NEIGHBORHOOD CHANGE

Leveraging research to advance community revitalization

SUPPLEMENT: WHAT DOES THE RESEARCH TELL US?

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Urban neighborhoods, how they work and how they change, have been a focus of research, urban policy and on-the-ground practice in the United States for a hundred years or more. During that period, our understanding of what neighborhoods are and how they change over time has steadily evolved. Yet our understanding of those questions is still incomplete, and our ability to apply what we know on the ground, even more so. Our need to understand neighborhood change, however, has never been greater, as we see our cities changing in dramatic and unforeseen ways. Just in the past decade or so, many disinvested urban areas have turned into thriving communities, while many once-solid neighborhoods that somehow survived the depredations of the 1960s and 1970s have been destabilized and begun to deteriorate. These changes have often caught public officials, community activists and residents by surprise.

This paper is a companion to the Research and Policy Brief "Neighborhood Change: Leveraging Research to Advance Community Revitalization" published late in 2015 by the Vacant Property Research Network. Its purpose is to provide interested practitioners with the opportunity to dig more deeply into the research on neighborhood change, by providing a more detailed description of the research, and by citing a larger number of studies than covered in the brief. At the same time, a brief disclaimer is in order. The research on this subject is vast, encompassing hundreds of separate studies and analyses, and a brief like this can only hope to reference a small part of it. In the course of preparing this brief, some studies have been left out... Similarly, it is inevitable that in trying to summarize so many different studies, some may have been mischaracterized or oversimplified.

The first part of the paper covers the effect of different ***factors***, in the sense of things that happen to neighborhoods, such changes in homeownership rates or increases in crime; while the second covers the effect of different ***intervention****s*, in the sense of specific steps taken by local government, community development corporations (CDCs) or others to change a neighborhood, such as demolishing vacant houses or building affordable housing developments.

RESEARCH REFERENCES

This brief follows the standard convention used in academic publishing that when a book or article is referred to, the citation appears as (author, year) referring to the entry in the bibliography at the end of the brief. When a direct quotation from a cited article appears, the page number appears after the quotation.

1 What Factors and Interventions Affect Neighborhood Change?

One of the most basic questions researchers have asked about neighborhoods is what factors are associated with change, whether positive or negative, and to what extent, and with stability. Since the number of different factors that can potentially influence neighborhood change is vast, it is not surprising that over recent years many studies have appeared, looking at a great variety of specific factors. As mentioned earlier, researchers have looked at both *factors*, which are changes that exist independent of deliberate strategies, such as changes in poverty or crime rates; and *interventions*, which are products of intentional public decisions or investments, such as housing rehabilitation or demolition. This section will look at the former, while the next section will look at the effect of interventions on neighborhoods.

Given the long list of separate factors that exist, I have classified them by category, as shown in Table 1.

Table 1: Research into individual factors associated with neighborhood change

1.1 SOCIAL AND ECONOMIC FACTORS	1.2 PROPERTY-RELATED FACTOR	1.3 EXTERNAL FACTORS
1.1.1 Mobility and stability 1.1.2 Crime and disorder 1.1.3 Poverty 1.1.4 Social capital, collective efficacy and confidence	1.2.1 Homeownership 1.2.2 Vacant properties 1.2.3 Foreclosure 1.2.4 Tax delinquency	1.3.1 Exogenous factors generally 1.3.2 Quality of life 1.3.3 Location 1.3.4 Employment opportunity

What complicates any evaluation of this research is the need to recognize that *neighborhood change is multidimensional.* Many different factors, all working at the same time, affect neighborhoods, and they interact with each other in ways that are complex and hard to predict. Indeed, much of the research is not so much about neighborhood change *as such*, as about the way certain factors affect *conditions that are relevant to neighborhood change.* Two important examples are the body of research that looks at how vacant properties affect the value of the properties around them, or the literature on the social effects of homeownership. For a further discussion of these issues, readers are encouraged to read the companion Neighborhood Change Translation Brief or the paper titled *What Drives Neighborhood Trajectories In Legacy Cities? Understanding the Dynamics of Change*, available on the Lincoln Institute of Land Policy website.

1.1 Social and Economic Factors

Changes in the social and economic condition of the people who live in a neighborhood or changes in their behavior are among the most powerful forces driving neighborhood change. This can result from changes in the conditions of the population already living in the neighborhood, or from changes in the population, as some people move out and others move in, or some combination of the two. It is important to distinguish between the two, because changes resulting from one may have very different implications for practitioners than changes resulting from the other. For example, if a neighborhood is becoming poorer, is it because the same residents are becoming poorer, because of loss of jobs or some other factor; or is it because of an exodus of middle-class families and in-migration of poor families?

1.1.1 Mobility and Stability

Weissbourd, Bodini and He (2009) write that "mobility is the primary mechanism of neighborhood change. Who a neighborhood retains and attracts reflects and defines the status, direction and nature of change in the neighborhood" (p57). Mobility, in this sense, is the means by which market demand for the neighborhood is made manifest.

Mobility, in the sense of the pace of turnover, can in itself have an effect on neighborhood vitality. Coulton, Theodos and Turner (2009) found that what they termed 'residential churning' or high levels of turnover can have a negative effect on neighborhoods, as well as on the families involved. High levels of residential instability are associated with weakening of neighborhood social controls, reducing collective efficacy and potentially increasing crime levels (Sampson Raudenbush and Earls 1997). Conversely, residential stability has been found to have strong positive associations with many family outcomes that are likely to lead to positive neighborhood effects, such as parenting, child educational outcomes (Green and White 1997, Harkness and Newman 2003, and others) and civic participation (Cox 1982, DiPasquale and Glaeser 1998).

Much of the research that finds benefits to stability has focused on homeownership, and does not explicitly distinguish between homeownership as a form of tenure and stability as such. The relationship between the two, however, is extremely close. While in theory it might be possible to obtain the benefits of stability without homeownership, that is unlikely to take place for many reasons (see Section 1.2.1.1). For that reason, research on mobility supports claims for the importance of homeownership in neighborhood stabilization.

1.1.2 Crime and Disorder

Crime has a powerful impact on neighborhood change, and the relationship between the two has been studied closely by scholars for many decades. Increases in crime foster out-migration, increased poverty concentration (because of the selective out-migration of those with more ability to do so), and other measures of neighborhood instability (Kirk and Laub 2010, Hipp

2013), while Galster (2007) focuses on some of the mechanisms by which crime fosters instability. As we discuss elsewhere, there are strong relationships between crime and increased mobility, crime and foreclosure, and crime and vacant properties. The level of crime in a neighborhood is also strongly affected by the neighborhood's level of *collective efficacy*, as discussed in Section 1.1.3.

Violent crime appears to have a stronger and more lasting effect on increasing concentrated disadvantage in neighborhoods than property crime (Hipp 2013), while other research has found particularly strong effects from drug-related crime (Pandey and Coulton 1994).

Disorder, meaning both visible social disorder (public drinking, prostitution, vandalism) and physical disorder (graffiti, trash in streets, abandoned buildings, broken streetlights) is likely to have negative neighborhood effects equivalent to those associated with more formally-defined criminal activity (Skogan 1990). This is strongly supported by Lagrange, Ferraro and Supancic (1992), who found that 'incivilities,' which include both disorderly physical surroundings and disruptive social behavior, had strong effects on people's fear of crime, independent of the level of actual violent crime. Fear of crime, in turn, strongly drives people's decisions about living and investing in a neighborhood. Similarly, Seo and von Rabenau (2011), in a study of a Columbus Ohio neighborhood, found that visible physical disorder, such as graffiti, trash and dilapidated public areas, dramatically reduced property values. Varady (1986) found that living in a neighborhood with poorly maintained streets, sidewalks and curbs increased pessimism about the neighborhood, which in turn influenced residents' decisions of whether to remain in, or leave the neighborhood.

It is likely that evidence of disorder, whether physical or social, is seen as reflecting a breakdown in social control, affecting residents' perception of both current conditions and future prospects of their neighborhood. From the standpoint of building or preserving neighborhood vitality, addressing both physical and social disorder in their many manifestations may be as significant a step as addressing major crime.

1.1.3 Social Capital, Collective Efficacy and Confidence

Social capital is widely defined as a combination of civic engagement and trust, or the extent to which people feel mutual obligations to one another (Putnam 1993). Using a definition of social capital that combines sociocultural milieu and institutional infrastructure, Temkin and Rohe (1998) developed and tested a model to explain the relationship between changes in social capital and neighborhood change (Figure 1). By studying change in Pittsburgh neighborhoods between 1980 and 1990, Temkin and Rohe found that "neighborhoods with relatively large amounts of social capital are less likely to decline when other factors remain constant (p82)." This is an important finding, and it would be good to see more research to support (or challenge) it, as well as refine it, in order to understand which features of the bundle of behaviors associated with social capital contribute most to neighborhood stability.

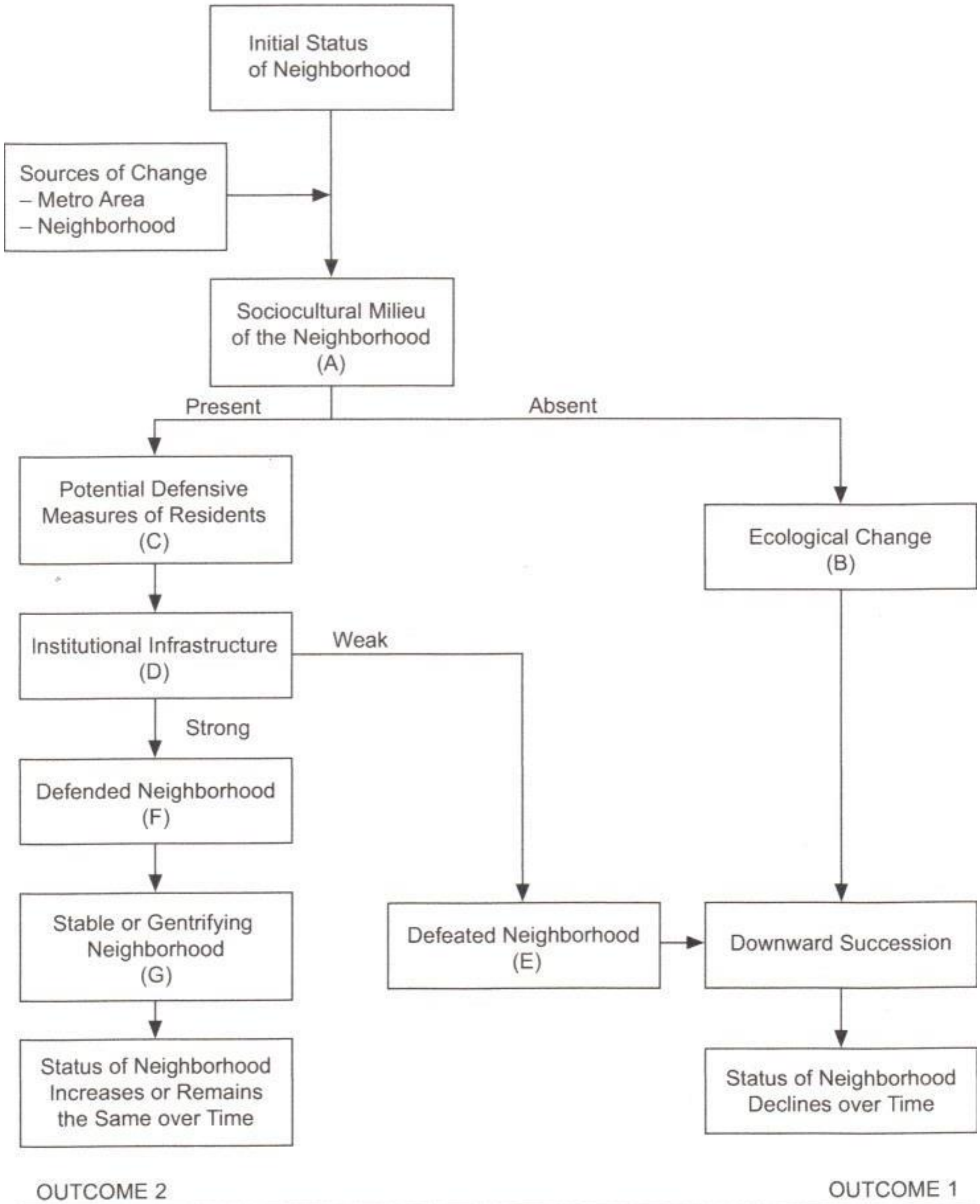

Figure 1: A Social Capital Model of Neighborhood Change (Temkin and Rohe 1998)

A concept that is related to social capital in its underlying premises, but that is a more focused way of linking social dynamics to neighborhood change, is the concept of *collective efficacy* developed over the past decades by Robert Sampson and his colleagues, which Sampson defines as “social cohesion combined with shared expectations for social control” (2012, p27). This concept echoes a much earlier formulation by Jane Jacobs (1961), who wrote “a successful neighborhood is a place that keeps sufficiently abreast of its problems so it is not destroyed by them” (p112).

“Social control,” Sampson, Raudenbush and Earls (1997) write, “should not be equated with formal regulation or forced conformity by institutions such as the police and courts. Rather, social control refers generally to the capacity of a group to regulate its members according to desired principles—to realize collective, as opposed to forced, goals” (p918).” They found that collective efficacy was “a robust predictor of lower rates of violence (p923)” after controlling for neighborhood characteristics. Later research found that collective efficacy was a strong predictor of homicide rates (Morenoff, Sampson and Raudenbush 2011). The concept of collective efficacy has since been extended by various scholars into a variety of other areas, including education, public health and group dynamics.

Confidence in one’s neighborhood is another factor that may be related to social capital and collective efficacy. Varady (1986) found that neighborhood confidence, measured as a combination of one’s assessment of the current condition of the neighborhood and one’s expectation of the direction of change in the next few years, had a strong bearing on residents’ decision whether to stay in or leave their neighborhood.

1.1.4 Poverty

The relationship between increased poverty and neighborhood decline is a strong one, operating in different ways. Pandey and Coulton (1994) found a three-way reciprocal relationship between poverty, births to single mothers, and house values. Poverty is strongly associated with residential instability, reflecting the constant struggle of poor households to pay rents that are typically well beyond their realistic means (Desmond 2012). Hipp (2013) found a similar strong relationship between concentrated disadvantage (a measure he created by combining median income, poverty, divorce and unemployment rates) and both violent and property crime.

While the effects of concentrated poverty on both neighborhoods and the people who live in them have been well-established (Wilson 1987 and others), Galster, Quercia and Cortes (2000) and Galster, Cutsinger and Malenga (2008) have shown that there are threshold effects associated with increased poverty; for example, the social costs of increased poverty, as translated into changes in rents and house values, increase sharply as poverty increases from 10 to 20 percent in a neighborhood. These researchers draw a number of policy conclusions worth considering:

> First, preventing neighborhoods from sliding past their threshold into a state of concentrated poverty would result in avoiding substantial social harms, as capitalized in dramatic losses of property values. Second, reducing poverty in extremely high-poverty neighborhoods is unlikely to yield substantial increments in property values without major and sustained investments. Third, if concentrated poverty is prevented or undone, the alternative destination neighborhoods for the poor should primarily be those of low-poverty, not moderate poverty. Upsurges in poverty in neighborhoods already near their thresholds are likely to produce such dramatic losses in property values that they will overwhelm the gains in value in neighborhoods that evince declines in poverty (Galster, Cutsinger and Malenga 2008, p48).

Threshold effects with respect to the effect of poverty on crime, particularly as poverty rates increase about 20 percent, have also been found (Quercia and Galster 2000).

1.2 Property-Related Factors

Property-related factors are those linked directly to the ownership, condition or financial status of individual properties within a neighborhood. The division between these and social factors is not hard and fast; homeownership rates are clearly driven by a variety of social and economic factors. At the same time, it is important to distinguish property-related factors, because to the extent that they affect neighborhood stability, they may be amenable to strategies that are also property-specific, and thus differ from strategies to change the neighborhood's underlying social and economic features.

1.2.1 Homeownership

While there is relatively little research that looks at homeownership and neighborhood change directly, there is a vast literature on different homeownership effects that share features which bear directly on neighborhood change. Because of the sheer number of different ways homeownership can potentially affect neighborhood change, this section has been divided into a series of five subsections, each one focusing on the relationship between homeownership and a key factor potentially affecting neighborhood change.

While homeownership research typically tries to control for socioeconomic differences between owners and renters, such as income, race or other factors, a recurrent problem in the research which is harder to control for is what is known as *self-selection*; in other words, whether people who choose to become homeowners may have different attitudes or values than people of similar social and economic status who choose not to become homeowners. While this does not affect the relationship between homeownership and whatever neighborhood dimension one is trying to measure, such as stability or civic engagement, it means that one can never be completely certain that one is measuring the effect of homeownership or the effect of some other social factor that is, in turn, linked to homeownership.

1.2.1.1 Homeownership Affects Residential Stability

As noted earlier, residential stability or turnover is an important element in neighborhood health, with high turnover or 'churning' seen as a factor leading to decline. There is no question that homeownership is statistically associated with greater length of tenure; the most recent data from the 2013 American Community Survey found that the median length of residence for homeowners in their current home was 11 years, compared to fewer than 3 years for tenants. In many older cities the gap is even wider, with homeowners typically living in the same house for 12 to 15 years, while homeowners move every 2 years or less.

This raises the question of how to separate the impact of homeownership as such from the impact of stable housing (National Association of Realtors 2006). Some studies have found that the effect of homeownership on child outcomes drops significantly when controlling for mobility (Barker and Miller 2009). Thus, *in theory*, one might be able to achieve the same stability outcomes that are associated with homeownership by stabilizing the tenure of renters, or by fostering intermediate forms of tenure as exist in some European countries.

In practice, this may not be a realistic option. First, there is strong evidence that homeownership *does* increase residential stability, independent of other socioeconomic factors (Rohe and Stewart 1996), for a variety of different reasons. Second, the magnitude of the 'tenure gap' between owners and renters is so great that it is hard, if not impossible, to conceive of a plausible strategy that would eliminate it. While increasing the stability of tenure for tenants is likely to yield significant benefits for the tenants themselves as well as some potential community benefit, it cannot substitute for homeownership as a means of fostering neighborhood stability. Finally, it is important for practitioners to understand that in promoting homeownership, it is not enough to encourage families to *become* homeowners, but that it is equally or more important to ensure that they become *stable*, *long-term homeowners*, and do not involuntarily lose their homes through foreclosure, tax delinquency, or other controllable factors (Mallach 2011). That is destructive to both the homeowners and their neighborhoods.

1.2.1.2 Homeownership Affects Property Values

Rising property values are a direct indicator of positive economic change in a neighborhood, and declining values equally directly measure negative change. As elsewhere, in studying the impact of homeownership on property values it is hard to separate out the effect of homeownership as such from other related factors. Since homeowners tend to have higher incomes than renters, it stands to reason that property values would be higher in areas with high homeownership levels. A number of studies have found that construction of new affordable (subsidized) housing for owner-occupancy increased the value of nearby homes (Ellen at al 2002, Ding and Knapp 2003). While those impacts may have had as much to do with the replacement of vacant lots or derelict buildings with shiny new homes, Coulson, Hwang and Imai (2002, 2003) found significant neighborhood effects on house prices with increased homeownership, while Ding and Knapp (2003) found that the loss of homeowners from Cleveland neighborhoods had a negative effect on property values in those areas. Rohe and Stewart (1996) provide further support for this proposition, and also find that the relationship works in reverse as well; healthy property value appreciation triggers greater homeownership.

Property condition and maintenance are important elements in neighborhood change; as noted above, Taub et al (1984) see the level of investment in the neighborhood as the fundamental driver of change. While the research on homeownership and property maintenance and condition finds that a strong relationship exists, it also finds that it is contingent, in the sense of being strongly affected by other factors. Figure 2 presents a chart derived from research in Flint, Michigan that provides strong evidence of the difference in property condition for owner-occupied versus absentee-owned properties, as well as the effect of higher homeownership rates on the condition of *rental* properties as well as owner-occupied properties. The X-axis in Figure 2 shows census tracts in Flint, organized in order of homeownership rate from low to high as indicated along the right-hand Y-axis. The left-hand Y-axis shows average housing condition scores. The graph then shows the average condition scores for owner-occupied and for absentee-owned properties for each census tract, going from the tract with the lowest to the tract with the highest homeownership rate.

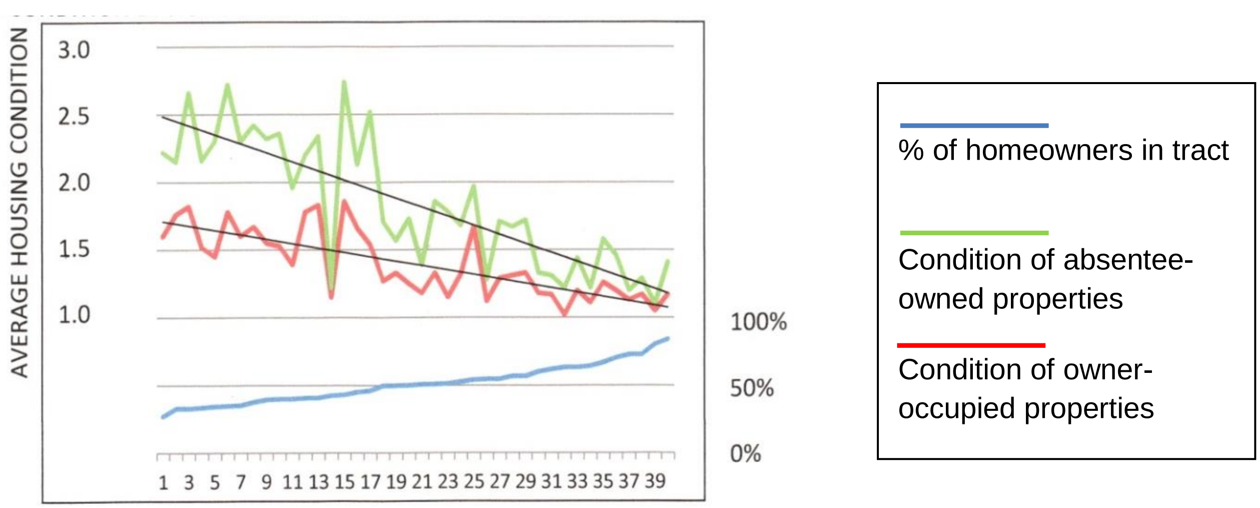

Figure 2: Tenure and Property Condition by Census Tract in Flint, Michigan (Mallach 2014)

1.2.1.3 Homeownership Affects Social/Behavioral Conditions

Both Galster (1987) and Ioannides (2002) found that the level of property upkeep by homeowners was significantly influenced by the level of social interaction and social cohesion in the neighborhood; put differently, a homeowner's maintenance and investment decisions are influenced by what she sees her neighbors doing. Their findings suggest a possible link between homeownership, property upkeep and collective efficacy, in that the level of collective efficacy in the neighborhood may act to magnify the positive impact of homeownership. This would be a fruitful area for further research.

A variety of studies have found a strong connection between homeownership and different social or behavioral conditions; while these conditions are not directly linked to neighborhood change, they can affect it in important ways. Changes in child and youth outcomes may affect crime, through lower drop-out rates leading to lower juvenile delinquency; or lower teen pregnancy rates leading to lower poverty rates in the next generation, in light of the powerful link between teen pregnancy, single female parenthood, and poverty. A strong relationship between homeownership and greater educational attainment, lower drop-out rates and teen pregnancies was found by Green and White (1997), while Boehm and Schlottmann (1999) found that the children of homeowners are more likely to achieve higher levels of education and subsequent earnings. These studies controlled for other relevant social and economic factors affecting educational outcomes and earnings.

There has also been considerable research on homeownership and physical and psychological health and well-being, finding strong positive relationships between homeownership and physical health (Rossi and Weber 1996) and overall life satisfaction (Rohe and Basolo 1997). Homeownership has also been shown to have a positive effect on psychological health and life satisfaction (Diaz-Serrano 2009), while Manturuk (2012) found that positive effects of homeownership were closely linked to owners' greater sense of control over their environments. It should be stressed, though, that these are the effects of *successful* homeownership; extensive research has found that homeowners who are delinquent on their mortgages or enmeshed in foreclosure proceedings suffer from increased stress, depression and mental illness (Bowdler, Quercia and Smith 2010, Pollock and Lynch 2009). This may contribute, although to what extent cannot be estimated, to the powerful negative neighborhood impacts of foreclosure.

1.2.1.4 Homeownership Affects Social Capital and Collective Efficacy

Both social capital and collective efficacy are significant factors in the direction of neighborhood change. Research has shown that homeownership is positively associated with social capital (DiPasquale and Glaeser 1998, Cheo, Fesselmeyer and Seah 2013). The latter study found that homeowners were much more likely to participate in activities that increase neighborhood social capital, such as volunteering or participating in block group meetings. Manturuk, Lindblad and Quercia (2010) found similar results specifically with respect to low and moderate income homeowners.

One study that looked directly at the relationship between homeownership, collective efficacy and neighborhood crime and disorder found a strong relationship (Lindblad, Manturuk and Quercia 2013). The authors point out that the relationship is subject to the homeowner having a sustainable mortgage, reinforcing the point that delinquency and foreclosure, as we discuss below, not only undo the benefits of homeownership, but trigger negative neighborhood effects. Two European studies also provide strong support for the link between homeownership and collective efficacy. A Danish study found a strong negative relationship between homeownership and crime while controlling for multiple economic and demographic variables (Lauridsen, Nannerup and Skak 2006), while a German study found that homeowners were less willing to accept deviant behavior and more ready to intervene when they observed such behavior (Friedrichs and Blasius 2006).

In conclusion, the relationship between homeownership and neighborhood change is complex and multi-dimensional, yet it appears clear that increasing stable, sustainable homeownership can significantly further positive neighborhood change through many different pathways, and that significant shifts of a neighborhood's housing stock from owner-occupancy to absentee ownership, as is taking place in many urban neighborhoods, can be destabilizing.

1.2.2 Vacant Properties

Vacant properties, particularly those that are visibly vacant and abandoned, are a widely recognized trigger for neighborhood decline. While there are many ways in which vacant properties may have negative effects on neighborhoods, the two areas that are best established through research are their effect on neighborhood property values and their effect on crime.

Many studies have found that vacant properties significantly affect the value of the other properties close to it. Two studies of vacant properties in Philadelphia nearly a decade apart came to the same conclusion, with the latter study finding that in some parts of the city the presence of a vacant property could reduce the value of nearby properties by up to 20% (Temple University Center for Public Policy 2001; Econsult et al 2010). Seo and von Rabenau (2011) found that a vacant property reduced property values in a Columbus Ohio micro-neighborhood by 22 percent. Importantly, the Temple University study found that the effect of *one* vacant property on the block was not that different from the effect of 2 or more vacant properties; from a practical standpoint, that suggests that strategies that remove some but not all of the vacant properties from a block are much less likely to have a positive impact than strategies that remove *all* of the vacant properties.

Research in Philadelphia that looked at vacant lots reached the same conclusion; in this case, however, the researchers found that appropriate vacant lot treatments not only eliminated the negative impact on nearby home prices, but in some cases turned it into a positive impact (Wachter, Gillen and Brown 2007). Garvin et al (2013), through interviews with residents of nearby homes, found that unmaintained vacant lots negatively affected their quality of life and well-being in many important respects. Section 2 provides a further discussion on on the effect of interventions.

The thrust of their research is supported by studies from Cleveland, where the authors carefully distinguished between vacant, foreclosed and tax delinquent properties (Mikelbank 2008, Whitaker and Fitzpatrick 2011). This is important, because much of the research on the impact of foreclosure appears to inadvertently blur the difference between foreclosure and vacancy. Although the Cleveland studies point in the same direction as the Philadelphia research, they find a smaller dollar impact of vacant properties on house prices.

Vacant properties are also strongly associated with crime and violence. Spelman (1993) found that crime rates on blocks with abandoned properties were twice as high as on those without, while also finding significant differences between buildings that were or were not secured against illegal entry. A more sophisticated study in Philadelphia found a strong relationship between the presence and number of vacant properties and reported aggravated assaults on the same block, with the risk of violence increasing as the number of vacant properties goes up (Branas 2012).

1.2.3 Foreclosure

The end of the housing bubble in 2006 and 2007 triggered a wave of foreclosures that overwhelmed many neighborhoods throughout the United States, and predictably led to a series of research studies designed to evaluate the impact of foreclosure on neighborhoods. As with vacant properties, the research concentrated on the effect of foreclosures on nearby house prices and on crime. A review of the research (Frame 2010) described the findings of eight separate studies published between 2006 and 2009 that documented the effect of foreclosures on nearby house prices. All found negative impacts, although the size of the impact varied from study to study, or area to area.

A more modest series of studies has looked at foreclosures and crime, including a study in New York (Ellen, Laycoe and Sharygin 2013) which found that additional foreclosures on a block face led to increases in total crimes, violent crimes and public order crimes, a finding similar to that of an Indianapolis study (Stucky, Ottensmann and Payton 2012). At the same time, however, these findings have been challenged by others. Two recent studies have raised serious questions about the relationship between foreclosures and crime (Jones and Pridemore 2012, Kirk and Hyra 2012). Both studies, using somewhat different approaches, conclude that both foreclosures and crime are driven by pre-existing neighborhood characteristics, and that the apparent relationship between them is, in Kirk and Hyra's words, spurious.

There is also some evidence to suggest that foreclosures may be considered a *leading indicator* of neighborhood decline, including a study that compared foreclosures in Cleveland between 1983 and 1989 with neighborhood change between 1990 and 2000 (Li and Morrow-Jones 2010), and a recent study by Williams, Galster and Verma (2013) that found a causal relationship between foreclosure and subsequent decline, finding that "the completed foreclosure indicator was strongly predictive of three other indicators: property crimes, total home purchase loan amounts, and mean home purchase loan amounts (p207)" the last two being housing market indicators. They characterize foreclosures as an "early warning indicator" of neighborhood change.

One problem, however, that pervades much of the research in this area is that of figuring out exactly what is being measured by foreclosure: is it the legal process, and its effect on the homeowner's well-being and her engagement with the community; is it reduced maintenance and deterioration of the property during the foreclosure period; is it the association between foreclosure and vacancy; or, is it something else again? If this research is to be truly useful for practitioners, a greater understanding of what aspects of the foreclosure process are triggering the observed effects is needed.

1.2.4 Tax Delinquency

Although tax delinquency and tax foreclosure is perhaps even more widespread than mortgage foreclosure, the impacts of tax delinquency and foreclosure on neighborhoods have led to far less research than mortgage foreclosure. This may reflect the extent to which scholars, like other people, tend to be drawn to visible, high-profile crises, the 'train wrecks' of public policy.

Only a few research studies have looked at the neighborhood effect of tax delinquency, all of which focus on the effect of tax delinquencies on property values. Simons, Quercia and Maric (1998) found in Cleveland that a 1 percent increase in tax delinquencies led to a decline of $778 in the value of nearby properties. Whitaker and Fitzpatrick (2012) in a study that looked at the separate and combined effects of vacancy, tax delinquency and mortgage foreclosure, found that the presence of tax delinquent properties reduced the value of other properties in the vicinity by 1.5 to 2 percent, an effect that held true across low, moderate and high poverty areas. Gillen (2014), in a study in Philadelphia, found more drastic impacts; importantly, although Gillen found that the first 5 tax delinquent properties within 500 feet of a home sale had relatively little impact, the effect sharply increased after that, with each additional tax delinquent property from 5 to 15 being associated with a 1.089% decrease in house value – meaning that going from 5 to 15 delinquencies within 500 feet reduces a house's value by 11%, a significant amount. As delinquencies go up, the damage continues, but at a gradually reduced level. Overall, Gillen concluded that the "median loss in a home's value associated with nearby delinquent properties is estimated to be $15,200" (p10). It is not clear from this study whether the impacts are purely the product of tax delinquency, or whether blocks with tax delinquent properties are also likely to have large numbers of vacant properties, as well as other factors pushing property values downward.

This is an area where more research is clearly needed. While tax delinquency and mortgage foreclosure may appear on the surface to be similar phenomena, with similar neighborhood effects, that may not actually be the case. Because property taxes are usually a smaller part of the owner's total costs than mortgage payments, the reasons for tax delinquency – and thus their impact on neighborhood conditions – may be very different. One can argue that with respect to many property owners, non-payment of taxes is more likely to be discretionary, in the sense that it is a choice made rather than a financial necessity, than non-payment on a mortgage. If that is indeed the case, tax delinquency may have a relationship to confidence in the neighborhood. There is also a considerable difference between the property outcomes of tax vs. mortgage non-payment. Mortgage non-payment will usually, although not always, lead to foreclosure; tax non-payment, on the other hand, more often does not, particularly when the municipality or county holds the tax lien. Further research to better understand these factors could be valuable in terms of our understanding of the relationship between tax delinquency and neighborhood change.

1.3 External factors

Neighborhoods are not self-contained, but are part of a larger citywide and regional environment. How a neighborhood is situated socially, economically and spatially within that environment, the dynamics of that environment, and the changes that are taking place within it, all have a major and ongoing effect on change taking place at the neighborhood level. What Galster and Tatian (2009) write about home price change can be expanded to cover almost any dimension of neighborhood change:

> The degree of home price appreciation experienced by any neighborhoods in a particular metropolitan area will be influenced by a broad set of contextual forces related to the regional economy, demographic shifts, housing production, local government regulations, transportation infrastructure, and technology operating at a much broader geographic scale than the neighborhood (p8).

In addition to the effect of regional economic and other changes, neighborhoods can also be affected by political forces, as well as by the manner in which the neighborhood is perceived by people in the city and region. All of these are external or *exogenous* factors affecting a neighborhood, as shown in Figure 1 earlier. This section will address these factors only briefly, since by definition they offer less scope for neighborhood-level action than neighborhood-specific factors. Still, it is important that practitioners understand them, and take them into consideration.

Weissbourd, Bodini and He (2009), in their analysis of different factors affecting neighborhoods concluded that on average regional factors, particularly economic trends, accounted for 35% of the observed neighborhood change. They also found that the impact of regional factors on neighborhood change varied widely from city to city, and suggest that the greater the change in the regional economy, the greater its impact on neighborhood change. Consistent with this, Kolko (2009) found that neighborhood household incomes were strongly influenced by changes in the location and composition of jobs in the city as a whole.

A recent study (Mallach 2015), although not directly addressing neighborhood change, demonstrates an approach to analyzing employment change at the neighborhood level that can readily be linked to neighborhood change. Mallach found that the past decade has seen significant erosion not only of jobs, but more significantly, of the number of *jobholders* (residents with jobs) in most neighborhoods in 10 large older industrial cities.

The relationship of regional housing markets to neighborhood change is also significant. While there is little recent research on the subject, there is a solid theoretical and observational basis, summarized in the classic work of William Grigsby (Grigsby 1963, 1983). His basic proposition that neighborhoods are submarkets functioning within a larger regional market appears incontrovertible, and provides the underpinning for much of the recent work on neighborhood market conditions, as well as for the typologies developed by Coulton, Theodos and Turner (2009) and by Weissbourd, Bodini and He (2009).

Where within its market area the neighborhood is located is a critical factor. Guerrieri, Hartley and Hurst (2010) found that the proximity of a disadvantaged neighborhood to an advantaged one was the strongest predictor of future house price appreciation, which was confirmed by a study of Washington DC neighborhoods by Galster and Tatian (2009). While there does not appear to be much formal research literature on the effect of other location factors on neighborhood change, there appears to be a solid body of informal, but hard to dispute, assumptions about those relationships, including proximity to major anchors, downtowns, fixed rail transit, and for whatever reason, water bodies.

2 The Effect of Interventions on Neighborhood Change

The research on the many factors that affect neighborhoods, such as homeownership or vacant properties, provides useful but general direction for practitioners. The research strongly suggests, for example, that increasing homeownership, or removing vacant properties, can benefit a neighborhood. One can go further to say that it shows that *sustainable* homeownership will benefit a neighborhood more, and that removing *all* of the abandoned buildings from an area will benefit a neighborhood more than removing a few. Still, the research described above does not say anything explicit about the effect of particular *interventions*; that is, what happens to a neighborhood if dollars and energy are invested in specific programs or activities, such as demolition of vacant houses or construction of a Low Income Tax Credit rental housing project, in the neighborhood.

Less research has been done on the effect of interventions on neighborhoods, but much of what has been done offers insights that can be useful to practitioners as they plan neighborhood strategies. In a few cases, multiple studies have been done which point in a particular direction; often, however, we find that only limited research has been done about a particular intervention. As a result, many of the study findings that are described in this section should be considered tentative, pending more research that either supports or modifies the initial findings.

2.1 Housing Rehabilitation

Research on the effect of housing rehabilitation on neighborhoods has found mixed results. Goetz et al (1997) studied a program in St. Paul, Minnesota to support rehabilitation of vacant houses, and found that it yielded fiscal benefits well in excess of the cost of rehabilitation, including a significant positive impact on the value of nearby properties. The study focused narrowly, however, on the fiscal benefits, and did not look at broader impacts of rehabilitation. Margulis and Sheets (1985), in a study that compared areas that had received significant CDBG rehabilitation investments with comparable areas in the city of Cleveland found that the rehabilitation investments had no apparent effect on neighborhood trajectories. Graves and Shuey (2013), in a study of NSP investments in Boston, found that rehabilitation investments had a negative effect on social conditions, and no impact on physical conditions in the immediate area. On the other hand, Edmiston (2012) found that CDC housing investments in Kansas City – mostly rehabilitation, but including some new construction – had a significant positive effect on neighborhood property values.

HUD commissioned The Reinvestment Fund to conduct a study of the impact of concentrated investment of Neighborhood Stabilization Program (NSP) funds. The study compared each NSP targeted area or Neighborhood Investment Cluster (NIC) with three ‘comparable market’ block groups on two key measures of neighborhood change – property values and housing vacancies – from 2008 to 2012. The data, taken as a whole, showed no impact from the NSP investments; the outcomes were all but identical with what could be expected by chance. Although the national study – averaging out the results in all of the different cities and counties studied – showed no impact from the NSP spending, the data *for some cities* suggests that in those cities the program had a significant impact. It would be useful for someone to study those cities, and try to identify why their efforts had more impact than elsewhere. At the same time, it should be noted that this study did not control for the possible effect of other factors that might have been simultaneously affecting these neighborhoods.

The inconsistent research findings summarized above highlight how important it is to make clear distinctions about the nature of the project and the neighborhood: housing rehabilitation projects vary widely, as do neighborhoods. Questions also arise about what is being measured; assuming the study shows some benefit, is it created by the rehabilitation itself, or by the removal of a vacant house that was having a negative effect on the area, or some other factor? The type of housing being provided, which can vary by form of tenure, income level of buyer, and other factors; the way it is being carried out; and the particular features of the neighborhood all influence what impact a project will have. These concerns are visible in the Graves and Shuey study (2013). When they interviewed residents living near the properties being rehabilitated, the residents knew nothing about the project, and expressed considerable concern about whether the people who would end up living in the houses would be good neighbors, concerns fueled by their feeling left in the dark about the program. These concerns and uncertainties affected the impact of the project.

2.2 Other Vacant Property Strategies

While it follows logically that when one takes a vacant property and puts it back into productive use one should see, at a minimum, a reversal of the negative effects of vacant properties and potentially a shot in the arm for property values in the immediate vicinity, other actions dealing with vacant buildings or vacant lots that do not involve rehabilitation or new construction can also have a positive impact on the neighborhood.

A recent study conducted in Cleveland (Griswold et al 2014) found that demolition of distressed vacant properties had a positive effect on neighboring property values independent of the subsequent reuse of the property. The study found, however, that the cost-benefit ratio of demolition costs to increased value was positive only in areas with relatively low distress, which the authors called “high and moderately functioning” markets. In high distress areas, with larger ratios of vacant properties to occupied and sound properties, demolition costs outweighed benefits. This study provides support for targeting demolition efforts to areas where a smaller number of vacant abandoned properties are pulling down an otherwise potentially viable neighborhood. The study also found, however, that demolitions reduced the number of mortgage foreclosures in the vicinity of the properties across different types of neighborhoods. Griswold’s firm recently completed a similar study of demolition in Detroit with similar results (Dynamo Metrics 2015).

The immediate outcome of demolition is a vacant lot or parcel. While in some cases, that lot is redeveloped with new construction, in most cases, particularly in legacy cities with weak housing markets like Buffalo or Cleveland, the vacant lot is likely to remain vacant indefinitely. As a result, the question of what to do with vacant lots if they are not going to be redeveloped, and how different vacant lot strategies affect neighborhood conditions, is not only an important one for practitioners, but has been the subject of a small, but significant, body of research.

Wachter, Gillen and Brown (2007), studying vacant lots in Philadelphia, found that being next to an untreated, neglected vacant lot reduces the value of adjacent properties by 20%. A program of stabilizing and greening vacant lots, however, which involved “the removal of discarded trash; grading and amending the soil; planting grass, trees, and shrubbery; and even adding such amenities as benches, sidewalks, and fences (p17),” reversed the negative effects, and increased the value of adjacent properties by 19%. Branas et al (2011) found, also in Philadelphia, that vacant lot greening was associated with reductions in gun assaults as well as with residents’ reporting less stress and more exercise. A third recent study (Heckert and Mennis 2012) -focused specifically on the Philadelphia LandCare program which stabilizes and greens vacant lots in the city- found similar effects. Notably, however, they found that the benefits of vacant lot treatment were not significant in strong market areas or highly distressed areas, but only in moderately distressed areas. Branas et al also found that the health effects of greening were not consistent in all areas.

Voicu and Been (2008) in a study of New York City found that creating community gardens had a positive effect on property values in lower income neighborhoods, resulting in an increase in property value of over 9 percent over the five years after the garden was created, but not in more affluent neighborhoods. All in all, the research makes a compelling case for spending funds to stabilize and green vacant lots, and where community support exists, to facilitate creation of community gardens, as a tool of neighborhood change.

Finally, a recent study found that implementation of a Philadelphia ordinance which required property owners of abandoned buildings to install working doors and windows in all structural openings or face significant fines had a significant effect on reducing crime in the immediately surrounding area (Kondo et al 2015). This is one of the very few studies that have looked at a regulatory intervention affecting vacant buildings in urban areas.

2.3 Subsidized housing programs

Over the past few decades, much of the resources and energy of CDCs, as well as of non-profit and specialized for-profit developers, have been devoted to creating affordable or subsidized housing, usually through the Low Income Housing Tax Credit (LIHTC) program. While these developments usually provide high-quality housing for lower income households, many of whom may be living in substandard housing or spending disproportionate shares of their income for shelter, the effect building subsidized housing on neighborhood trajectories is less obvious. Claims that such projects foster positive change, as well as accusations that they trigger decline, are both often made with no real foundation.

There is no one answer to the question “will building a subsidized housing project, or alternatively, removing one that is already there, improve the surrounding neighborhood?” The answer is ‘maybe’, depending on the type and size of the project and the features of the neighborhood. Since the 1960s, researchers have been studying the effect of different types of subsidized housing on neighborhoods, mostly with respect to their effect on nearby property values, with mixed and sometimes inconsistent findings. A summary of the findings of twenty different studies appears in Lee (2008).

With specific respect to LIHTC projects, Green Malpezzi and Seah (2002) looked at the Milwaukee area, and found that projects in suburban non-poverty areas generally had neutral or positive effects, but that projects in higher-poverty areas in Milwaukee tended to have modest negative effects. A study of a number of different neighborhoods in Miami by Deng (2008) found that LIHTC development had their most positive impacts in high-poverty areas; however, her case studies suggest that the positive changes may have been more the result of other simultaneous neighborhood-level investment than the projects themselves. By contrast, Deng found that introduction of LIHTC housing into potentially struggling or transitioning working class or middle class areas was likely to have negative rather than positive effects. Lee (2008) found that scale mattered, with projects of more than 50 units likely to have more negative effects.

The question which is hard to answer, with respect to all of this research, is the extent to which the effect of projects is the result of the *project* or the effect of *the increase (or decrease) in poverty concentration* associated with the residents of the project. The residents of LIHTC projects are more representative of high-poverty populations than are widely believed; according to a recent study, the median household income of LIHTC tenants nationally is approximately $17,000 (Hollar 2015). In affluent areas, the impact of these factors is likely to be insignificant, but in struggling middle- or moderate-income communities, it may be more problematic. This is consistent with research evidence that has found that the introduction of a LIHTC project typically has no negative impact in solidly affluent areas, but the effect of such projects in other areas is likely to be more contingent and uncertain.

2.4 Targeted Multi-Faceted Public Investment

Two research studies suggest that targeting multi-faceted resources to neighborhoods can significantly affect their trajectory. A large-scale study of 17 cities by Galster et al (2004) found that when cities targeted high levels of Community Development Block Grant funds into designated areas, the expenditures had significant impacts on key neighborhood indicators, such as mortgage activity, mortgage approval rate, and the number of businesses in the area. The study also found that although the impact of targeted CDBG investment was less in areas with larger concentrations of the poor, it was still significant. A second study, by Galster, Tatian and Accordino (2006), was an assessment of the Richmond, Virginia Neighborhoods in Bloom program – which was an initiative under which the city directed "the bulk of its CDBG and HOME funds, as well as significant amounts of capital improvement funds and other resources (focused code enforcement and accelerated vacant property disposition) on just seven carefully chosen neighborhoods." Their research found significant increases in home prices in the targeted areas relative to other parts of the city.

Both of these studies make a point of particular importance for practitioners. Both found that what one can call an 'investment threshold' exists – investing in improvements in a neighborhood, whether with CDBG funds or otherwise has little impact until a critical level of targeting and concentration is reached, at which point the investments then impact the neighborhood's trajectory. This gives the lie to the theory that by spreading out public investment, 'like peanut butter' as they say, one can achieve modest improvements in a large number of areas. The reality is that such a strategy is more likely to achieve *no* change in *any* area.

REFERENCES

Barker, David and Eric A. Miller. "Homeownership and Child Welfare" *Real Estate Economics* 37, no.2 (2009)

Boehm, Thomas P. and Alan Schlottmann. "Does Home Ownership by Parents Have an Economic Impact on Their Children?" *Journal of Housing Economics* 8, no.3 (1999)

Bowdler, Janice, Roberto Quercia and David A. Smith. *The foreclosure generation: The long-term impact of the housing crisis on Latino children and families.* Washington DC: National Council of La Raza, 2010.

Branas, Charles C., Rose A. Cheney, John M. MacDonald, Vicky W. Tam, Tara D. Jackson, and Thomas R. Ten Have. "A Difference-in-Differences Analysis of Health, Safety, and Greening Vacant Urban Space" *American Journal of Epidemiology* 174, no.11 (2011)

Branas, Charles C., David Rubin, and Wensheng Guo. "Vacant Properties and Violence in Neighborhoods." *ISRN public health* (2012)

Cheo, Roland, Eric Fesselmeyer and Kiat Ying Seah. "Revisiting the Effect of Homeownership on Social Capital." National University of Singapore, Institute of Real Estate Studies, 2013.

Coulson, N. Edward, Seek-Joon Hwang and Susumu Imai. "The Value of Owner-Occupation in Neighborhoods" *Journal of Housing Research* 13, no.2 (2002)

Coulson, N. Edward, Seek-Joon Hwang and Susumu Imai. "The Benefits of Owner-Occupation in Neighborhoods" *Journal of Housing Research* 14, no.1 (2003)

Coulton, Claudia, Brett Theodos and Margery A. Turner. "Family Mobility and Neighborhood Change: New Evidence and Implications for Community Initiatives." Washington DC: Urban Institute, 2009.

Cox, Kevin R. "Housing Tenure and Neighborhood Activism," *Urban Affairs Quarterly* 18, no.1 (1982)

DiPasquale, Denise and Edward Glaeser. "Incentives and Social Capital: Are Homeowners Better Citizens?" *Journal of Urban Economics* 45, no.2 (1998)

Econsult Corporation, Penn Institute for Urban Research and May 8 Consulting 2010. "Vacant Land Management in Philadelphia: The costs of the current system and the need for reform." Report prepared for Philadelphia Redevelopment Authority and Philadelphia Association of Community Development Corporations.

Deng, Lan. “Assessing Changes in Neighborhoods Hosting Low-Income Housing Tax Credit Projects” Ann Arbor MI: University of Michigan Center for Local, State and Urban Policy, CLOSUP Working Paper Series Number 8, 2009.

Desmond, Matthew. “Eviction and the Reproduction of Urban Poverty” *American Journal of Sociology* 118, no.1 (2012)

Ding, Chengri and Gerrit-Jan Knapp. “Property Values in Inner-City Neighborhoods: The Effects of Homeownership, Housing Investment and Economic Development” *Housing Policy Debate* 13, no.4 (2003)

Dynamo Metrics. “Estimating Home Equity Impacts from Rapid, Targeted Residential Demolition in Detroit, MI: Application of a Spatially-Dynamic Data System for Decision Support.” Detroit, MI: Dynamo Metrics, 2015.

Edmiston, Kelly D. “Nonprofit Housing Investment and Local Area Home Values” Federal Reserve Bank of Kansas City, *Economic Review,* First Quarter (2012)

Ellen, Ingrid Gould, Michael Schill, Scott Susin and Amy Ellen Schwartz. “Building Homes, Reviving Neighborhoods: Spillovers from Subsidized Construction of Owner-Occupied Housing in New York City” *Journal of Housing Research* 12, no.1 (2002)

Ellen, Ingrid Gould. “Spillovers and Subsidized Housing: The Impact of Subsidized Rental Housing on Neighborhoods.” Cambridge, MA: Joint Center for Housing Studies Harvard University, 2007

Ellen, Ingrid, Laycoe, J., and Sharygin, CDO Foreclosures Cause Crime? Unpublished manuscript, 2011, available at:http://www.frbsf.org/community/conferences/2011ResearchConference/docs/3a-sharygin-paper.pdf.

Frame, W. Scott. “Estimating The Effect of Mortgage Foreclosures on Nearby Property Values: A Critical Review of The Literature.” Federal Reserve Bank of Atlanta, Economic Review, 2010.

Friedrichs, Jurgen and Jorg Blasius “Attitudes of Owners and Renters in a Deprived Neighborhood” Paper presented at the 2006 ENHR Conference, Ljubljana, Slovakia, 2006.

Garvin, Eugenia, Charles Branas, Shimrit Keddem, Jeffrey Sellman, and Carolyn Cannuscio. “More Than Just An Eyesore: Local Insights And Solutions on Vacant Land And Urban Health” *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 90, no. 3 (2013)

Galster, George C. *Homeowners and Neighborhood Reinvestment* Durham NC: Duke U Press, 1987.

Galster, George C., Roberto Quercia and Alvaro Cortes. “Identifying Neighborhood Thresholds: An Empirical Exploration” *Housing Policy Debate* 11, no.3 (2000)

Galster, George, Christopher Walker, Christopher Hayes, Patrick Boxall, and Jennifer Johnson. “Measuring the Impact of Community Development Block Grant Spending on Neighborhoods.”*Housing Policy Debate* 15, no.4 (2004)

Galster, George C., Peter Tatian and John Accordino. “Targeting Investments for Neighborhood Revitalization.” *Journal of the American Planning Association* 72, no.4 (2006)

Galster, George, Jackie Cutsinger and Up Lim. “Are Neighborhoods Self-Stabilizing?: Exploring Endogenous Dynamics” *Urban Studies* 44, no.1 (2007)

Galster, George, Jackie Cutsinger and Ron Malenga. “The costs of concentrated poverty: Neighborhood property markets and the dynamics of decline.” In Retsinas & Belsky (Eds.), *Revisiting rental housing: Policies, programs, and priorities*. Washington, DC: Brookings Institution Press, 2008

Galster, George and Peter Tatian. “Modeling Housing Appreciation Dynamics in Disadvantaged Neighborhoods”. *Journal of Planning Education and Research* 29, no.7 (2009)

Gillen, Kevin C. “Estimating the Economic Value and Neighborhood Impact of Tax---Delinquent Properties in Philadelphia.” University of Pennsylvania, Fels Institute of Government, 2013

Goetz, Edward G., Kristin Cooper, Bret Theile and Hin Kin Lam. The fiscal impacts of the St. Paul Houses to Homes program. University of Minnesota, Center for Urban and Regional Affairs, 1997.

Graves, Erin and Elizabeth Shuey. “The Social Impact of Home Rehabilitation in Low-Income Neighborhoods.” Boston MA: Federal Reserve Bank of Boston, 2013.

Green, Richard K. and Michelle J. White. “Measuring the Benefits of Homeowning: Effects on Children,” *Journal of Urban Economics* 41, no.3 (1997)

Green, Richard K., Stephen Malpezzi and Kiat-Ying Seah. Low Income Housing Tax Credit Housing Developments and Property Values. University of Wisconsin, The Center for Urban Land Economics Research, 2002.

Griswold, Nigel G., Benjamin Calnin, Michael Schramm, Luc Anselin & Paul Boehnlein. “Estimating the Effect of Demolishing Distressed Structures in Cleveland, OH, 2009-2013:

Impacts on Real Estate Equity and Mortgage-Foreclosure." A Report Produced by Griswold Consulting Group, 2014.

Guerrieri, Veronica, Daniel Hartley, and Erik Hurst. "Endogenous gentrification and housing price dynamics." *Journal of Public Economics* 100 (2013): 45-60.

Harkness, Joseph M. and Sandra J. Newman."Effects of Homeownership on Children: The Role of Neighborhood Characteristics and Family Income" Federal Reserve Bank of New York, Economic Policy Review, 2003.

Haurin, Donald R., Toby L. Parcel and R. Jean Haurin. "The Impact of Homeownership on Child Outcomes." Cambridge, MA: Harvard University, Joint Center for Housing Studies, 2001.

Heckert, Megan, and Jeremy Mennis. "The economic impact of greening urban vacant land: a spatial difference-in-differences analysis." *Environment and Planning-Part A* 44, no. 12 (2012): 3010.

Hipp, John R. "A Dynamic View of Neighborhoods: The Reciprocal Relationship between Crime and Neighborhood Structural Characteristics" *Social Problems* 57, no.2 (2013)

Hollar, Michael K. "Understanding Whom the LIHTC Program Serves. Washington, DC: US Department of Housing & Urban Development, 2015

Hur, Misun, and Hazel Morrow-Jones. "Factors that Influence Residents' Satisfaction with Neighborhoods," *Environment and Behavior*, 40, no.5 (2008).

Ioannides, Yannis M. "Residential neighborhood effects." *Regional Science and Urban Economics* 32, no.2 (2002).

Jacobs, Jane. *The Death and Life of Great American Cities*. New York, NY: Random House 1961

Jones, Roderick W. and William Alex Pridemore. "The Foreclosure Crisis and Crime: Is Housing-Mortgage Stress Associated with Violent and Property Crime in U.S. Metropolitan Areas?" *Social Science Quarterly* 93, no.3 (2012).

Kirk, David S. and John H. Laub "Neighborhood Change and Crime in the Modern Metropolis" in M. Tonry (ed.) *Crime and Justice, Vol. 39.* Chicago, IL: University of Chicago Press, 2010

Kirk, David S. and Derek S. Hyra. "Home Foreclosures and Community Crime: Causal or Spurious Association?" *Social Science Quarterly* 93, no.3 (2012).

Kolko, Jed. *Job Location, Neighborhood Change, and Gentrification*. San Francisco, CA: Public Policy Institute of California, 2009.

Kondo, Michelle C., Danya Keene, Bernadette C. Hohl, John M. MacDonald and Charles C. Branas. "A Difference-In-Differences Study of the Effects of a New Abandoned Building Remediation Strategy on Safety" *PLOS ONE* 10, no.8 (2015)

Grange, Randy L., Kenneth F. Ferraro, and Michael Supancic. "Perceived Risk and Fear of Crime: Role of Social and Physical incivilities," *Journal of Research in Crime and Delinquency* 29, no.3 (1992)Lauridsen, Jorgen, Niels Nannerup and Morten Skak. "Owner-Occupied Housing and Crime Rates in Denmark" Paper presented at the 2006 ENHR Conference, Ljubljana, Slovakia, 2006.

Lee, Sarah S. Does Proximity to Means-Tested Subsidized Housing Affect Single-Family Home Values? An Empirical Investigation Across Five Metropolitan Areas. Washington, DC: The George Washington University, Ph.D dissertation, 2008.

Li, Yanmei and Hazel A. Morrow-Jones. "The Impact of Residential Mortgage Foreclosure on Neighborhood Change and Succession" *Journal of Planning Education and Research* 30, no.1 (2010)

Lindblad, Mark, Kim Manturuk and Roberto Quercia "Sense of Community and Informal Social Control among Lower Income Households: The Role of Homeownership and Collective Efficacy in Reducing Subjective Neighborhood Crime and Disorder." *American Journal of Community Psychology* 51, no.1 (2013)

Mallach, Alan. "Building Sustainable Homeownership: Rethinking Public Policy toward Lower-income Homeownership." Philadelphia, PA: Federal Reserve Bank of Philadelphia, 2011.

Mallach, Alan. "Lessons From Las Vegas: Housing Markets, Neighborhoods, and Distressed Single-Family Property Investors" *Housing Policy Debate* 24, no.4 (2014)

Mallach, Alan. "The Uncoupling of the Economic City: Increasing Spatial and Economic Polarization in American Older Industrial Cities" *Urban Affairs Review* 51, no.4 (2015)

Manturuk, Kim, Mark Lindblad and Robert Quercia. "Friends and Neighborhoods: Homeownership and Social Capital among Low- to Moderate-Income Families" *Journal of Urban Affairs* 32, no.4 (2010)

Manturuk, Kim. "Urban Homeownership and Mental Health: Mediating Effect of Perceived Sense of Control." *City & Community* 11, no.4 (2012)

Margulis, Harry L. and Catherine Sheets. "Housing Rehabilitation Impacts on Neighborhood Stability in a Declining Industrial City" *Journal of Urban Affairs* 7, no.3 (1985)

Mikelbank, Brian A. "Spatial Analysis of the Impact of Vacant, Abandoned and Foreclosed Properties." Cleveland OH: Federal Reserve Bank of Cleveland, 2008.

Mohanty, Lisa L. and Lakshmi K Rau. "Home Ownership and School Outcomes of Children: Evidence from the PSID Child Development Supplement." *The American Journal of Economics and Sociology.* 68, no.2 (2009)

Morenoff, Jeffrey D, Robert J. Sampson and Stephen W. Raudenbush. "Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence" *Criminology;* 39, no.3 (2001)

National Association of Realtors. "Social Benefits of Homeownership and Stable Housing." Washington DC: NAR Research Division, 2006

Pandey, Shanta and Claudia Coulton. "Unraveling neighborhood change using two-wave panel analysis: A case study of Cleveland in the 1980s" *Social Work Research* 18, no.2 (1994)

Pollock, Craig Evan and Julia Lynch "Health Status of People Undergoing Foreclosure in the Philadelphia Region" *American Journal of Public Health* 99, no.10 (2009)

Putnam, Robert D. "The Prosperous Community: Social Capital and Public Life." *The American Prospect* 13 (1993)

Quercia, Robert G. and Galster, George C. 2000. "Threshold Effects and Neighborhood Change" *Journal of Planning Education and Research* 20

Rohe, William and L.S. Stewart. "Home Ownership and Neighborhood Stability" *Housing Policy Debate* 7, no.1 (1996)

Rohe, William and Victoria Basolo. "Long-Term Effects of Homeownership on the Self-Perceptions and Social Interactions of Low Income Persons" *Environment and Behavior* 29, no.6 (1997)

Rossi, Peter H. and Eleanor Weber. "The Social Benefits of Homeownership: Empirical Evidence from National Surveys" *Housing Policy Debate* 7, no.1 (1996)

Sampson, Robert J., Stephen W. Raudenbush, and Felton Earls. "Neighborhoods and violent crime: A multilevel study of collective efficacy."*Science* 277, no. 5328 (1997): 918-924.

Sampson, Robert J. *Great American City.* Chicago IL: University of Chicago Press, 2012

Seo, Wonseok, and Burkhard von Rabenau. "Spatial Impacts of Microneighborhood Physical Disorder on Property Resale Values in Columbus, Ohio," *Journal of Urban Planning and Development*, vol. 137, no.3 (2011)

Simons, Robert, Roberto Quercia and Ivan Maric.. “The value impact of new residential construction and neighborhood disinvestment on residential sales price.” *Journal of Real Estate Research* 15, no.2 (1998)

Skogan, Wesley. *Disorder and Decline: Crime and the Spiral of Decay in American Neighborhoods* Berkeley, CA: University of California Press, 1990

Stucky, Thomas D., John R. Ottensmann and Seth B. Payton. “The Effect of Foreclosures on Crime in Indianapolis, 2003–2008” *Social Science Quarterly* 93, no.3 (2012)

Taub, Richard P., D. Garth Taylor, and Jan D. Dunham. *Paths of neighborhood change: Race and crime in urban America*. Chicago IL: University of Chicago Press, 1984

Temkin, Kenneth and William Rohe. “Social Capital and Neighborhood Stability: An Empirical Investigation” *Housing Policy Debate* 9, no.1 (1998)

Temple University Center for Public Policy and Eastern Pennsylvania Organizing Project. “Blight Free Philadelphia: A Public-Private Strategy to Create and Enhance Neighborhood Value.” Philadelphia, 2001.

Varady, David P. “Neighborhood Confidence: A Critical Factor in Neighborhood Revitalization?” *Environment and Behavior* 18, no.4 (1986)

Voicu, Ian, and Vicki Been. “The Effect of Community Gardens on Neighboring Property Values,” *Real Estate Economics*, 36, no.2 (2008)

Wachter, Susan M., Kevin C. Gillen, and Carolyn R. Brown. "Green investment strategies: a positive force in cities." Communities and Banking Spring (2008): 24-27.

Weissbourd, Robert, Riccardo Bodini and Michael He. “Dynamic Neighborhoods: New Tools for Community and Economic Development.” Prepared by RW Ventures for Living Cities: The National Community Development Initiative, 2009

Whitaker, Stephan and Thomas J. Fitzpatrick IV. “Deconstructing Distressed-Property Spillovers: The Effects of Vacant, Tax-Delinquent, and Foreclosed Properties in Housing Submarkets.” Cleveland OH: Federal Reserve Bank of Cleveland, 2012.

Williams, Sonya, George Galster and Nandita Verma. “Home Foreclosures as an Early Warning Indicator of Neighborhood Decline” *Journal of the American Planning Association* 79, no.3 (2013)