. During the housing boom, high risk financing, such as subprime and balloon mortgages, was concentrated in low-income and minority neighborhoods in an effort to stimulate homeownership in disadvantaged neighborhoods (Immergluck & Smith, 2006b). When the real estate bubble burst, these areas saw disproportionately higher rates of foreclosures than areas with greater social capital. In Chicago, for example, between the years 1995 and 2002, the *total* foreclosure rate increased by 238 per cent (Immergluck & Smith, 2006b). Conversely, a 544 per cent increase in foreclosures was found in tracts with high (≥ 90 per cent) minority concentrations within the city (Immergluck & Smith, 2006b).

In this study, negative social capital includes those measures of low socioeconomic status and high minority concentration. In other words, communities with lower social capital are those with residents who have fewer resources to improve their situations (e.g., having a lower education attainment does not bode well for getting a [better] job and making more money). Additionally, communities exhibiting lower levels of social capital often lack the resources (or the potential to gain the resources) available to maintain their communities; whether it be eliminating signs of physical disorder or reducing the presence of other social problems such as drug use, public incivilities, and crime. Further, this lack of community capital can also create a disruption in community networks, cooperation, and social interactions, which can exacerbate the disorder in an already struggling neighborhood. Taken together, the atmosphere and physical condition of a community with low social capital can make homes in the area, as well as the community itself, unattractive to potential buyers.

The impact of the affluent households' indicator further supports this idea. Here, findings indicated the greater the proportion of households that are considered affluent (annual household incomes of $50 000 or greater), the greater the proportion of traditional real estate sales occur in that community. In addition, foreclosure sales decrease as the proportion of affluent households present increases. There are two ways in which this has an impact on the real estate market. First, those buyers who are looking to purchase a home, rather than an investment, typically favor newer properties (an indicator that is also positively and significantly related to an increase in traditional sales) that are in better condition. These properties are often 'move-in ready' and require little work or expense on the part of the buyer. An influx of these types of buyers into a community helps to increase social ties between residents, who have a greater stake in maintaining the inviting atmosphere and physical order present in the community. This, in turn, increases social interaction and cooperation and decreases social disorganization.

Conversely, areas that have higher proportions of foreclosure sales lack affluence as well as the social capital to acquire some. This was likely exacerbated by the subprime lending which took place before the real estate bubble burst. In these instances, people who should not have qualified for loans were approved for mortgages. For some, the rising mortgage payments stemming from balloon mortgages became too great, and ultimately borrowers could not meet their financial obligations. Since banks were no longer willing to renegotiate the terms of such loans, many people defaulted on their mortgages, their properties were foreclosed on, and the banks then resold the properties for a fraction of what was originally owed. In other instances, rising maintenance and expenses for homes became too great for some individuals, and they ultimately elected to walk away from the

properties or let them fall into disrepair rather than sinking more money into investments on which they were upside down.

In an effort to re-stimulate the housing market, the government re-introduced Fair Housing Administration (FHA) loans to help borrowers affected by subprime lending. However, the FHA loan qualification criteria are fairly stringent and eliminate many of the people living in areas with high concentrations of foreclosures. To qualify for a FHA loan, a borrower must have two years of steady employment with steady or increasing income, a minimum credit score of 620, and must have perfect credit following any bankruptcies or foreclosures, which must be at least two and three years old, respectively (FHA Home Loans, 2011). FHA loan requirements also impose limits on the amount a person's monthly mortgage payment should be (30 per cent of gross income) and require, in most instances, a 5 per cent down payment (FHA Home Loans, 2011). These requirements are reflected in the results of the present study. In census tracts where transactions included an increasing number of sales utilizing FHA financing, there are a greater proportion of sales that were traditional transactions. Conversely, areas characterized by an increasing number of foreclosure sales experience fewer transactions utilizing FHA financing.

Examining the length of time, or average days on market (ADOM), in which a property sits between listing and sale also can provide interesting insight. In areas with higher proportions of foreclosures, the ADOM is typically lower than in areas with higher proportions of traditional sales. Generally, this can be attributed to the price point of the property. As noted, for properties that are in foreclosure status, the banks are typically selling them for pennies on the dollar so that they can make back some of what they lost on the defaulted mortgages while not incurring excessive new costs of maintaining the property. For instance, in one condominium community in Orange County, a two-bedroom unit sold through a traditional sale was sold for $32 000 to $42 000 (average price for the same floor plan was $37 000). In comparison, an identical unit sold through an REO sale was sold for between $7350 and $31 500 (average price for the same floor plan was $22 747).

However, this is not solely indicative of communities with lower price points. In a different community in an 'upper middle class' area of town, the average price point of a two-bedroom townhome in REO status was approximately $82 000. The average ADOM for these homes was just 16 days from list to sale. By comparison, those same units sold through traditional transactions had an average ADOM of 72 days with a price point of nearly $10 000 higher. This same finding is echoed in many of the communities in Orange County. However, in census tracts with a higher ADOM, this typically occurred in tracts with higher proportions of traditional sales, which actually experienced less social disorganization. Lower ADOM, therefore leads to increased residential instability within the communities, which in turn provides a greater opportunity for disruption in the community's social networks, which leads to increased likelihood of other social problems moving in.

To understand why foreclosed properties are essentially 'flipped' faster, consideration should be given to the types of financing that occurs in these transactions. Typically, REO transactions are all-cash deals (68 per cent) and are able to be pushed through faster. However, in areas with traditional sales, there are typically less all-cash transactions (32 per cent) than in areas with higher proportions of short sales or REOs. Instead, there is a heavier push not only for conventional mortgages (29 per cent), but even more so for the new FHA and VA mortgages (36 per cent). By comparison, FHA and VA mortgages

account for less than 18 per cent of REO sales. This confirms our finding that census tracts with a higher proportion of traditional sales will also have a higher proportion of such type of loans.

One additional predictor of foreclosures worth noting is the impact of the proportion of males within the community. The results of the present study indicate that the number of foreclosure sales in a community is associated with an increase in the proportion of males in that community. Theoretically, males are more likely to contribute to social disorganization in neighborhoods (than females) because they are the ones who are more likely to be engaging in the behaviors that cause social disorganization (e.g., crime, neglect, drugs, and street incivilities). Now, foreclosures come into play as 'behavior' associated with social disorganization. Here, it is posited that males are more likely to be associated with foreclosures because their names are more likely to be on the mortgages. Also, men have been hurt by the recession more than women (Hartenstein, 2010; Hoynes *et al.*, 2012; Leonhardt, 2009; Miller, 2011; Rampell, 2009). Since men have been in more traditional jobs (such as manufacturing and banking), they were the ones getting laid off when companies began to downsize. Women, though still affected, have been less hurt by these economic patterns because they are working in less traditional and cyclical workplaces, such as smaller companies, owning their own companies, and working in newer industries that were less affected (Hartenstein, 2010; Hoynes *et al.*, 2012; Miller, 2011; Rampell, 2009).

Another consideration these findings give rise to is why social disorganization is apparently related to foreclosures, but not so much with short sales. There may be several reasons for this difference in association. First, short sales make up a small proportion (25 per cent of transactions). They also represent a sort of last-ditch effort for people to sell their homes before they hit foreclosure status. Rarely are repairs done—the properties are usually sold as they are (basically if people had the money to be making repairs, they would have paid their mortgage and not ended up in pre-foreclosure in the first place). Given that this type of situation is particularly likely to be related to the recent floundering economy, it may be that short sales can happen anywhere. There are just as many white, middle-class people who are recently unable to make their mortgage payments (and are trying to fend off foreclosure) as residents in socially disorganized communities. In this way, it might be that a similar analysis done during an economically stable time would yield different results and show that short sales also were related to social disorganization. Nevertheless, more information and further analysis would be needed to confirm this.

Combining all of these considerations, a clearer understanding of the relationship between the real estate foreclosure crisis and social disorganization is achieved. Many foreclosed houses fall into disrepair, yards are unkempt, and units may be left vacant for extended periods of time. Flipping foreclosed homes quickly can result in high residential turnover, which can impede interactions and attachment between neighbors. Selling homes for much less than what they may be valued impacts the economic worth of other homes in the neighborhood, which in turn is likely associated with the social capital of incoming neighborhood residents. All of these circumstances are factors highlighted by social disorganization theorists as important in the relationship between neighborhood organization and the presence of social problems.

The present study, while contributing to the growing body of literature on social disorganization, is not without its limitations. First, the present study relies on real estate data collected from the MLS database. While utilizing the MLS system provides

potentially richer data for analysis, it relies on a self-reporting system of the realtors. Similar to self-reported crime surveys, the data provided to the MLS may present issues of validity if the realtors are not vigilant in reporting their transactions on time.

Further, this research focuses on a single county at a single point in time by using cross-sectional data, aggregated for the year. As noted at the onset of this paper, the relationship between social disorganization and the foreclosure crisis, barring other outcomes (e.g., social problems, crime, etc.), is both complex and highly reciprocal. While social disorganization existed before the height of the housing crisis, it is reasonable to conclude that it was exacerbated by the bursting of the real estate bubble in 2007. Therefore, the instability created within the real estate market during the housing crisis could perpetuate or even heighten the level of social disorganization within the community. It is also possible that neighborhoods that have indicators of social disorganization are the ones that lead to higher instability in the housing market. Unfortunately, cross-sectional studies cannot pinpoint causality. To fully understand the effects of social disorganization and housing market instability on one another as well as which came first, analyses should be replicated using longitudinal time-series data with fixed effects estimation, as OLS regression is not suited for capturing causal effects. This technique will also allow researchers to examine the changes both before and after the housing market crash. Future research would also benefit from replicating this study, both using cross-sectional and longitudinal MLS data, in similarly composed cities to draw additional comparisons and glean a fuller understanding of the impact of the housing crisis on the nation, rather than one county in Florida.

Though limited, the results of this study also leave consideration for policy moving forward. As the results indicate, areas characterized by an increase in regular sales also exhibit less social disorganization, and welcome homebuyers with greater levels of affluence. Together, this has helped stabilize these particular communities, though future research should examine outcomes, such as crime, that result from the relationship between real estate and social disorganization. The use of FHA loans has also been instrumental in helping to increase homeownership, thereby also increasing social cohesion and residential stability. Policy makers should consider these findings with respect toward the need to stabilize areas that are hardest hit by foreclosures, which also exhibit greater social disorganization.

One such consideration may be tax breaks or incentives to borrowers for purchasing properties in these communities and living in them. Another consideration may be to alter the criteria for properties that qualify for FHA financing so that properties in these communities are more attractive to homebuyers and will entice owners, rather than investors, to purchase in these communities. Though the FHA does now offer the 203(k) loan program, which allows buyers qualifying for an FHA loan to add an additional 20 per cent to the home price for rehabilitative maintenance to the property, this service is underemphasized. Yet at the same time, such a program can be integral for helping to stabilize areas which are characterized by physical disorder, such as those in socially disorganized, foreclosure heavy areas.

Though the housing market has begun to rebound, it is far from flourishing as it was a decade ago. As such, researchers should continue to examine the impact of social disorganization and other community level phenomenon on the housing market. In addition, researchers should also focus on the effect that the foreclosure crisis has on communities. Gaining a better understanding of this relationship may provide valuable insight that could help the real estate market and communities re-stabilize.

Notes

[1] The FFIEC program used to compile census data is available for download at http://www.ffiec.gov/hmda/censusproducts.htm.

[2] While traditional indicators of immigrant concentration such as the proportion of Spanish speaking households were originally included in the factor analysis, it was not included in the final factors due to its poor fit. This departure from previous research is most likely attributed to the study's location, as there is a considerable portion of the population of Orange County Florida are native Latinos and Spanish speakers (Orange County has a large population of Puerto Ricans).

[3] Although this factor is somewhat different from previous research (Sampson *et al.*, 1999), the individual measures loading best onto this factor clearly indicate residential instability.

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