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By

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ABSTRACT

NONMETROPOLITAN SOCIAL DISORGANIZATION: A MULTILEVEL ANAYSIS OF QUALITY OF LIFE

By

Jeffrey Michael Cancino

Guided by social disorganization theory and the emerging concept of collective efficacy, this study investigates variation in citizens' quality of life assessments in nonmetropolitan settings. Using survey data from 1,125 citizens nested in 31 residential units located in the State of Michigan, hierarchical linear modeling is used to examine the effects of structural antecedents, collective efficacy and crime on citizen-level quality of life outcomes. Results suggest that traditional social disorganization variables, such as economic disadvantage and residential instability, are not linked to quality of life. Collective efficacy, however, is inversely associated with citizen quality of life assessments. Citizens from residential units with higher concentrations of property crime report higher levels of perceived crime, fear, incivility, and risk of victimization.

Dedicated to Brailee Madisen Cancino. Forgive me for missing the first two years of your life. Find a career that makes you happy. Dedicated to Brandi, you did a great job raising our daughter. Dedicated also to my loving and supporting parents whose educational dreams were realized through my accomplishments. I love you!

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CHAPTER ONE: RESEARCH FOCUS

Urban sociological research has shown that quality of life varies across neighborhoods. Despite the wealth of research in the urban setting, little is known about the effects of ecological features on quality of life in more rural, less densely populated areas. For example, since the pioneering work of sociologists from the University of Chicago in the early part of the 20th century, large urban centers, such as Chicago, Philadelphia, Boston, and New York, have been the focus of criminological research. Empirical attempts to explore less traditional settings, such as nonmetropolitan areas, are few and far between.

Large metropolitan areas have experienced numerous economic and social changes throughout American history. Many "big city" problems have been further complicated by shifts in rural populations (Madison, 1986). For example, urban areas experiencing an influx of rural citizens have been described as "disorganized" because of the breakdown in informal social controls that often follows migration to urban settings (Maccoby, Johnson, and Church, 1958). Progressive reformers of the late 19th and early 20th centuries focused on the negative consequences of rapid

urban growth, but devoted little attention to rural areas (Madison, 1986:645).

Urban areas were not alone in experiencing the pains of in-migration, and negative outcomes have also been noted in nonmetropolitan settings. For example, the exodus of rural residents can disrupt the social and economic fabric of nonmetropolitan areas (Albrecht, Albrecht, and Albrecht, 2000; Tickamyer and Duncan, 1990). To date, urban studies continue to far outnumber research conducted in less populated areas. As a result, the study of the factors affecting quality of life remains, in a relative sense, neglected.

The Nonmetropolitan Setting

Although the terms nonmetropolitan and rural areas are often used interchangeably, the former entails more variation in residential settings: from sparsely populated rural areas to small towns to more densely populated small city neighborhoods. Conceptualizing nonmetropolitan areas in a manner beyond simple rural classification is necessary because variation in social histories and economic patterns of development exist within the nonmetropolitan continuum. Subsequently, this reconceptualization will help provide a better understanding as to how variation across

nonmetropolitan areas affects citizen quality of life. For example, research shows that citizens residing on rural farms report higher levels of fear of crime and risk of victimization than residents of small towns (Bankston, Jenkins, Thayer-Doyle, and Thompson, 1987; see also Saltiel, Gilchrist, and Harvie, 1992). While it is necessary to identify variation in the nonmetropolitan setting, it is also informative to highlight the location of the nonmetropolitan conception on a larger continuum.

The Nonmetropolitan-Metropolitan Continuum

Nonmetropolitan and metropolitan areas can be conceptualized along a continuum (Sanders and Lewis, 1976:36). On one side of the continuum are nonmetropolitan areas. These areas are generally characterized as family-oriented, culturally homogenous, and spatially secluded. On the other side are metropolitan areas. These areas are stranger-oriented, culturally diverse, and spatially dense. Fisher (1982) found that most small-town social interaction is kin-based, whereas urban social interaction is stranger-based. Research by Amato (1993) shows that urban residents assist and receive help from friends more than rural residents, and that urban residents live greater distances from relatives. Hofferth and Iceland (1998)

found that familial ties tend to be stronger in rural areas. In combination, the evidence strongly suggests that social interaction varies across the nonmetropolitan-metropolitan continuum. Whether this variation influences citizen quality of life remains an open empirical question.

Others question the validity of the nonmetropolitan-metropolitan continuum, and claim that exploring differences may be premature (Bell, 1992). Smith and Huff (1982) suggest nonmetropolitan and urban areas share many similarities. Among them include the prevalence of single mothers and poverty (Bachman, 1992; Laub, 1983; Smith and Huff, 1982). Critics of the nonmetropolitan-metropolitan continuum allege that economic and social characteristics reflect smaller gradations of variation rather than possessing entirely distinct features.

While urban and rural researchers remain divided, recent evidence suggests that various forms of social and economic disadvantage are becoming increasingly common in sparsely populated rural areas. For example, poverty rates have increased disproportionately in rural areas (Albrecht et al., 2000). Do structural and social processes influence citizen quality of life in nonmetropolitan America?

Beggs, Haines, and Hurlbert (1996) found that rural residents structure their social and personal ties differently according to location and environmental concerns. Beggs et al. (1996:320) posit that "locality matters and, therefore, the more general call for taking seriously contextual effects in analyses of individual behavior" is necessary. Moreover, Belyea and Zingraff (1988:473) argue that urban-rural differences are explained "by behavior and attitudes determined by resident's positions and interactional patterns within the local structures." By exploring the effects of structural features and social processes in the nonmetropolitan setting, a better understanding of the causes and correlates of citizen quality of life may be revealed.

Defining Meaningful Patterns of Residential Location in the Urban Setting

Since the early ecological studies of the Chicago School, researchers have struggled to adequately define the term "community." For the most part, the term has been defined rather loosely. For example, Hollingshead (1948:145) notes that researchers have defined community in three different ways: 1) social aspects, such as group solidarity, cohesion, and social interaction; 2) geographic

features, such as census tracts, block groups, roads, and businesses; and 3) socio-geographic characteristics where researchers attempt to identify both social and geographic components. Concerning the latter, Hillery (1955:11) argues that a definition of community consists of "persons in social interaction within a geographic area and having one or more common ties." While the above characteristics provide some guidance, contemporary attempts to define "community" remain imprecise and must be approached with caution.

Given the increased awareness among social scientists of the salience of macroeconomic forces (e.g., economic disinvestment) in determining within-community outcomes (see, for example, Wilson, 1987), the use of community as a unit of analysis has fallen out of favor because it fails to capture meaningful variation across smaller geographic units. Accordingly, researchers have turned to smaller units of analysis, such as "neighborhoods." Burton, Price-Spratlen, and Spencer (1997:133) note that neighborhoods are conceptualized in different ways: neighborhood as geographic site, neighborhood as perception, neighborhood as social network, and neighborhood as culture. Given the many ways in which neighborhoods are conceptualized, it

appears that this aggregate unit also suffers from a lack of precision.

Despite the lack of precision (conceptual and empirical) in determining what constitutes "community" or "neighborhood," debate persists over which unit of analysis is most useful in identifying salient social forces. For example, Massey (1996) claims that an individual's immediate surroundings are more likely to influence perception and behavior than the larger environment, such as census tract boundaries. In fact, many scholars have suggested that neighborhoods matter (Wilson, 1987; Elliot et al., 1996; Baba and Austin, 1989:179). The same cannot be said, however, for less densely populated geographic areas. Part of the problem lies in the fact that defining meaningful geographic units in nonmetropolitan areas is complicated by many factors.

Residential Units in Nonmetropolitan Areas

The term neighborhood is problematic in nonmetropolitan areas because it was developed by social scientists primarily interested in urban settings. Osgood and Chambers (2000:82) claim that "theory and research on crime and communities has almost exclusively defined communities as neighborhoods within large urban centers."

Others claim that neighborhoods may be an important unit of analysis in an urban environment, but such aggregates are less applicable in rural areas (Darling and Steinberg, 1997). Thus, using the neighborhood as a unit of analysis in nonmetropolitan areas would likely result in several problems.

The first problem is that nonmetropolitan areas vary from sparsely populated rural areas to small towns to more densely populated small cities. The neighborhood conception fails to take into account such variation. In addition, nonmetropolitan residents are likely to make the most of their extended surroundings more so than urban residents. Specifically, nonmetropolitan residents are more likely to travel farther to access social and physical resources due to open country characteristics (Darling and Steinberg, 1997:122). For example, residents in rural areas are more likely to live several miles from convenient stores, acquaintances, and other places of necessity (e.g., medical services), whereas resources and places of necessity are more abundant and in close proximity to residents in urban areas. For these reasons, rural residents are likely to make use of larger geographic spaces out of necessity, while urban residents have the ability to choose among several resources available within walking distance.

Another reason why the neighborhood conception is not suitable for the rural setting is that inner-city urban areas are economically homogenous (Wilson, 1987); however, nonmetropolitan areas encompass a wide range of social classes and incomes (Osgood and Chambers, 2000:109; Lynch and Cantor, 1992:345). Given the problems associated with defining "community" and "neighborhood" in the nonmetropolitan setting, an alternative specification for aggregate residential patterns must be formulated.

An aggregate unit that more accurately represents nonmetropolitan economic and social variation is a "residential unit." Residential units encompass a larger body of land and include a smaller number of people when compared to urban neighborhoods. Residential units are unique because they capture rural structural and social variation that differ from urban "neighborhood clusters" (see Sampson, Morenoff, and Earls, 1999:638-639).[1] Although residential units are unique to nonmetropolitan areas, they possess many of the same characteristics of "community" and "neighborhood." These characteristics are best understood along the nonmetropolitan-metropolitan continuum. For example, at the nonmetropolitan end, more rural residential units resemble "community" characteristics because they cover larger geographic areas. Moving toward the

metropolitan end of the continuum residential units in small towns begin to possess characteristics similar to neighborhoods in that they represent smaller bodies of land and are more densely populated. Conceptually, then, residential units are similar with respect to traditional community and neighborhood characteristics, but also overcome the weakness inherent in both traditional conceptualizations.

Why do residential units matter? Residential units serve as unique units of analysis by providing an alternative aggregate measure that captures social and economic characteristics of nonmetropolitan areas. Because social and economic factors are hypothesized to be associated with citizen quality of life, residential units as an aggregate measure can help researchers to better understand the dynamics of citizen quality of life in these areas. The assumption here is that individuals respond to their social and economic surroundings. Since nonmetropolitan residents tend to structure social networks according to ecological concerns, citizen quality of life ultimately depends on the overall social organization of the community.

Social Disorganization in the Nonmetropolitan Setting

Nonmetropolitan social and economic factors can be placed within the theoretical context of social disorganization. Social disorganization theory is based on the premise that low economic status, ethnic heterogeneity, and residential mobility lead to the disruption of community social organization, which in turn, leads to crime and delinquency (Shaw and McKay, 1942). More recently, social disorganization theory has been extended to include individual-level outcomes, such as legal cynicism (Sampson and Jeglum-Bartush, 1998).

While many theories have been developed to explain the urban-crime phenomena, Laub (1983:192-194) suggests that most theories are germane with respect to nonmetropolitan areas. Supporting this claim, Osgood and Chambers (2000:85) argue that "social control has everything to do with general principles of social relations and nothing to do with urban versus rural setting." This statement suggests that mechanisms of informal control are generalizable to nonmetropolitan settings. Osgood and Chambers (2000) tested the generalizability of social disorganization theory to nonmetropolitan areas. There is no reason to believe that community social disorganization

should be strictly confined to urban areas. In addition, given recent out-migration of people from urban to suburban and less densely populated rural areas, testing social disorganization in communities of all sizes is warranted.

Osgood and Chambers (2000:85) also contend that social disorganization is not uniquely urban when focusing on geographic locations, such as concentric zones. This uniquely urban approach has continued for too long in the criminological literature, and the time has come for social scientists to expand their research outside the urban-box and investigate less densely populated nonmetropolitan areas. Doing so is worthwhile because many of the structural features of urban life, such as poverty, are also found in nonmetropolitan areas.

Research Objective

Given these gradations of economic and social factors, a primary objective of this research is to assess the generalizability of social disorganization theory to nonmetropolitan settings. Two research questions are proposed: First, do structural features (e.g., economic disadvantage) influence citizen quality of life in nonmetropolitan areas? Second, do social processes found

to influence crime and quality of life in urban areas have a similar influence in less densely populated areas?

Again, the rationalization for this research is that structural and social characteristics are applicable to all types of environments. By assessing both social and structural variables simultaneously on a variety of citizen quality of life outcomes, this dissertation will provide a better understanding of the influence of ecological factors. Sampson and Wilson (1995:44) favor this community-level approach because "[r]esearch conducted at the individual level rarely questions whether obtained results might be spurious and confounded with community-level processes." Therefore, the present research examines both aggregate and individual-level factors to investigate the link between social disorganization, crime, and perceived quality of life in nonmetropolitan areas.

Organization of Dissertation

The dissertation is organized into five chapters. Chapter Two provides an overview of the theoretical framework, as well as the extant research is this area. Chapter Three specifies the hypotheses to be tested, the methodological design, and identifies and defends the measurements of the independent and dependent variables

used in the analysis. Chapter Four reports the major research findings. The final chapter discusses the implications of the results in both theoretical and practical terms.

CHAPTER TWO: THEORETICAL AND EMPIRICAL LITERATURE

The theoretical framework guiding this research is derived from the ecological perspective. The ecological perspective suggests that structural and social characteristics of a community or neighborhood influence an array of outcomes, such as crime and delinquency. Perhaps the most influential ecological perspective is social disorganization theory.

Social disorganization theory posits that adverse structural changes (e.g., low economic status, residential mobility, and ethnic heterogeneity) undermine social control, which in turn, fosters crime and delinquency in urban neighborhoods (Shaw and McKay, 1969). In recent years, however, social disorganization theory has been refined (Sampson and Groves, 1989), and used to explain crime in nonurban settings (Osgood and Chambers, 2000). More recently developed models have emerged that identify specific neighborhood social mechanisms, such as collective efficacy, that mediate the effects of neighborhood disorganization (Sampson et al., 1997; Sampson et al., 1999; Sampson and Raudenbush, 1999). Put simply, social disorganization theory is well represented in the criminological literature.

From a larger perspective, neighborhood social disorganization has been linked to macrostructural antecedents, such as deindustrialization (Wilson, 1987; Sampson and Wilson, 1995). Deindustrialization disrupts the economic stability (e.g., unemployment) and neighborhood social organization, which ultimately fosters crime. This chapter provides a review of influential ecological studies from the Chicago School, discusses the traditional dimensions of social disorganization theory, highlights recent theoretical developments, discusses the role of collective efficacy, and articulates the link between social disorganization and quality of life.

The Chicago School of Sociology: Pioneers in Social Disorganization Theory

Much of the community ecology literature (e.g., locales with low economic status and changing population patterns) is influenced by the early work of the Department of Sociology at the University of Chicago. Park, Burgess, Shaw, and McKay are considered by many to be the pioneers of the Chicago School (Vold, Bernard, and Snipes, 1998:140-149). During the early part of the 20th century, members of the Chicago School posited that social problems (e.g., crime and delinquency) were a product of the social

disruption influenced by ecological attributes of urban neighborhoods (i.e., concentric zones). What resulted from the attempt to better understand the impact of neighborhood conditions on various social problems, such as crime, was social disorganization theory. The following section provides a brief chronology of the early development of social disorganization theory.

The Chicago School Tradition: Three Eras

During the early part of the 20th century, Chicago School researchers viewed cities as living, growing, and constantly changing social systems. Successive waves of new immigrants from foreign countries and in-migration from rural areas were the impetus for change in urban communities. Change in the urban setting was believed to be linked to several aspects of social life, especially crime. The development of ecological scholarship occurred over a span of three eras (Hollingshead, 1948).

The first era was termed the "normative-meliorative" because of its emphasis on improving and solving community problems (Hollingshead, 1948:137). The primary method of social inquiry during this era was to survey the community through fieldwork and first-hand contact with residents about ongoing social problems (Snodgrass, 1976).

Researchers from this era were interested in alcoholism, poverty, crime, and economic exploitation. These problems were not distributed evenly, and were most common in slum areas where most research was conducted. The slums, however, were not the only areas of interest. Sociologists from this period also focused on country life because of decaying and malfunctioning institutions, such as the church and the family, and the migration of young people to the city (Hollingshed, 1948:138).

The following era, which has been termed the "analytical" era, was essentially the birth of the Chicago School. Researchers from this period were interested in the history, development, population, and organization of urban communities (Hollingshed, 1948:140). Sociologists from the Chicago School studied "objectively the communal collectivity in terms of its relation to the larger society" (Hollingshed, 1948:137). This period produced more detailed and statistical research that centered on community norms and values. Robert E. Park and Ernest W. Burgess (1925) were among the first scholars to shed light on the effects of city growth. According to Hollingshed (1948:138-139), Park was influenced by Galpin's (1915) rural research[2] by "bringing into focus his own thoughts

about the relationship between city growth and structure, institutional services, neighborhoods, and natural areas."

Due to significant social and economic change in large cities, urban areas became the focus of attention. The combined effort of Park and Burgess (1925) was one of the first studies examining the relationship between community ecology and crime in urban areas. Both Park and Burgess (1925) were interested in the processes of city growth related to crime and delinquency. Their study consisted of dividing the city of Chicago into five concentric zones.[3]

Park and Burgess (1925) hypothesized that crime and delinquency would burgeon in Zone II (i.e., the zone of transition), which was most unstable (i.e., disorganized) and slum-like. Results showed that the zone of transition was responsible for much of the crime and delinquency in Chicago. Specially, Zone II displayed many characteristics of ineptitude, such as attrition of businesses and residents, deterioration in housing, low-income persons, and a breakdown in mechanisms of institutional social control (Reid, 2000:116-117).

By the late 1920s, rural and urban community research proliferated. The abundance of community research gradually shifted the focus of interest from norms and values to structural characteristics. For example,

sociologists were interested in the interrelations between people (e.g., social networks), social organizations (e.g., church and family), and social structures (e.g., the organization of both people and institutions)(Hollingshed, 1948). Thus, in 1930, the structural era emerged. During this era, Clifford Shaw and Henry McKay were key figures. It was during this era that social disorganization theory emerged. As history shows, it appears that rural community research shaped the way Chicago School researchers examined urban communities. Suffice it to say, the Chicago School's ecological perspective and Shaw and McKay's (1942) social disorganization theory has had a long shelf life.

Social Disorganization Theory

Shaw and McKay (1942) posited that juveniles were relatively normal and that delinquency was due to their physical and social environment. Guided by this view, Shaw and McKay (1969:xxxviii) analyzed Chicago neighborhood characteristics and official police and court records of juvenile delinquents. Shaw and McKay (1969) argued that the capacity for social control in urban communities was much lower when compared to suburban and rural areas.[4] Much like Park and Burgess (1928), Shaw and McKay (1969:145)

found that certain neighborhoods in "transition" showed the highest delinquency rates in Chicago.

The theoretical premise of Shaw and McKay's (1942) original formulation was that crime and delinquency was the result of weakened community social organization due to structural characteristics (e.g., low-economic status, residential mobility, and population composition). Shaw and McKay (1969) linked social disorganization (e.g., residential instability) to conditions endemic in the urban areas where newly arriving poor were forced to settle. Because crime-producing factors were alleged to be inherent in neighborhoods where immigrants and the poor resided, one solution was to control these factors by developing means of informal social control, such as supervising teenage peer groups.

Shaw and McKay (1969) dismissed individualistic explanations of delinquency. Instead, they concluded that neighborhood-level[5] attributes better explain aggregate patterns of crime (Shaw and McKay, 1969:320). Thus, social disorganization is an ecological theory about places, not a theory of persons. Shaw and McKay's (1942) neighborhood level dimensions are important because over the last 75 years they have been a mainstay in criminological theory. The following subsections provide a detailed assessment of

the three structural dimensions most closely associated with social disorganization theory.

Economic Status

According to Shaw and McKay (1969:147-152), socially disorganized communities characterized by low economic status lack the necessary resources to effectively establish social control. Shaw and McKay (1969:4) posited that in order to resolve social problems in a given community, social organizations (e.g., churches and local neighborhood groups) must promote community awareness and intervention. A weak organizational base is the result of neighborhood residents failing to organize socially in terms of natural forces for effective social control (Vold et al., 1998:148). The low economic status-crime link suggests that communities characterized by low economic status should experience higher concentrations of crime. Overall, Shaw and McKay (1942) concluded that neighborhood socio-economic status does not have a direct relationship with crime, but instead effects mechanisms of social control, which then give rise to crime (Shaw and McKay, 1969:145).

Residential Mobility

The second dimension associated with social disorganization theory is residential mobility. Residential mobility was conceptualized as the process whereby residents continuously move in and out of a given community (Shaw and McKay, 1969:147-149). Shaw and McKay (1969) posited that residential mobility would impede the development of social relations among residents. Therefore, the relationship between residential mobility and crime is that neighborhoods with high levels of population turnover (i.e., residential mobility) should experience higher rates of crime and delinquency because mobility disrupts social organization (Shaw and McKay, 1969:148). The inability to establish social relations undercuts prevention and problem solving, which then promotes crime.

Population Composition

A third dimension of social disorganization theory is population composition. Shaw and McKay (1969:145) hypothesized that delinquency was associated with other social problems related to the migration of new residents of different values, norms, and beliefs into a neighborhood. The connection between population

composition and crime is based on the premise that a mix of racial and ethnic people disrupts the social equilibrium of neighborhood social control, which in turn, leads to crime and delinquency (Shaw and McKay, 1969:155). As a result, Shaw and McKay (1969:155) hypothesized crime and delinquency would be high in ethnically diverse neighborhoods.

Community Supervision and Control

According to Shaw and McKay (1969:176-185) residents of homogenous, stable, and affluent communities are more effective in controlling teenage deviance. Effective community supervision of teens is expected to act as a buffer by mediating the impact of social disorganization on delinquency. Their research showed that the ability of a community to supervise and control teenage peer groups who resided in disorganized communities was inversely related to crime and delinquency (Shaw and McKay (1969:176-186).

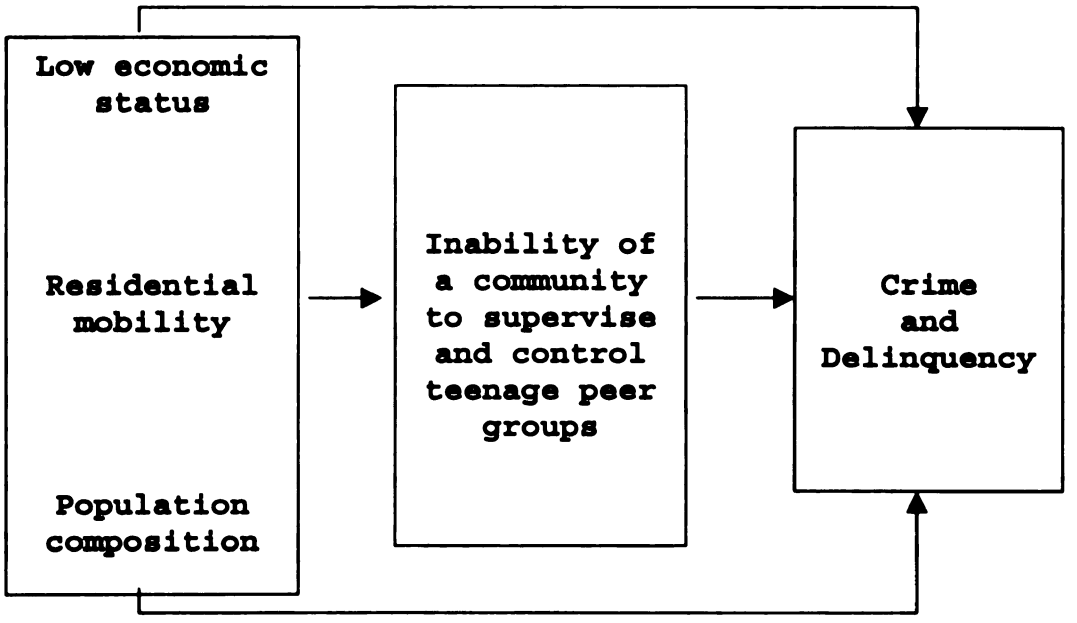
Summarizing Shaw and McKay

Neighborhood-level dimensions of social disorganization are connected in the sense that they work in combination and lead to neighborhood decline. For example, neighborhood residents who suffer from economic hardship and continuously move are less likely to

participate in the development of informal social control. The lack of resources fails to provide an economic commitment (e.g., owning the home) to the neighborhood. High residential turnover fails to permit sufficient time to establish common values with others in the neighborhood.

In addition, neighborhoods that are racially and ethnically heterogeneous will be characterized by lower levels of social organization because of conflicting cultural values. The net result is that residents do not identify with the neighborhood, its appearance, or reputation and thereby lack common social bonds to effectively build informal controls to deal with social problems (Vold et al., 1998:147). In the end, residents are left with a socially disorganized neighborhood where crime is more common. Figure 1 shows Shaw and McKay's theoretical model.

Figure 1: Shaw and McKay's Classic Social Disorganization Theory



Contemporary Social Disorganization Theory

Some 75 years since its introduction, social disorganization theory is regularly discussed in the literature. A long list of scholars have reformulated and refined Shaw and McKay's (1942) classic model (Bursik, 1988; Kornhauser, 1978; Sampson and Groves, 1989; Sampson et al., 1997; Sampson and Raudenbush, 1999), while others have tested it in nonurban settings (Kowalski and Duffield, 1990; Osgood and Chambers, 2000; Wilkinson, 1984). For the most part, Shaw and McKay's (1942) original formulation is still intact.

While Shaw and McKay (1942) emphasized community disorganization characteristics--low economic status, residential mobility, and population composition--that undermined community supervision and fostered crime, Kornhauser (1978) was the first to emphasize mechanisms of social organization in the community to explain crime. More specifically, she put forth the notion that community social control is nested in social disorganization. Kornhauser (1978:79) argued that institutional instability (e.g., a lack of churches) were key structural factors. As a result, social organization should be viewed as a control model. Put simply, social disorganization weakens community social control (Kornhauser, 1978).

Kornhauser's argument is based on the systemic model. The systemic model is characterized as a system of controls involving locally based social networks, such as friends, family, and acquaintances that constitute the core social fabric of communities (Kasarda and Janowitz, 1974). According to Bursik and Grasmick (1993), these social networks (e.g., friends) represent different levels of control within communities.

The relevance of the systemic model is that it addressed early criticism that the Chicago School researchers overemphasized dimensions of disorganization

(Sampson, 1995:556).[6] Whyte (1934:75) argued that what looks like social disorganization from the outside is actually an intricate internal organization. He continued by suggesting that problems of the slums were the result of failed social organization that did not adapt to the changing structure of the community. Studies have found that integration of social ties, based on the systemic model, are important mediators between ecological influences and crime (Sampson, 1987; Sampson, 1988).

Over the years, the systemic model has helped researchers better understand the community social disorganization-social process connection. Community social organization has been conceptualized as the ability of a community to realize the common values of its residents and maintain effective social controls (Kornhauser, 1978:120; Bursik, 1988; Sampson, 1988). When a community's formal and voluntary organizations are weak, the ability of a community to defend against local problems (e.g., crime) is greatly reduced. When residents form local social ties their capacity for community social control is increased because they are better able to recognize strangers and likely to engage in guardianship behavior (Taylor et al., 1984:307; Skogan, 1986:216).

While different attributes of the systemic model have been shown to be inversely related to crime, researchers have become interested in contextual dimensions of community social organization likely to have the same affect (e.g., collective efficacy). In essence, the systemic model has (1) provided a starting point for measuring social processes and (2) allowed researchers to re-conceptualize social mechanisms of control at the aggregate level (Sampson and Lauritsen, 1994:58-59; see also Bursik, 1988).

In a recent article by Markowitz et al. (2001:311), Sampson and Groves (1989) are given credit as the first to examine the notion that neighborhood cohesion mediates the relationship between social disorganization and crime. While Sampson and Groves (1989:782) relied on the theoretical framework of Kornhauser (1978), who claimed that social disorganization was part and parcel to social organization, they also viewed social organization and disorganization as different ends of the same continuum. As they put it, "[s]ocial disorganization is clearly separable not only from the processes that may lead to it (e.g., poverty and residential mobility), but also from the degree of delinquent behavior that may result from it" (Sampson and Groves, 1989:778).

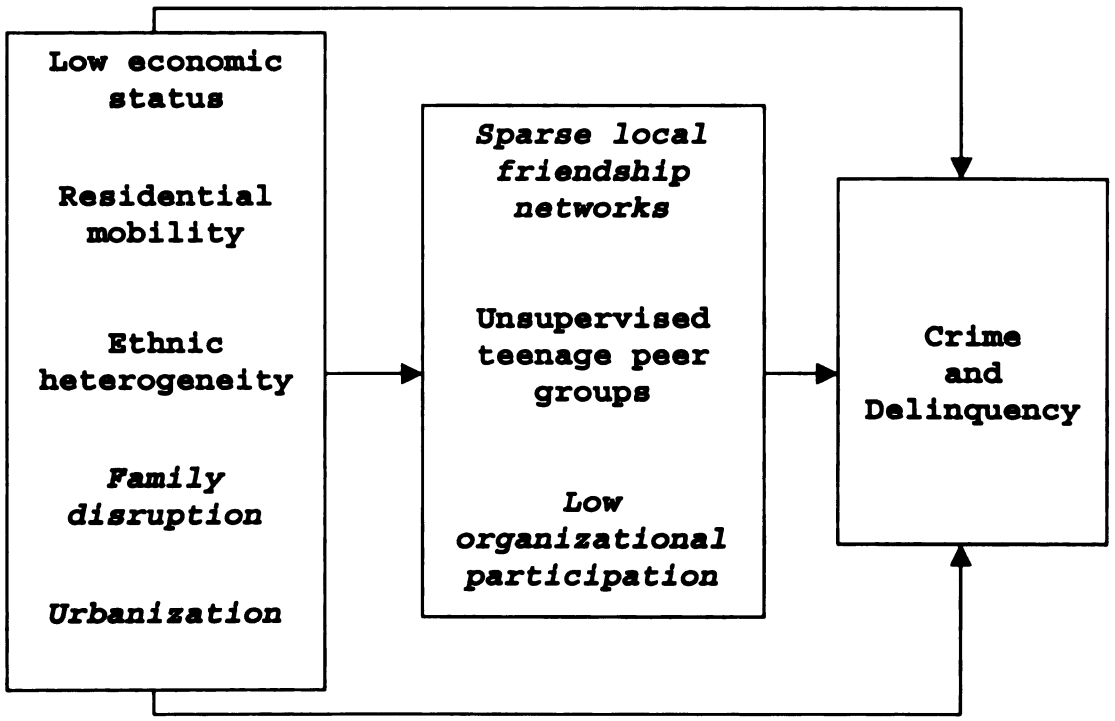
Sampson and Groves' (1989) study was unique because it examined various mechanisms of social organization, which was one of the criticisms of Shaw and McKay's (1969) model. Sampson and Groves' (1989) considered low economic status, residential mobility, and ethnic heterogeneity (traditionally known as population composition) as exogenous variables. Sampson and Groves (1989:774) hypothesized that low economic status, residential mobility, ethnic heterogeneity (Shaw and McKay's original model) and family disruption led to community social disorganization, which in turn, increased crime and delinquency rates. They also viewed Shaw and McKay's original dimension of supervised teenage peer groups as an endogenous variable.

Results showed that "communities characterized by sparse friendship networks, unsupervised teenage peer groups, and low organizational participation had disproportionately high rates of crime and delinquency" (Sampson and Groves, 1989:799). It is interesting to note that social disorganization (e.g., low socioeconomic status, residential stability, family disruption, heterogeneity) accounted for much of the effect on rates of burglary.[7] Consistent with Sampson and Groves (1989), recent research shows that burglary is influenced by

several indicators of social disorganization (Rountree et al., 1994; Lynch and Cantor; 1992), such as single parent households (Smith and Jarjoura, 1989).

Moreover, Sampson and Groves' (1989) research also supports Shaw and McKay's theoretical model. Figure 2 shows Sampson and Groves' revised social disorganization model. The italicized dimensions indicate changes to Shaw and McKay's original model.

Figure 2: Sampson and Groves' Revised Theoretical Social Disorganization Model



Social Disorganization Theory: Beyond the Metropolis

Despite the numerous intellectual and empirical contributions of the Chicago School, early sociologists focused primarily on urban areas. For example, Park and Burgess (1928; see also Shaw and McKay, 1942) examined outer zones of the city including satellite towns and suburbs, but they did not examine structural characteristics in nonmetropolitan areas. For these reasons, Osgood and Chambers (2000:89) argue that a primary shortcoming of sociological research is that it focuses on

variation among neighborhoods within a single metropolitan area (see also Bursik, 1988).

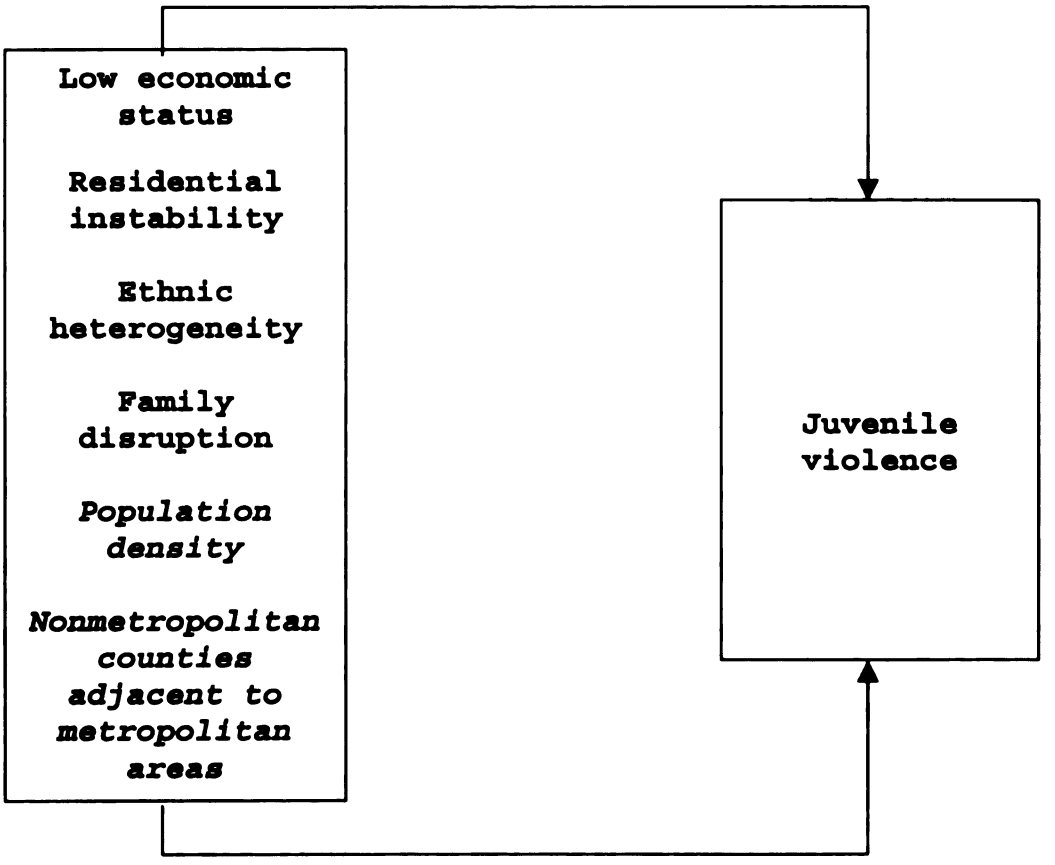
To address this shortcoming, Osgood and Chambers (2000:84) studied nonmetropolitan communities, such as small towns, that varied in their ability to realize common values and solve social problems (Osgood and Chambers, 2000:84). Their study included an analysis of arrest rates of juvenile violence in 264 nonmetropolitan counties in four states. They reported that residential instability was associated with higher rates of rape, aggravated assault, weapons violation, and simple assaults (Osgood and Chambers, 2000:102). Ethnic heterogeneity was also significantly associated with higher rates of arrest for all violent offenses with the exception of homicide and simple assault. Family disruption (i.e., female-headed households) was significantly associated with higher rates of arrest for violent offenses other than homicide (Osgood and Chambers, 2000:103). Low economic status[8] was found to be positively associated with rates of juvenile violence (Osgood and Chambers, 2000:87).

Osgood and Chambers (2000) held some reservation regarding how the poverty hypothesis would actually behave because previous research indicates that neighborhood poverty works in combination with other indicators of

social disorganization, such as residential stability (Smith and Jarjoura, 1988; Shaw and McKay, 1969; Sampson, 1986).[9] Results failed to support the low economic status hypothesis directly because populations of poorer nonmetropolitan communities may be more stable (Osgood and Chambers, 2000:106). This finding supports Shaw and McKay's (1969) contention that poverty works in combination with other structural characteristics that influence crime.

Overall, Osgood and Chambers found that variables commonly used in social disorganization research, such as residential instability, family disruption, and ethnic heterogeneity, were associated with higher rates of juvenile violence. Figure 3 shows their theoretical model. The italicized dimensions indicate changes to previous models of social disorganization theory.

Figure 3: Osgood and Chambers' Theoretical Social Disorganization Model Extended to Nonmetropolitan Settings



Osgood and Chambers' (2000) study underscores the critical task of testing existing theories in different settings (Osgood and Chambers, 2000:108). However, one shortcoming is that Osgood and Chambers do not account for endogenous (or intervening) mechanisms of social organization.[10] To address this shortcoming, Sampson and colleagues have closely examined social organization mechanisms, such as neighborhood collective efficacy, which

is hypothesized to reduce the effect of social disorganization on crime.

The Salience of Collective Efficacy

Neighborhood level research is clearly dominated by studies that focus on structural predictors of social disorganization (e.g., poverty, residential stability, and ethnic heterogeneity) on crime. It is also necessary, however, to examine potential mediating[11] effects of social mechanisms (Kornhauser, 1978:82; Cook et al., 1997:95-97; Taylor et al., 1984; Simcha-Fagan and Schwartz, 1986:695; Taub et al., 1980; Taylor et al., 1979; Greenburg et al., 1982). Here, the mediating social mechanism of interest is collective efficacy.

The term mediating means that collective efficacy has the potential to reduce and/or reverse the effects of social disorganization on crime and quality of life. Sampson and colleagues have examined the emerging concept of collective efficacy and are heading the development of this body of research. The purpose of this section is to highlight the salience of collective efficacy, and discuss recent empirical research.

Collective Efficacy

Self-efficacy serves as a starting point for understanding mechanisms of neighborhood social organization (e.g., collective efficacy). According to Bandura (1995:2) "self-efficacy theory addresses all of the sub-processes both at the individual and collective level." At the collective level, efficacy has been operationalized as aggregated individual perceptions regarding a neighborhood's ability to produce positive outcomes for the common good (Bandura, 1995:33-38).

Bandura's (1986, 1995) theory of self-efficacy provides a conceptual bridge between neighborhood structure and collective agency. In other words, structural characteristics (e.g., poverty) can disrupt neighborhood collective efficacy because it is embedded in a context that stratifies places of residence according to key social characteristics (Sampson et al., 1997:919). The theoretical premise of collective efficacy is that community or neighborhood residents who actively engage, as a group, in the exercise of control (e.g., monitor) over behaviors in the neighborhood can reduce social problems (Sampson et al., 1997; Sampson et al., 1999; Sampson and Raudenbush, 1999).

Collective efficacy has been defined as task specific achievements, processes of active engagement, the exercise of control, and shared expectations among neighborhood residents to effectively maintain public order (Sampson et al., 1997; Sampson et al., 1999; Sampson and Raudenbush, 1999). Collective efficacy is comprised of two dimensions: social cohesion and informal social control. Social cohesion refers to neighborhood conditions whereby residents exhibit mutual trust and solidarity (Sampson et al., 1997:919), whereas informal social control is the general capacity of a group to regulate its members according to desired principles to realize collective goals (Sampson et al., 1997:918; Sampson and Raudenbush, 1999:610).

Sampson and Raudenbush (1999:611) add that social control should not be considered synonymous with repression or forced conformity; thus, "dimensions of social control are analytically separable not only from possible structural antecedents (e.g., poverty, instability) and effects (e.g., disorder, crime) but from the definition and operationalization of the units of analysis" (Sampson and Raudenbush, 1999:611). Collective efficacy places more weight on the notion of informal social control because it has the capacity to most effectively maintain public order

and control amid a wide range of social problems (e.g., violence, property crime, social and physical disorder).

It is apparent that for collective efficacy to exist, social cohesion must precede informal social control. The level of effectiveness in informal social control depends on the level of social cohesion (Sampson and Raudenbush, 1999:612). In essence, collective efficacy begins with a certain degree of social capital. In other words, social capital has the capability to facilitate modes of action, such as collective efficacy. The social capital–collective efficacy connection will be discussed in Chapter 5.

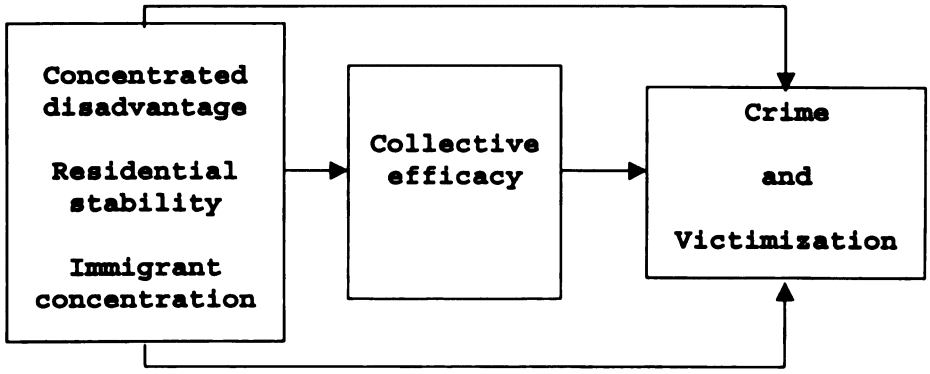
To summarize, collective efficacy is the linkage of mutual trust and the willingness to intervene for the common good (Sampson et al., 1997:919; Sampson and Raudenbush, 1999:612). Collective efficacy is seen in a variety of forms (e.g., willingness to prevent and intervene in fights, voluntary community patrols) and is not limited to involving formal controls, such as the police. Nonetheless, the salience of collective efficacy lies with its ability to mediate the effect of social disorganization.

The Mediating Effect of Collective Efficacy

Sampson et al. (1997) examined the effects of collective efficacy on violent victimization and homicide rates. This study came out of the Project on Human Development in Chicago Neighborhoods (PHDCN).[12] Sampson et al. (1997:919; see also Sampson and Raudenbush, 1999:613) hypothesized that neighborhoods will also vary in their capacity for collective efficacy.

Sampson et al. (1997) used three concepts of social disorganization (e.g., concentrated disadvantage, immigrant concentration, and residential stability). Results from their analysis showed that collective efficacy mediated the association between concentrated disadvantage and violence. Sampson et al. (1997) also found that collective efficacy mediated the association between residential instability and crime. Overall, collective efficacy at the neighborhood level plays a vital role in the reduction of violence. Figure 4 shows Sampson et al.'s conceptualization of collective efficacy in relation to social disorganization, crime and victimization.

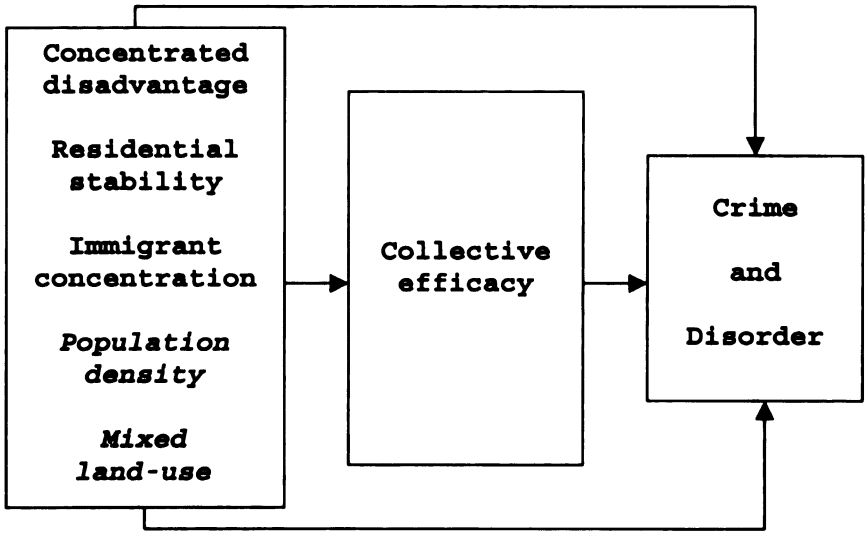
Figure 4: Sampson et al.'s Collective Efficacy Model



Similar to the research of Sampson et al. (1997), Sampson and Raudensbush (1999) also assessed the mediating effects of collective efficacy.[13] Here, they shed new light on whether crime is a cause or consequence of observed disorder by specifying an alternative explanation to the "broken windows" thesis (Wilson and Kelling, 1982). Sampson and Raudenbush (1999:608) argue that disorder is not a direct cause of crime; instead, disorder is crime itself. They reason[14] that disorder and crime are both the products of weakened social controls and structural antecedents (Sampson and Raudenbush, 1999:626). The structural constraints are considered exogenous variables, while collective efficacy, disorder and crime are considered endogenous variables (Sampson and Raudenbush, 1999:634). Collective efficacy is hypothesized to inhibit neighborhood disorder.[15]

Results from their analysis showed that structural characteristics (particularly concentrated disadvantage and mixed land use) were strongly associated with physical and social disorder[16] (Sampson and Raudenbush, 1999:637). Collective efficacy predicted lower observed disorder after controlling not only for socio-demographic and land use variables, but for perceived disorder and prior rates of predatory crime as well. Public disorder and predatory crimes were related in similar ways to disadvantage and collective efficacy. These findings led Sampson and Raudenbush (1999:637) to conclude that public disorder and most predatory crimes share similar theoretical features and are explained by concentrated disadvantage and low collective efficacy. Figure 5 shows Sampson and Raudenbush's theoretical model with two additional social disorganization variables italicized.

Figure 5: Sampson and Raudenbush's Theoretical Collective Efficacy-Crime and Disorder Model



The empirical evidence clearly shows that collective efficacy plays a key role in reducing crime, disorder, and controlling behavior. Placing collective efficacy under empirical scrutiny shows that it can mediate the effect of social disorganization. If so, then, neighborhood collective efficacy, perhaps, is likely to influence citizens' quality of life assessments. Despite the mounting evidence suggesting that collective efficacy matters, it has yet to be tested in nonmetropilitan settings.

Nonmetropolitan Social Organization

To date, only a few studies have examined social disorganization in the nonmetropolitan setting.[17] It is customary to assume that nonmetropolitan areas are characterized by greater solidarity, social cohesion, security, and law abiding residents (Sorokin et al., 1930). However, there are mixed findings whether mechanisms of social organization in more rural areas are linked to social problems and quality of life. For example, some claim that close-knit, well integrated nonmetropolitan communities have the ability to control social problems (Kowalski and Duffield, 1990; Freudenburg, 1986). Others argue, however, that the lack of social relationships in terms of distance from others may increase social problems (Wilkinson, 1984) and decrease quality of life (Saltiel et al., 1992; Bankston et al., 1987).

There are two assumptions regarding the link between rurality and quality of life (Kowalski and Duffield, 1990; Saltiel et al., 1992). Saltiel et al. (1992:543) state these assumptions in relation to nonmetropolitan locations:

> One [assumption] is the view of rural areas as close-knit, well-integrated communities. This is the image of the small town where neighbors provide protection. The second [assumption] is more characteristic of agriculture areas, where the way of life associated with farming is marked

> by large distances and lesser reliance on others. The fragmented social organization increases sensitivity to risks of victimization.

Therefore, nonmetropolitan areas may reflect wide variation in *social organization* that must be considered beyond traditional urban specifications. It seems that in order to accurately examine the effects of social disorganization on crime and quality of life, we need to understand how social organization operates in different nonmetropolitan communities (Bankston et al., 1987).

Using 3,130 U.S. counties, Kowalski and Duffield (1990) examine the effect of rural population on homicide. Kowalski and Duffield (1990) hypothesized that traditional bonds governed by social cohesion decrease the likelihood of homicides for rural counties in the U.S. Results supported their hypothesis by showing that rurality[18] diminished the rate of homicide (Kowalski and Duffield, 1990:75). This finding provides partial support for the notion that less developed areas facilitate more traditional bonds within a society (Kowalski and Duffield, 1990:86). The authors explain that individualism in more rural areas is reduced, group identification is strengthened, and the potential for violence is inhibited (Kowalski and Duffield, 1990:76).

Freudenburg (1986) examined the effect of community density of acquaintanceship[19] on control of deviance, socialization of the young, and caring for the community's weaker members in four rural western Colorado communities. Freudenburg (1986:27) argued that the "most basic characteristic of a community's social structure is the proportion of its residents who are acquainted with one another." Results showed that a decline in acquaintanceship negatively affected all three outcomes. Freudenburg (1986:28-29) concluded that simply knowing people in the neighborhood may affect the overall social fabric, and that high density of acquaintanceship has the ability to increase neighborly watchfulness and improve mechanisms of social control.

Using 1970 census data for 278 rural counties in the northeastern United States, Wilkinson (1984) examined the effect of traditional relationships (e.g., those comprised on close-knit relationships) on nonlethal violence, divorce, homicide, and suicide. His study revealed contradictory findings. While rural areas are characterized by primary relationships[20] (e.g., familial ties), which are assumed to enhance levels of social control and reduce crime (Beggs et al., 1996:309), Wilkinson (1984:36) found that the preponderance of primary

ties reduced the proportion of weak ties (e.g., relationships comprised of friends and acquaintances). The lack of friends and acquaintances essentially created opportunities for nonlethal violence, divorce, homicide, and suicide by increasing opportunities for interpersonal violence and other familial problems. In other words, the disproportionate amount of family to friends/acquaintances relationships prevented individuals from turning to others for social support.

Saltiel et al. (1992) examined the effects of previous victimization, distance from law enforcement and neighbors, and sufficiency of police patrols on the spatial arrangements of fear of crime among 1,171 Montana farmers and ranchers. The authors based their research on the "isolation factor," which states that fear among residents is due to spatial distances and the inability to access resources such as police (Saltiel et al., 1992:534). Saltiel et al. (1992; see also Warner, 1981) note that the isolation factor plays a more important role by affecting perceptions of fear. Results showed that residents who lived greater distances from police and neighbors reported higher levels of fear and risk of victimization (Saltiel et al., 1992:534).

In a related study, Bankston et al. (1987) examined the effect of community size[21] (e.g., rural farm, rural nonfarm, small city less than 50,000, and large city 50,000 or more) on fear of crime and risk of victimization. Bankston et al. (1987:100) argue that "identical perceptions of risk may not produce identical levels of fear because the level of fear is dependent on the location between perceived risk and fear within each location category." In general, results showed that fear of crime did not vary greatly by location. Specifically, large city residents did not show high levels of fear as expected and rural farm residents indicated higher sensitivity to risk of victimization (Bankston et al., 1987:106).

Rural farm residents showed more fear of rape and burglary while home and away than nonfarm residents.[22] In addition, rural farm residents showed less fear with regard to juveniles disturbing the peace, and being beaten up. Bankston et al. (1987) conclude that perceptions of fear and victimization with respect to rape and burglary on farmlands is best explained by the lack of neighborly behavior in terms of house watching and other forms of social monitoring within the community.

To summarize, it appears that social interaction governed by close-familial ties has the ability to reduce

social problems. Indeed, rural life is characterized by more traditional norms and values of group interaction and intervention. Urban life, however, places greater emphasis on individualism, independence, and exhibits increased social and economic inequality. Because nonmetropolitan areas are likely to experience relatively less social disorganization and, perhaps more important, are likely to be racially/ethnic homogeneous than urban areas, expected values and norms against wayward behavior should be less tolerant.

Research also shows that spatial arrangement of the population (e.g., population density) and the average distance between residents, in terms of contact, has the ability to undermine social interaction and thereby increase social problems. Thus, at both ends of the nonmetropolitan continuum, rural areas and small towns may suffer from a lack of social interaction and exhibit a decrease in quality of life. The final section of this chapter highlights the relationship associated with social disorganization and perceived quality of life.

Social Disorganization and Quality of Life: Making the Connection

For the most part, social disorganization theory has been used to explain crime (Shaw and McKay, 1942; Sampson and Groves, 1989; Osgood and Chambers, 2000) or some derivative thereof, such as disorder (Sampson and Raudenbush, 1999; Markowitz et al., 2001). Yet, neighborhood residents' concerns go beyond crime (Garofalo and Laub, 1978). Because crime is rare, affects only a small proportion of people, and varies by location (Taylor and Shumaker, 1990), other outcomes, such as perceived quality of life, are in need of empirical attention. Crime often leaves behind a residue of cognitive and perceptual responses, whether or not one is actually victimized. Hindelang et al. (1978), for example, found that people were more likely to report that they had changed their perceptions and behaviors because of crime. In short, quality of life outcomes affect a much wider audience.

Quality of Life

While the public appears to be concerned about crime, their concerns are more subjective (Garofalo and Laub, 1978). Garofalo and Laub (1978) place concerns over fear and victimization within the context of quality of life.

Doing so, however, does not alleviate some of the difficulties in adequately assessing quality of life. For example, Reiss (1973:392) argues that "measuring the quality of life in a community or society is no simple matter since what is at stake are human values, judgments, and subjective perceptions of social reality." Consistent with previous research (see Garofalo and Laub, 1978), this dissertation places perceived crime, fear of crime, perceived risk of victimization, and perceived incivilities within the quality of life framework.

Most residents want to live in a crime free and orderly community where they feel safe and secure. Quality of life factors, such as fear of crime and risk of victimization, affect an individual's psyche and limit outdoor physical activities (e.g., walking) (Ross, 1993). Lewis and Salem (1986) argue that concerns over quality of life (e.g., risk of victimization) also result in people being afraid to leave their homes. Residents who do not leave their homes make it difficult for neighborhoods to sustain necessary levels of community social organization for the purpose of controlling social problems (Sampson and Raudenbush, 1999:609-611).

The connection between social disorganization and crime is well established (Shaw and McKay, 1969; Sampson

and Groves, 1989; Osgood and Chambers, 2000; Peterson et al., 2000). Research has also established that social disorganization (e.g., poverty, residential instability, female headship) influences quality of life outcomes, such as perceived danger and safety (Aneshenel and Sucoff, 1996), fear of crime and perceived crime (Robert, 1998; MacIntyre et al., 1993; Sooman and MacIntyre, 1995; Taylor and Covington, 1993; Conklin, 1975; Taub et al., 1984), perceived incivilities (Ross, 2000; Hunter 1974; Hunter, 1978), and risk of victimization (Newman, 1972; Sampson and Wooldredge, 1987; Hough, 1987; McDowell, Loftin, and Wersima, 1989).

Evidence regarding the relationship between crime and quality of life is mixed. Some empirical studies show that crime rates directly affect individual reactions, such as fear of crime (Skogan and Maxfield, 1981; Lewis and Salem, 1981; Covington and Taylor, 1991; Taylor and Covington, 1993; Greenburg and Rohe, 1984; Lavrakas et al., 1980; Skogan and Maxfield, 1981; Gordon and Riger, 1980; Gates and Rohe, 1987; Robert, 1998), risk of victimization (Garofalo and Laub, 1978; Rountree and Land, 1996; Ferraro and LaGrange, 1987; LaGrange and Ferraro, 1989; LaGrange et al., 1992; Gates and Rohe, 1987), safety (Lewis and Riger, 1986; Lewis and Salem, 1981; Taylor and Perkins, 1994;

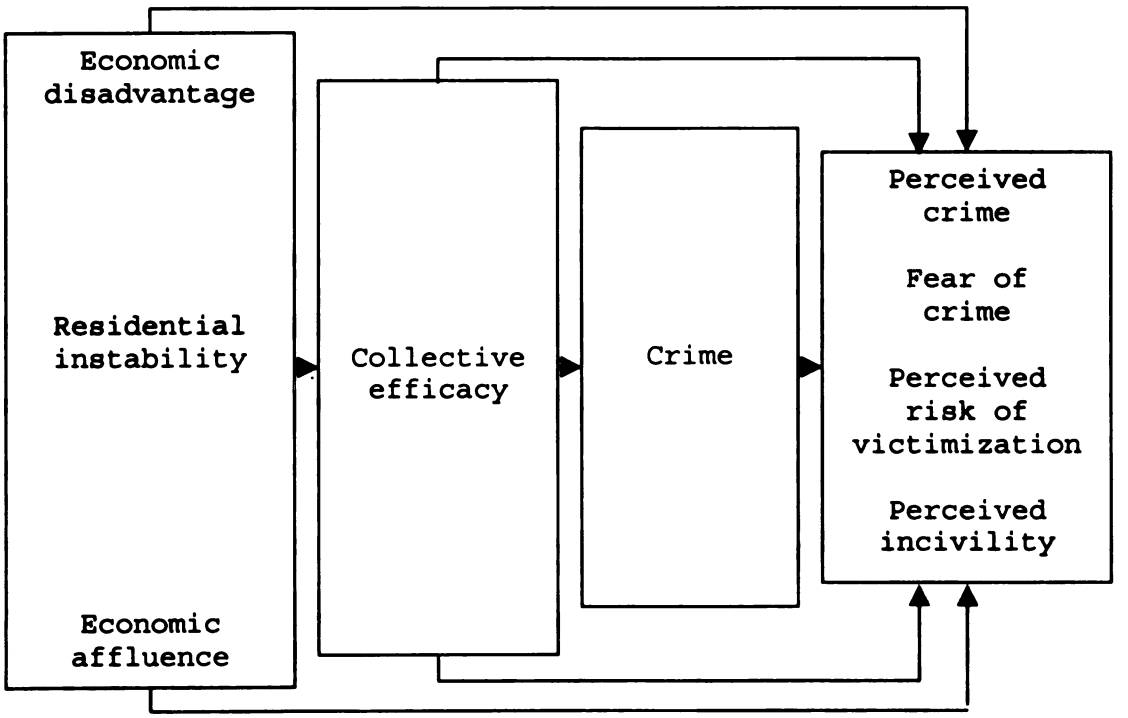
Norris and Kaniasty, 1991) and incivilities (Ross and Mirowsky, 1999). Other studies, however, have shown a weak or insignificant relationship between rates of crime and fear (Dubow et al., 1979; Taylor and Hale, 1986; Taylor and Shumaker, 1990:627; Michalos and Zumbo, 2000).

What remains unclear is whether quality of life is affected by social disorganization more than crime, or equally by both. For example, Lewis and Salem (1986; see also Hunter, 1978; Taylor and Covington, 1993) argue that concerns over fear of crime are not simply characterized by crime, but by the erosion of accepted norms and values common in disorganized communities. Therefore, in order to assess quality of life accurately, both neighborhood characteristics and rates of crime are essential. A study that examines the effects of *both*, simultaneously on individual outcomes of quality of life, is superior to research that adopts an either-or approach.

Research shows the ability of collective efficacy to mediate the effects of social disorganization on crime and disorder (Sampson et al., 1997; Sampson and Raudenbush, 1999). However, collective efficacy has never been tested in nonmetropolitan settings. The most unique aspect of this research, then, is that it investigates the influence of collective efficacy on perceived quality of life in

nonmetropolitan settings. The appropriateness of applying social disorganization theory to nonmetropolitan areas is that such locations are not immune to problems that disrupt neighborhood social organization. Figure 6 indicates the multilevel[23] theoretical model for the current research. The next chapter provides an in-depth assessment of the data, individual and aggregate level variables, and methods used in the multilevel analysis.

Figure 6: The Theoretical Model to be Tested



CHAPTER THREE: HYPOTHESES, DATA AND METHODS

Following up on the evolution of social disorganization theory and research, this chapter specifies a series of research hypothesis to be tested. Also provided in this chapter is a detailed outline of the methodological procedures, including a description of the sample and operationalization of variables. Finally, this chapter provides an overview of the primary analytic strategy that will be employed (i.e., hierarchical linear modeling).

Hypotheses

Early theorists claimed that residential areas characterized by low economic status, high residential mobility, and greater ethnic heterogeneity experienced higher rates of crime as a result of weakened community social organization (Park et al., 1928; Shaw and McKay, 1969). Recent studies consider structural characteristics as exogenous indicators of social disorganization (Sampson and Groves, 1989; Sampson and Raudenbush, 1999; Taylor and Covington, 1993; Smith and Jarjoura, 1989; Bellair, 2000). Exogenous indicators refer to adverse changes in a neighborhood that are capable of directly and indirectly

affecting crime. The present study focuses on three exogenous factors: economic disadvantage, residential instability, and economic affluence.

Social Disorganization and Crime

Traditional social disorganization theory posits that low-economic status and residential instability indirectly affects crime (Shaw and McKay, 1969), and contemporary research supports such propositions (Peterson et al., 2000; Sampson and Groves, 1989). The connection between economic disadvantage and crime follows that poverty stricken residential areas lack social and economic resources, which in turn, lead to weak systems of informal social control. The following relationship is hypothesized:

> H1a: Economic disadvantage will have a direct positive effect on crime.

Resident attrition and turnover inhibits social investment among residents. Areas that experience higher population turnover produce less opportunity to build mechanisms of social organization, which leads to crime. The following relationship is hypothesized:

> H1b: Residential instability will have a direct positive effect on crime.

The significance of identifying economic differentiation across neighborhoods is fundamental for

understanding what resources are needed to reduce and control crime. For example, unlike disadvantaged areas, affluent areas often possess the resources necessary to combat crime by maintaining higher levels of social organization. To account for this variation, economic affluence is included in the analysis. Although related to economic disadvantage, economic affluence is a conceptually distinct factor (Sampson et al., 1999:637). Evidence shows that more affluent neighborhoods have the ability to reduce social problems (Sampson et al., 1999:637). Accordingly, the following relationship is hypothesized:

> H1c: Economic affluence will have a direct negative effect on crime.

Social Disorganization and Collective Efficacy

Sampson et al. (1997) posit that concentrated disadvantage and residential stability affect crime indirectly through informal social control. Osgood and Chambers (2000:107; see also Shaw and McKay, 1969) argue that poverty and residential instability dampen social relationships in a community. Moreover, poverty produces isolation and resource dependence that undercuts residents desire to work together to achieve desired outcomes (Wilson, 1987). Undercutting a neighborhood's ability to build social cohesion and informal social control (i.e.,

collective efficacy) can lead to further disorganization (Sampson et al., 1997; Sampson et al., 1999). In contrast, more affluent neighborhoods are likely to show increased levels of collective efficacy (Sampson et al., 1999). The following relationships are hypothesized:

> H2a: Economic disadvantage will have a direct negative effect on collective efficacy.
>
> H2b: Residential instability will have a direct negative effect on collective efficacy.
>
> H2c: Economic affluence will have a direct positive effect on collective efficacy.

Collective Efficacy, Crime, and Quality of Life

While recent research has considered traditional social disorganization concepts as exogenous (Sampson and Groves, 1989), Sampson and Raudenbush (1999; see also Sampson et al., 1999) consider collective efficacy as normatively situated and endogenous to specific structural attributes. Sampson et al. (1997) found that neighborhoods with high levels of collective efficacy are likely to develop effective methods of defending against social disorganization by preventing and reversing the downward spiral of deterioration. Given the apparent link between collective efficacy and crime, the following relationship is hypothesized:

H3a: Collective efficacy will have a direct negative effect on crime.

While collective efficacy has been empirically shown to reduce rates of crime, there is reason to believe that collective efficacy can reduce negative perceptions of quality of life. The logic is that crime leaves behind a residue of unease, such as fear. The following relationships are hypothesized:

H4a: Collective efficacy will have a direct negative effect on perceived crime.

H4b: Collective efficacy will have a direct negative effect on fear of crime.

H4c: Collective efficacy will have a direct negative effect on perceived incivility.

H4d: Collective efficacy will have a direct negative effect on perceived risk of victimization.

Crime and Quality of Life

Reactions to crime often appear in the form of citizen quality of life assessments. Aggregate crime rates have been reported to inversely affect individual perceptions and behaviors (Hindelang et al., 1978; Ross, 1993). The level of crime in a neighborhood indeed shapes the level of perceived crime. Accordingly, the following relationship is hypothesized:

H5a: Crime will have a direct positive effect on perceived crime.

The literature, although mixed, shows that crime is associated with fear of crime (Skogan and Maxfield, 1981; Lewis and Salem, 1981; Covington and Taylor, 1991). Fear of crime maybe directly affected by crime more so than perceived crime because it plays on an individual's personal assessment of vulnerability (Gates and Rohe, 1987). Because fear of crime is an emotional response, it is conceivable that individuals are likely to express fear as a result of crime. Accordingly, the following relationship is hypothesized:

> H5b: Crime will have a direct positive effect on fear of crime.

Hunter (1978) was among the first to posit a relationship between crime and incivilities (e.g., litter, noisy neighbors). However, his nonrecursive reasoning was that each caused the other and one does not preceded the other. According to Taylor (1996:67) "extensive incivilities will be found in high crime neighborhoods, and high crime neighborhoods will be found in neighborhoods with extensive deterioration." A few years after Hunter (1978), Wilson and Kelling (1982) proposed that disorder (i.e., incivilities) causes crime. However, Sampson and Raudenbush (1999) have recently challenged the broken windows causal pathway by suggesting that crime and

incivilities are both a product of social disorganization. The following relationship is hypothesized:

> H5c: Crime will have a direct positive effect on perceived incivility.

Research shows that individuals living in communities characterized by high crime rates fear victimization (Garofalo and Laub, 1978; Garofalo, 1979; Clemente and Kleiman, 1977; Erskine, 1974; Parker and Ray, 1990; Taylor and Hale, 1986). While fear of crime reflects the likelihood of being a victim of a specific type crime, individual risk of victimization is more widespread in general. Therefore, high rates of neighborhood crime are likely to produce elevated perceptions concerning risk of victimization. The following relationship is hypothesized:

> H5d: Crime will have a direct positive effect on perceived risk of victimization.

Social Disorganization and Quality of Life

Research shows that crime and quality of life are affected by aggregate levels of poverty (Aneshenel and Sucoff, 1996:293; Campbell, 1981; Robert, 1998; Macintyre, MacIver, and Sooman, 1993; Sooman and MacIntyre, 1995). Neighborhoods characterized by low economic status often suffer from resource deprivation that produces subjective responses that crime is prevalent, imminent, and thereby

leads to further notions of personal vulnerability (Skogan, 1990:75).

Dilapidated homes and buildings are signs that incivilities are on the rise. If such conditions are ignored, outsiders will infer that informal social controls are weak and that residents do not care about the immediate environment (Taylor, 1999:68). The following relationships are hypothesized:

> H6a: Economic disadvantage will have a direct positive effect on perceived crime.
>
> H6b: Economic disadvantage will have a direct positive effect on fear of crime.
>
> H6c: Economic disadvantage will have a direct positive effect on perceived incivility.
>
> H6d: Economic disadvantage will have a direct positive effect perceived risk of victimization.

Research shows that residential instability (Aneshensel and Sucoff, 1996:293; Peterson et al., 2000; Taylor and Covington, 1993) contributes to an increase in crime and a decrease in subjective quality of life assessments. High levels of neighborhood attrition and turnover inhibit social investment. Residential instability leads residents to withdraw and cease social interaction. Because residents do not know their neighbors they are more likely not to trust each other and express

elevated perceptions of fear and risk of victimization. Accordingly, the following hypotheses will be tested:

> H7a: Residential instability will have direct positive effect on perceived crime.
>
> H7b: Residential instability will have direct positive effect on fear of crime.
>
> H7c: Residential instability will have a direct positive effect on perceived incivility.
>
> H7d: Residential instability will have a direct positive effect on perceived risk of victimization.

Economic disadvantage and residential instability signify an unstable neighborhood with limited shared financial and social interests. By contrast, economic affluence signifies a stable neighborhood with sufficient economic and social resources aimed at enhancing quality of life. Research suggests that more affluent communities are better able to secure resources, and are more likely to socially and economically invest in their communities and produce positive outcomes (Sampson et al., 1999; Boardman and Robert, 2000). The following relationships are hypothesized:

> H8a: Economic affluence will have a direct negative effect on perceived crime.
>
> H8b: Economic affluence will have a direct negative effect on fear of crime.
>
> H8c: Economic affluence will have a direct negative effect on perceived incivility.

H8d: Economic affluence will have a direct negative effect on perceived risk of victimization.

In conclusion, this section has specified several hypotheses concerning the relationship between social disorganization, collective efficacy, crime, and perceived quality of life. A socially disorganized community, characterized not just by crime, but by the erosion of community accepted standards and values has the ability to influence citizens' quality of life assessments (Lewis and Salem, 1986; Newman, 1972; Reppetto, 1974; Greenburg and Rohe, 1984). Once again, this dissertation will assess the general proposition that social disorganization weakens a community's ability to unite in pursuit of the collective good, which results in higher levels of crime and poorer citizen quality of life assessments.

Data

To assess the effects of social disorganization on citizen quality of life assessments, three independent data sources were collected: 1) community survey data, 2) 1990 Census data, and 3) official police crime records. The following subsections highlight the collection procedures for these data sources.

Community Survey

The first data source consisted of a crime and criminal justice survey mailed to residents of one county (Grand Traverse County, 1995 population 70,628), one small town (St. Johns, 1995 population 7,273), and one small city (Traverse City, 1995 population 15,439) in Michigan. The survey data were collected under the auspices of the Regional Community Policing Institute (RCPI) at Michigan State University in 1998. Survey administration was carried out using a modified "Total Design Method" (Dillman, 1978), which consisted of several steps.

A random probability sample of adult residents was drawn from each location. After the sample was drawn, a postcard was mailed to potential respondents notifying them of their selection. During the month of March, approximately two weeks after the initial postcard notice, the first wave of surveys was mailed. A second wave was distributed three weeks later to nonrespondents. Citizens who failed to return their survey after the second wave were phoned and/or mailed letters to encourage participation in the study. Three weeks after the second mailing, a third wave of surveys was mailed to nonrespondents. Table 1 shows the breakdown of each location sampled along with the response rate.

Table 1: Sample Statistics by Location

Location	Sample size	Number of respondents	Usable surveys	Response rate
Grand Traverse Co.	1,002	604	571	60%
St. Johns	458	299	226	66
Traverse City	602	404	328	67
Total	2,062	1,310	1,125[a]	64[b]

[a]Residents who lived outside the city/county limits were excluded which resulted in 6.5% reduction of the sample size.
[b]Response rates represent the percentage of the sample that returned the survey.

For Grand Traverse County, the original sample yielded 1,002 good addresses. Over 600 individuals returned their surveys, with a response rate of 60%. For St. Johns, the original sample yielded 458 good addresses. Nearly 300 citizens returned surveys, resulting in a 66% response rate. For Traverse City, the original sample yielded 602 good addresses. Individuals returned 404 surveys (response rate = 67%). Overall, the response rate for all three locations was 64%.

Concerning the community survey, it is important to highlight two points. First, not all of the surveys are used in the analysis because some residents lived outside the county line and city limits. For example, 68 of the 299 individuals in St. Johns who returned usable surveys were excluded because they lived outside St. John's city

limits.[24] Thus, 231 residents in the sample actually resided within the St. Johns city limits. Second, Traverse City is located in Grand Traverse County thereby resulting in an overlap of the population. To clarify, for the Traverse City sample, 150 individuals lived inside the city limits and 254 individuals lived outside the city limits but within Grand Traverse County. In Grand Traverse County, 131 individuals lived inside the city limits of Traverse City, and 466 lived outside the city limits (but still in Grand Traverse County).

The three samples (i.e., Grand Traverse City, St. Johns, and Traverse City) were pooled into one data set. Pooling the samples into one data set best captures the nonmetropolitan continuum discussed in Chapter 1. Rather than examine the locations individually, this research is interested in variation with respect to aggregate characteristics along the nonmetropolitan continuum. When pooled, these data can be used to assess nonmetropolitan community characteristics. Table 2 shows the descriptive statistics for the pooled sample. Some cases were excluded from the sample as a result of missing information, residents living outside specified jurisdictions, and the inability to determine the citizen's location.

Table 2: Pooled Sample Characteristics

Characteristic	Categories	#	%
Race	Caucasian	1090	96.9
	Non-Caucasian	35	3.1
Age	18 to 35	103	9.2
	36 to 50	421	37.4
	51 to 64	312	27.7
	65+	289	25.7
Gender	Male	712	63.3
	Female	413	36.7
Education	Non-college degree	762	67.7
	College degree	363	32.3
Housing	Own	1000	88.9
	Rent	125	11.1
Household Income	Less than $10,000	47	4.2
	$10,000-$19,999	148	13.2
	$20,000-$49,999	520	46.2
	$50,000-$74,999	252	22.4
	$75,000 and over	158	14.0
Marital Status	Single, never married	86	7.4
	Married	771	68.5
	Divorced/Separated	163	14.9
	Widowed	105	9.2
Years in Community	1-5 years	304	27.0
	6-15 years	438	38.9
	16-25 years	208	18.5
	25 years or more	175	15.6

Census Data

The second source of data was gathered from the 1990 Census. Census data were used to: 1) compare survey sample characteristics with census data to ensure data quality, 2)

identify and construct "residential units" (RUs) (discussed in the unit of analysis section), and 3) construct social disorganization variables, such as economic disadvantage (discussed in variables section). Census items are not direct indicators of neighborhood social disorganization processes; rather they reflect key structural conditions suggested by a long line of theorists as exogenous causes of social disorganization (Silver, 2000:1056). Hence, social disorganization effects must be inferred from these structural antecedents because direct measures of the social disorganization process operating at the neighborhood-level are not available from the U.S. Census.

Demographic characteristics of the 1998 survey sample were compared with 1990 Census data. For Grand Traverse County, St. Johns, and Traverse City, age and race from the 1998 sample characteristics differ from the 1990 Census characteristics: the 1998 sample was older and more racially diverse. The 2000 Census shows that Grand Traverse County and St. Johns are in fact becoming older and more racially diverse. Therefore, the 1998 sample characteristics are fairly consistent with the 2000 Census.

Official Crime Data

The third data source was collected independent of the community survey and census information. Official crime data from police records provided information regarding property crime across the three locations. Specifically, official police records of burglary were geo-coded and aggregated to the residential unit-level. Attention was restricted to burglary because this crime presented sufficient variation to model.[25] Although homicide is regularly used because of reporting reliability (Sampson et al., 1997:920; Sampson and Raudenbush, 1999), Osgood and Chambers (2000:92) note that homicide is a rare event in nonmetropolitan settings. In addition, when police officials were contacted regarding crime types, they unanimously suggested that burglary would be best suited for the research objective. To satisfy the question of reliability when using police records from different departments, all three departments use the standard Michigan Incident Crime Report (MICR) arrest charge codes. This standardized reporting form increases the likelihood that the data are reliable.

Overall, the three data sources provide the necessary information to operationalize citizen- and aggregate-level

variables. The next section provides the criteria used to construct residential units.

The Residential Unit

The present data set has a nested structure, and two units of analysis can be identified: individuals and residential units. This section highlights the procedures used to construct residential units.

Given the unique characteristics of nonmetropolitan areas (e.g., wide open country, sparsely populated areas, and distance from others) researchers have raised valid concerns over the way nonmetropolitan areas have been conceptualized. For example, Sanders and Lewis (1976:37) argue that geographic boundaries have been misrepresented because they do not reflect large areas of land, while Darling and Steinburg (1997:121) claim that automobile transportation may alter the "boundedness"[26] of rural areas. In addition, Lynch and Cantor (1992:345) expressed similar concerns by arguing that the meaning of neighborhood or block group is not clear in rural areas. Contemporary research must take these points into consideration when defining aggregate nonmetropolitan geographic units.

Constructing the Residential Unit

Residential units were constructed according to a three-step research design that included the use of Ultra-GIS software. Ultra-GIS is a geographical information systems software package that allows the user to systematically layer 1990 census information over census tracts and block groups. First, Ultra-GIS allowed socio-demographic census data, such as race, education, poverty, and unemployment, to be identified across census block groups. Second, physical landmarks, such as roads, lakes, schools, and parks, served as natural boundaries for grouping census block groups into residential units. Third, the combination of socio-demographic and geographic characteristics above were used to create homogenous and independent residential units (Blalock, 1984; Bryk and Raudenbush, 1992:xiv).[27]

Overall, sixty-seven census block groups were grouped into 31 residential units. This research design produced an analysis file of 1,125 citizens nested within 31 residential units. The number of cases in each residential unit ranged from 16 to 72 (average = 36.29; median = 35).

Nonmetropolitan Residential Unit Variation

After the residential units were constructed, the next step was to systematically examine each residential unit with regard to the nonmetropolitan continuum. To do so, the variable *ruralness* was constructed, which represents a continuum ranging from sparsely populated rural areas to small town neighborhoods to more densely populated small city neighborhoods. The objective was to provide empirical support that the residential units in the analysis occupied a sufficient portion of the nonmetropolitan continuum. This section is strictly descriptive in nature.

Ruralness is a weighted factor regression score (eigenvalue = 1.79; factor loadings = > |.90|) that included the following 1990 census items: percent rural and population density. To assess the variance of ruralness across the nonmetropolitan continuum, several descriptive statistics were evaluated. Variance measures the average squared deviations of scores around the mean; however, the unit of measurement of the variable influences the variance and can be difficult to interpret. Ruralness had a minimum value of -2.05 and maximum value of .90, with a range of 2.95. The minimum value (-2.05) represents less rural areas, such as small town (St. Johns) and small city neighborhoods (Traverse City), while the maximum value

(.90) reflects more rural geographic units (Grand Traverse County). The range is an unstable measure of variance because it takes only two values into account and can be greatly changed by a single value (Miller and Whitehead, 1996:64). Thus, to establish that ruralness varied in an acceptable fashion, a histogram was assessed.

Because ruralness was a weighted factor score, it had a mean of 0.00 and standard deviation of 1.00. More important is the distribution of ruralness across the 31 residential units. The values for ruralness (Skewness = -.72; Kurtosis = -.93) indicate a negatively skewed, leptokurtic distribution. Kurtosis measures the degree of peakedness. When closely examined, the distribution indicates two residential units occupying the value of -2.05 and one residential unit occupying the value of -1.75 in the extreme left end of the tail.

Moving toward the center of the distribution, the next ruralness values of interest are -.50 and -.25. Here, the number of residential units remains consistent between 2 and 3, respectively. There are total of 14 residential units evenly distributed between -2.00 and -.25 (i.e., the smaller values) at the less rural end of the continuum. On the opposite end of the distribution, positive values indicate more rural areas. There is a sharp peak at value

.75 (leptokurtic distribution) corresponding with 10 residential units. The last value to the extreme right shows six residential units at the ruralness value of .90. Thus, there are total of 17 residential units at the most rural end of the distribution.

To summarize, the geographic display of the data show an empirical pattern suggesting that as we move toward the right of the distribution, represented by larger ruralness values, the number of residential units sharply increases to reflect residential units that are larger in size and more sparsely populated (e.g., Grand Traverse County). This pattern suggests that enough variation exists to achieve the research objective at hand. The next section highlights citizen- and residential unit-level variables.

Variables

The following section has three objectives: (1) to operationalize citizen-level quality of life outcomes; (2) to operationalize residential unit-level predictors; and, (3) to operationalize citizen-level socio-demographic controls.

Citizen-Level Quality of Life Outcomes

The quality of life variables[28] consist of four terminal-dependent endogenous citizen-level measures: (1) perceived crime, (2) fear of crime, (3) perceived risk of victimization, and (4) perceived incivility. Perceived crime reflects an individual's subjective judgment whether crime is decreasing or increasing (see Skogan, 1999). *Perceived crime* is a single survey item asking whether respondents believe that crime has been getting worse in their neighborhood over the past couple of years (1 = strongly disagree to 5 = strongly agree).

Fear of crime is a four-item additive scale. Respondents were asked to indicate their level of fear according to the following: (1) being robbed by someone who has a gun or knife; (2) someone breaking into your house to steal things; (3) someone stealing your car; and (4) someone attacking you physically. Responses for each item ranged from 1 = least fearful to 10 = most fearful. The inter-item correlation ranged from .58 to .86 (Cronbach's alpha = .89).

Perceived risk of victimization focuses on the concern for safety and the potential for harm. Risk levels are high when individuals' feel that something could happen to them (Skogan, 1999). *Risk of victimization* is measured

using a four-item additive scale that asked individuals how safe they would feel being: (1) out alone in their neighborhood at night; (2) home alone at night; (3) out alone in their neighborhood during the day; and (4) home alone during the day. Responses for the four items ranged from 1 = very safe to 5 = very unsafe. The inter-item correlation ranged from .57 to .95 (Cronbach's alpha = .91).

Perceived incivility is measured as a five-item additive scale. Respondents were asked about specific problems in their neighborhood. It is important to note that nonmetropolitan settings are unlikely to experience problems with gangs when compared with urban areas (Ball, 2001). To reduce measurement error and adjust for differences in nometropolitan settings, perceived incivility taps into less severe measures of social disorder (i.e., noisy neighbors, public drinking, and drug dealing) and physical decay (i.e., litter and run down buildings). Each of the incivility items originally featured a three-point scale (1 = no problem, 2 = a problem, and 3 = serious problem). The inter-item correlation ranged from .25 to .36 (Cronbach's alpha = .67).

Overall, the four dependent variables were positively skewed. To normalize the distributions, the natural log was taken for each dependent variable. Descriptive statistics of these variables are presented in Table 3. The next subsection operationalizes five independent residential unit-level variables.

Table 3: Descriptive Statistics for Quality of Life Outcomes (N = 1,125)

Variable	Mean	SD	Min.	Max.
Perceived crime	.57	.55	.00	1.61
Fear of crime	2.52	.72	1.39	3.69
Perceived incivility	1.70	.17	1.61	2.71
Risk of victimization	1.74	.40	1.39	3.00

Social Disorganization Variables

Given the literature reviewed thus far, three social disorganization factors consistently emerge: economic status, residential mobility, and population composition. Over the years, these dimensions have been modified. In many respects, such modifications correspond with the changing social and economic landscapes of contemporary urban neighborhoods. Economic status is no longer used and has been replaced by socioeconomic status (Sampson, 1986; Kornhauser, 1978), concentrated disadvantage (Sampson et

al., 1997), and economic disadvantage (Reisig and Holtfreter, 2000). Economic status, or some derivative thereof, has often been measured according to percent unemployed, public assistance, female-headed families, poverty, and the like (see also Taylor, 1999:75).

One dimension that had maintained its original form is residential mobility (e.g., residential stability [Sampson et al., 1997; 1999; Sampson and Groves, 1989]; residential instability [Peterson, Krivo, and Harris, 2000:37]; residential attrition [Krannich et al., 1989]). Residential mobility has commonly been measured as percent of persons living in the same house for less than five years and the percent of owner-occupied homes (Sampson et al., 1997:920; Taylor and Covington, 1993; Kornhauser, 1978). Recently, Peterson et al. (2000:37) operationalized residential instability using residential mobility (percentage of residents five years of age and older living in different dwellings in the past five years), rental occupancy (percentage of occupied housing units that are renter-occupied), and vacancy rate (percentage of all housing units that are vacant).

Population composition (to use Shaw and McKay's terminology) is rarely used, and has been replaced by ethnic heterogeneity. From an operational standpoint,

ethnic heterogeneity is measured by race and ethnic (e.g., percent Hispanic and African-American) variation in a neighborhood (Taylor, 1999:75). In a study conducted by Rountree et al. (1994:90), ethnic heterogeneity was operationalized as the product of the percentage of nonwhite residents (including black, Asian, Native American, and Hispanic) and white residents. Measured in this way, ethnic heterogeneity varied from complete homogeneity (racial and ethnic composition representing all white or all ethnic) to perfect heterogeneity (racial and ethnic composition representing half white and half nonwhite). Given the pooled sample characteristics in Table 2, the descriptive statistics for race show almost complete homogeneity (largely white populations). Accordingly, the current study excludes ethnic heterogeneity from the analysis.

In the present research, social disorganization is represented by three variables: economic disadvantage, residential instability, and economic affluence. These variables are considered exogenous due to their direct and indirect effects on crime (Sampson and Groves, 1989; Simcha-Fagan and Schwartz, 1986:687; Sampson et al., 1997; Sampson and Raudenbush, 1999). In other words, these variables are the "triggering events" that set in motion

the loss (or increase) of quality of life. Several 1990 census items were included in the analysis. Table 4 provides the mean percentage and range of census items used in the analysis.

Table 4: Mean Percentage and Range of 1990 Census Items

Variable	Mean	Range		N
		Lowest	Highest	
% Poor	9.50	3.27	28.73	31
% Female-headed w/ children	9.23	1.22	27.80	31
% Unemployed	4.52	.00	9.46	31
% Rented occupied homes[a]	25.96	3.50	56.42	31
% Household income $75k+	6.22	.69	31.69	31
% College education	17.63	3.27	50.48	31
% Professional/Managerial work	17.17	2.66	33.79	31

[a]Percent lived in residential unit less than 6 years is excluded because it is a survey item aggregated to the residential unit-level.

The social disorganization variables were extracted using principal components analysis with varimax rotation. Land et al. (1990; see also Welsh et al., 1999:88) recommend factor analyzing census measures to reduce multicollinearity and reduce the number of underlying dimensions. Varimax rotation maximizes the variance of the

pattern matrix and is orthogonal (i.e., the resulting factors are uncorrelated) (Kim and Mueller, 1978:55-58). Varimax rotation was chosen because it is commonly used and yields factors that are uncorrelated.

Table 5 shows the loading pattern from the factor analysis. Two factors with eigenvalues greater than 1.0 were extracted. Factor 1 indicates a pattern consistent with opposite ends of the socioeconomic continuum. Recent scholarship argues for separating the upper tail of the socioeconomic distribution from the lower tail (Sampson et al., 1999:637). Given the loading pattern for Factor 1 and previous empirical support for separating the distribution, two variables were constructed: economic disadvantage (i.e., the lower-end of the socioeconomic distribution) and economic affluence (i.e., the upper-end of the socioeconomic distribution).

Table 5: Factor Pattern for Disorganization Variables (N = 31).

Variables	Factor 1	Factor 2
% Poor	-.639	.246
% Female-headed w/ children	-.586	.474
% Unemployed	-.841	-.296
% Rented homes	-.286	.735
% Less than 6 years in neighborhood	.136	.794
% Household income $75k+	.798	-.162
% College	.902	-.126
% Professional/ Managerial work	.924	-.006

Note: Factor loadings greater than .50 are underlined.

Economic disadvantage is measured as a weighted factor regression score (eigenvalue = 1.89; factor loadings = > .70) that included the following 1990 census items: percent poor, percent female-headed families with children, and percent labor force unemployed. *Economic affluence* is also measured as a weighted factor regression score (eigenvalue = 2.64; factor loadings = > .90) that included the following 1990 census items: percent households with income $75,000 and higher, percent college education bachelors and

higher, and percent adults in professional/managerial occupations.

The second principal component, *residential instability*, is measured using one aggregated community survey item and one census item. The survey item asked respondents "How long have you lived in your current neighborhood?" This item was aggregated to reflect the percentage of residents who had lived in the residential unit less than 6 years. The census item measured percentage of renter occupied homes. The weighted factor regression score was relatively healthy with an eigenvalue = 1.24 and factor loadings = > .70.

Collective Efficacy

Collective efficacy is a six-item additive scale aggregated to the residential-unit level. Collective efficacy is made up of two conceptually distinct, yet related variables: *social cohesion* and *informal social control*. Social cohesion gauged the level of mutual trust and solidarity among neighbors and is represented by a three-item scale. Residents were asked to indicate their level of agreement with the following statements: 1) this is a close-knit neighborhood, 2) people in the neighborhood can be trusted, and 3) people in the neighborhood generally

don't get along with each other (reversed scored). Each item originally featured a five point Likert-type scale.

Informal social control is also represented by a three-item additive scale. Informal social control measures the likelihood that neighbors would intervene for the common good in the following situations: 1) children spray painting graffiti on a local building, 2) children showing disrespect to an adult, and 3) a fight breaking out in front of their house. Responses were coded using a five point Likert-type scale.

Responses to all six items were aggregated to the residential unit-level and summed to create collective efficacy. The inter-item correlations for collective efficacy ranged from .17 to .69 (Cronbach's alpha = .79). While collective efficacy has traditionally been used in urban research, it has yet to be tested in nonmetropolitan settings. Using it required minor adjustments. For example, collective efficacy in its original form asks residents about children hanging out on street corners, budget cuts with respect to the local fire station, and the like (Sampson et al., 1997:919-920); but these scenarios are less likely to occur in nonmetropolitan areas. Thus, to reduce measurement error, some of the original social cohesion and informal social control items were not used.

Burglary Index

While previous social disorganization research has modeled burglary as the terminal dependent variable (Smith and Jarjoura, 1989; Rountree et al., 1994; Lynch and Cantor, 1992), this research carries the analysis one step further by examining the influence of property crime on perceived quality of life. The crime of burglary is relevant for several reasons. First, property crime (e.g., burglary) is far more prevalent than person crime (e.g., homicide) in nonmetropolitan areas (Taylor and Shumaker, 1990:621; also see Osgood and Chambers, 2000). Second, operationalizing narrowly defined classes of crimes, such as burglary, increases the internal homogeneity of crime categories and thereby reduces measurement error (Lynch and Cantor, 1992:342; also see Bellair, 2000:146; Welsh et al., 1999:91). Lastly, Rountree et al. (1994:389) argue that burglary is particularly well-suited when conducting community-level studies because "measures of community context are relevant only to crimes at or near the home."

Burglary index is considered an endogenous variable and is a multisource measure of property crime across residential units. *Burglary index* is a weighted factor regression score measure that includes incidents of police-recorded burglary per 100 residents (burglary rate),

aggregated self-report survey victimization (percent victim of burglary in past 6 months), and aggregated perceptions of burglary (percent reported that burglary was a problem/serious problem) (eigenvalue = 1.74; factor loadings = > .70).

Citizen-Level Socio-demographic Variables

Socio-demographic variables are included to control for survey response bias and spurious effects (Sampson et al., 1997:921; Sampson et al., 1999:640; Raudenbush and Sampson, 1999:133). Because the sample is racially homogenous (i.e., largely white), race is measured using a single dummy variable: *minority* (1 = minority, 0 = Caucasian). *Age* (respondent's age in years) and *male* (1 = male, 0 = female) are included because research suggests that elderly citizens and females are more likely to experience higher levels of fear (LaGrange and Ferraro, 1989; Lawton and Yaffe, 1980; Ortega and Myles, 1987; Clarke, Ekblom, Hough, and Mayhew, 1985), while younger persons are less fearful (Stephens, 1999:62; Garofalo and Laub, 1978; DuBow et al., 1979). *Married* (1 = married, 0 = otherwise) is included because single individuals have higher rates of victimization due to lack of guardianship (Smith and Jarjoura, 1989:621; Lynch and Cantor, 1992).

Socio-economic status is a weighted factor score that includes education, family income, and occupational prestige (eigenvalue = 1.82; factor loadings = > .70). The last two controls are h*omeowner* (1 = homeowner, 0 = otherwise) and *years in neighborhood* (# of years lived in current neighborhood). Descriptive statistics for citizen- and residential unit-level variables used in this analysis are shown in Table 6.

Table 6: Descriptive Statistics for Independent Variables[a] (N = 1,125)

Variable	Mean	SD	Min.	Max.
Independent Variables				
Citizen-level predictors				
Minority	.03	.17	.00	1.00
Male	.63	.48	.00	1.00
SES	.00	1.00	-2.68	2.63
Age	54.19	15.30	19.00	98.00
Married	.69	.46	.00	1.00
Ownhome	.89	.31	.00	1.00
Years in neighborhood	14.73	13.25	1.00	84.00
Residential unit-level predictors[b]				
Economic disadvantage	.00	1.00	-1.37	3.44
Residential instability	.00	1.00	-1.74	2.25
Economic affluence	.00	1.00	-1.30	3.37
Collective efficacy	21.55	.84	19.54	22.88
Burglary index	.00	1.00	-1.34	2.80

[a]Total sample size is 1,125 citizens and 31 residential units.
[b]Descriptive statistics for residential units are based on residential unit as the unit of analysis.

The next section highlights the analytic strategy used for this research. It provides a review of the advantages

of hierarchical linear modeling (HLM) over other multivariate techniques, and outlines the four-step modeling procedure used to conduct the analyses.

Analytic Strategy

Rationale

Hierarchical linear modeling (HLM) has many advantages over traditional multivariate techniques. For example, ordinary least-squares regression would be limited with these data because it would ignore the aggregate clustering of individuals. In contrast, HLM takes advantage of these natural clusters by simultaneously modeling citizen- and aggregate-level models (Bryk and Raudenbush, 1992:xiv), thus decreasing the probability of committing a Type I error (Kreft and DeLeeuw, 1998:10). The rationale for using HLM is that it serves as the most effective way to model citizen-level outcomes using both individual- and residential unit-level independent variables.

To perform a reliable multilevel analysis, 10 cases within 10 aggregates must be present (Mok and Flynn, 1998:413). For this research, the average number of respondents within each residential unit is 36.29. In short, it appears as though HLM can be used here to regress quality of life outcomes on individual- and residential

unit-level variables. HLM resolves many of the problems that multivariate and other multi-level models encounter,[29] yet is still based on traditional OLS regression assumptions of independence, normality, and variance (Bryk and Raudenbush, 1992:15).

Analysis Procedure

A four-stage modeling procedure will be used for each quality of life outcome. The first model, the One-Way ANOVA, provides descriptive statistics detailing the appropriateness of the data for HLM techniques, such as reliability estimates. The random coefficient model, which is the second step in the process, provides a first look at the effects of citizen-level predictors on the outcome measure. This model also indicates whether any of the citizen-level slopes vary across aggregate units. Where such variation is found, it can be modeled as a function of residential-unit characteristics (Rountree et al., 1994:396). The third step (or the means-as-outcomes model) helps determine whether residential-unit variables influence quality of life outcomes. Finally, the citizen and residential unit-level models are combined into a single hierarchical model.

Conclusion

This chapter has provided several hypotheses to be tested with respect to social disorganization and quality of life in nonmetropolitan settings. The chapter also outlined how social disorganization, perceived quality of life, and other variables were operationalized. The chapter highlighted how the data were gathered, how residential units were constructed, and why HLM is appropriate when using data with a nested structure. The next chapter discusses the findings.

CHAPTER FOUR: FINDINGS

In this chapter, the major research findings are presented. Before doing so, however, several diagnostic procedures were performed to help increase confidence in the findings. For example, bivariate correlations and OLS regression models helped address issues concerning multi-collinearity and discriminant validity. Along the way, some initial hypotheses testing were conducted. After doing so, the analysis proceeds with the estimation of a series of hierarchical linear models.

Preliminary Statistics

Model Diagnostic Procedures

Citizen-Level Associations. Zero-order correlations between the citizen-level independent variables were explored to help determine whether multi-collinearity was present. Table 7 presents bivariate correlations between citizen-level variables used in the analyses. The results indicated that multi-collinearity was not a problem because the Pearson correlation values did not exceed .80 (Menard, 1995:66). In fact, the highest correlation was observed between years in neighborhood and age (.46), while the weakest correlation was between age and male (-.01). The

mean inter-correlation for all of the variables presented in Table 7 was .24.

Table 7: Zero-order Correlation Coefficients between Citizen-Level Variables

Measure	(2)	(3)	(4)	(5)	(6)	(7)
(1) Minority	-.04	-.14*	.13*	-.03	-.05	.06
(2) Male	---	.20*	-.01	.41*	.10*	.05
(3) SES[a]	---	---	-.20*	.26*	.20*	-.21*
(4) Age	---	---	---	-.08*	.14*	.46*
(5) Married	---	---	---	---	.27*	.02
(6) Ownhome	---	---	---	---	---	.16*
(7) Years in Neigh.	---	---	---	---	---	---

[a]Weighted factor score
*p < .01 (two tailed tests)

Because relying solely on bivariate analysis to investigate the existence of multi-collinearity is viewed as unsatisfactory (Berry and Feldman, 1985:43), OLS regression diagnostics (not shown) provided additional support that multi-collinearity was not a problem. When perceived crime was regressed on citizen-level variables, the tolerance statistics for each independent variable was greater than .70. According to Menard (1995:66) a

tolerance statistic less than .20 is cause for concern. In sum, the tolerance statistics revealed no evidence of multi-collinearity among the citizen-level variables used in the multivariate models.

Residential Unit-Level Associations. Bivariate results from the independent residential unit-level variables showed no signs of multi-collinearity. The mean inter-item correlation between all of the residential unit-level variables was .32 (see Table 9). However, as expected, an inverse association was observed between economic affluence and economic disadvantage (-.68). It is important to note that concerns regarding multi-collinearity are not a problem given that the correlation between economic affluence and economic disadvantage did not exceed .80.

Based on Menard's (1995) tolerance guidelines, no evidence of multi-collinearity was detected when perceived crime was regressed on residential unit-level variables. However, the tolerance statistic revealed that economic disadvantage (.52) and economic affluence (.48) might be of some concern. Despite the comparatively low tolerance statistics, it was decided to keep these variables in their original form because it is theoretically salient to separate the upper-tail of the socioeconomic distribution

from the lower-tail (Sampson et al., 1999:637). Overall, while the multivariate model showed a modest degree of multi-collinearity, there was no evidence suggesting a problematic model specification.

Discriminant Validity of Outcome Measures

Citizen-Level. A second set of zero-order correlations was estimated to determine the magnitude of the association between the quality of life outcome measures at the citizen-level. These bivariate results (not shown) helped determine whether the quality of life variables used in the analyses possessed discriminant validity. Meeting the criterion of discriminant validity shows that "your measure of a concept is different from measures of similar but distinct concepts" (Maxfield and Babbie, 1998:110). In other words, how do we know that perceived crime is empirically distinct from risk of victimization? The weakest correlation was observed between fear of crime and perceived incivility (.16), while the strongest correlation was between perceived incivility and perceived crime (.40). Although the correlations were statistically significant, the magnitudes did not exceed .80. Accordingly, it is safe to conclude that the quality

of life measures at the citizen-level possessed discriminant validity.

Residential Unit-Level. Prior ecological research has emphasized the need to establish discriminant validity at the aggregate level (Sampson et al., 1997:922-923; Sampson et al., 1999:642-643; Cook et al., 1997:97). The bivariate results (not shown) for the outcome measures at the residential-unit level revealed some concern regarding the correlation between perceived crime and risk of victimization (.75) and risk of victimization and fear of crime (.71). Despite the high values, the Pearson correlations were less than .80. Therefore, results support the discriminant validity of the scales. Fear of crime and perceived incivility (.18) showed the weakest correlation.

Correlates of Quality of Life at the Residential Unit-Level

Table 8 presents zero-order correlations between the residential unit-level and outcome variables. Collective efficacy was inversely related to three of the four quality of life outcomes. Hence, three hypotheses were supported. For example, as collective efficacy decreases, perceived crime significantly increases (H4a). A similar relationship was observed between collective efficacy and

perceived incivility (H4c). In addition, the relationship between collective efficacy and risk of victimization was significant and in the expected direction (H4d).

The only observed relationship that failed to reach statistical significance was between collective efficacy and fear of crime (H4b); nevertheless, the sign was in the expected direction. Overall, strong to moderate negative relationships were observed between collective efficacy and perceived crime (-.63), perceived incivility (-.62), and risk of victimization (-.51); yet, a weak negative relationship was observed for fear of crime (-.27). These results suggest that citizens living in residential units characterized by low levels of collective efficacy are more likely to rate their quality of life in more negative terms.

Table 8: Zero-Order Correlation Coefficients between Quality of life Measures and Residential Unit-Level Measures

Measure	Perceived crime	Fear of crime	Perceived incivility	Risk of victimization
Economic disadvantage[a]	.16	.26	.23	.29
Residential instability[a]	.05	.11	.07	.16
Economic affluence[a]	-.29	-.09	-.30	-.23
Collective efficacy	-.63**	-.27	-.62**	-.51**
Burglary index[a]	.79**	.38*	.71**	.64**

[a]Weighted factor score
*p < .05, **p < .01 (two-tailed tests)

Results also indicated positive and significant correlations between burglary index and quality of life outcomes. The relationship between burglary index and perceived crime (.79; H5a), perceived incivility (.71; H5c), and risk of victimization (.64; H5d) are strong and in the hypothesized direction. Fear of crime is correlated less strongly with burglary index (.38; H5b), yet remains statistically significant. These findings suggest that citizens living in residential units with higher rates of

burglary are more likely to perceive that crime, incivility, risk, and fear are problematic.

The weakest relationships were observed between social disorganization indicators and quality of life outcomes. In other words, the results do not support the hypotheses regarding the link between economic disadvantage (H6a through H6d), residential instability (H7a through H7d), economic affluence (H8a through H8d) and quality of life outcomes. Although these coefficients failed to reach statistical significance, the relationships were in the hypothesized direction. Focus here is on the magnitude of the correlations as opposed to statistical significance because the latter depends on sample size. Nevertheless, it is worth repeating that both collective efficacy and burglary index significantly influenced the quality of life outcomes.

Bivariate Associations Between Residential Unit Independent Variables

Table 9 examines the zero-order correlations between residential unit-level variables included in the analysis. These initial tests indicated that collective efficacy and burglary index were correlated (-.57). Among the zero-order correlations, the association between collective efficacy and burglary index was the only hypothesis (H3a)

posited to reach statistical significance. This finding reaffirms pervious research showing that collective efficacy and crime are inversely related (Sampson et al., 1997; Sampson et al., 1999).

Table 9: Zero-Order Correlation Coefficients between Residential Unit-Level Variables

Measure	(2)	(3)	(4)	(5)
(1) Economic disadvantage[a]	.22	-.68*	-.15	.14
(2) Residential instability[a]	---	-.22	-.12	.24
(3) Economic affluence[a]	---	---	.32	-.17
(4) Collective efficacy	---	---	---	-.57*
(5) Burglary index[a]	---	---	---	---

[a]Weighted factor score
* $p < .01$ (two-tailed tests)

The correlation between economic affluence and collective efficacy (.32), although weak and insignificant, was in the hypothesized direction (H2c). The directional accuracy of this finding is consistent with prior research that suggests economically affluent residential areas are more likely to experience higher levels of collective efficacy (Sampson et al., 1999). In addition, the

hypotheses that economic disadvantage (H2a) and residential instability (H2b) would be inversely related to collective efficacy were in the expected direction; however, neither coefficient achieved statistical significance. The relationships between structural variables, such as economic disadvantage (H1a), residential instability (H1b), and economic affluence (H1c) and burglary index were in the hypothesized direction, but failed to reach statistical significance.

Hierarchical Linear Models

Using a four-step HLM procedure (Bryk and Raudenbush, 1992), the analyses began with preliminary ANOVA models. The One-way ANOVA models helped determine the amount of variation in the outcomes within and between residential units, as well as provide reliability estimates[30] for outcome measures at the aggregate-level. Next, random coefficient models were estimated. The random coefficient models examined citizen-level predictors on the outcome measure. These models indicated whether any of the citizen-level slopes varied across aggregate units. Where such variation was found, it was modeled as a function of residential-unit characteristics (Rountree et al., 1994). Third, intercept-as-outcome models, which include the

residential unit-level variables, were estimated. These models helped determine whether residential-unit variables influenced quality of life outcomes. The final step entailed estimating HLM models where the outcome measures were regressed on both citizen- and residential unit-level variables simultaneously.

One-Way Analysis of Variance (ANOVA) Models

Table 10 presents HLM decomposition of variance components and residential unit-level reliabilities for quality of life outcomes. The residential unit reliability for perceived crime (.73) and perceived incivility (.76) are quite high. This means that parameter variance was reliably captured at the residential unit-level. Put differently, high estimates (>.70) indicate that residential unit differences can be modeled with a high degree of precision.

Table 10: Decomposition of Variance and Residential Unit-Level Reliabilities of Quality of Life Measures

Variance Components	Perceived crime	Fear of crime	Perceived incivility	Risk of victimization
Within-RU variance (σ^2)	.28	.50	.03	.15
Between-RU variance (τ_{00})	.02	.01	.00	.00
Intraclass correlation	.07	.03	.09	.01
RU reliability	.73	.50	.76	.33

Note: N = 1,125 citizens nested in 31 residential units.

The residential unit reliability for fear of crime is lower at .50. Although the ability to detect residential unit differences is somewhat thwarted, the value remains within the bounds of acceptability (see Duncan and Raudenbush, 1999). Previous research (Sampson and Jeglum-Bartusch, 1998:796) has considered similar values (e.g., .54) acceptable. The reliability estimate for risk of victimization is low at .33, indicating that it may be difficult to model.

Table 10 also presents intraclass correlation (ICC) values.[31] The ICC ($\rho = \tau_{00} / \sigma^2 + \tau_{00}$) indicates the percentage of the scale's variance between residential units, with the remainder apportioned to random error and citizen-level

variation.[32] In general, the intraclass correlations for the four scales ranged between 1% and 9%. An ICC of 1% should be met with caution. Duncan and Raudenbush (1999:10) advise caution when interpreting small ICC, as effect sizes commonly viewed as large translates into small proportions of variance in individual outcomes. However, the ICC for perceived incivility was .09. This means, for example, that approximately 9% of the variation in perceived incivility was between residential units. Results indicate that sufficient variation exists in the outcomes to estimate residential unit-level models (see Duncan and Raudenbush, 1999). Overall, the primary results support proceeding with more complex modeling, but caution should be exercised when interpreting the results for the risk of victimization models.

Random Coefficient Models

Prior to modeling residential unit-level effects, random-coefficient models were estimated. Justification for doing so was twofold. First, the models examine the association between citizen-level variables and the outcomes in a multivariate context. Second, the models help determine whether any of the citizen-level slopes vary significantly across residential units. If citizen-level

slopes vary across residential units, then aggregate variation can be modeled using contextual variables (Rountree et al., 1994). All citizen-level variables were group-mean centered in the following analyses.

Table 11 addressed whether citizen-level variables were related to the outcomes. Table 11 presents four quality of life random coefficient models. Minority and ownhome were set as fixed due to a lack of variation across residential units. The coefficients for perceived crime showed that, on average, males and old residents were more likely to report problems associated with crime. Prior research indicates that elderly are more likely to perceive crime as problematic (Garofalo and Laub, 1978), and males are less likely to perceive crime as a problem (LaGrange and Ferraro, 1989; Lawton and Yaffe, 1980). Ownhome showed a significant inverse relationship with perceived crime. In other words, citizens who do not own their home are more likely to perceive problems concerning crime. The citizen-level variables explained 5% of the within RU variance in the perceived crime model.

Table 11: Random Coefficient Quality of Life Models (N = 1,125)

	Perceived crime		Fear of crime		Perceived incivility		Risk of victimization	
	b	*t*-ratio	*b*	*t*-ratio	*b*	*t*-ratio	*b*	*t*-ratio
Intercept	.58	18.77**	2.51	82.23**	1.71	167.23**	1.74	122.59**
	(.03)		(.03)		(.01)		(.01)	
Minority	.06	.82	.17	1.59	.04	1.55	-.00	-.03
	(.07)		(.11)		(.03)		(.08)	
Male	.10	3.14*	-.24	-4.46**	-.01	-1.01	-.12	-5.59**
	(.03)		(.06)		(.01)		(.02)	
SES	-.00	-.11	-.00	-.02	.00	.24	-.04	-3.80**
	(.01)		(.02)		(.01)		(.01)	
Age	.01	-4.32**	-.01	-3.27**	-.00	-2.23*	-.00	-.67
	(.00)		(.00)		(.00)		(.00)	
Married	.01	-0.38	-.03	-.63	-.01	-1.10	.02	.86
	(.04)		(.05)		(.01)		(.03)	
Ownhome	-.13	-2.06*	.07	1.05	-.03	-1.51	-.07	-1.64
	(.07)		(.07)		(.02)		(.04)	
Yrs. in Nghd	.00	1.08	.00	.31	-.00	-.20	.00	.63
	(.00)		(.00)		(.00)		(.00)	
Variance Explained								
Within-RU	5%		7%		8%		5%	

Note: Minority and Ownhome set as fixed due to lack of variation across RUs. Estimates are unstandardized coefficients. Standard error in parentheses. *p < .05, **p < .01 (two-tailed tests)

The fear of crime model revealed that male and age were inversely and significantly related to fear of crime. These findings are inconsistent with previous research that suggests elderly and females are more likely to experience higher levels of fear (LaGrange and Ferraro, 1989; Lawton and Yaffe, 1980; Ortega and Myles, 1987; Clarke, Ekblom, Hough, and Mayhew, 1985), while younger persons are less fearful (Stephens, 1999:62; Garofalo and Laub, 1978; DuBow et al., 1979). The citizen-level variables accounted for 7% of the within RU variance in the fear of crime model.

Perceived incivility was inversely related to age. More specifically, younger citizens are likely to perceive various forms of social disorder and physical decay as problematic in their immediate surroundings. This finding is consistent with Ball (2001) who found that in rural Maine, youth perceived disorder and decay more of a problem than adults. The model explained 8% of the within RU variance associated with perceived incivility.

In the final model, male and SES were inversely and significantly related to risk of victimization. These findings suggest females perceive higher levels of risk when compared to men. In addition, citizens with lower SES are more likely to report higher levels of risk. One explanation for this relationship is that monetary

constraints prohibit citizens from installing locks, alarms, or other security devices that help provide a sense of security and safety (Taylor and Schumaker, 1990).

Table 12 addressed whether any of the citizen-level slopes varied significantly with quality of life outcomes across residential units. The models for perceived crime, fear of crime, and risk of victimization revealed that none of the citizen-level variables varied across residential units. According to Walsh et al. (1999:98), this means that the relationships between citizen-level variables and quality of life outcomes were similar across the 31 residential units. However, the perceived incivility model revealed that age and years in neighborhood varied significantly. Because variation was found to exist, age and years in neighborhood were modeled as a function of residential-unit variables. To examine this variation, two multi-level interaction models were estimated.

Table 12: Variance of Quality of Life Models (N = 1,125)

	Perceived crime		Fear of crime		Perceived incivility		Risk of victimization	
	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value
Male	32.23	.35	37.03	.18	26.84	>.50	30.14	.46
SES	24.08	>.50	31.56	.39	26.97	>.50	18.36	>.50
Age	35.88	.21	36.30	.20	69.40	.00	29.13	>.50
Married	40.00	.11	24.49	>.50	33.99	.28	38.66	.13
Yrs. Nghd	33.63	.30	42.33	.07	45.28	.03	40.53	.10

In the first interaction model, the slope for age was modeled as a function of economic disadvantage, residential instability, and collective efficacy (results not shown). Here, the effect of age persisted. Additionally, a cross-level association between age and residential instability (*t*-ratio = -3.68) and collective efficacy (*t*-ratio = -3.31) was revealed. These findings suggest that older citizens reside in more stable residential units with lower levels of collective efficacy. In the second interaction model, the slope for years in neighborhood was modeled as a function of economic disadvantage, residential instability, and collective efficacy. Results (not shown) revealed no multi-level interactions.

Intercept-As-Outcome Models

Having estimated the regression equations for citizen-level variables to explore possible variation across residential units, a series of intercept-as-outcome models were examined for purposes of hypotheses testing. The intercept-as-outcome models helped determine whether residential unit-level variables influenced quality of life outcomes. In these models, however, citizen-level variables were not included, so these models represent lenient tests. Here, intercepts for quality of life

variables were modeled as a function of residential-unit contextual characteristics. The residential unit-level variables were centered around the grand mean. The residential-unit models were specified with random error terms. The error term represents the variability that remains after the residential unit-level variables have been entered into the model.

The following tables present two models for the four quality of life variables. Two separate models were estimated due to the sample size (N=31) at the residential unit-level. A small sample restricts statistical power. The common rule of thumb is that one needs at least 10 observations for each predictor at the aggregate-level (Byrk and Raudenbush, 1992:211). Despite these limitations, Bryk and Raudenbush (1992:198) claim "implausible results arising from units with small sample size are not a problem because the estimation methods are robust."

Model 1 in Tables 13 through 20 included economic disadvantage, residential instability, and collective efficacy. Model 2 also included collective efficacy; however, economic disadvantage and residential instability were replaced with economic affluence and crime. Economic disadvantage and economic affluence are separated in each

model because of collinearity concerns. These two models are assessed throughout the remainder of the analyses.

Table 13 presents results for perceived crime. In Model 1, the hypothesis that economic disadvantage would have a direct positive effect on perceived crime (H6a) was not supported. In other words, economic disadvantage did not appear to influence perceived crime. This finding was inconsistent with prior urban research that revealed aggregate-level economic indicators, such as economic disadvantage, significantly affects perceptions of crime (Aneshenel and Sucoff, 1996; Campbell, 1981; Robert, 1998; MacIntyre, MacIver, and Sooman, 1993; Sooman and MacIntyre, 1995). Moreover, this finding does not support Skogan's (1990:75) argument that neighborhoods characterized by economic deprivation foster subjective responses that crime is prevalent, imminent, and thereby leads to further notions of personal vulnerability (Skogan, 1990:75). It is important to note that Skogan's, and much of the prior research pertains to urban neighborhoods. Therefore, many of the inconsistent findings are attributed to the research settings (i.e., urban versus nonmetropolitan settings).

The results also revealed that residential instability was not positively associated with perceived crime (H7a). However, the observed relationship between collective

efficacy and perceived crime (H4a) was inverse in nature and statistically significant. Stated differently, residential units with low levels of collective efficacy are more likely to be inhabited by residents who perceive crime as problematic.

Table 13: Intercept-as-Outcome Models for Perceived Crime

	Model 1		Model 2	
Variable	Coefficient (SE)	t-ratio	Coefficient (SE)	t-ratio
Intercept	.58 (.02)	24.38**	.58 (.02)	33.14**
Economic disadvantage	.02 (.02)	.98	--	--
Residential instability	-.00 (.03)	-.25	--	--
Collective efficacy	-.13 (.02)	-5.22**	-.04 (.02)	-1.85*
Economic affluence	--	--	-.02 (.02)	-1.42
Burglary index	--	--	.11 (.02)	5.80**

*p < .10, **p < .05 (two-tailed tests)

In Model 2, the relationship between collective efficacy and perceived crime (H4a) was significant and in the hypothesized direction. The results failed to support the hypothesis that economic affluence would have a direct negative effect on perceived crime (H8a) because the coefficient, although in the expected direction, did not achieve statistical significance. Lastly, the hypothesis that crime would have a direct positive effect on perceived crime (H5a) was supported. In other words, as crime increased at the residential-unit level, perceived crime also increased. By comparing Models 1 and 2 above, the evidence suggested that the inclusion of burglary index resulted in a diminished association between collective efficacy and perceived crime (from -.13 to -.04).

Table 14 presents results for fear of crime. In Model 1, the results failed to confirm the hypotheses that economic disadvantage (H6b) and residential instability (H7b) would have a direct positive effect on fear of crime. Hence, the two structural predictors in Model 1 had no bearing on fear of crime. Collective efficacy, on the other hand, was significant and inversely related to fear of crime (H4b). In other words, fear of crime was higher among citizens living in residential units with low levels of collective efficacy. This finding is consistent with

the social control model, which posits that a breakdown in the development and enforcement of local norms for social behavior is the major determinant of fear (Greenburg et al., 1985; Lewis and Salem, 1981; Podolefsky and DuBow, 1980).

Table 14: Intercept-as-Outcome Models for Fear of Crime

	Model 1		Model 2	
Variable	Coefficient (SE)	t-ratio	Coefficient (SE)	t-ratio
Intercept	2.51 (.03)	82.70***	2.51 (.03)	91.81***
Economic disadvantage	.03 (.04)	.78	--	--
Residential instability	.00 (.03)	.01	--	--
Collective efficacy	-.05 (.03)	-1.63*	-.01 (.04)	-.31
Economic affluence	--	--	.00 (.03)	.04
Burglary index	--	--	.06 (.02)	3.14**

*p < .10, **p < .05, ***p < .01 (two-tailed tests)

In Model 2, the observed relationship between collective efficacy and fear of crime (H4b) was in the expected direction, but not statistically significant. The diminished influence of collective efficacy appears to be a result of the inclusion of burglary index. Here, the hypothesized relationship between burglary index and fear of crime (H5b) was in the expected direction. Lewis and Salem (1981) argue that actual crime rates are the basic cause of fear and other emotional reactions to crime. The hypothesis that economic affluence would have a direct negative effect on fear of crime (H8b) was not supported.

Table 15 presents the results for perceived incivility. In Model 1, the findings failed to support the hypotheses that economic disadvantage would have a direct positive effect on perceived incivility (H6c). This finding is inconsistent with Sampson and Raudenbush (1999:637) who found that concentrated disadvantage was positive and significantly associated with physical and social disorder. These inconsistencies reflect different research settings (i.e., urban versus nonmetropolitan settings). The hypothesis that residential instability would have a direct positive effect on perceived incivility (H7c) was not supported.

While these two structural hypotheses were not supported, the hypothesized relationship between collective efficacy and perceived incivility (H4c) was supported in Model 1. Stated differently, citizens living in residential units with lower levels collective efficacy perceived higher levels of incivility. This is consistent with existing research conducted in the urban setting (Sampson and Raudenbush, 1999).

Table 15: Intercept-as-Outcome Models for Perceived Incivility

	Model 1		Model 2	
Variable	Coefficient (SE)	t-ratio	Coefficient (SE)	t-ratio
Intercept	1.71 (.01)	216.78*	1.71 (.01)	283.85*
Economic disadvantage	.01 (.01)	1.07	--	--
Residential instability	-.00 (.01)	-.17	--	--
Collective efficacy	-.04 (.01)	-4.43*	-.02 (.01)	-1.49
Economic affluence	--	--	-.01 (.01)	-1.41
Burglary index	--	--	.03 (.01)	3.94*

*p < .01 (two-tailed tests)

While collective efficacy was significant in Model 1, it failed to reach statistical significance in Model 2 (i.e., p < .10). The hypothesized relationship between economic affluence and perceived incivility (H8c) was not supported. Results did, however, confirm the hypothesis that burglary index would have a direct positive effect on

perceived incivility (H5c). This finding supports the crime-incivility connection (Hunter, 1978; Wilson and Kelling, 1982; Taylor, 1996). Overall, both models suggest that perceived incivilities are the result of crime and, to a lesser extent, lower levels of collective efficacy.

Table 16 presents the intercept-as-outcome results for risk of victimization. In Model 1, the hypothesis that economic disadvantage would have direct positive effect on risk of victimization (H6d) was not supported. The hypothesized association between residential instability and risk of victimization (H7d) was also not supported. Collective efficacy and risk of victimization were inversely and significantly related (H4d). In essence, citizens living in residential units with lower levels of collective efficacy reported higher assessments of risk.

Table 16: Intercept-as-Outcome Models for Risk of Victimization

	Model 1		Model 2	
Variable	Coefficient (SE)	t-ratio	Coefficient (SE)	t-ratio
Intercept	1.74 (.01)	151.93*	1.74 (.01)	160.82*
Economic disadvantage	.02 (.01)	1.50	--	--
Residential instability	.00 (.02)	.10	--	--
Collective efficacy	-.05 (.01)	-4.11*	-.02 (.01)	-1.65
Economic affluence	--	--	-.00 (.01)	-.53
Burglary index	--	--	.04 (.01)	4.05*

*p < .01 (two-tailed tests)

In Model 2, the association between collective efficacy and risk of victimization was not statistically significant. While in the expected direction, the hypothesized relationship between economic affluence and risk of victimization (H8d) was not confirmed. However, the hypothesized relationship between burglary index and

risk of victimization (H5d) was statistically significant. In other words, as rates of burglary increase, risk of victimization increase.

Overall, the residential unit-level results reveal several important findings. First, structural predictors appear not to influence citizen quality of life assessments in nonmetropolitan settings. Second, residential units with lower levels of collective efficacy are likely to be inhabited by citizens who report lower levels of quality life. Third, when economic affluence and crime are added to the model (i.e., Model 2), the influence of collective efficacy is diminished. In short, Model 2 suggests that crime not only attenuates collective efficacy, but also significantly influences perceived crime, fear of crime, perceived incivility, and risk of victimization.

Fixed Effects Hierarchical Models (Full Models)

The main question addressed in this study is, once individual correlates are controlled, what is the effect of social disorganization and collective efficacy on citizen-level quality of life assessments? To address this question, two full hierarchical models were estimated for each quality of life outcome (8 models total). As

previously mentioned, two models were estimated due to sample size (N=31) (Bryk and Raudenbush, 1992:211).

Table 17 presents fixed effects hierarchal models for perceived crime. In Model 1, the Chi-square statistic (χ^2 = 70.78, $p < .01$) indicated that citizen perceptions of crime varied across residential units. Controlling for minority and four other individual-level predictors, respondents who were male, young, and renters reported higher levels of perceived crime. At the residential unit-level, the results showed that citizens residing in residential units characterized by higher levels of collective efficacy reported significantly lower levels of perceived crime (H4a). This result suggested a contextual effect of residential unit collective efficacy on perceived crime. The findings from Model 1 also indicated that the hypothesized relationships between economic disadvantage (H6a), residential instability (H7a) and perceived crime were not supported. Model 1 accounted for 48% of the explained variance between residential units, while the sociodemographic variables explained 3% of the variation at the citizen-level.

Table 17: Fixed Effects Hierarchical Models for Perceived Crime

Variables	Model 1 *b* (SE)	Model 1 *t*-ratio	Model 2 *b* (SE)	Model 2 *t*-ratio
Intercept	.58	24.38***	.58	33.15***
	(.02)		(.02)	
Citizen-Level (N=1,125)				
Minority	.06	.80	.06	.80
	(.07)		(.07)	
	[.02]		[.02]	
Male	.09	2.68**	.09	2.68**
	(.03)		(.03)	
	[.08]		[.08]	
SES	.00	-.23	.00	-.23
	(.01)		(.01)	
	[-.01]		[-.01]	
Age	-.01	-4.24***	-.01	-4.24***
	(.00)		(.00)	
	[-.14]		[-.14]	
Married	-.01	-.13	-.01	-.13
	(.04)		(.04)	
	[.00]		[.00]	
Ownhome	-.14	-2.04**	-.14	-2.04**
	(.07)		(.07)	
	[-.08]		[-.08]	
Years in neighborhood	.00	1.13	.00	1.13
	(.00)		(.00)	
	[.05]		[.05]	
Residential Unit-Level (N=31)				
Economic disadvantage	.02	.97	--	--
	(.02)			
	[.03]			
Residential instability	-.01	-.25	--	--
	(.03)			
	[-.01]			
Collective efficacy	-.13	-5.22***	-.04	-1.85**[†]
	(.02)		(.02)	
	[-.63]		[-.20]	

Table 17: Continued

Economic affluence	--	--	-.02 (.01) [-.12]	-1.42
Burglary index	--	--	.11 (.02) [.64]	5.80***
χ^2	70.78***		37.27*	
Variance Explained (Percentages)				
Within-residential unit	3		3	
Between-residential unit	48		86	

Note: Standardized coefficient in brackets
*p < .10, **p < .05, ***p < .01 (two-tailed tests)
†One-tailed test

In Model 2, the Chi-square statistic (χ^2 = 37.27, p < .10) also indicated that perceived crime differed across residential units. Citizen-level correlates behaved in a manner similar to Model 1. What is more, collective efficacy was found to be inversely and significantly related to perceived crime (H4a). When compared to Model 1, however, the magnitude of collective efficacy was considerably weaker (from -.63 to -.20). So, what variable is responsible for such reduction in magnitude? The answer, burglary index. As hypothesized, a strong relationship was observed between burglary index and perceived crime (H5a).

In fact, after controlling for collective efficacy, economic affluence, and a multitude of citizen-level correlates, burglary index was the strongest determinant of perceived crime. It is important to note that in both models economic disadvantage (H6a) and economic affluence (H8a) are in the hypothesized direction, but not statistically significant. The results from Model 2 revealed that by including burglary index and economic affluence, and excluding other structural predictors (e.g., economic disadvantage and residential instability), the amount of explained between-residential unit variation nearly doubled from 48% to 86%. Clearly, the inclusion of burglary index significantly improved the model. In sum, the evidence indicates that collective efficacy and burglary index are the most important aggregate variables. In contrast, the social disorganization predictors do not significantly influence perceived crime in the nonmetropolitan setting.

Table 18 presents fixed effects hierarchal models for fear of crime. In Model 1, the Chi-square statistic (χ^2 = 57.81, $p < .01$) indicated that fear of crime differed across residential units. At the citizen-level, fear of crime was significantly higher among females and younger citizens. After controlling for seven citizen-level variables,

collective efficacy was the only residential unit-level predictor to reach statistical significance (H4b). In essence, fear of crime was lower among citizens in residential units with comparatively higher levels of collective efficacy. Economic disadvantage (H6b) and residential instability (H7b) were not associated with fear of crime. Model 1 accounted for 55% of the explained variance between residential units, while the sociodemographic variables explained 4% of the variance at the citizen-level.

Table 18: Fixed Effects Hierarchical Models for Fear of Crime

Variables	Model 1 *b* (SE)	Model 1 *t*-ratio	Model 2 *b* (SE)	Model 2 *t*-ratio
Intercept	2.51	82.94***	2.51	92.13***
	(.03)		(.03)	
Citizen-Level (N = 1,125)				
Minority	.16	1.49	.16	1.48
	(.11)		(.11)	
	[.04]		[.04]	
Male	-.24	-4.60***	-.24	-4.60***
	(.05)		(.05)	
	[-.16]		[-.16]	
SES	.00	.10	.00	.07
	(.02)		(.02)	
	[.00]		[.00]	
Age	-.00	-3.24**	-.00	-3.18**
	(.00)		(.00)	
	[-.11]		[-.11]	
Married	-.02	-.42	-.02	-.42
	(.05)		(.05)	
	[-.01]		[-.01]	
Ownhome	.07	1.04	.08	1.07
	(.07)		(.07)	
	[-.03]		[.03]	
Years in neighborhood	-.00	-.26	-.00	-.40
	(.00)		(.00)	
	[-.01]		[-.02]	
Residential Unit-Level (N=31)				
Economic disadvantage	.03	.79	--	--
	(.04)			
	[.16]			
Residential instability	.00	.01	--	--
	(.03)			
	[.00]			
Collective efficacy	-.05	-1.61*†	-.01	-.28
	(.03)		(.04)	
	[-.22]		[-.04]	

Table 18: Continued

Economic affluence	--	--	.00 (.03) [.01]	.03
Burglary index	--	--	.07 (.02) [.37]	3.10**
χ^2	57.84***		50.98**	
Variance Explained (Percentages)				
Within-residential unit	4		4	
Between-residential unit	55		26	

Note: Standardized coefficient in brackets
*p < .10, **p < .05, ***p < .01 (two-tailed tests)
†One-tailed test

In Model 2, the Chi-square statistic (χ^2 = 50.98, p < .05) indicated that levels of fear differed across residential units. Fear of crime was also significantly higher among females and younger citizens. Collective efficacy was not significantly correlated with fear of crime (H4b), but was in the hypothesized direction. Unlike Model 1, which explained over 50%, Model 2 explained a little more than a quarter of the variance. The citizen-level variables accounted for 4% of the within-residential unit variance.

According to Lewis and Salem (1986), fear of crime is a consequence of the erosion of social control. Fear and mistrust may breakdown people's ability to form mutually

supportive bonds to help each other deal with the threats in the community, which further reduces collective efficacy. By inhibiting efforts of goodwill, crime prevention efforts are reduced. And this may be the case here because burglary index, as hypothesized, was positively and significantly associated with fear of crime (H5b).

Skogan (1991:45) highlighted the reciprocal feedback effects that crime and its consequences cause. If people shun their neighbors out of fear of crime, fewer opportunities exist for the development of collective efficacy. Weakening of informal social control fuels more crime. Crime is corrosive because it undermines trust among neighbors (Skogan, 1989). Baba and Austin (1986) found that burglary victimization had an impact on residents' perception of urban neighborhood fear of crime. It appears that regardless of setting (i.e., urban versus nonmetropolitan), burglary influences fear of crime.

Another possible explanation for fear of crime is that nonmetropolitan areas are characteristic of family and kin-based ties; local crimes are likely to increase levels of fear in other residents if they hear about events through local social contacts. Skogan and Maxfield (1981) found exaggeration of fear of crime related to neighbors talking

about crime and participating in victimization prevention groups. This indirect victimization model posits that local social ties amplify the impact of the crime event, which then increases fear levels (Covington and Taylor, 1993; Taylor and Hale, 1986). In short, high crime rates and high levels of fear lead to the atomization of the community (Gates and Rohe, 1987). Regardless of the urban-nonmetropolitan setting, the combination of crime and social interactions among citizens residing in residential units governed by close-ties are likely to influence fear.

Table 19 presents fixed effects hierarchal models for perceived incivility. In Model 1, the Chi-square statistic (χ^2 = 73.58, $p < .01$) indicated that perceived incivility differed across residential units. At the citizen-level, younger citizens were significantly more likely to report perceived incivilities. At the residential unit-level, after controlling for seven citizen-level variables, collective efficacy was inversely and significantly related to perceived incivility (H4c). Stated differently, citizens residing in residential units characterized by higher levels of collective efficacy reported significantly lower levels of perceived incivility. Findings for economic disadvantage and residential instability did not support the specified hypotheses (H6c and H7c). Model 1

accounted for approximately 50% of the between and 2% of the within residential unit variation.

Table 19: Fixed Effects Hierarchical Models for Perceived Incivility

Variables	Model 1 *b* (SE)	Model 1 *t*-ratio	Model 2 *b* (SE)	Model 2 *t*-ratio
Intercept	1.71 (.01)	216.67***	1.71 (.01)	283.10***
Citizen-Level (N=1,125)				
Minority	.04 (.03) [.04]	1.49	.16 (.11) [.04]	1.48
Male	-.01 (.01) [-.02]	-.94	-.01 (.01) [-.02]	-.94
SES	.00 (.01) [.01]	.24	.00 (.01) [.01]	.24
Age	-.00 (.00) [-.09]	-2.62*	-.00 (.00) [-.09]	-2.61*
Married	-.01 (.01) [-.03]	-1.23	-.01 (.01) [-.03]	-1.23
Ownhome	-.03 (.02) [-.05]	-1.48	-.03 (.02) [-.05]	-1.48
Years in neighborhood	-.00 (.00) [-.00]	-.04	-.00 (.00) [-.00]	-.04
Residential Unit-Level (N=31)				
Economic disadvantage	.01 (.01) [.17]	1.07	--	--
Residential instability	-.00 (.01) [-.03]	-.17	--	--
Collective efficacy	-.04 (.01) [-.57]	-4.43***	-.02 (.01) [-.28]	-1.42*†

Table 19: Continued

Economic affluence	--	--	-.01 (.01) [-.12]	-1.49
Burglary index	--	--	.03 (.01) [.51]	3.93***
χ^2	73.58***		47.69***	
Variance Explained (Percentages)				
Within-residential unit	2		2	
Between-residential unit	49		28	

Note: Standardized coefficient in brackets
*p < .10, **p < .05, ***p < .01 (two-tailed tests)
†One-tailed test

In Model 2, the Chi-square statistic (χ^2 = 47.69, p < .01) revealed that perceived incivility differed across residential units. Consistent with Model 1, younger citizens also reported higher perceptions of incivility in Model 2. The hypothesis that collective efficacy would negatively effect perceived incivility was supported (H4c). However, the strength of the estimate was weaker (-.28) when compared to Model 1 (-.57).

In Model 2, burglary index was positively and significantly linked to perceived incivility (H5c). This finding supports the crime-perceived incivility hypothesis. According to Skogan (1990), neighborhoods that are orderly, clean, and safe; houses, apartments, and buildings that are

well-maintained; and residents who are respectful toward one another and of each other's property, are likely to experience less incivilities. Although the relationship between economic affluence and perceived incivility was not statistically significant (H8c), it was in the expected direction. Model 2 accounted for 28% of the between and 2% of the within residential unit variance.

Table 20 presents fixed effects hierarchal models for risk of victimization. Unlike previous Chi-square statistics, which showed quality of life outcomes to differ across residential units, the Chi-square statistic (30.65) for Model 1 did not achieve statistical significance. In other words, risk of victimization did not differ across residential units. Controlling for minority and four other citizen-level predictors, respondents who were female and of lower socioeconomic status reported higher perceptions of risk. This finding is consistent with previous research suggesting that females and the poor are more likely to report risk of victimization (Newman, 1972; Sampson and Wooldredge, 1987; Hough, 1987; McDowell, Loftin, and Wersima, 1989).

Table 20: Fixed Effects Hierarchical Models for Risk of Victimization

Variables	Model 1 *b* (SE)	Model 1 *t*-ratio	Model 2 *b* (SE)	Model 2 *t*-ratio
Intercept	1.74 (.01)	151.98***	1.74 (.01)	160.91***
Citizen-Level (N=1,125)				
Minority	-.00 (.08) [-.00]	-.03	-.00 (.08) [-.00]	-.03
Male	-.12 (.02) [-.14]	-5.98***	-.12 (.02) [-.14]	-5.98***
SES	-.04 (.01) [-.01]	-3.95***	-.04 (.01) [-.01]	-3.95***
Age	-.00 (.00) [-.03]	-.79	-.00 (.00) [-.03]	-.79
Married	.02 (.02) [.02]	.94	.02 (.02) [.02]	.94
Ownhome	-.08 (.04) [-.06]	-1.85	-.08 (.04) [-.06]	-1.85
Years in neighborhood	.00 (.00) [.02]	.61	.00 (.00) [.02]	.61
Residential Unit-Level (N=31)				
Economic disadvantage	.02 (.01) [.25]	1.50	--	--
Residential instability	.00 (.02) [.03]	.11	--	--
Collective efficacy	-.05 (.01) [-.53]	-4.10***	-.02 (.01) [-.21]	-1.66*[†]

Table 20: Continued

Economic affluence	--	--	-.00 (.01) [-.06]	-.53
Burglary index	--	--	.04 (.01) [.51]	4.05***
χ^2	30.65		24.53	
Variance Explained (Percentages)				
Within-residential unit	3		4	
Between-residential unit	68		86	

Note: Standardized coefficient in brackets
*p < .10, **p < .05, ***p < .01 (two-tailed tests)
†One-tailed test

Adjusting for citizen-level variables, the hypothesized relationship between collective efficacy and risk of victimization (H4d) was supported. Economic disadvantage (H6d) and residential instability (H7d), however, were not supported, but in the expected direction. At the residential unit-level, Model 1 accounted for 68% of the variance. At the citizen-level, less variance was explained (i.e., 3%).

Like Model 1, the Chi-square statistic (24.53) for Model 2 also revealed that risk of victimization did not differ across residential units. The results for male and SES persisted in Model 2. Collective efficacy (H4d) and burglary index (H5d) were significant and in the

hypothesized directions; yet, the magnitude of estimate for collective efficacy diminished in Model 2 from -.53 to -.21. At the residential unit-level, Model 1 accounted for 86% of the variance. At the citizen-level, less variance was explained (i.e., 3%).

Table 21 presents a summary of the hypotheses tested between residential unit-level variables and quality of life outcomes. As Table 21 indicates, the general pattern of findings partially supported the collective efficacy-quality of life associations. In addition, the relationship between burglary index and quality of life outcomes were also supported.

Table 21: Summary of Hypotheses Between Residential Unit-Level Variables and Quality of life Outcomes

	Perceived crime	Fear of crime	Perceived incivility	Risk of victimization
Economic disadvantage	+	+	+	+
Residential instability	+	+	+	+
Economic affluence	-	-	-	-
Collective efficacy	*	-	*	*
Burglary index	*	*	*	*

* = significant at .10 level and in the expected direction. "+" or "-" = not significant at .10 level but in the expected direction.

Table 22 presents a summary of hypotheses tested between residential unit-level variables. The first set of hypotheses shows that structural variables (e.g., economic disadvantage, residential instability, and economic affluence) were not supported. The relationship between collective efficacy and burglary index was the only hypothesis to be statistically significant among the residential unit-level variables presented in Table 22.

Table 22: Summary of Hypotheses Between Residential Unit-Level Variables.

	Collective efficacy	Burglary index
Economic disadvantage	-	+
Residential instability	-	+
Economic affluence	+	-
Burglary index	*	

* = significant at .01 level and in the expected direction "+" or "-" = not significant at .01 level but in the expected direction.

Overall, the fixed effects hierarchical models revealed four general patterns. First, structural variables (i.e., economic disadvantage, residential instability, and economic affluence) were not significantly correlated with quality of life outcomes. Second, collective efficacy[33] reduced concerns over perceived crime, perceived incivility, fear of crime, and risk of victimization. Third, collective efficacy was attenuated by crime[34] (i.e., Model 2). Fourth, burglary index was positively associated with all of the quality of life outcomes. In sum, the observed finding at the residential unit-level indicates that citizen quality of life assessments are influenced by contextual factors, but not entirely as hypothesized. These patterns and deviations are discussed in greater detail below.

Discussion

While social disorganization theory offers powerful constructs for explaining crime and delinquency, it does not seem to generalize well with regard to citizen quality of life assessments in more rural, less densely populated areas. In this study, social disorganization exogenous variables (i.e., economic disadvantage, residential instability, and economic affluence) did not set in motion reductions in quality of life. Rather, evidence revealed that residential unit crime rates were directly responsible for loss in quality of life.

No claim is made that social disorganization theory has been examined in its entirety. However, the results do not support the primary contention of this research: social disorganization would significantly influence quality of life in nonmetropolitan settings. The lack of significance in the social disorganization predictors may possibly stem from the fact that little social disorganization existed in nonmetropolitan areas to begin with.

Despite these limitations, the findings provided support for the secondary contention that collective efficacy reduces negative perceptions of crime, fear, incivility, and risk of victimization. After controlling

for citizen and residential unit-level predictors, citizens residing in residential units characterized by higher levels of collective efficacy rated their quality of life in more positive terms. The unique contribution of this research is that it has explored the influence of collective efficacy in nonmetropolitan settings. Collective efficacy and burglary rates revealed strong contextual effects, and thus play an important role in determining citizen quality of life assessments in nonmetropolitan settings.

While Osgood and Chambers (2000) found that social disorganization per se (e.g., residential instability and ethnic heterogeneity) generalized well to nonmetropolitan Florida, Georgia, South Carolina, and Nebraska, the results presented here do not allow such a generalization. If one pays close attention to the states in Osgood and Chambers' (2000) study, they are representative of the South. The rural literature has found that the South, compared with other regions (e.g., North and Midwest), is likely to experience greater structural inequality (Tickamyer and Duncan, 1990). Future replications of Osgood and Chambers' (2000) work in other regions throughout the United States may report findings similar to those highlighted above.

Do structural features of social disorganization influence citizen quality of life in nonmetropolitan settings? Social disorganization structural predictors do not seem to influence citizen quality of life assessments across nonmetropolitan residential units. Does collective efficacy, found to influence crime and quality of life in urban areas, have a similar influence in less densely populated areas? Collective efficacy directly enhances quality of life. However, crime indirectly reduces collective efficacy and directly leads to lower levels of quality of life. Not until more nonmetropolitan settings are examined can definitive statements be made about the applicability of social disorganization to all settings.

Consistent with Osgood and Chambers (2000), however, testing and expanding social disorganization theory outside the urban box is warranted. While structural antecedents are important, researchers must also examine important social mechanisms that have the ability to undermine structural forces on crime and quality of life. Therefore, the critical task is to develop research projects that test the mediating capability of collective efficacy in socially disorganized nonmetropolitan settings.

Given the evidence reported throughout this dissertation, an interesting question remains to be

addressed: how can citizens in the local community increase collective efficacy and reduce crime? One possible answer worth exploring is building social capital (Coleman, 1988a). The utility of social capital in terms of crime reduction and prevention is the topic of the next chapter.

CHAPTER FIVE: SOCIAL CAPITAL AND POLICY IMPLICATIONS

Over the last six decades, social disorganization theory has primarily been tested in the urban setting. The present research sought to assess social disorganization theory in nonmetropolitan areas. In addition, one of the more important social process concepts that has emerged in the ecological literature (i.e., collective efficacy) was gauged. Along the way, three major findings were revealed. First, structural social disorganization predictors did not influence citizen quality of life. Second, collective efficacy was associated with higher citizen quality of life evaluations. Third, rates of burglary were inversely related to levels of collective efficacy, and also negatively associated quality of life.

While research suggests that structural characteristics influence aggregate rates of crime and disorder (Shaw and McKay, 1942; Sampson and Groves, 1989; Sampson et al., 1997; Sampson and Raudenbush, 1999), structural characteristics did not influence quality of life in the nonmetropolitan settings observed here. One plausible explanation for these null findings concerns social capital.

This chapter has two objectives. The first half of the chapter systematically identifies sources of social capital at various levels that likely influence citizen quality of life. I do this by identifying: (1) macro-level factors (e.g., federal policies) that have historically influenced the development of nonmetropolitan communities, (2) societal institutions (e.g., church, school, police) that have traditionally provided social control, (3) the family and its role in providing supervision and community development, and (4) characteristics of the community, such as norms and values, that play a role in solving problems through informal social control.

The latter half of the chapter, which has a policy-orientation, focuses on crime intervention, prevention, the enhancement of community social organization, and cooperation between citizens and criminal justice agencies. Using the social capital framework allows alternative social resources to be identified to improve citizen quality of life and reduce crime.

Defining Social Capital

Although social capital is defined in many ways (Portes, 1998; Sandefur and Laumann, 1998), it is conceptualized here as resources produced through

relationships (Coleman, 1990:304). More specifically, social capital is a social good embodied in the *structure* of social networks (Coleman, 1990). Social capital can manifest itself in a variety of institutions, such as school, police, and family. Accordingly, social capital is also found in the larger aggregates in which these institutions are embedded, such as communities.

Social Capital and Collective Efficacy

This section seeks to advance the discussion of social capital one-step further by linking it with collective efficacy.[35] Identifying sources of social capital can provide a better understanding concerning the development of collective efficacy, as well as reduce levels of social disorganization. For example, Sampson (1995:199) has previously identified the social disorganization-social capital connection; he argues that the lack of social capital is one of the primary features of socially disorganized communities (see also Coleman, 1988a; Sampson 1992; Putnam, 1993). Sampson (1995) suggests that the theoretical task is to highlight characteristics of communities that produce social capital among families and children.

Coleman (1988:98) argues that social capital is a form of social organization. Mechanisms of social organization are viewed as a control model, and social disorganization adversely affects levels of community social control (Kornhauser, 1978; see also Sampson and Groves, 1989). Therefore, the logic is that if social disorganization is not present or effectively combated, then social capital (i.e., social organization) is more likely to facilitate levels of collective efficacy.

What is the link between collective efficacy and social capital? While collective efficacy and social capital share similar characteristics, they do possess analytically distinct qualities. These distinctions are apparent in terms of resources and modes of action. I begin by highlighting the similarities.

Similarities. First, collective efficacy is associated with dimensions of social cohesion, trust, and informal social control (Sampson et al., 1997; Sampson et al., 1999). Social capital is also associated with social cohesion, trust (Wall et al. 1998:303-304; Coleman, 1988a:101; Putnam, 1995:67,73), and intervention that benefits a group or community (Wall et al., 1998:304; Portes, 1998:6,12; Coleman, 1988a:100; Putnam, 1995:67,73). Second, collective efficacy has been defined as task

specific achievements, processes of active engagement, the exercise of control, and shared expectations among neighborhood residents to effectively maintain public order (Sampson et al., 1997; Sampson et al., 1999; Sampson and Raudenbush, 1999). Social capital is broadly defined as a resource derived from social networks of shared expectations and obligations that are activated for the purpose of enhancing social mobility, economic growth, political prominence, and community vitality (Wall et al., 1998:304-308).

Distinctions. Despite these similarities, Sampson et al. (1999:634-635) argue that social capital is distinct from collective efficacy because the latter involves "active engagement" in the exercise of control, whereas the former is a process in terms of "resource potential." A more efficient way to view these distinctions is from a structural resource–agency perspective. According to Sampson et al. (1999:635) social capital is a commodity of resources (e.g., voluntary associations) embedded in the structure that may or may not proceed in active engagement. Social capital, then, has the potential to facilitate (or hinder) social action (Wacquant, 1998:26; see also Coleman, 1988b:100).

In contrast, Bandura (1986:449-452) views collective efficacy as an important element in sustaining members' commitment to their cause, it is an assessment of their agency. Hence, collective efficacy is considered the "agency;" it is a modus of operandi for action. Agency refers to the willingness of individuals to control and affect their environment by taking action. Collective efficacy is a locus of social control whereby citizens develop their capacity to serve as effective causal agents in their day-to-day lives. Collective efficacy, then, to some degree depends on social capital.

The Process of Social Capital

To understand the accumulation process of social capital in nonmetropolitan settings, we must take a step back and see how economic and cultural capital influences the development of family and community. Doing so will help us to better understand collective efficacy.

Economic Capital: Government Policy

Economic capital is a primary step toward generating social capital. Fox (1995) claims that social capital is co-produced between federal/state actors and local groups.[36] An early example of economic capital was President Theodore Roosevelt's 1908 Commission on Country Life, which called

national attention to improve rural life. Roosevelt's Commission concluded that the "major sources of problems of rural people were lack of organization, failure of rural social institutions, and inadequate infrastructures" (Summers, 1986:348).

Six years later, Congress passed the Smith-Lever Act of 1914 aimed at better planning, more happiness, and improved education for rural Americans (Hooks and Flinn, 1981). In 1925, the Purnell Act authorized economic and sociological investigation for development and improvement of rural institutions, home, and life (Sanderson, 1927). By the 1930s, rural America was experiencing a mass exodus of residents to major urban centers. According to Madison (1986), the out-migration of residents negatively affected the economic base in rural areas. As a result, the federal government continued to provide economic capital to rural American. Later, in 1961 Congress passed the Area Redevelopment Act (ARD) that provided capital to problem areas in the form of low-cost loans to industry, and loans and grants to communities for upgrading infrastructural support to attract new industry (Summers, 1986:366).[37]

The literature suggests that governmental action has greatly aided American rural communities.[38] The history of community social organization portrays vertical integration

(i.e., federal intervention) as a significant factor in the development of American rural communities. In short, it is my contention that economic policy influences the formation of social capital in nonmetropolitan areas.

Cultural Capital: The Church, School and Police

The church and school are institutional structures where resources can be found. In other words, the church and school consist of ties where individuals can draw upon resources by virtue of membership (Wacquant, 1998:28). In the 1900s, the church and school served as a way to socialize and train the young, and instill a sense of community, stability, and tradition for adults. On one hand, the church was viewed as the seminal formal institution. Loomis and Davidson (1939:28) argue that the church had priority over all other types of social agencies. Loomis (1939:2) claims that in nonmetropolitan America, it was customary for residents to visit new arrivals and invite them to church.

On the other hand, Wacquant (1998) argues that no organization better exemplified institutional influence than the school. However, Madison (1986) argues that quickly as churches and schools became the centerpiece for nonmetropolitan life, the out-migration of nonmetropolitan

residents to urban cities in seek of economic and social opportunities led to their demise. According to Madison (1986:645), "Progressive Era reformers concentrated their prodigious energies and talents on the receiving end of the rural–to–urban populations shift."

The police provide yet another source of social capital in nonmetropolitan America. Police-citizen relations have traditionally been defined according to close relationships whereby citizens exhibit more confidence in the police, when compared to urban residents. Unlike urban areas, where police provide little physical security, legal protection, and services (Kotlowitz, 1991), it is quite possible that citizens rely less on police because nonmetropolitan areas are governed by traditional family and kin ties that react with non-legal sanctions (Weisheit et al., 1994). In other words, citizens are more likely to intervene to solve social problems.[39] Sampson (1995:209) argues that the social capital model can be extended to agents of criminal justice. In addition, Bursik and Grasmick (1993) highlight the importance of public control (e.g., police services) that helps sustain community organization and crime control.

Social Capital: The Family

For the most part, family and kin informally handle many types of social conflict, and the nuclear family is an important source of social capital (Coleman, 1988a). Coleman (1988a:111) reasoned, however, that capital deficits will develop if healthy relations between children and parents are not maintained. Because social relations in nonmetropolitan areas are likely to be governed by family and kin networks, available social capital is likely higher when compared to urban areas. Hofferth and Iceland (1998) found that families living in rural areas are more likely to exchange exclusively with kin than families living in urban areas. Since families are sometimes isolated from the community, larger social networks are needed to promote social action.

The resourcefulness of the family to facilitate social action was hindered by rural-urban migration during the mid-1900s (Madison, 1986), and additional resources were needed to foster informal social controls. According to Taylor (1927), the community appeared most suitable to facilitate social action given characteristics, such as group orientation and non-competing institutions and associations. Thus, the community was viewed as a place

where social relations could produce resources of social capital that would promote collective community action.

Social Capital: The Community

The social capital literature has extended the concept from an individual resource to a feature of communities (Coleman 1988a:113; Portes, 1998; Wall et al., 1998). Sampson et al. (1999:634) suggest that "sources of social capital tied to local community context are analytically distinct from the more proximate family processes and relationships observed inside the home." The two concepts are distinct because social capital, as a resource, has the potential to be converted into modes of action (i.e., agency) by residents in the community.

According to Wall et al. (1998:311-312) communities that are well governed and moving ahead economically usually are richer in social capital, whereas more economically disadvantaged communities usually lack social capital (Wall et al., 1998:311). It is often customary to assume that nonmetropolitan areas are characterized by greater solidarity, social cohesion, and law-abiding residents (Sorokin et al., 1930). Coleman (1988a:104) argues that community norms and effective sanctions are more likely to be in place due to communal traditions.

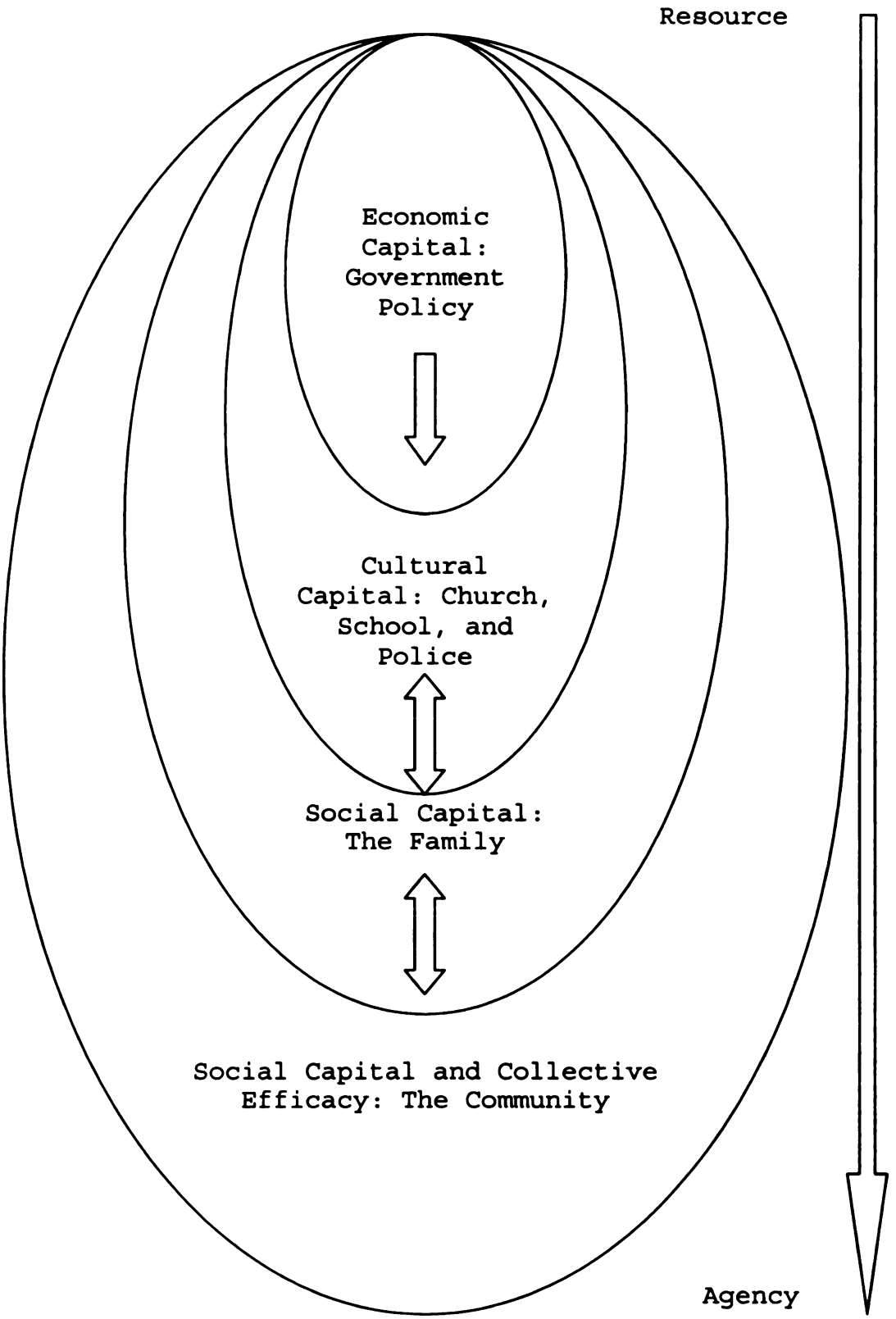
Coleman (1988a:104-105) claims that norms and effective sanctions can inhibit crime by making it possible to walk freely outside at night and enable old persons to leave their homes without fear for their safety.

Another reason that nonmetropolitan communities may experience higher levels of social capital is because most nonmetropolitan areas are racially homogeneous. Research suggests that variation in race and ethnicity (i.e., ethnic heterogeneity) is likely to produce different norms of behavior (Shaw and McKay, 1942). Different community cultures and value systems are linked to differential rates of crime (Short, 1990:11-12; Luckenbill and Doyle, 1989) and leads to the formation and transmission of deviant subcultures (Kornhauser, 1978:75). In essence, cultural heterogeneity impedes communication and obstructs the pursuit of common cultural values (Bursik, 1988; Sampson, 1988).[40]

Figure 7 shows that social capital is best viewed as a process and resource of social control. Social capital can flow from different entities, both formal and informal, and at different levels (e.g., family and community). The process begins with economic capital in the form of state capital. Formal institutions receive economic capital. The police, for example, can convert this economic capital

into social capital. The transformation of social capital by formal institutions provides families with resources, support, and the means of social control against wayward behavior. Bursik and Grasmick (1993) highlight the importance of public control, which they define as the capacity of local community organizations to obtain extra-local resources (such as police) that help sustain neighborhood organization and crime control. In other words, by working together, citizens and police, have the capacity to convert social capital into collective efficacy.

Figure 7: The Processes and Resources of Social Capital in Nonmetropolitan Settings



Social capital appears to be most effective at the community-level in terms of informal social control. However, since crime inhibits the development of collective efficacy and reduces quality of life, the next section addresses public policy related to crime. I focus on police initiatives and more important community policy aimed at securing alternative resources of social capital.

Policy Implications

While much of the social capital literature presented thus far may indicate that nonmetropolitan areas are resourceful and possess characteristics of social organization, this does not mean that these areas are crime free. The second question asked in this chapter stems from the findings regarding crime in Chapter Four. If social capital is likely to be more abundant in nonmetropolitan settings, why did citizens report higher quality of life assessments when residing in residential units characterized by higher levels of collective efficacy?

This pattern of findings reported in Chapter Four suggests that public agencies should take a more active role at reducing crime, given that citizens are unable to build collective efficacy at levels that can reduce the negative impact of crime. As previously mentioned, social

capital is conceptualized here as a source of social control. Therefore, social capital is useful for advocating crime related policies from a police and community perspective. After all, social capital has the potential to facilitate crime prevention strategies and collective efficacy.

Police Resources and Public Control

While the community theme is important, I first argue that criminal justice agents are key players in reducing crime, and increased programmatic collaboration with community residents is needed. Several studies have emphasized that citizens in the community can address problems of crime, disorder, and fear of crime by securing ties to public officials and the police (Kelling and Coles, 1996; Medoff and Sklar, 1994; Podolfsky and Dubow, 1980; Rabrenovic, 1996; Rooney, 1995; Skogan and Hartnett, 1997). As mentioned earlier, however, many of the infractions in nonmetropolitan areas are handled informally whereby residents respond with non-legal sanctions (Weisheit et al., 1994).[41]

Assuming that the community does, in fact, take more proactive measures in crime prevention than police, any increase in police initiated crime prevention efforts would

generate resources of social capital and enrich police-citizen relations. Perhaps it is time for nonmetropolitan police to take a more active role in fighting crime and develop meaningful crime-related programs so that citizen quality of life can be improved.

Police-citizen cooperation, for example, can generate new resources of social capital that can be used to make possible collective efficacy. For instance, police can take part in town hall meetings that inform and collect information from residents about community concerns. In addition, town hall meeting can inform residents about crime prevention or "target hardening" (Newman, 1972; Jeffrey, 1977), such as installing deadbolt locks and alarms (Taylor and Schumaker, 1990).

More complex police policy includes identifying "hot spots" of crime, such as burglary. This approach is consistent with social disorganization theory that identifies crime prone places and communities rather than people (Sampson, 1995; Brantingham and Brantingham, 1999).[42] Once identified, citizens can take part in community-based task forces aimed at monitoring hot spots (Kelling and Coles, 1996). Like many police departments, citizen participation in police programs alleviates many of the

problems of understaffed departments. In turn, this exchange of services helps to produce social capital.

As Figure 7 indicated, it is important for police to promote vertical integration with local communities for the purpose of securing extra-local resources. "When local organizations are unstable and isolated, and when the vertical links of community institutions to the outside are weak, the capacity of a community to defend its local interests is weakened" (Sampson, 1995:214). This can be accomplished by citizens in the community securing resources of public control from local governments (Sampson, 1995; Bursik and Grasmick, 1993; Velez, 2001).

Building police-citizen relations can have additional benefits. For example, Skogan (1990) found that in Newark police-citizen ties led to a decrease in fear of crime. In addition, such policies call for citizens to request resources from those with political decision-making responsibilities. Bursik (1989) found that political decision-making is salient for neighborhood levels of crime and victimization. Velez (2001:840) recently noted "residents must establish ties to city elites in order to influence political decisions that affect their neighborhoods, including their level of crime."

According to Bursik and Grasmick (1993:17-18) *public control* refers to the capacity of community social networks to solicit and secure external resources by establishing ties to local government such as the police. In addition, Sampson (1995:214) refers to public control as the "ability to secure public and private goods and services that are allocated by groups and agencies located outside of the neighborhood." The idea is that such goods and services reflect resources obtained from outside the community that can be used inside the community for the purpose of social control. Although police have an important role, residents must take advantage of all the opportunities of social capital and collaborate with criminal justice agencies to better facilitate collective efficacy.

Community Resources and Public Control

While law enforcement strategies are helpful, they remain too simplistic. Although employing police strategies may temporarily reduce crime across nonmetropolitan Michigan areas, I argue for policy that generates resources of social capital that are likely to help facilitate collective efficacy. Community social control is most effective when citizens regulate the behavior of residents and visitors (Bursik and Grasmick,

1993). How is this function best carried out? By building social capital and providing resources to community members.

Community strategies can have long-term effects in developing various resources of social capital. Thus, policies should focus on community mobilization that emphasizes strategies to capture the attention of police and political constituents. While these approaches may be carried out informally in nonmetropolitan areas, they are nonetheless important. According to Rabrenovic (1996), in New York, citizens from a local community captured the attention of city officials by having lunch at the Mayor's office door to protest that their community was unsafe due to crime. Once citizens have captured the attention of public officials, resources are more likely to follow. In sum, neighborhoods with strong ties to public officials and the police are able to secure resources that effectively diminished victimization risks (Velez, 2001:855).

More common community mobilization strategies include citizen patrol associations (Yin, 1977) and voluntary block associations (Perkins et al., 1990), which provide additional resources that facilitate modes of action above and beyond police patrols. Perkins et al. (1990:90) argues that block associations may help reduce crime and fear

because (1) residents are likely to share similar concerns, (2) participation rates are higher than any other community program, and (3) small face-to-face crime prevention should work better than larger organizations. According to Greenburg (1983), crime prevention associations are more successful in homogenous areas. Given the socio-demographic homogeneity characteristics of nonmetropolitan Michigan areas, community-level strategies may be more successful in creating social capital and facilitating action to address crime. Sanders and Lewis (1976) claim that it is a truism in nonmetropolitan community life that voluntary organizations provide the mechanisms for carrying out many communal goals.[43]

Community mobilization might also reinforce the idea that community residents can be relied upon to maintain public order. Lynch and Cantor (1992) argue that burglary is a function of guardianship and suggest that neighborly watchfulness can affect the risk of burglary (Lynch and Cantor, 1992:356). In this case, community members should encourage residents to take part in neighboring, which in turn, can facilitate neighborhood watches and surveillance (e.g., citizen patrols).

Neighboring is characterized by social interaction among neighbors, such as talking and gathering socially.

Research has indicated that neighborhoods with high levels of neighboring were associated with lower rates of crime (Bellair, 1997, 2000; Warner and Rountree, 1997). It is important to note that more rural, less densely populated areas (e.g., Grand Traverse County) are likely to face some difficulty at accomplishing this neighboring task, but small towns (St. Johns) and small cities (Traverse City) may have fewer problems doing so.

Because burglary usually occurs when no one is home and at night, citizens should watch the homes of others and take action when needed. Community watchfulness does not have to involve formally organized crime prevention programs to be effective. Podolefsky (1983) found that informal social control appeared strongest and most effective in neighborhoods without much organized crime prevention activity. Bankston et al. (1987) concluded that perceptions of fear and victimization with respect to burglary in more rural areas was due to the lack of neighborly behavior (e.g., house watching) and other forms of social monitoring within the community.

In sum, crime has the potential to limit access to resources (i.e., social capital) that are necessary for facilitating collective efficacy.[44] By increasing social capital, there is reason to believe that citizens can fully

develop their capacities for mobilizing resources aimed at collective efficacy. Developing collective efficacy requires citizens to have access and be afforded the opportunity to experience resources (e.g., access to police and government officials) of social capital.

Conclusion

Drawing on the concept of social capital, this chapter has identified various institutions (e.g., police and community) that are likely to facilitate collective efficacy in nonmetropolitan areas. Accordingly, nonmetropolitan areas demonstrate evidence of residential unit structural continuity (i.e., the lack of social disorganization) likely to generate social capital (Coleman, 1990). However, community social control cannot remain effective given the negative influence of crime, and as a result, alternative resources are needed to reduce crime and enhance citizen quality of life.

Because social capital is lodged in structure (Sampson and Raudenbush, 1999:635), it is considered a limited good (Wall et al, 1998:311).[45] In other words, if the structure of the community becomes socially disorganized (i.e., loses its continuity), then social capital may wane. When resources of social capital cannot be found or have been

depleted, Coleman (1988b) advocates manipulating the social structure to generate social capital and bring about social change. One way of manipulating the social structure is to attract the attention of public service and government officials and secure alternative resources of social capital that can facilitate and reinforce collective efficacy.

The empirical evidence presented throughout this dissertation has shown that nonmetropolitan residents' concerns with quality of life are not merely reflections of romantic visions, but rather are rooted in measurable effects of collective efficacy and crime. Consequently, this research reaffirms theoretically and empirically that collective efficacy holds promise as an aggregate-level attribute (Sampson et al., 1997; Sampson et al., 1999); but also highlights the negative impact of crime on collective efficacy and quality of life. Similar to collective efficacy, Portes (1998:21) believes that the greatest theoretical promise of social capital is to define it as a structural property of large aggregates. Nonetheless, a central theme of this research is that crime, regardless of where it occurs (e.g., nonmetropolitan settings), remains to be a community wide problem, which in turn, affects quality of life assessments.

Because citizens are less likely to participate in collective efficacy due, in part, to crime there are greater chances they will remain confined to their homes and avoid social interactions and networking among neighbors aimed at building social capital. Coleman (1988b:98) argues that social capital, based on the structure of relations among persons facilitates action, "making possible the achievement of certain ends that in its absence would not be possible" (see also Coleman 1990:300). In short, social capital has the potential to bring about greater control over crime.

Future Research

This dissertation has extended research on communities (e.g. collective efficacy and social disorganization), crime, and quality of life beyond the urban box. However, the research is limited because there was little evidence of socially disorganized residential units. Therefore, making broad generalizations that social disorganization theory has applications to communities of all sizes (Osgood and Chambers, 2000) is cautioned. Nevertheless, social disorganization is an appropriate starting point for developing criminological theories specific to rural settings (Osgood and Chambers, 2000:108).

Future research in nonmetropolitan settings is warranted. First, research should closely examine more socially disorganized areas. As Tickamyer and Duncan (1990) note, socially disorganized (e.g., poverty) nonmetropolitan communities are likely to be found in the South (see also Osgood and Chambers, 2000). By including socially disorganized communities, we can gain a better sense of the effect of collective efficacy and its ability (or inability) to reduce crime and enhance quality of life.

Second, nonmetropolitan communities in the South and Southwest are more likely to have a wide variation of racial and ethnic differences compared to the Midwest. In the Southwest, for example, Hispanics are a growing population with interesting immigration patterns, are often considered the working poor, and possess unique cultural lifestyles (Martinez, 1996). This ethnic variation (i.e., ethnic heterogeneity) increases the chances of testing Shaw and McKay's (1942) social disorganization model.

Third, future research should examine community-level characteristics based on a continuum that includes urban, suburban, small-town rural, and rural farming communities. This continuum will provide a wide variation of community characteristics that are likely to produce different outcomes. Lastly, researchers should investigate whether

communities with more social capital are likely to facilitate collective efficacy while controlling for other contextual and individual-level variables.

Overall, the present research has provided a rare look at contextual features of the community that are likely (unlikely) to influence quality of life in nonmetropolitan Michigan areas. However, to truly acquire a sense of the contextual-level relationships at work, researchers must consistently use criminological theories of crime to guide research in these settings. In addition, practitioners must devote special attention to crime-related issues and identify alternative resources of social capital to reduce crime and enhance quality of life assessments.

ENDNOTES

1. Sanders and Ensminger (1940) were the first to apply the cluster method. The neighborhood cluster method was used in "areas where local neighborhood identification was strong and neighborhoods, rather than individuals, could be clustered around one of the predesigned community centers" (Sanders and Ensminger, 1940:3). Smith (1941:391) described neighborhoods as "small clusters of families...they are the next group beyond the family to have social significance." Recently, Sampson and Jeglum-Bartusch (1998:783) conceptualized neighborhood as an "ecological sub-section of a larger community—a collection of both people and institutions occupying a spatially defined area that is conditioned by a set of ecological, sociodemographic, and often political forces." Elliot et al. (1996:390) conceptually described neighborhood as "a transactional setting that influences individual behavior and development both directly and indirectly." They argue that the neighborhood is indicative of a multi dimensional cluster of traits whereby neighborhoods are changing structurally and individually. In other words,

neighborhoods are not static entities; they are part of the political, economic, and cultural context in which they are located. According to Baba and Austin (1989:768), neighborhoods are part of a complex ecological system involving interaction and subjective evaluations.

2. Despite the Chicago Schools' interest in urban cities, research did not exclusively focus on these areas. Like Galpin's influential rural research in America, Thomas and Znaniecki (1927), colleagues from the Chicago School, first developed the theoretical concepts of community solidarity and disorganization in a study on the effects of migration and industrialization on rural communities of Polish peasants. Research produced during this era would later greatly influence others. Meanwhile, researchers at Columbia University were also conducting rural community research. Rural researchers focused on "the disorganization effects of communications on the small community, and showed how people and institutions made successive adjustments to the expanding urban world" (Hollingshed, 1948:138).

3. Zone I was conceptualized as the central business district characterized by overall economic and social stability, while Zone II was conceptualized as the area immediately around Zone I characterized by economic and social instability (Vold et al., 1998:143).

4. As one starts to move outward from the city, neighborhoods experience low levels of social disorganization and high levels of community social control.

5. Shaw and McKay adopted a neighborhood-level approach (see also Wilson, 1987; Sampson and Groves, 1989; Rountree, Land, and Miethe, 1994, for contemporary neighborhood level theory). This approach places emphasis on neighborhood level variables that are expected to effect individual outcomes over and above individual level variables (Rountree et al., 1994:389). The community-level perspective is unique in that it moves away from a simple kinds of people analysis to a focus on contextual characteristics that influence various outcomes (Sampson and Wilson, 1995:54).

6. The link between the systemic model (Kasarda and Janowitz, 1974) and social disorganization theory is

that both presuppose ecological influences, which undermine formal and informal ties likely to control local community problems. For example, communities that experience high resident attrition and turnover (e.g., residential mobility) are less likely to develop meaningful and effective social networks due, in part, to residents' short stay in the community (Sampson, 1988). Therefore, the effectiveness of social control depends on frequent contact and density that binds residents together as a social community (Bursik and Grasmick, 1993:4).

7. Communities characterized by extensive friendship networks, high organizational participation, and effective control of teenage peer groups had lower than average rates of burglary (Sampson and Groves, 1989:790).
8. Low economic status was measured according to the proportion of persons living below the poverty line and unemployment rate (Osgood and Chambers, 2000:95).
9. The connection between economic status and crime and delinquency is consistent with pervious research in that communities with low economic status lack resources, have greater residential instability, and are more likely to attract immigrants. These

factors, working in combination, impede the development of informal social control and thereby lead to crime and delinquency (Bursik and Grasmick, 1993:39).

10. The closest dimension of social organization is family disruption, but Sampson and Groves would argue that this variable is an exogenous variable and more appropriately represents a structural antecedent.

11. Cook et al. (1997:95) argue that "social organization has continued to play a mediating role, so that a set of neighborhood attributes is assumed to instantiate social disorganization, which then affects individual outcomes."

12. In a related study, Sampson et al. (1999) use the PHDCN data to assess mechanisms of social organization of 8,500 individuals across 342 neighborhoods. Sampson et al. (1999) examined whether neighborhood social organization mediates the effect of structural antecedents on control of children. The authors tap three new sources of social organization: intergenerational closure, reciprocated exchange, and child-centered social control (a hybrid of collective efficacy). They viewed mechanisms of social organization (e.g.,

child-centered social control [collective efficacy], intergenerational closure, and reciprocated exchange) as endogenous variables, whereas structural antecedents (e.g., concentrated disadvantage, residential instability, concentrated affluence) were considered exogenous. Findings showed that residential stability and concentrated affluence are strong predictors of intergenerational closure and reciprocal exchange (Sampson et al., 1999:633). Concentrated disadvantage, in turn, was found to be associated with lower expectations for shared child control. More important, results for spatial proximity showed that neighborhoods with higher levels of intergenerational closure, reciprocal exchange of information, and shared willingness to intervene on behalf of children are more likely to influence adjacent neighborhoods with respect to building effective means of social organization mechanisms (Sampson et al., 1999:657).

13. Their study included the systematic social observation (SSO) of 23,000 street segments and a survey of 3,500 residents in 196 Chicago neighborhoods.

14. Sampson and Raudenbush (1999:609) provide further reasoning for the importance of examining disorder rather than crime alone: [W]hile both crime and disorder reflect common origins, crime may be less relevant for understanding processes such as population abandonment and perceived incivility of urban life [and thus] propose that disorder is the more visually proximate or immediate neighborhood cause of theoretical interest, even if it is not a direct cause of further crime. As a result, collective efficacy is relevant to explaining incidents of crime and disorder (i.e., collective efficacy can prevent disorder).

15. Physical disorder was operationalized according to the presence or absence of items such as cigars, garbage, and litter, while social disorder was operationalized by the presence or absence of items such as adults loitering, drinking alcohol in public, and public intoxication (Sampson and Raudenbush, 1999:618). The authors write that items on the disorder scales "bear a conceptual affinity with concurrent "crime" in the sense of violation" (Sampson and Raudenbush, 1999:618). Predatory crime was measured from respondents' report whether they

had experienced in the last six months a violent victimization or a household burglary or theft victimization.

16. Sampson and Raudenbush (1999) used systematic social observation data (SSO) to build these measures.

17. The little research that has been conducted in the nonmetropolitan setting is comparative in nature. Belyea and Zingraff (1988) explored the relationship between fear of crime in urban and rural locations. Using a random sample of 3,109 respondents in North Carolina, residents were asked about levels of fear and anxiety concerning crime. Predictors of fear included residential location (e.g. rural, town < 2,500, town 2,5000-9,999, city 10,000-24,999, city 25,000-49,999), age, gender, race, education, income, victimization, crime perception, crime rate, and seriousness of crime. The multivariate analysis showed that rural residents have as significantly lower level of fear than their urban counterparts after controlling for gender, race, age, education, and income. One possible explanation is that residents in rural areas tend to help one another, whereas in urban locations, relationships are stranger-based and individuals are less helpful

(Amato, 1993). Kennedy and Krahn (1984) examined fear of crime of rural residents who migrated to urban areas. Using survey data of 736 residents from two large western Canadian cities, the study estimated the effects of size of the community of origin, length of residence, and other demographic variables on fear of crime. The results showed that "for new arrivals in a city, size of place of origin has a substantial effect on fear of crime, but this effect is shortlived...the larger the community of origin, the safer the current big city resident feels" (Kennedy and Krahn, 1984:257). After controlling for community of origin, women felt less safe than men. As expected, men originating from rural areas felt less safe than men from urban areas (Kennedy and Krahn, 1984:257-258). Due to the strong familial-based social ties commonly found in rural areas, people who had recently arrived to the city were trusting of others. Trust among those coming to the city from rural areas ultimately led to the fear of crime. However, once acclimated to the urban way of life, rural residents adjusted to stranger-based relations, which resulted in a decrease in fear of crime.

18. Rurality is measured as percent of a county's total population composed of rural nonfarm residents and the percent of rural farm residents.
19. Density of acquaintanceship was operationalized as the average proportion of people in the community who do not know others in the community (Freudenburg, 1986:30).
20. Consistent with Wilkinson, Beggs et al. (1996:316) found that nonmetropolitan residents have higher proportions of familial-neighbor based relations and do not depend on others when forming social networks. Hence, it appears that social networks in rural areas are based on familial relations.
21. Using phone surveys from 415 Utah nonmetropolitan residents aged 18 and over, Stinner et al. (1990) examined whether community size effects the linear development of systemic models more than community attachment. Stinner et al. (1990) estimated the effect of community size (i.e., villages, cities, and nonmetropolitan areas), demographic characteristics (e.g., duration of residence, SES, homeownership), and three concepts of community attachment (e.g., involvement, amity, and sentiment). The multivariate results showed support for the systemic model

(Kasarda and Janowitz, 1974) suggesting that residential tenure and social interaction based on close-knit meaningful relationships matter more than community size (Stinner et al., 1990:497).

22. Bachman (1992) found that elderly who reside in nonmetropolitan areas have a greater chance of becoming victims of household crimes (burglary, larceny, motor theft) than do elderly metropolitan residents.

23. Rountree et al. (1994:387) state that "an important motivation for multilevel analysis is the potential for progress towards the goal of theoretical integration in criminology...this type of integration places causal significance on both large-scale forces and individual-level adaptations" (see also, Lynch and Cantor, 1992; Taylor, 1996; Sampson and Wilson, 1995). The study of how aggregate properties influence individual outcomes is an important step toward integrating theory and research across individual and aggregate units (Smith and Jarjoura, 1989:624).

24. St. John's police officials were interested in learning about county residents. As a result, residents who lived outside St. John's city limits

were surveyed, but excluded from this analysis. Excluding non-city residents is an analysis issue, not a sample quality issue.

25. While property crimes were exclusively used for this research project, 1998 UCR crime data were examined in each of the sample sites. In St. Johns: 2 aggravated assaults, 51 vagrancies, 7 disorderly conduct, 28 larcenies, 27 liquor violations, and 35 non-aggravated assaults. In Grand Traverse County: 65 aggravated assaults, 1600 vagrancies, 438 disorderly conduct, 803 larcenies, 126 liquor violations, and 548 non-aggravated assaults. In Traverse City: 26 aggravated assaults, 209 vagrancies, 167 disorderly conduct, 420 larcenies, 98 liquor violations, and 252 non-aggravated assaults.

26. Because nonmetropolitan areas are characteristic of large geographic areas, Darling and Steinburg (1997:121) claim that automobile transportation may alter the "boundedness" in rural areas. Thus, the selection of social ties (e.g., friendship groups) and sense of community as a result of transportation patterns lead to variation in rural, suburban, and urban geographical boundaries (Darling and Steinberg, 1997:121).

27. Homogeneity and independence assume that individuals in the same group are closer or more similar than individuals in different groups (Bryk and Raudenbush, 1992:xiv). Moreover, "[i]ndividuals are all independent; group components are independent between groups but perfectly correlated within groups...some groups might be more homogenous than other groups, which means that the variance of the group components differ" (Bryk and Raudenbush, 1992:xiv).

28. Overall, these dependent quality of life variables, according to Skogan (1999:47), tap unique dimensions of the crime phenomena. First, perceived crime assesses an individual's perception of crime in the neighborhood context (Skogan, 1999) and reflects beliefs about crime levels or trends (Gates and Rohe, 1987:427). Individual assessment of crime is often accurate, while perceptions of fear and victimization are inaccurate (Skogan et al., 1981). Moreover, researchers have found that perceived crime can be independent of fear of crime (Furstenburg, 1971; Hartnagel, 1979). Second, fear of crime is distinct from victimization because fear is more widespread than victimization (Covington and Taylor, 1991; Skogan, 1999; Dubow et al., 1979). Researchers have

regularly asked individuals to rate their fear levels in addition to assessing perceptions of becoming a victim of certain crimes (Skogan, 1999). Lastly, risk of victimization is distinct from fear of crime because it represents a more cognizant assessment of the likelihood of victimization (LaGrange and Ferraro, 1989).

29. Two studies, in particular, represent excellent examples of various multilevel shortcomings with respect to insufficient cases. Geis and Ross (1998) used 1995 Community, Crime and Health data that surveyed 2,482 adults in Chicago aged 18-92 and census tract data to examine neighborhood effects of disorder on individual outcomes of perceived powerlessness within small city and rural locations. A shortcoming of their methodological approach employed OLS estimates rather than HLM. The use of OLS was a consequence of insufficient cases required to perform a reliable multilevel analysis. For example, approximately two-thirds of the census tracts contained only one respondent. While using OLS, perhaps, was appropriate under the circumstances of their study, by not using HLM they could not generate reliable estimates of the variance within

tracts. Like Geis and Ross, Robert (1998) utilized a similar multilevel model and used OLS regression using SUDAAN software. Her multilevel study examined whether community level predictors such as percent receiving public aid and percent unemployed effected individual outcomes of diseases, disability, and subjective health over and above individual level predictors of age, race, sex, assets, and education. SUDAAN served to adjust for standard error coefficients using a Taylor series linearization method rather than HLM because the survey sampled only a few respondents within each census community.

30. Reliability is a function of sample size in each of the RUs and the proportion of the total variance that is between RUs relative to the amount that is within RUs (Sampson et al., 1999:642)

31. The ICC is computed as the ratio of the amount of variation between RUs relative to the amount of variation within them, plus measurement error, plus any statistical interactions between neighborhood and individual difference attribute (Cook et al., 1997:107).

32. Note that much of the variation associated with quality of life (e.g., fear of crime .50) was due to

differences among citizens within the same RU. However, research has shown that small variance between aggregate units resulted in a large effect associated with differences between aggregates (Sampson and Jeglum-Bartusch, 1998:794-799; Sampson et al., 1999:641-642).

33. The multivariate models empirically revealed that collective efficacy has the capability to reduce quality of life assessments, however, it is important to note that such models are "under-specified." In other words, there exists the possibility that other variables, not included in the model, influence citizen quality of life assessments, such as local friendship networks, organizational participation, and other social processes variables (Sampson and Groves, 1989; see also Kornhauser, 1978; Kasarda and Janowitz, 1974). However, additional variables are not of theoretical interest. Instead, the theoretical interest emphasized the salience of social cohesion and informal social control through collective efficacy. Moreover, variables such as local friendship networks pertain to social cohesion and fail to account for informal social.

34. To address the concern about the attenuation of the effects of collective efficacy when burglary index was entered into the mixed model, I estimated additional hierarchical models for each of the quality of life outcomes. In this model, I controlled for citizen-level variables and included only burglary index at the residential unit-level. Next, I compared the mixed model with the crime model estimates to determine the degree of attenuation. For perceived crime, the coefficient for burglary index when compared to the mixed model was reduced from .14 to .11. The burglary index coefficient for fear of crime (from .08 to .07), perceived incivility (from .04 to .03), and risk of victimization (from .05 to .04) revealed minor reductions. Overall, evidence suggests some degree of attenuation.

35. Several studies have drawn on the concept of social capital to explain the effects of negative social capital (e.g., exclusion of outsiders) and its negative consequences (e.g., inadequate education and poor police service) in urban neighborhoods (Portes, 1998; Wacquant, 1998; Hagan and Coleman, 2001; Laub and Sampson; 1993; Sampson and Lauritsen, 1994; Sampson, 1995).

36. O'Conner (1973) associated social capital with state and federal expenditures. Coleman (1988a; 1988b) argues that economic rationality is inextricably tied to social capital.

37. The ARD set the stage for additional governmental initiatives, such as the 1964 Economic opportunity Act, the 1965 Appalachian Regional Commission, and the Economic development Act of 1965, aimed at economic development in rural areas experiencing high rates of poverty and unemployment (Summers, 1986). The development of economic capital continued, and in 1972 the Rural Development Act and the Rural Development Policy Act of 1980 (Summers, 1986) allocated more money to rural America.

38. For example, Madison (1986) argues that economic development, improved educational systems, and low crime rates are the result of government intervention. Wacquant (1998) has noted that federal policies (e.g., economic capital) are responsible for promoting services (e.g., physical safety, education, welfare, healthcare, etc.), which in turn, translate into improved social capital (see also Sampson, 1995).

39. Weisheit et al's. (1994) study, which included qualitative interviews with 46 rural and 28 rural police chiefs, suggested that modern community policing draws heavily on ideas and practices that have long been traditions in nonmetropolitan areas. It is relatively common for rural police officers to know citizens personally, have frequent face to face contact with them, and engage in a variety of problem-solving activities that fall outside law enforcement (Weisheit et al., 1994:550). Research suggests that nonmetropolitan police tend to go above and beyond crime fighting and offer a variety of services, which in turn, encourages citizen participation in problem solving (Flanagan, 1985; Decker, 1979; Gibbons, 1972; Meagher, 1985). The co-production perspective involving police-community partnership toward crime prevention (Skogan, 1989), can lead to social capital. The logic is that relations among persons, especially criminal justice personnel, can facilitate action.

40. The evidence presented in this dissertation showed that Michigan residential units were comprised of 97% Caucasian. Because of this racial homogeneity, community residents are likely to share similar norms

and values, thereby making it easier to convert social capital into collective efficacy.

41. Moreover, studies show that nonmetropolitan citizens are initiators in helping police solve social problems (Brandle et al., 1994; Decker, 1979; Meagher, 1985).

42. However, this approach may be difficult given the lack of technology and sophistication in collection of crime data in nonmetropolitan areas.

43. An informed community that mobilizes (e.g., citizen patrols) for the purpose of providing additional surveillance may help build collective efficacy and lead to the formation of new social ties (i.e., social capital) by increasing local awareness regarding crime. By providing local awareness and accurate information about crime, citizens can gain a sense of what is going on and make sensible decisions about participating in social control activities (Rohe, 1985; Rohe and Gates, 1985).

44. In other words, the social structural origins of crime limit social networking (i.e., social capital) because citizens are apprehensive about quality of life, which ultimately discourages getting involved in community-wide participation.

45. Wall et al. (1998:311) argues that "social capital, as an aspect of social organization—trust, norms, and networks—persists in the long run and re-asserts it self under suitable circumstances." In other words, social capital can increase with use and diminish with disuse, allowing for either virtuous or vicious cycles (Wall et al., 1998). Nevertheless, "working together is easier in a community blessed with a substantial stock of social capital" (Putnam, 1993:35-36).

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