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## Neighborhood Boundaries and Structural Determinants of Social Disorganization: Examining the Validity of Commonly Used Measures

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**Abstract:** *Social disorganization theory is a macro-level approach to understanding variation in levels of neighborhood crime and delinquency. Contemporary studies of social disorganization typically rely on administratively defined geographic boundaries (i.e., census blocks, block groups, or tracts) and demographic data aggregated to corresponding areas as proxies for neighborhoods and neighborhood conditions. Despite their frequent use, it is unknown whether official measures of neighborhoods and corresponding measures of neighborhood conditions are valid indicators of these concepts. Using data from a survey of 116 residents of Clark County, Nevada, the current study tests the validity of commonly used measures of neighborhood boundaries and neighborhood structural conditions in the context of social disorganization theory. Results show that administrative proxies of neighborhoods are inconsistent with perceived neighborhood boundaries and that perceived neighborhood structural determinants of social disorganization are also inconsistent with official measures. Findings are discussed in terms of their theoretical implications and direction for future research.*

**Keywords:** defining neighborhood, neighborhood crime, social disorganization theory

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### INTRODUCTION

Shaw and McKay's (1942) social disorganization perspective represented a fundamental shift in thinking about crime and delinquency, focusing on "kinds of places" instead of "kinds of people" as an explanation of the etiology of crime and deviance. The original underlying theme of the social disorganization argument emphasized both social and environmental characteristics of inner cities that were linked to increased rates of anti-social behavior. Although the body of literature supporting the social disorganization explanation of criminogenic places has grown over the past several decades, important methodological issues remain underdeveloped (see Bursik 1988; Kornhauser 1978; Kubrin and Weitzer 2003). One such concern is the use of administratively defined proxies of "neighborhoods" and corresponding official measures of neighborhood structural determinants that are believed

to influence crime and delinquency either directly or indirectly by way of various community dynamics.

Contemporary social disorganization research often utilizes data aggregated to administratively defined areas such as census blocks, block groups, or tracts because these data are robust and easily available. Recent changes to the Census Bureau's American Community Survey (ACS)<sup>1</sup> have resulted in more precise and timely indicators of neighborhood disorganization, thereby making these data even more attractive to the scientific community. Despite the growing availability and use of official data, it remains unclear whether administratively defined boundaries used as proxy neighborhoods and corresponding measures of the structural determinants of social disorganization are consistent with perceptual indicators of these concepts. The current study answers two questions related to these concerns.

First, using geographic information systems (GIS), the current study investigates whether geographic boundaries of perceived neighborhoods differ significantly from administratively defined proxies of “neighborhoods.” Comparisons between perceived and official neighborhood boundaries are made at the census block, block group, and tract levels. Answering the question, “Which administratively defined geographic unit best represents a neighborhood, if any?” is important, as it will aid those interested in studying the relationship between neighborhood processes and crime at the macro-level to determine the most appropriate unit of analysis.

Second, the current study examines whether perceived neighborhood structural determinants of social disorganization (e.g., socio-economic status, residential mobility, racial heterogeneity, and family disruption) differ significantly from official measures of these concepts. Answering this question is also important and has relevant theoretical implications. Simply put, it offers new insight into whether commonly used indicators of social disorganization accurately represent the way residents perceive—and therefore likely react in response to—their neighborhoods, which is believed to play an important role in contemporary neighborhood process models used to explain crime and disorder. Collectively, results from this study inform a large and growing scientific audience interested in the ecology-crime link in general and the relationship between social disorganization and crime in particular.

The remainder of this article is arranged in the following manner. The next section provides an overview of the relevant literature. Theoretical developments related to the social disorganization perspective are highlighted and methodological challenges to and extensions of Shaw and McKay’s (1942) original work are discussed. The section concludes with a presentation of the hypotheses that are tested in the current study. Details of the data and methodology used follow, including a description of our analytic strategy. Results are presented in the fourth section; and the final section includes a discussion of our findings, limitations of the current work, and implications for future research. We begin with a review of the contemporary literature, which serves as the impetus for the current investigation.

## **SOCIAL DISORGANIZATION AND CRIME**

Emergence of the Chicago School in the 1920s and 1930s signaled a major paradigm shift in sociological and criminological thinking. Theories that attempted to explain crime and delinquency as a function of the urban environment were offered as alternatives to existing approaches. One of the most notable and enduring criminological theories produced during the Chicago School-era was the theory of social disorganization (Shaw and McKay 1942), which suggests that neighborhood

structural factors disrupt a community’s ability to self-regulate and that this inability to self-regulate leads to crime and delinquency.

Despite growing interest in ecological explanations of neighborhood crime at the macro level, important methodological and measurement questions about the social disorganization perspective have been raised over the years (see Bursik 1988; Kubrin and Weitzer 2003 for a review). For example, shortly after Shaw and McKay’s (1942) ideas were introduced, Robison (1950) questioned the appropriateness of using ecological correlates to crime as a substitute for individual correlates. Since then, concerns over the dynamic nature of the relationship between social disorganization and crime as well as the appropriate units of analysis used in social disorganization models have been demonstrated in the literature (Arnold and Brungardt 1983; Bursik 1988; Hipp 2007b; Kubrin and Weitzer 2003; Robison 1950; Short 1985; Stark 1987). In addition, the operational and conceptual definitions of formal control, informal control, and crime have been the focus of others interested in the social disorganization approach (Bursik 1988; Kubrin and Weitzer 2003; Robison 1936; Warner and Pierce 1993). Perhaps the biggest challenge facing ecological explanations of crime and delinquency at the community level, however, is the problem of developing an appropriate operational definition of “neighborhood.”

### **What is a Neighborhood?**

Social scientists have struggled to define “neighborhood” for nearly a century. Some argue that communities are socially constructed (Hunter 1974; Sampson 2004), whereas others argue that neighborhoods are spatially or geographically defined (Grannis 1998, 2010; Park 1915; Suttles 1972). Despite clear scholarly direction on how to operationally define neighborhoods, most social disorganization research relies on administrative boundaries defined by the U.S. Census Bureau as neighborhood proxies. Although houses on both sides of the street between two intersections or between one intersection and a dead end (i.e., face blocks or street blocks) are occasionally used to represent communities (Smith, Frazee, and Davison 2000; Taylor 1997; Taylor, et al. 1995), administratively defined boundaries are used most often to approximate these locations.

Census blocks, block groups, and tracts are the three most common administrative boundaries used as neighborhood proxies in social disorganization research. Representing the basis for all tabular U.S. Census Bureau data, census blocks are defined by both visible features (e.g., streets, roads, streams, and railroad tracks) and nonvisible features (e.g., property lines, school districts, and line-of-site extensions of streets or roads). In urban areas, census blocks are typically small in area; but can be much larger—even encompassing hundreds of square

miles—in suburban, rural, and remote areas of the country (United States Census Bureau 2010).

Clusters of census blocks are used to form block groups, which is the smallest geographic unit for which the U.S. Census Bureau tabulates sample data. Block groups generally contain between 600 and 3,000 people, with an optimal size of 1,500. Block groups never cross a state, county, or census tract boundary; but may cross the boundary of other geographic entities (United States Census Bureau 2010).

Finally, census tracts are small, relatively permanent statistical subdivisions of counties and contain one or more block groups. On average, census tracts contain 4,000 residents; but generally ranging from 1,200 to 8,000. Census tract boundaries usually follow visible features but may follow governmental unit boundaries and other nonvisible features and are designed to be relatively homogeneous units with respect to socio-demographic characteristics and living conditions (United States Census Bureau 2010).

From a practical standpoint, it makes sense to operationally define “neighborhoods” in terms of administrative boundaries because indicators of social disorganization that are used to explain neighborhood effects on crime are contained in census data and can easily be aggregated to blocks, block groups or tracts. Boggess and Hipp recently put it this way: “Though there are perhaps many ways to define ‘neighborhood,’ we rely on a conventional method—tracts—that has been used throughout sociological and criminological research on communities. Like many studies before us, *we are constrained by data availability* <Emphasis added>” (2010:357). Despite the availability of census data, some suggest that the “conventional” method of defining neighborhoods in terms of administrative boundaries is inappropriate for studying the relationship between social disorganization and crime. Sampson, Morenoff and Gannon-Rowley, for example, feel that official geographic approximations of communities offer imperfect operational definitions of neighborhoods for research and policy and argue “the strategy of defining neighborhoods based on Census geography and using tracts or higher geographical aggregation as proxies for neighborhoods is problematic from the standpoint of studying social processes” (2002:470). Nevertheless, investigations into the relationship between neighborhood structural determinants and crime continue to rely on administratively defined geographic boundaries as neighborhood proxies. It is unclear, however, whether these boundaries accurately reflect perceived neighborhood boundaries among community members. Understanding the relationship between perceived neighborhood boundaries and that which is reflected by administrative units is vitally important, given the link between neighborhood structural conditions and the community processes they are believed to influence.

## Neighborhood Structure and Crime

Social disorganization theory suggests that neighborhood structural factors disrupt a community’s ability to self-regulate, which in turn leads to crime and delinquency. Initially, Shaw and McKay (1942) argued that economic status, ethnic heterogeneity, and residential mobility were the primary neighborhood structural determinants of community instability. Today, a substantial body of literature shows that concentrated disadvantage, racial heterogeneity, family disruption, residential stability, and urbanization explain meaningful variation in rates of crime and delinquency at the neighborhood level (Boggess and Hipp 2010; Hipp 2007a, 2010a, 2010b; Lowenkamp, Cullen, and Pratt 2003; Maimon and Browning 2010; Miethe, Hughes, and McDowall 1991; Sampson and Groves 1989; Sampson, Raudenbush, and Earls 1997; Sun, Triplett, and Gainey 2004; Veysey and Messner 1999; Warner and Pierce 1993). As noted previously, researchers frequently rely on census data—aggregated to either the tract or block group—when measuring the structural determinants of social disorganization because structural determinant data are collected across the entire United States, at regular intervals, and then made easily available to the public via the Internet.

Despite their availability and accessibility, Hipp (2007b) recently encouraged researchers studying the effects of social disorganization on crime to give greater consideration to the manner in which indicators of social disorder found in census data are geographically aggregated. Studying the relationship between neighborhood effects on perceived crime and disorder at different administratively defined levels, he argued that aggregating census data to proxy neighborhoods represented by tracts or block groups distorts the empirical relationships between neighborhood structure and crime and disorder that are suggested by social disorganization theory. Although Hipp concluded that no single level of aggregation is appropriate for studying social disorganization, his research demonstrates the need to better understand the implications of arbitrarily aggregating structural determinant data to administrative boundaries. Wooldredge (2002) also suggests that models can produce bias results when neighborhoods are operationally defined in terms of different administrative boundaries because different sized “neighborhoods” will likely generate differences in empirical relationships between ecological dynamics and crime.

Geographers have long warned of the problems that arise when point-based measures of spatial phenomena are aggregated to larger areal units. Gehlke and Biehl (1934) were among the first to document this issue when they observed changes in correlation coefficients of male juvenile delinquency rates in 252 Cleveland, Ohio census tracts when data were aggregated to different scales. This

phenomenon has become known as the Modifiable Areal Unit Problem (MAUP) (Openshaw and Taylor 1979) and is formally defined as, “a problem arising from the imposition of artificial units of spatial reporting on continuous geographical phenomenon resulting in the generation of artificial spatial patterns” (Heywood, Cornelius, and Carver 1998:8). For example, by definition an administrative boundary represented as a census block, block group, or tract can contain several households. Each household represents a discrete location and can be associated with demographic information collected from residents during a particular data collection project (e.g., the decennial census or the American Community Survey). When these point-based data are aggregated to blocks, block groups, or tracts so that the effects of some social process on a particular outcome can be estimated, models may produce bias estimates because of the arbitrary scale of the spatial unit.

Despite the MAUP, neighborhood effects research continues to utilize neighborhood structural determinant data collected by the Census Bureau and aggregated to the block, block group, or tract level. When this approach is taken, the operational definition of neighborhood becomes the particular administrative boundary to which data are grouped. It is unclear, however, whether the endogenous community dynamics that are believed to mediate the effects of neighborhood structure on crime develop in response to conditions that conform to any of these census geographies.

### **Endogenous Community Dynamics**

Over nearly the past 25 years, the intervening effects of endogenous community dynamics have been incorporated into social disorganization models (Sampson and Groves 1989). Social control, social ties, social capital, and collective efficacy are among the kinds of endogenous neighborhood factors that have been considered when the social disorganization-crime link is examined (Bursik and Grasmick 1993; Lowenkamp, Cullen, and Pratt 2003; Maimon and Browning 2010; Markowitz, Bellair, Liska, and Liu 2001; Mazerolle, Wickes, and McBroom 2010; Sampson 1988, 2002, 2004, 2006, Sampson and Groves 1989; Sampson, Morenoff, and Earls 1999; Sampson, Raudenbush, and Earls 1997; Veysey and Messner 1999). Unlike structural determinants of crime and delinquency, indicators of endogenous community dynamics are commonly derived from self-reported national or local surveys.

By including the mediating effects of endogenous community dynamics into traditional models of social disorganization, researchers make two important assumptions. First, it is assumed that the mechanisms of informal and/or formal social control are influenced by community members’ awareness of and collective response to the neighborhood conditions in which they

live. Raudenbush and Sampson (1999) refer to this social process as “ecometrics”; and social process models have been used successfully over the past several years to explain various neighborhood effects on crime and disorder (see Sampson, Morenoff, and Gannon-Rowley 2002 for a complete review).

Second, it is assumed that official measures of neighborhood structural conditions aggregated to a particular administrative boundary are valid indicators of perceived neighborhood conditions. Since social processes rely first and foremost on an awareness of and reaction to neighborhood structural conditions in which people live, official indicators of the structural determinants of crime should accurately reflect individuals’ perceptions of them when they are aggregated to a neighborhood proxy if accurate conclusions about “neighborhood effects” on crime are to be reached. In light of Coulton, Cook, and Irwin’s (2004) findings that suggest the reliability of composite measures of neighborhood attributes diminishes significantly as individual-level data is aggregated to larger units of analysis such as census tracts and block groups, it is unclear whether commonly used measures of the neighborhood structure that are believed to affect community dynamics and that in turn affect crime and disorder are valid indicators. This uncertainty serves as the impetus for the current study.

### **Current Study**

While a robust literature exists on how social and perceptual boundaries of neighborhoods are created in general (see for example, Coulton, et al. 2001; Lamont and Molnár 2002), less is known about whether perceived neighborhoods boundaries and corresponding structural determinants of crime are consistent with administratively defined boundaries and official data, respectively. That is, despite their frequent use, it is unclear whether geographic “proxies” of neighborhoods and corresponding measures of neighborhood conditions are valid indicators of these concepts, when they are used to explain crime and delinquency from a social disorganization perspective. It is important to note that we are not suggesting that census block, block group, or tract boundaries and demographic data produced by the Census Bureau are erroneous. Rather, we question whether geographic boundaries and corresponding indicators of neighborhood structural conditions used in studies designed to better understand the relationship between neighborhoods and crime are consistent with residents’ perceptions, since it is these perceptions that give rise to the social processes that are believed to have a ‘neighborhood effect’ on crime and delinquency.

The current study begins to fill existing gaps in the relevant literature by testing two distinct research hypotheses. First, it is hypothesized that perceptions of neighborhood boundaries will differ from their

**Figure 1. Illustration of a respondent's perceived neighborhood boundary (light grey) drawn on a map image, compared to the overlaid boundaries of the corresponding census block group (dashed) and tract (black) in which the respondent lives.**



administratively defined proxies, regardless of whether they are represented as census blocks, block groups, or tracts. Examining the level of consistency between perceived and official neighborhoods, both in terms of count and overlapping area (in  $\text{mi}^2$ ), allows us to assess the first hypothesis. Second, it is hypothesized that perceptions of neighborhood structural determinants of social disorganization, including indicators of socio-economic status, residential mobility, racial heterogeneity, and family disruption differ from official measures of these concepts. Mean differences between official and perceptual measures of these concepts are tested in order to assess the second hypothesis. Data and methods used in

the current study as well as the analytic strategy employed are described next.

## DATA AND METHODS

Data for the current investigation were collected in two phases from a convenience sample of Clark County, Nevada residents aged 18 years or older. Potential respondents were approached at various public locations throughout the county, including shopping plazas, libraries, and community centers. Student volunteers attending the University of Nevada, Las Vegas also participated in the study. Surveys were administered

during the fall and winter of 2010 (n=116). The typical respondent was male, 24 years of age, who had reportedly lived in their current neighborhood for about 4.5 years. According to official statistics, our sample is younger than most Clark County residents (median age in 2010 was 35), is slightly overrepresented by men (54% versus 50%), but representative of residential tenure (i.e., as of 2010, 56% of residents in occupied housing units had lived in their current home for about 5 years). Measures of the relevant variables, including neighborhood boundaries and structural determinants of social disorganization are described in greater detail in the following sections.

### Neighborhood Boundaries

During the initial data collection phase, each respondent provided research staff with the address for their current residence. Using ArcGIS 10.0, the address was identified as a point location on an aerial image map at the scale of 1:10,000. The respondent was then instructed how to manipulate the map imagery and GIS interface (i.e., how to zoom in/out, pan, and draw on the map using a mouse, etc.). Next, the respondent was asked to use the computer's mouse to draw a contiguous line on the map image, around the area that they felt best represented the boundary of the neighborhood in which they lived.

Once the respondent drew their perceived neighborhood boundary, the Edit Feature tool in ArcGIS was used to export the resulting polygon as a feature class. Each feature class created and exported was merged into a single shapefile. These data were used to compare to each administrative boundary (i.e., census block, block group, and tract) in which each respondent lived and to test the first research hypothesis. Figure 1 provides an example of a respondent's perceptually defined neighborhood (in light grey), compared to the corresponding census tract (in black) and block group (dashed) in which they lived.

### Exogenous Neighborhood Conditions

The second stage of data collection involved measuring perceived neighborhood structural determinants of social disorganization<sup>2</sup>. A self-administered questionnaire was used to gather this information. The four neighborhood structural determinants assessed in the current study include socio-economic status, residential mobility, racial heterogeneity, and family disruption. These variables reflect the exogenous neighborhood structural determinants traditionally used to test social disorganization theory (Sampson and Groves 1989; Sampson, Morenoff, and Earls 1999; Sampson, Raudenbush, and Earls 1997). In addition to the perceptual indicators of social disorganization, the current study

obtained corresponding official data for these indicators—based on where respondents' lived—from the American Community Survey (ASC) 5-year estimate file (2005-09).

In the current study, perceived socio-economic status is a composite measure consisting of 1) the *perceived* percentage of households within a respondent's neighborhood earning more than the county's median household income<sup>3</sup>; 2) the *perceived* percentage of adults living in a respondent's neighborhood who hold a professional or managerial position at work<sup>4</sup>; 3) the *perceived* percentage of college educated adults living in a respondent's neighborhood; and 4) the *perceived* percentage of homes in a respondent's neighborhood that are owned versus rented. Table 1 provides summary statistics for each perceptual measure, as well as the corresponding measure obtained from the ASC data and aggregated to the block group level.

The second perceived structural determinant measured in the current study is residential mobility. Respondents were asked, "Out of every 100 housing units occupied in your neighborhood, in your opinion, how many are occupied by residents who have lived there for less than 10 years?" On average, respondents believed that two-thirds of all occupied homes in their neighbors were inhabited by residents that had lived there less than 10 years. The corresponding official figure is approximately one-third of what respondents' perceived.

Perceived racial heterogeneity is the third exogenous factor examined in the current study, and was constructed using a variation of Blau's (1977) index of intergroup relations<sup>5</sup>,  $(1 - \sum P_i^2)$ , where  $P_i$  is the proportion of the population in each racial/ethnic group. Six racial/ethnic categories are used to calculate the perceptual and official racial heterogeneity index<sup>6</sup>.

Finally, two perceptual indicators of family disruption are also used in the current study, including 1) the *perceived* percentage of divorced or separated adults living in a respondent's neighborhood; and 2) the *perceived* percentage of households headed by single-parents. Perceptual measures were based on respondents' answers to the questions, "Out of every 100 people age 15 years and over living in your neighborhood, in your opinion, how many are either currently married, divorced, separated, widowed, or never married" and "Out of every 100 families that reside in your neighborhood, in your opinion, how many are headed by a single parent," respectively. On average, respondents' perceived that 16% of adults living in their neighborhoods are divorced or separated. Furthermore, they believed that single-parent households comprise 32% of the homes where they lived. Corresponding data contained in the ASC indicate that these figures are 15% and 28%, respectively.

**Table 1. Descriptive Statistics for the Perceived and Official Measures of Neighborhood Structural Determinants of Social Disorganization (n=116).**

Structural determinants	Perceived				Official <sup>1</sup>			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD
Socio-economic status								
High income	0.00	1.00	0.52	0.29	0.10	0.97	0.55	0.20
Professional/manager	0.00	0.95	0.52	0.23	0.00	0.36	0.11	0.20
College educated	0.00	0.98	0.51	0.24	0.12	0.90	0.61	0.16
Home ownership	0.00	1.00	0.60	0.29	0.00	1.00	0.62	0.24
Residential mobility	0.00	1.00	0.65	0.32	0.00	0.67	0.21	0.18
Racial heterogeneity	0.10	0.83	0.55	0.16	0.00	0.59	0.30	0.15
Family disruption								
Divorced or separated	0.00	0.60	0.25	0.15	0.03	0.40	0.15	0.07
Single parent	0.00	0.80	0.32	0.20	0.00	0.79	0.28	0.15

<sup>1</sup> Official indicators of the neighborhood structural determinants of social disorganization are based on measures at the block group level.

**Analytic Strategy**

Both research hypotheses presented above required distinct analytic strategies. For example, two separate analyses were performed in order to assess the consistency between perceived and administratively defined neighborhood boundaries. First, a one-sample t-test was conducted to determine whether, on average, more than a single administratively defined “neighborhood” was contained by a respondent’s perceived neighborhood. To accomplish this task, the perceived neighborhood boundary shapefile was overlaid by a 2010 U.S. Census Bureau polygon shapefile for Clark County, Nevada<sup>7</sup>. ArcGIS’s selection tool was then used to identify all blocks, block groups, and tracts that were overlapped by each respondent’s perceived neighborhood boundary. Raw counts for each administrative unit were recorded for each respondent. Table 2 shows that, on average, most respondent’s perceived neighborhood boundary overlap 5 or more blocks. However, on average, the majority of respondents’ perceived neighborhood boundaries overlap only one block group (68%) and one census tract (83%).

Consistency between perceived and administratively defined neighborhood boundaries was also analyzed. Specifically, a paired sample t-test was used to determine whether, on average, the size of each administratively defined neighborhood in which respondents lived differed significantly from the size of the corresponding perceived neighborhood. To conduct this analysis, the total area (in mi<sup>2</sup>) of the census block, block group, and tract in which

**Table 2. Number of Official Neighborhoods Contained within the Perceived Neighborhood in which Respondents Live, by Administrative Unit (n=116).**

Unit	Number	Pct.	Cum. Pct.
Blocks			
1	12	10.3	10.3
2	11	9.5	19.8
3	14	12.1	31.9
4	11	9.5	41.4
5 or more	68	58.6	100.0
Block groups			
1	79	68.1	68.1
2	19	16.4	84.5
3	8	6.9	91.4
4	3	2.6	94.0
5 or more	7	6.0	100.0
Tracts			
1	96	82.8	82.8
2	12	10.3	93.1
3	4	3.4	96.6
4	1	0.9	97.4
5 or more	3	2.6	100.0

each respondent lived was calculated using ArcGIS’s spatial geometry tool and compared to the calculated size of each respondent’s perceived neighborhood boundary.

Table 3 provides summary statistics for the size of perceived and official neighborhoods. Results show that the average size of an official neighborhood, defined as a census block, is about one-fifth the size of a respondent’s perceived neighborhood. Conversely, on average, block groups are more than three times the size of perceived neighborhoods. Finally, on average, census tracts in which respondents’ lived are nearly six times the size of perceived neighborhoods. Combined, results from the one-sample t-test (counts) and the paired sample t-test (area) are used to evaluate our first research hypothesis.

**Table 3. Area of Perceived Neighborhoods in which Respondents Live and Corresponding Official Neighborhoods, by Administrative Unit (n=116).**

Neighborhood	Area (mi <sup>2</sup> )			
	Min.	Max.	Mean	SD
Perceived	--	10.16	0.29	1.08
Official				
Block	--	0.82	0.06	0.10
Block groups	--	46.59	1.04	4.38
Tracts	0.24	46.59	1.67	4.44

-- Less than .05 square miles.

Finally, a paired sample t-test is used to test our second research question: do perceptions of neighborhood structural determinants of social disorganization differ significantly from official measures of these concepts. Based on test results of our initial research hypothesis, official measures of the neighborhood structural determinants of social disorganization were aggregated to the geographic unit that best represented respondents’ neighborhoods. As noted previously, perceptual indicators of the neighborhood structural determinants of social disorganization were based on responses to survey questions, whereas official measures of these indicators were obtained from the American Community Survey (see Table 1). Results of our analysis follow.

**RESULTS**

One-sample t-tests were conducted in order to determine whether, on average, perceived neighborhoods described by respondents contain more than a single administratively defined “neighborhood.” Administrative neighborhoods were operationalized as census blocks,

block groups, and tracts. Therefore, a total of three separate t-tests were conducted.

**Perceived Versus Official Neighborhood Boundaries**

Results from tests of our first hypothesis are presented in Table 4 and show that none of the geographic areas defined administratively accurately represent a respondent’s neighborhood in terms of count. Even census tracts, which are most commonly used as proxies of neighborhoods and represent the largest of the three administratively defined geographic areas examined, are no exception. On average, respondents’ perceived neighborhoods contained more than a single tract  $t(115) = 2.65, p = .009$ . Since both perceived neighborhoods as well as the official proxies of communities vary in size, measuring consistency between the two based solely on counts is insufficient. Therefore, consistency between perceived and administratively defined neighborhoods—defined in terms of shared area—was also examined.

**Table 4. One-Sample T-Test Results Determining Whether Perceived Neighborhoods Contain more than a Single Administrative "Neighborhood" (n=116).**

Neighborhood	Mean <sup>1</sup>	SD	t	p
Official				
Blocks	17.99	68.95	2.64	.010
Block groups	2.05	3.80	2.98	.003
Tracts	1.45	1.82	2.65	.009

<sup>1</sup> Represents the average number of administrative "neighborhoods" contained within a respondent's perceived neighborhood boundary.

Table 5 presents results from a series of paired sample t-test used to examine whether, on average, a respondent’s perceived neighborhood was similar in size to the census block, block group, and track in which they lived. Findings show that on average census blocks significantly underrepresent the size of perceived neighborhoods  $t(115) = -2.32, p = .022$ , whereas tracts significantly overrepresent the size of perceived neighborhoods  $t(115) = 3.28, p = .001$ . Conversely, on average, block groups are statistically similar in size (i.e., neither larger or smaller in area than) to perceived neighborhood boundary  $t(115) = 1.80, p = .074$ .

Collectively, results from the one sample t-test support our first hypothesis that perceptions of neighborhood boundaries differ from administratively defined geographic boundaries of “neighborhoods” when proxy neighborhoods are represented as census blocks, block groups, or tracts. However, when the overall size of neighborhood



**Table 5. Paired-Sample T-Test Results Determining Whether the Size of the Perceived Neighborhood in which Respondents Live Differs from their Corresponding Administrative “Neighborhood” (n=116).**

Neighborhood	Mean <sup>1</sup>	SD	t	p
Perceived	0.29	1.08	NA	NA
Official				
Blocks	0.06	0.10	-2.32	.022
Block groups	1.04	4.38	1.80	.074
Tracts	1.67	4.44	3.28	.001

<sup>1</sup> Represents the average area (in mi<sup>2</sup>) of a respondent's perceived neighborhood and corresponding official neighborhood in which the respondent lived.

boundaries is considered, findings indicate that census block groups serve as the best administrative proxy.

#### **Perceived versus Official Indicators of Structural Determinants**

Finally, a series of paired sample t-tests were conducted to determine whether perceptions of neighborhood structural determinants of social disorganization are consistent with corresponding official measures. Since results of the previous analysis suggest that census block groups are the best proxy for communities, comparisons between perceptual and official measures were made using administrative data aggregated to the block group in which respondents lived. Results are presented in Table 6 and show that the majority of exogenous structural determinants used in contemporary social disorganization research are inconsistent with corresponding perceptions of the conditions in which individuals live.

Socio-economic status, for example, is a measure of social disorganization and is typically comprised of multiple indicators such as household income level, percentage of household residents in professional/managerial positions, percentage of household residents who are college educated, and percentage of households that are owned versus rented. Although perceptions of household income and ownership are consistent with official data aggregated to the block group level, on average, respondents overestimated the percentage of residents in their neighborhoods who hold professional/managerial positions at work by 40%,  $t(115) = 18.81, p = .000$ . Similarly, respondents underestimated

the percentage of residents in their neighborhoods who are college educated by 10%,  $t(115) = -4.57, p = .000$ .

Significant differences between perceived and official measures of residential mobility and racial heterogeneity were also observed. Specifically, respondents overestimated the percentage of residents who had lived in their neighborhoods for less than 10 years by 43%,  $t(115) = 11.17, p = .000$ ; and overestimated the racial diversity of their neighborhoods by 26%,  $t(115) = 13.52, p = .000$ .

Family disruption is the final neighborhood structural determinant of social disorganization considered. Results indicate that one of the two perceptual indicators of family disruption is significantly different than what is represented in official data. Specifically, respondents overestimated the percentage of parents living in their neighborhoods who are divorced or separated by 9%,  $t(115) = 6.19, p = .000$ .

Collectively, results suggest that most of the typical indicators of social disorganization used in contemporary neighborhood effects research are inconsistent with perceptions of neighborhoods held by those living within them. Implications of these findings on future research are offered in the final section.

## **DISCUSSION**

Social disorganization theory is a macro-level approach to understanding variation in rates of crime and delinquency. Originally, the theory focused on explaining crime and delinquency as a function of changes in neighborhood structure. Over the past 25 years, however, models of social disorganization have incorporated endogenous community dynamics that mediate the relationship between neighborhood structure and crime.

**Table 6. Paired-Sample T-Test Results Determining Whether Perceived and Official Measures of Neighborhood Structural Determinants of Social Disorganization Differ (n=116).**

Structural determinants	Paired differences <sup>1</sup>			
	Mean	SD	t	p
Socio-economic status				
High income	-0.28	0.26	-1.16	.249
Professional/manager	0.40	0.23	18.81	.000
College educated	-0.10	0.22	-4.57	.000
Home ownership	-0.02	0.29	-0.90	.368
Residential mobility	0.43	0.42	11.17	.000
Racial heterogeneity	0.26	0.20	13.52	.000
Family disruption				
Divorced or separated	0.09	0.16	6.19	.000
Single parent	0.04	0.23	1.77	.079

1

Official indicators of the neighborhood structural determinants of social disorganization were based on measures aggregated to the block group in which respondents lived.

These mediating factors are usually measured at the individual level because it is assumed that the mechanisms of informal and/or formal social control are based in part on residents' awareness of and collective response to the neighborhood conditions in which they live. In other words, contemporary neighborhood effects models of social disorganization acknowledge the important role responses to neighborhood structural conditions play in explaining levels of crime. Paradoxically, these models generally rely on aggregated data that correspond to proxies of neighborhoods. These units of analysis, however, may or may not be valid indicators of the neighborhoods within which people believe they reside or what they believe the conditions of these locations to be.

In response, the current study was conducted in order to assess whether administratively defined neighborhood proxies and structural conditions within these locations that are commonly used in neighborhood effects research are consistent with residents' perceptions. Although there are many ways to define "neighborhood," most sociological/criminological research relies on measures aggregated to geographical boundaries that are represented by census blocks, block groups, or tracts. Neighborhoods are often operationally defined in this manner because socio-demographic information corresponding to administrative boundaries is easily available and consistently collected across space and time.

Findings from the current study show that on average *multiple* census blocks, block groups, and tracts are

consistently associated with a single neighborhood in which a person lives. Furthermore, perceived neighborhood boundaries are consistently disproportionate in size to corresponding official boundaries of proxy neighborhoods. An exception to this finding is the block group. Current results suggest that they represent similar approximations—in terms of size but not count—to perceived neighborhood boundaries. Overall, however, results from the current study indicate that there is a strong disconnect between how people define their neighborhood and how their neighborhood is defined in terms of administrative boundaries. In addition to discrepancies between perceived and official neighborhood boundaries, current findings demonstrate that perceptions of neighborhood structural conditions differ from what is reflected in census data. With few exceptions (i.e., high income, home ownership, and single parent households), individuals consistently over- and underestimate neighborhood structural conditions described in official statistics. In other words, current findings suggest that official data aggregated to the census block group usually fails to provide valid indicators of neighborhood structural determinants of crime.

As with most studies, data used in the present study have certain limitations that restrict some of our substantive conclusions. First, the current study relies on data collected from a convenience sample of county residents. Therefore, findings may not be generalizable to the larger population from which the sample was drawn.

Second, the sample size (n=116) was not large enough to permit more robust analysis. In 2010, there were nearly 500 census tracts and nearly 1,200 census block groups within Clark County, Nevada. If the sample was drawn randomly and large enough to include enough respondents from every block, block group, and tract within the county, for example, within group variation of perceived neighborhood condition could have been assessed for each community dynamic represented throughout the county. The current research would have benefitted from an analysis of within group variation; unfortunately, this type of approach was not possible. Although these limitations prevent us from drawing definitive conclusions about the validity of neighborhood boundaries and commonly used indicators of social disorganization, they begin to fill a gap in the contemporary scholarship; and more importantly, they provide guidance for future research.

Despite the convenience, current findings suggest that researchers seeking to model the relationship between social disorganization and crime should resist the urge to use “conventional” units of analysis available in administrative data. Instead, it may be more appropriate to incorporate perceptual measures of neighborhoods and corresponding structural determinants of social disorganization. Criminologists have recognized for decades that individuals’ perceptions play an important role in explaining patterns of both victimization and offending. During the 1970s and 1980s for example, in an attempt to improve our understanding of the deterrent effects of punishment on offending, increased academic attention focused on the *perceived* certainty, celerity, and severity of official responses to crime and delinquency (Chiricos and Waldo 1970; Jensen, Erickson, and Gibbs 1978; Lundman 1986; Paternoster 1987; Saltzman, et al. 1982). The rational choice perspective emerged from this scholarship, arguing that offenders were more likely to engage in criminal activity when the *perceived* benefit of criminal activity outweighed the *perceived* cost (Bachman, Raternoster, and Ward 1992; Decker, Wright, and Logie 1993; Nagin and Paternoster 1991). Explanations of criminal victimization offered from a routine activities perspective also acknowledge the importance of individuals’ perceptions (Cohen and Felson 1979; Kennedy and Forde 1990; Miethe and Meier 1990; Sampson and Lauritsen 1990). Although other examples can be found throughout the criminological scholarship (e.g., broken windows theory, anomie theory, environmental criminology, labeling theory, etc.), most are associated with attempts to explain individual behavior. Therefore, including perceptual measures of the structural determinants of social disorganization may be viewed as being inconsistent with the general macro-level theoretical approach of this perspective.

A renewed interest in systemic models of social disorganization (see for example, Bellair and Browning 2010), however, suggests that individual behavior plays an

important role in mediating the effects between neighborhood structural conditions and crime and delinquency. A systemic model of crime argues that the process of social control and its effect on crime and delinquency rests on the presence and strength of primary (e.g., social ties among relatives and close friends) and secondary (e.g., social ties among neighborhood acquaintances) social networks. In discussing systemic models of social disorganization, Messner and Zimmerman recently suggested that “...the systemic model of crime ‘unpacks the mechanisms’ of neighborhood effects by highlighting the ways in which relational networks and various forms of social control intervene between structural neighborhood conditions and levels of crime” (2012:160). It can be assumed that the presence and strength of these types of networks may develop in response to both the underlying perceived condition of neighborhoods in which individuals live, which is defined by the area that comprise the boundaries of one’s neighborhoods. Given the level of scholarly interest in systemic models of social disorganization and in light of current findings, additional research is warranted.

In light of current findings, future research could build on the current study in several ways. For example, future studies could replace official data with perceptual data in models of social disorganization in order to determine whether perceptual models outperform traditional approaches. Similarly, scholars could incorporate perceptual measures of neighborhood structure into systemic models that seek to better understand the mechanisms by which social networks are created and maintained in different neighborhoods. Third, perceptual models of social disorganization could be tested with alternative units of analysis. For example, Perkins et al. (1990) recommends using face blocks (i.e., households facing each other on both sides of the street between the adjacent cross streets) when studying neighborhood effects. Similarly, Coulton et al. (2001) have developed an approach for using perceptual maps to identify the common spaces that residents include in neighborhood definitions, which have been successfully applied to calibrate the units of measurement with residents’ perceptions in place-based community initiative research (Coulton, Tsui, and Midelbank 2011). Foster and Hipp (2011) suggest that t-communities (Grannis 1998) are a more effective unit of analysis than administrative boundaries in neighborhood-based research. Finally, Hipp, Faris, and Boessen (2012) have recently introduced “network neighborhoods” as an alternative way for operationalizing neighborhoods. Each of these alternative units of analysis offers promising approaches for future research and should be considered in light of current findings. Finally, there have been calls in the past to link social disorganization theory with other criminological approaches (Bellair and Browning 2010; see also, Veysey and Messner 1999). Given the current findings, future

research could investigate ways to use perceptual measures of neighborhood structure as the linchpin between traditional, macro-level social disorganization models and micro-level individual approaches to understanding victimization. In summary, since emerging in the mid-1980s as a major theoretical perspective for explaining the etiology of crime, social disorganization theory has benefited from continuous scientific scrutiny that focuses specifically on methodological concerns. We conclude that the current study adds to the existing body of scientific knowledge and serves to advance the development of this popular theoretical perspective in a similar manner.

## Notes

<sup>1</sup> The ASC now offers 5-year household and demographic estimates based on the 5 most recent years prior to the data release year. Estimates are available for all tracts and block groups.

<sup>2</sup> Indicators of formal and informal social control believed to mediate the relationship between neighborhood structure and crime were also measured, but analysis of these variables was not included in the current study. The full survey instrument is presented in Appendix A.

<sup>3</sup> At the time the survey was administered, the median family income for Clark County, Nevada was \$60,000 per annum.

<sup>4</sup> Perceptual indicators of neighborhood structural determinants of social disorganization were measured in a similar manner. Respondents were asked, for example, "Out of every 100 people age 16 and over employed and living in your neighborhood, in your opinion, how many hold a professional or managerial position at work?" The actual percentage of people age 16 and over employed and living within the same census block as the respondent was obtained from data provided by the US Census and compared to the perceptual measure of the corresponding indicator.

<sup>5</sup> While Blau's (1977) index of intergroup relations is calculated using official measures of neighborhood racial composition, the current measure is based on the perceived racial composition of the neighborhood in which a respondent lives.

<sup>6</sup> White, non-Hispanic, Black, non-Hispanic, Native American, non-Hispanic, Asian/Pacific Islander, non-Hispanic, "Other" non-Hispanics, and Hispanics of any race were the race/ethnic categories used in the current study.

<sup>7</sup> The Clark County shapefile contains administrative boundaries for all census blocks, block groups, and tracts within the study area.

## References


- Arnold, William R. and Terrance M. Brungardt. 1983. *Juvenile Misconduct and Delinquency*. Boston, MA: Houghton Mifflin.
- Bachman, Ronet, Raymond Paternoster, and Sally Ward. 1992. "The Rationality of Sexual Offending: Testing a Deterrence/Rational Choice Conception of Sexual Assault." *Law and Society Review* 26(2):343-372.
- Bellair, Paul E. and Christopher R. Browning. 2010. "Contemporary Disorganization Research: An Assessment and Further Test of the System Model of Neighborhood Crime." *Journal of Research in Crime and Delinquency* 47(4):496-521.
- Blau, Peter M. 1977. *Inequality and Heterogeneity: A Primitive Theory of Social Structure*. New York: The Free Press.
- Bogges, Lyndsay N. and John R. Hipp. 2010. "Violent Crime, Residential Instability and Mobility: Does the Relationship Differ in Minority Neighborhoods?" *Journal of Quantitative Criminology* 26(3):351-370.
- Bursik, Robert J. 1988. "Social Disorganization and Theories of Crime and Delinquency: Problems and Prospects." *Criminology* 26(4):519-551.
- Bursik, Robert J. and Harold G. Grasmick. (1993). *Neighborhoods and Crime: The Dimensions of Effective Community Control*. New York, NY: Lexington.
- Chiricos, Theodore G. and Gordon P. Waldo. 1970. "Punishment and Crime: An Examination of Some Empirical Evidence." *Social Problems* 18(2):200-217.
- Cohen, Lawrence E. and Marcus Felson. 1979. "Social Change and Crime Rate Trends: A Routine Activity Approach." *American Sociological Review* 44:588-608.
- Coulton, Claudia, Tsui Chan, and Kristine Mikelbank. 2011. "Finding Place in Community Change Initiatives: Using GIS to Uncover Resident Perceptions of their Neighborhoods." *Journal of Community Practice* 19:10-28.
- Coulton, Claudia, Thomas Cook, and Molly Irwin. 2004. "Aggregation Issues in Neighborhood Research: A

- Comparison of Several Levels of Census Geography and Resident Defined Neighborhoods." Retrieved February 2, 2013 (<http://digitalcase.case.edu:9000/fedora/get/ksl:2006052511/Cook-Agression-2004.pdf>)
- Coulton, Claudia, Jill Korbin, Tsui Chan, and Marilyn Su. 2001. "Mapping Residents' Perceptions of Neighborhood Boundaries: A Methodological Note." *American Journal of Community Psychology* 29(2):371-383.
- Decker, Scott, Richard Wright, and Robert Logie. 1993. "Perceptual Deterrence among Active Residential Burglars." *Criminology* 31(1):135-147.
- Foster, Kirk, A. and J. Arron Hipp. 2011. "Defining Neighborhood Boundaries for Social Measurement: Advancing Social Work Research." *Social Work Research* 35(1):25-35.
- Gehlke, C. E. and Katherine Biehl. 1934. "Certain Effects of Grouping Upon the Size of the Correlation Coefficient in Census Tract Material." *Journal of the American Statistical Association* 29(185A):169-170.
- Grannis, Rick. 1998. "The Importance of Trivial Streets: Residential Streets and Residential Segregation." *American Journal of Sociology* 103(6):1530-1564.
- . 2010. *From the Ground Up: Translating Geography into Community Through Neighbor Networks*. Princeton, NJ: Princeton.
- Heywood, D. Ian, Sara Cornelius, and Steve Carver. 1998. *An Introduction to Geographical Information Systems*. New York, NY: Addison Wesley Longman.
- Hipp, John R. 2007a. "Income Inequality, Race, and Place: Does the Distribution of Race and Class within Neighborhoods Affect Crime Rates?" *Criminology* 45(3):665-697.
- . 2007b. "Block, Tract, and Levels of Aggregation: Neighborhood Structure and Crime and Disorder as a Case in Point." *American Sociological Review* 72(5):659-680.
- . 2010a. "A Dynamic View of Neighborhoods: The Reciprocal Relationship Between Crime and Neighborhood Structural Characteristics." *Social Problems* 57(2):205-230.
- . 2010b. "The Role of Crime in Housing Unit Racial/Ethnic Transition." *Criminology* 48(3):683-723.
- Hipp, John R., Robert W. Faris, and Adam Boessen. 2012. "Measuring 'Neighborhood': Constructing Network Neighborhoods." *Social Networks* 34(1):128-140.
- Hunter, Albert J. 1974. *Symbolic Communities: The Persistence and Change of Chicago's Local Communities*. Chicago, IL: University Press.
- Jensen, Gary F., Maynard L. Erickson, and Jack P. Gibbs. 1978. "Perceived Risk of Punishment and Self-Reported Delinquency." *Social Forces* 57(1):57-78.
- Kennedy, Leslie W. and David R. Forde. 1990. "Routine Activities and Crime." *Criminology* 28(1):137-151.
- Kornhauser, Ruth R. 1978. *Social Sources of Delinquency*. Chicago, IL: University Press.
- Kubrin, Charis E. and Ronald Weitzer. 2003. "New Directions in Social Disorganization Theory." *Journal of Research in Crime and Delinquency* 40(4):374-402.
- Lamont, Michèle and Molnár, Virág. 2002. "The Study of Boundaries in the Social Sciences." *Annual Review of Sociology* 28:167-195.
- Lowenkamp, Christopher T., Francis T. Cullen, and Travis C. Pratt. 2003. "Replicating Sampson and Groves's Test of Social Disorganization Theory: Revisiting a Criminological Classic." *Journal of Research in Crime and Delinquency* 40(4):351-373.
- Ludman, Richard J. 1986. "One-Wave Perceptual Deterrence Research: Some Grounds for the Renewed Examination of Cross-Sectional Methods." *Journal of Research in Crime and Delinquency* 23(4):370-388.
- Maimon, David and Christopher R. Browning. 2010. "Unstructured Socializing, Collective Efficacy, and Violent Behavior Among Urban Youth." *Criminology* 48(2):443-474.
- Markowitz, Fred E., Paul E. Bellair, Allen E. Liska, and Jianhong Liu. 2001. "Extending Social Disorganization Theory: Modeling the Relationships Between Cohesion, Disorder, and Fear." *Criminology* 39(2):293-320.
- Mazerolle, Lorraine, Rebecca Wickes, and James McBroom. 2010. "Community Variations in Violence: The Role of Social Ties and Collective Efficacy in Comparative Context." *Journal of Research in Crime and Delinquency* 47(1):3-30.
- Messner, Steven F. and Gregory M. Zimmerman. 2012. "Community-Level Influences on Crime and Offending." Pp. 155-172 in *The Oxford Handbook of*

- Crime Prevention*, edited by Brandon C. Welsh and David P. Farrington. New York, NY: Oxford.
- Miethe, Terance D. and Robert F. Meier. 1990. "Opportunity, Choice, and Criminal Victimization." *Journal of Research in Crime and Delinquency* 27(3):243-266.
- Miethe, Terance D., Michael Hughes, and David McDowall. 1991. "Social Change and Crime Rates: An Evaluation of Alternative Theoretical Approaches." *Social Forces* 70(1):165-185.
- Nagin, Daniel S. and Raymond Paternoster. 1991. "The Preventative Effects of the Perceived Risk of Arrest: Testing an Expanded Conception of Deterrence." *Criminology* 29(4):561-587.
- Openshaw, Stan and Peter Taylor. 1979. "A Million or So Correlation Coefficients: Three Experiments on the Modifiable Area Unit Problem." Pp. 127-144 in *Statistical Applications in the Spatial Sciences*, edited by N. Wrigley. London: Pion.
- Park, Robert E. 1915. "The City: Suggestions for the Investigation of Human Behavior in the City Environment." *American Journal of Sociology* 20:577-612.
- Paternoster, Raymond. 1987. "The Deterrent Effect of the Perceived Certainty and Severity of Punishment." *Justice Quarterly* 4(2):173-217.
- Perkins, Douglas D., Paul Florin, Richard C. Rich, Abraham Wandersman, and David M. Chavis. 1990. "Participation and the Social and Physical Environment of Residential Blocks: Crime and Community Context." *American Journal of Community Psychology* 18:83-115.
- Raudenbush Stephen W. and Robert J. Sampson. 1999. "Ecometrics": Toward a Science of Assessing Ecological Settings, with Application to the Systematic Social Observation of Neighborhoods." *Sociological Methodology* 29:1-41.
- Robinson W. S. 1950. "Ecological Correlation and the Behavior of Individuals." *American Sociological Review*, 15(3):351-357.
- Robison, Sophia M. 1936. *Can Delinquency be Measured?* New York, NY: Columbia.
- Saltzman, Linda, Raymond Paternoster, Gordon P. Waldo, and Theodor G. Chiricos. 1982. "Deterrent and Experiential Effects." *Journal of Research in Crime and Delinquency* 19(2):172-189.
- Sampson, Robert J. 1988. "Local Friendship Ties and Community Attachment in Mass Society: A Multi-Level Systemic Model." *American Sociological Review* 53:766-779.
- 2002. "Organized for What? Recasting Theories of Social (Dis)organization." Pp. 95-110 in *Crime and Social Organizations*, edited by E. Waring and D.L. Weisburd. New Brunswick, NJ: Transactions.
- 2004. "Neighborhood and Community: Collective Efficacy and Community Safety." *New Economy* 11:106-113.
- 2006. "Collective Efficacy Theory: Lessons Learned and Directions for Future Inquiry." Pp. 149-167 in *Taking Stock: The Status of Criminological Theory. Advances in Criminological Theory Vol. 15*, edited by F.T. Cullen, J.P. Wright, and K.R. Blevins. New Brunswick, NJ: Transaction Publishers.
- Sampson, Robert J. and W. Byron Groves. 1989. "Community Structure and Crime: Testing Social-Disorganization Theory." *The American Journal of Sociology* 94(4):774-802.
- Sampson, Robert J. and Janet L. Lauritsen. 1990. "Deviant Lifestyles, Proximity of Crime, and the Offender-Victim Link in Personal Violence." *Journal of Research in Crime and Delinquency* 27(2):110-139.
- Sampson, Robert J., Jeffrey D. Morenoff, and Felton Earls. 1999. "Beyond Social Capital: Spatial Dynamics of Collective Efficacy for Children." *Annual Review of Sociology* 64:633-660.
- Sampson, Robert J., Jeffrey D. Morenoff, and Thomas Gannon-Rowley. 2002. "Assessing 'Neighborhood Effects': Social Process and New Direction in Research." *Annual Review of Sociology* 28:443-478.
- Sampson, Robert J., Stephen W. Raudenbush, and Felton Earls. 1997. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 227(5328):918-924.
- Shaw, Clifford R. and Henry D. McKay. 1942. *Juvenile Delinquency and Urban Areas*. Chicago, IL: University of Chicago Press.
- Short, James F. 1985. "The Level of Explanation Problem in Criminology." Pp. 51-74 in *Theoretical Methods in*

- Criminology*, edited by R.F. Meier. Beverly Hills, CA: Sage.
- Smith, William R., Sharon Glave Frazee, and Elizabeth L. Davison. 2000. "Furthering the Integration of Routine Activity and Social Disorganization Theories: Small Units of Analysis and the Study of Street Robbery as a Diffusion Process." *Criminology* 38(2):489-524.
- Stark, Rodney. 1987. "Deviant Places: A Theory of the Ecology of Crime." *Criminology* 25(4):893-909.
- Sun, Ivan Y., Ruth Triplett, and Randy R. Gainey. 2004. "Neighborhood Characteristics and Crime: A Test of Sampson and Groves' Model of Social Disorganization." *Western Criminology Review* 5(1):1-16.
- Suttles, Gérald D. 1972. *The Social Construction of Community*. Chicago, IL: University Press.
- Taylor, Ralph B. 1997. "Social Order and Disorder of Street Blocks and Neighborhoods: Ecology, Microecology, and the Systemic Model of Social Disorganization." *Journal of Research in Crime and Delinquency* 34(1):113-155.
- Taylor, Ralph B., Barbara A. Koons, Ellen M. Kurtz, Jack R. Greene, and Douglas D. Perkins. 1995. "Street Blocks with More Nonresidential Land Use Have More Physical Deterioration." *Urban Affairs Review* 31(1):120-136.
- United States Census Bureau (2010). Appendix A. Census 2010 Geographic Terms and Concepts. U.S. Census Bureau. Retrieved February 21, 2013 ([www.census.gov/geo/reference/pdfs/GTC\\_10.pdf](http://www.census.gov/geo/reference/pdfs/GTC_10.pdf))
- Veysey, Bonita M. and Steven F. Messner. 1999. "Further Testing of Social Disorganization Theory: An Elaboration of Sampson and Groves's 'Community Structure and Crime'." *Journal of Research in Crime and Delinquency* 36(2):156-174.
- Warner, Barbara D. and Glenn L. Pierce. 1993. "Reexamining Social Disorganization Theory Using Calls to the Police as a Measure of Crime." *Criminology* 31(4):493-417.
- Wooldredge, John. 2002. "Examining the (Ir)Relevance of Aggregation Bias for Multilevel Studies of Neighborhoods and Crime with an Example Comparing Census tracts to Official Neighborhoods in Cincinnati." *Criminology* 40(3):681-710.

APPENDIX A.

University of Nevada, Las Vegas College of Urban Affairs Department of Criminal Justice	
<b>Perceived Versus Official Measures of 'Neighborhood' and Social Disorganization:                  Assessing the Validity of Commonly Used Indicators</b>	
<b>Section 1: Involvement in your neighborhood.</b>	
<p><b>Q1:</b> <i>In the past year</i>, how often have you attended a meeting for a local board, council, or organization that deals with any community problems? Would you say...</p> <p> <input type="checkbox"/> Never                         <input type="checkbox"/> Once                         <input type="checkbox"/> 2-3 times                         <input type="checkbox"/> About once a month                         <input type="checkbox"/> More than once a month                 </p> <p><b>Q2:</b> <i>In the past year</i>, have you served in a voluntary capacity on any local board, council, or organization that deals with community problems?</p> <p> <input type="checkbox"/> No                         <input type="checkbox"/> Yes                 </p>	
<b>Section 2: Informal activities in your community or neighborhood.</b>	
<p><b>Q3:</b> <i>In the past year</i>, have you gotten together informally with or worked with others in your community or neighborhood to try to deal with some community issue or problem?</p> <p> <input type="checkbox"/> No                         <input type="checkbox"/> Yes                 </p> <p><b>Q4:</b> How important do you consider voting to be? Would you say...</p> <p> <input type="checkbox"/> Not very important                         <input type="checkbox"/> Somewhat important                         <input type="checkbox"/> Very Important                 </p>	
<b>Section 3: People in your neighborhood.</b>	
<p><b>Q5:</b> Mine is a close-knit neighborhood.</p> <p> <input type="checkbox"/> Strongly disagree                         <input type="checkbox"/> Disagree                         <input type="checkbox"/> Neither disagree nor agree                         <input type="checkbox"/> Agree                         <input type="checkbox"/> Strongly agree                 </p> <p><b>Q6:</b> People in my neighborhood are willing to help their neighbors</p> <p> <input type="checkbox"/> Strongly disagree                         <input type="checkbox"/> Disagree                         <input type="checkbox"/> Neither disagree nor agree                         <input type="checkbox"/> Agree                         <input type="checkbox"/> Strongly agree                 </p> <p><b>Q7:</b> People in my neighborhood do not share the same values.</p> <p> <input type="checkbox"/> Strongly disagree                         <input type="checkbox"/> Disagree                         <input type="checkbox"/> Neither disagree nor agree                         <input type="checkbox"/> Agree                         <input type="checkbox"/> Strongly agree                 </p> <p><b>Q8:</b> People in my neighborhood can be trusted.</p> <p> <input type="checkbox"/> Strongly disagree                         <input type="checkbox"/> Disagree                         <input type="checkbox"/> Neither disagree nor agree                         <input type="checkbox"/> Agree                         <input type="checkbox"/> Strongly agree                 </p>	
<b>Section 4: Respondent characteristics.</b>	
<p><b>Q9:</b> What is your gender     <input type="checkbox"/> Male     <input type="checkbox"/> Female</p> <p><b>Q10:</b> What is your age? _____ (in years)</p> <p><b>Q11:</b> What is your race &amp; ethnicity?                     <input type="checkbox"/> White, non-Hispanic                     <input type="checkbox"/> Black, non-Hispanic                     <input type="checkbox"/> Native American, non-Hispanic  <input type="checkbox"/> Asian/Pacific Islander, non-Hispanic                     <input type="checkbox"/> Other, non-Hispanic                     <input type="checkbox"/> Hispanic, any race             </p> <p><b>Q12:</b> When did you move to your current residence? _____/_____ (MM/YYYY)</p> <p><b>Q13:</b> With 0 representing completely <i>rural</i> and 100 representing completely <i>urban</i>, on a scale of 0 to 100, how would you rate the neighborhood in which you currently live? _____ (0= completely rural and 100= completely urban).</p> <p>Please continue to the back side of the questionnaire </p>	



Questionnaire # \_\_\_\_\_ - \_\_\_\_\_

Date Completed \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Census# 3200300 Tract \_\_\_\_\_ . \_\_\_\_\_ Block Group \_\_\_\_ Block \_\_\_\_\_

**Section 5: Please indicate how likely people in your neighborhood would act in each of the following situations listed below.**

**Q14:** If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighborhood would do something about it? Would you say it is...

Very unlikely     Unlikely     Neither unlikely nor likely     Likely     Very likely

**Q15:** If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it?

Very unlikely     Unlikely     Neither unlikely nor likely     Likely     Very likely

**Q16:** If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child?

Very unlikely     Unlikely     Neither unlikely nor likely     Likely     Very likely

**Q17:** If there was a fight in front of your house and someone was being beaten or threatened, how likely is it that your neighbors would break it up?

Very unlikely     Unlikely     Neither unlikely nor likely     Likely     Very likely

**Q18:** Suppose that because of budget cuts the fire station closest to your home was going to be closed down by the city. How likely is it that the neighborhood residents would organize to try to do something to keep the fire station open?

Very unlikely     Unlikely     Neither unlikely nor likely     Likely     Very likely

**Section 6: Finally, what your opinions are about your neighborhood.**

**Q19:** Out of every 100 people living in your neighborhood, *in your opinion*, how many are... (*Total must add to 100*).

White, non-Hispanic \_\_\_\_\_ Black, non-Hispanic \_\_\_\_\_ Native American, non-Hispanic \_\_\_\_\_

Asian/Pacific Islander, non-Hispanic \_\_\_\_\_ Other, non-Hispanic \_\_\_\_\_ Hispanic, any race \_\_\_\_\_

**Q20:** Out of every 100 people age 15 years and over living in your neighborhood, *in your opinion*, how many are...

currently married \_\_\_\_\_ divorced \_\_\_\_\_ separated \_\_\_\_\_ widowed \_\_\_\_\_ or never married \_\_\_\_\_ (*Total must add to 100*).

**Q21:** Out of every 100 people age 25 and over living in your neighborhood, *in your opinion*, how many are college educated? \_\_\_\_\_

**Q22:** Out of every 100 people age 16 and over employed and living in your neighborhood, *in your opinion*, how many hold a professional or managerial positions at work? \_\_\_\_\_

**Q23:** Out of every 100 households in your neighborhood, *in your opinion*, how many have a household income of more than \$60,000 a year? \_\_\_\_\_

**Q24:** Out of every 100 families that reside in your neighborhood, *in your opinion*, how many are headed by a single parent? \_\_\_\_\_

**Q25:** Out of every 100 housing units occupied in your neighborhood, *in your opinion*, how many house residents who have lived there for less than 10 years? \_\_\_\_\_

**Q26:** Out of every 100 housing units occupied in your neighborhood, *in your opinion*, how many are owned (versus rented) by the resident? \_\_\_\_\_

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