

State Control, Social Ties, Social Control:
Examining the Roles of Residents' Perception of the Police on Social Interactions, Social
Cohesion, and Informal Social Control

by

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Abstract

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Adviser: Larry E. Sullivan, Ph.D.

The main purpose of this dissertation is to extend the scope of ecological research, by investigating the effects of police social control on social ties, social cohesion, and informal social control. To accomplish this goal, the author proposes a new comprehensive measure of police social control, independent from the effects of demographic characteristics and experiences of individuals, structural components of community, and neighborhood social problems – including crime, victimization, disorder, and police deviance. The data used in this dissertation are collected by secondary sources including the 2000 Census, 2000 Household Survey in Lexington and Louisville, Kentucky, and Crime Data provided by two Kentucky police departments. Two main analytical techniques – HLM and M-plus 5.0 are utilized to examine the multilevel regression models and to draw the multilevel pathway models.

The results found in this dissertation show the positive associations between formal social control and informal social control. In addition, police social control has a positive influence on social cohesion. Compared to the effects of community processes (e.g.

neighboring, participation in community organization, social cohesion), demographic characteristics of respondents, structural components of communities, and community crime problems (e.g. crime rates, victimization, police harassment, disorder) are inferior to explain informal social control. The findings also reveal that residents' social interactions can activate informal social control directly or indirectly by enhancing social cohesion. However, the prediction of social interactions is more complex than expected.

This dissertation suggests the importance of citizens' perception of the police, which can be a new measure of police social control since this measure reflect the community's ability to solicit external resources and the police agency's ability to control community social problems. This new measure of police social control has, this dissertation finds, associations with the community's ability to share common values and the community's ability to maintain social order. In addition, the results show the undermining effects of community disorder in determining community solidarity and informal social control. Policy implications and theoretical lessons are discussed. Finally, several recommendations for future research are made.

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Chapter 1. Introduction

1.1. Problem Statements

For decades, one of the most generally acknowledged conclusions in criminology is that there are variations in crime rates across communities¹. This conclusion has been rooted from Shaw and McKay's classical social disorganization theory which explains that the disproportional pervasion of crime in certain Chicago communities are not attributed by the characteristics of individual residents, but by the structural components of communities, including poverty, residential mobility, and racial heterogeneity. These collective properties of the neighborhood have shown strong associations with crime rates in a neighborhood (Bursik & Grasmick, 1993; Shaw & McKay, 1942; Sampson, Raudenbush, & Earls, 1997).

Recent endeavors in understanding social disorganization theory have contributed to build an advanced theoretical perspective, the systemic control model of social disorganization theory, explaining how neighborhood compositions are linked to the concentration of crime across neighborhoods. The advocates of the systemic model argue that community processes generate a community's collective ability to regulate their neighbors, and to mediate the effects of neighborhood characteristics on crime and deviance (Belliar, 1997; Bursik & Grasmick, 1993; Sampson, 1988; Sampson et al., 1997; Sampson, Morenoff, & Earls, 1999). Numerous labels, such as informal social control, social cohesion, community attachment, social capital, sense of community, territory functioning, friendship networks, community organization participation,

¹ In this dissertation, community is interchangeably with neighborhood. The definition of community is a spatial area occupied by a collection of both people and institutions and influenced by ecological, cultural, and sometimes political forces (Sampson, Morenoff, & Gannon-Rowley, 2002:445). The scope of community or neighborhood is a block group in this study.

collective efficacy, and social ties have been used to measure community social processes. Although these community processes are distinct, sometimes ambiguous (Taylor, 2002), in definition and measurement, contemporary social disorganization research perceives community contextual variables are all central to regulative capacity of neighborhoods against community crime problems (Bursik & Grasmick, 1993; Sampson et al., 1997). Sampson and his colleagues (2002) have identified hundreds of studies about neighborhood effects on crime and disorder from 1990 to 2001. Most studies have examined the mediating impact of macro and micro community processes on community crime problems.

One important, but ignored area in community research is the examination of the impact of state control on social ties and informal social control (Clear, Rose, Waring, & Scully, 2003; Duffee, Fluellen, & Renauer, 1999; Kerley & Benson, 2000; Kubrin & Weitzer, 2003; Lynch & Sabol, 2000, 2004; Lynch, Sabol, Planty, & Shelly, 2002; Reisig & Park, 2004; Renauer, 2007; Rose & Clear, 1998; Scott, 2002; Skogan & Hartnett, 1997). In this field of study, state control specifically refers to the endeavors of the criminal justice system. Hunter (1985) clarified that social control consists of three levels - private, parochial, and public or state. Hunter (1985) also specified that the private level of control refers to personal ties with family, friends and intimate persons. Parochial control is maintained by neighbors in a community. Public control is an external control from public organizations (e.g. criminal justice agencies) to maintain social order. State control is often known as formal social control², while private and parochial controls are generally recognized as informal social control. For a long time, the connection between

² This dissertation focuses on the roles of formal social control, especially police, on community social processes including social ties, social cohesion, and informal social control. Formal social control mainly refers to police social control since the police are the major front entities in criminal justice system.

formal social control and informal social control, however, has not been focused in the ecological research of community. One reason for this less inquiry may be the cynical belief in the effectiveness of the police on crime and disorder. For example, Bayley (1994) states that “one of the best kept secrets of modern life is that police do not prevent crime” (Bayley, 1994:1). However, the recent the development of innovative police strategies and policies leads researchers to search indirect impacts of policing on crime through communities’ informal social control and citizens’ involvement. Therefore, it is crucial to understand what mechanisms relate state control to social ties, social cohesion, and informal social control. Less attention given to the examination of state control in the field of community research may obstruct fully understanding the process of the three levels of social control. The current knowledge of this inquiry, however, is sparse (Lynch & Sabol, 2000; Rose & Clear, 1998; Taylor, 2001).

In prior studies on the roles of the police on community processes, almost all researchers have attempted to show the effects of practice-based single criminal justice intervention (e.g. arrest rate, incarceration rate, or innovative community policing and/or problem oriented programs) on community interactions, informal social control, fear of crime, disorder, and crime. For instance, some have examined the associations between arrest rates in a community and informal social control (Lynch et al., 2002). The problem underlining these studies, however, can be attributed to the well-known assumption that police forces are perceived as a coercive force. Although arrest rates can be the best methodically representative measure of coercion, this measure can partially explain the effect of police activities in a community since there also exist non-coercive police practices in daily police practices (e.g. informal contact with citizens in order to provide

assistance and services not related to crime, communication with leaders of community organizations, participation in community meetings, and so forth). Therefore, practice-based measures of the police (e.g. numerical arrest rates or crime clearance rates) are not accurate operationalizations of policing.

Another direction in these studies is to examine the impact of innovative policing strategies or programs on the community. Many researchers believe that community-oriented policing (COP) can strengthen social ties and informal social control, and thereby overcome problems in the community. Although COP has become a dominant paradigm in contemporary U.S. policing (Oliver, 2000; Worrall & Zhao, 2003), there is no single definition of COP (Oliver & Bartgis, 1998; Rosenbaum & Lurigio, 1994). This ambiguity in the definition of COP has generated numerous programs named as community-oriented policing programs: substation, foot patrol, beat meeting, school policing, community news letters, Neighborhood Watch and so forth. Moreover, the scope of implementation of COP varies across police departments (Cordner, 1995). The implementation of COP has been done both partially and across all police agencies. However, this does not indicate that all of the U.S. police departments have abandoned traditional policing approaches; most police departments simultaneously practice both innovative and traditional police methods (e.g. 911 call, car patrol, detectives and so forth). These overlapping police practices in a neighborhood should be considered in the study of the relationships between formal social control and informal social control. Consequently, it is necessary to develop a more accurate, comprehensive measurement of state control in order to elucidate its impacts on the community. A new development of measurement may provide a more comprehensive explanation about the entire account of

complex police interventions that are concomitantly practiced in community. One suggestion of this dissertation is the application of residents' subjective evaluation of the police in a community as a new measure of policing. However, it should be careful to develop the measure of state control since residents' perception of police activities or policing in a neighborhood may be an outcome of multiple, complex factors (e.g. age, race, educational level, community characteristics, crime, disorder, victimization, police deviance, and so forth). Therefore, it is necessary to devise a variance of state control which is independent from external factors.

In extant literature, it has not been fully developed to clarify the association between formal social control and community process (e.g. social ties and informal social control). Some argue that state control may enhance residents' social interactions by reducing crime and disorder, or by removing criminals in a neighborhood and then strengthening informal social control (Lynch et al., 2002; Lynch & Sabol, 2004; Sampson & Cohen, 1988). In contrast, other researchers argue that criminal justice intervention does not always have a positive effect on the community (Anderson, 1999; Clear et al., 2003; Kane, 2002; Kubrin & Weitzer, 2003; Rose & Clear, 1998; Sampson & Bartusch, 1998;). Recent empirical evidence has also suggested that the association between social ties and informal social control can be positive and/or negative, and the efficacy of social interactions, including neighboring and community organizational membership, has been challenged (Morenoff, Sampson, & Raudenbush, 2001; Pattillo-McCoy, 1999; Sampson et al., 2002; Sampson, 2002; Wilson, 1987). Therefore, it is necessary to clarify what fundamental mechanisms underlie among these concepts. This dissertation addresses that residents' perception of policing is a measure of state control after controlling the

variance of demographic characteristics of respondents, individual experience (e.g. victimization, police deviance), structural components of community, and neighborhood crime problems (e.g. crime, victimization, disorder). In addition, the roles of residents' perception of policing on residents' social interactions, social cohesion and informal social control will be examined.

Furthermore, social disorganization theory generally focuses on the impacts of structural characteristics of neighborhoods on community crime problems, including crime, disorder, victimization, and police deviance. In general, social interactions and informal social control have been perceived as mediators which link community structural components and social problems. State control has also been considered a suppressor of crime and disorder. Consequently, for a long time, social problems have been treated as the outcomes of formal and informal social control across neighborhoods. However, recent empirical evidence has shown that crime and disorder can be considered constraints of community processes (Bellair, 2000; Bellair, Liska, & Liu, 2001; Bursik, 1988; Liska & Warner, 1991; Morenoff & Sampson, 1997; Skogan, 1990; Taylor, 2001). A new endeavor has also scrutinized the hypothesis that community problems in a neighborhood affect the decision making of criminal justice agencies: the need to add patrol officers, frequency of police patrol, aggressive arrests, drug investigation, victim service, internal investigation of corrupt police officers and so forth. In turn, initiatives of criminal justice agencies affect residents' perception. This subjective evaluation of criminal justice interventions may increase or decrease residents' social interactions, social cohesion and informal social control. However, community structural characteristics and community crime problems may affect residents' perception of the

police as well. Therefore, it is necessary to extract the independent impacts of police social control regardless of community structural components and community crime problems and then this police social control becomes a determinant of community process. Therefore, the examination of these hypothetical connections is main tasks of this dissertation.

Although many researchers acknowledge that it is necessity to handle it carefully when they examine nested data in community research, previous studies about the effect of state control on community have been less concerned about this issue. Overall studies have used the multiple regression models to test the impact of state control. However, ordinary least squares (OLS) for multiple regression is not an appropriate statistical method to handle multilevel data since it may be hard to identify the estimated error in a regression error and also may violate the assumptions of independent observation of variables and constant variance on the variable within neighborhoods. Therefore, OLS model serves to show the biased effects of standard errors for each coefficient, which could obstruct the accuracy of OLS analyses (Lynch et al., 2002). A plausible resolution is to adopt Hierarchical Linear Models (Bryk & Raudenbush, 1992; Raudenbush & Bryk, 2002), because HLMs can “simultaneously estimate within neighborhood and between-neighborhood equations” (Sampson et al., 1999:640).

Although HLM is statistically superior to examine multilevel data, HLM has also a limitation. For example, the application of HLM does not provide visual pathways among contextual characteristics, neighborhood processes, and social controls. Exogenous and endogenous variables may contain direct and indirect effects on dependent variables. Previous community research has paid less attention to this shortage. Consequently, it is

necessary to draw entire pathways in order to show the hidden figures of associations among variables (Markowitz et al., 2001). The preferred analysis is a multilevel pathway analysis or multilevel structural equation model (SEM). SEM is a statistical technique to test or estimate causal relationships among variables. It allows construction of latent variable models to produce unbiased estimates between latent constructs. Moreover, the theoretical framework of this dissertation is intricate multilevel pathway analysis, so SEM will make it possible to draw these links. In the past, SEM had been limited in providing pathways using multilevel data, but recent developments of statistical software and technique make it possible to use multilevel data in SEM (Bauer, 2003; Mehta & Neale, 2005; Muthen, 1991). In diverse SEM statistical packages, only M Plus provides an extensive chance to use multilevel data (Muthen & Muthen, 2007). In addition, this dissertation does not attempt to draw combined measurement model and latent variable model, but the application of M plus 5.0 will provide the multilevel pathway model among variables. A measurement model is used to determine the validity of study variables.

1.2. Purposes of Study

The main purpose of this dissertation is to extend the scope of ecological research, by investigating the effects of state control on social ties, social cohesion, and informal social control. In particular, the primary purpose of this study is to examine the impact of residents' subjective evaluation of police activities in their neighborhoods on social interactions (e.g. neighboring, participation in community organizations), social cohesion and informal social control. Previous ecological community research has mainly tested the mediating effect of community processes on crime. The main difference of this study from extant research, however, is to consider the impact of state control on community processes, such as social ties, social cohesion, and informal social control. Specifically, this study aims to examine the role of residents' evaluation of police activities, indicating an alternatively comprehensive measurement of state control on social ties, social cohesion, and informal social control. Previous studies on the impacts of state control are limited in explaining the effect of criminal justice interventions on community process. Very few empirical studies have attempted to examine the effect of residents' perception of policing on community processes (Silver & Miller, 2004). In this dissertation, the definition of residents' perception of policing is "neighbors' subjective evaluations about the police as major agents in fighting crime and deviance in a neighborhood, to take care of victims after incidents occur in a neighborhood, and to provide supportive help on community problems in a community."

Five main purposes can be stated. First, this study aims to develop a new comprehensive measure of police social control which is independent from the effects of demographic characteristics and experiences of individuals, structural components of

community, and neighborhood social problems – including crime, victimization, disorder, and police deviance. Second, it seeks to examine the effect of state control on social ties including residents' neighboring behaviors and participation in conventional community organizations. Third, the study investigates the effects of state control on social cohesion and informal social control. Fourth, this study attempts to examine the effects of community structural components and community crime problems on community processes including social ties, social cohesion, and informal social control. Finally, this study aims to progress one step forward in the application of statistical tools in the field of community research through the advanced statistical techniques – HLM (Hierarchical Linear Model) and Multilevel Pathway Model by using M Plus. The joint application of two advanced statistical techniques may offer statistically steady analyses to examine the role of state control on informal social control and social interactions.

Chapter 2. Community and Social Disorganization

2.1. Systemic Control Model of Social Disorganization

The fact that there exist variations in the distribution of crime in urban neighborhoods has been for some time a main inquiry for sociologists and criminologists. Extant empirical studies have consistently shown that poor minority inner urban communities disproportionately experience high crime rates and disorder. One generally accepted finding is that community economic status is strongly linked to crime and victimization (Baumer, 2002; Brody et al., 2001; Browning, Feinberg, & Dietz, 2003; Geis & Ross, 1998; Hannon & Knapp, 2003; Hay et al., 2006; Hipp, 2007; Jacobs & Helms, 1997; Kane, 2002; 2005; Kovandzic, Vieraitis, & Yeisley, 1998; Krivo & Peterson, 1996; Kubrin & Weitzer, 2003; Lauritsen & White, 2001; Morenoff et al., 2001; Rountree, Land, & Miethe, 1994; Sampson & Wooldredge, 1987; Sampson & Raudenbush, 1999; Warner & Rountree, 1997). Ethnic heterogeneity and population turnover are also a consistent factor to predict community crime rates (Belliar, 1997; Crutchfield, Geerken, & Gove, 1982; Hipp, 2007; Jacobs & O'Brien, 1998; Kane, 2002; Kapsis, 1978; Kovandzic et al., 1998; Markowitz, et al., 2001; Rountree & Warner, 1999; Warner & Rountree, 1997; Sampson & Raudenbush, 1999; Smith & Jarjoura, 1989). Many social scientists have attempted to explain why these concentrated social problems occur in a certain part of society. Various explanations are found across varying theoretical perspectives. For example, in the illustration of "deviant place," Stark (1987) suggests forty propositions related to deviant places and explains that the essential factors of community structure to make deviant place are density, poverty, mixed land use, transience, and dilapidation. In these places, residents are more likely to respond moral cynicism among residents,

increased opportunities for crime and deviance, increased motivation to deviate, and diminished social control. In turn, pervasive violence exists in these places due to attract deviant and crime-prone people and deviant and criminal activities to a neighborhood, drive out the least deviant, and further reduction of informal social control (Stark, 1987:895).

Historically, the earliest explanation of the effect of structural change of society focused on the effect of urbanization and industrialization on community social organization (Toennies, 1887; Wirth, 1938). Beyond a linear development explanation of social problems which assumes that population size and density of communities are primary exogenous factors linearly influencing human behaviors (Karsada & Janowitz, 1974), however, the ecological perspective of crime has been emerged from another venue of Chicago school (Park & Burgess, 1921, 1925). Two primary ecological explanations of crime are cultural theory and systemic control model of social disorganization. The former focuses on cultural transmission of deviance, while systemic control model of social disorganization asserts the importance of collective ability to regulate neighbors (Anderson, 1990; Browning et al., 2004; Bursik, 1988; Bursik & Grasmick, 1993; Kornhauser, 1978; Shaw & MacKay, 1942; Sutherland & Cressey, 1966; Warner, 2003; Wilson, 1987). These distinct theoretical understandings of community have been originated from Shaw and Mackay's classic work of social disorganization. Shaw and Mackay (1942) stated that structural characteristics - poverty, heterogeneity, and residential mobility - led to social disorganization which in turn led to socially disorganized communities to have higher level of crime rates. Social disorganization becomes a primary predictor of the variations of crime rates across

communities. Core elements of social disorganization are found in Shaw and MacKay's original formation of social disorganization theory – “inability to realize common value” (Kornhauser, 1978:120) and “the inability of a local community to regulate itself in order to attain goals that are agreed to by the residents of that community” (Bursik, 1988:535).

These earlier multi-definitions of social disorganization had generated cultural- and control-based explanations of community and crime (Bursik & Grasmick, 1993; Warner, 2003). For example, Kapsis (1978), although empirical findings are not supportive in his test, understands Shaw and McKay's social disorganization theory as a cultural transmission perspective which assumes that rapid racial succession weakens neighborhood interaction and adult criminal values and traditions are emerged. Juveniles living in these communities are apt to adopt sub-cultural values, and then there exists pervasive delinquent action. Only residential mobility has an impact on delinquency. On the other hand, the systemic control model of social disorganization assume that structural components of community undermine community processes (e.g. social ties, social networks, social interactions, and community organization participation) and then impede the development of collective regulation of community problems. Consequently, Bursik (1988:521) criticizes these vague definitions of social disorganization arguing that the causal linkage between social disorganization and neighborhood delinquency rates is not clearly explicated by Shaw and McKay since “in various sections of their work, they freely draw on elements of strain, cultural conflict, and control theories, but the logical implications of those frameworks are at times inconsistent.” For Bursik (1988; Bursik & Grasmick, 1993), the control-based social disorganization can provide an adequate theoretical understanding of community and crime. He argues that

Given the intimate theoretical connection between processes of rapid ecological change and the social disorganization framework, a control-theoretic approach offers perhaps the best general basis for understanding the process. That is, the dynamics of social disorganization lead to variations across neighborhoods in the strength of the commitment of the residents to group standards. Thus, weak structures of formal and informal control decrease the costs associated with deviation within the group, making high rates of crime and delinquency more likely (Bursik, 1988:521).

The ecological systemic control model of social disorganization, the main theoretical argument of this dissertation, assumes that structural barriers of community obstruct community neighbors' formal and informal social ties which may promote the collective ability to solve community problems (Bursik & Grasmick, 1993; Sampson & Grove, 1989). In their examination of systemic control model, Kasarda and Janowitz (1974), community is defined as "a complex system of friendship and kinship networks and formal and informal associational ties rooted in family life and on-going socialization processes" (Kasarda & Janowitz, 1974:329). Community organization becomes an essential aspect of mass society and a structure of community organization that has ecological, institutional, and normative dimensions (Kasarda & Janowitz, 1974: 329). They also argue that in the context of contemporary mass society residents' community participation and their attachment to community are determined by Janowitz's (1951) notion of the community of "limited liability" which means that "in a highly mobile society people may participate extensively in local institutions and develop community attachments yet be prepared to leave these communities if local conditions fail to satisfy their immediate needs or aspirations" (Kasarda & Janowitz, 1974:329). Residential

stability is a key exogenous factor influencing community behavior and attitude since residential mobility is considered a primary barrier of developing “extensive friendship and kinship bonds and widespread local association ties” (Kasarda & Janowitz, 1974:330). The findings generally support the systemic model of social disorganization. For example, the results reveal that population size and density fail to show a consistent effect on friendship, kinship, and associational bonds, while the length of residence has significant positive direct effects on social ties and attachment of community (Kasarda & Janowitz, 1974).

For a long time, insufficient data have thwarted directly testing Shaw and MacKay’s classical social disorganization (Sampson & Grove, 1989). Sampson and Grove’s efforts of utilizing the British Crime Survey have made the first extensive examination possible. The uniqueness of Sampson and Grove’s examination is that they use direct measures of social disorganization – the ability of a community to supervise and control teenage peer groups, informal local friendship networks, and local participation in formal and voluntary organizations (Sampson & Grove, 1989: 778-779). Weighted least squares (WLS) regression models illustrate the mediating effects of structural components of community on crime through social disorganization measures and generally support the systemic control model of social disorganization theory. For the rates of self-reported offending, unsupervised teenage peer groups strongly mediate the effects of community structures on violent offending. Local friendship networks and organization participation also mediate the impacts of structural variables on self-reported property offenses (Sampson & Grove, 1989). Lowenkamp and his colleagues (Lowenkamp, Cullen, & Pratt, 2003) re-test Sampson and Grove’s finding with the British Crime Survey again. Overall

findings support that social interactions mediate the impact of structural components of community on victimization and structural components predict local networks, unsupervised teens, and participation in community organization (Lowenkamp et al., 2003).

The modern systemic control model of social disorganization, therefore, assumes that the causes of social disorganization suggested by Shaw and MacKay (1942) are poverty, mobility, and racial/ethnic heterogeneity and these three characteristics of the community undermines residents' social ties refer to social interactions, networks with friends and family, and involvement in neighborhood organizations (e.g. neighborhood watch groups, political parties, school committees). Sampson and Groves (1989) has also shown two additional elements of structural components of community – family disruption and urbanization. In socially disorganized communities, neighbors are more likely to experience sparse local friendship networks, low organizational participation, and unsupervised teenage peer groups. There have been many attempts to determine the effect of structural components on social disorganization. For instance, stable communities (e.g. residential stability, homogeneity, and economic affluence) strengthen local kinship and friendship, neighboring, participation to community organization, community attachment and social cohesion and trust, while socially disadvantaged and racially heterogeneous communities undermine social interactions and social ties (Bellair, 1997; Bursik, 1999; Garcia, Taylor, & Lawton, 2007; Lowenkamp et al., 2003; Kasarda & Janowitz, 1974; Markowitz et al., 2001; Rountree & Warner, 1999; Sampson, 1988; 1991; Sampson & Grove, 1989; Skogan, 1989; Swaroop & Morenoff, 2006; Taylor, 1996; Warner & Rountree, 1997).

Specifically, Sampson (1991) examines the role of residential stability (the percentage of people who have lived in the neighborhood for twenty years more) on social ties, social cohesion, and community satisfaction. The results show that residents living in stable communities are more likely to have large numbers of friends and acquaintances in their neighborhoods. In addition, residential stability also increases neighbors' trust and interest in community. Therefore, strong social cohesion and local social ties enhance community satisfaction. For social cohesion and community satisfaction, local social ties mediate the effect of residential stability, but not for urbanization. Sampson (1988) also shows that residential stability is found to be the most important factor to predict local friendship, compared to urbanization and density. This positive link between residential stability and social ties are generally supportive. Taylor (1996) shows that neighborhood stability and status increase neighbors' attachment and involvement of community. The negative effects of ethnic heterogeneity on forming local social ties are also found (Warner & Rountree, 1997; Bellair, 1997). Markowitz and his colleagues (2001) find that four of five structure variables predict social cohesion, while Bellair (1997) shows that with the exception of SES and ethnic heterogeneity family disruption and residential stability fail to predict social interactions of neighbors.

Empirical studies have also shown that structural variables may directly weaken collective ability to maintain community social order (Bellair, 2000; Baumer, 2002; Hagan, Gillis, & Chan, 1978; Markowitz et al., 2001; Morenoff et al., 2001; Sampson et al., 1997; 1999; Warner, 2003). For example, residential stability and economic affluence are found to be a catalyst of community's capability to keep their neighbors out committing abnormal and deviant behavior (Bellair, 2000; Baumer, 2002; Markowitz et

al., 2001; Morenoff et al., 2001; Warner, 2003; Sampson et al., 1997; 1999; Sampson, 1991). Opposingly, research attests negative impacts on social control of concentrated disadvantage communities, which is an aggregated concept of communities' overall negative structural factors including poverty, ethnic heterogeneity, family disruption, population density and population turnover and inequality (Baumer, 2002; Hagan et al., 1978; Markowitz et al., 2001; Morenoff et al., 2001; Sampson, 1991; Sampson et al., 1997; 1999; Scott, 2002; Silver & Miller, 2004; Warner, 2003). Consequently, it may be concluded that community structural characteristics are common causes that engender community social ties and informal social control.

2.2. Social Ties and Informal Social Control

The primary outcomes and/or measures of social disorganization in the systemic model, therefore, are social ties and collective ability to maintain social order (Sampson & Grove, 1989). Community structures generate pro and con impacts on social ties referring local friendship/kinship networks, neighboring among community members, and voluntary community organizations (e.g. neighborhood watch meetings, political parties, school meetings). Sequentially, the deteriorated local community processes determine a community's collective ability to regulate community problems (Bellar, 1997; Bursik & Grasmick, 1993; Morenoff et al, 2001; Sampson & Grove, 1989). Though social control often refers to formal responses of criminal justice system to deviant behavior, in this dissertation, (informal) social control is defined as "the capacity of a group to regulate its members according to desired principles — to realize collective, as opposed to forced, goals" (Sampson et al., 1997:918). Normally, social goals of

community are to keep safe and free from crime (Sampson et al., 1997). Therefore, it is premised that stronger social ties and interactions among neighbors may stimulate the higher likelihood of residents' responses to community problems, which is known as informal social control, also defined as "willingness to intervene on behalf of the common good" (Sampson et al., 1997: 918).

Bursik and Grasmick (1993) in *Neighborhood and Crime*, cite three levels of social control from Hunter (1985)'s work - private, parochial, and public social control. Private social control refers to affective relational networks from family, friends and intimate persons, while parochial control means aggregate relationships of community neighbors which do not require the same sentimental basis. Private and parochial social controls are underlined in the concept of informal social control. The last level of social control, generally known as public or state social control, refers to public ties to external organizations outside the community (e.g. police, government) and the ability of these external organizations to maintain social order. Extant studies of social disorganization have paid substantial attention to the effects of informal social control resulting from private and parochial networks on crime (Bursik & Grasmick, 1993; Rose & Clear, 1998; Silver & Miller, 2004; Velez, 2001).

Ecological studies have attempted to find temporal order between social ties and informal social control of community. Previous research has showed that these include social ties, community organizational participation, community attachment, community cohesion, territorial function, and social interaction among neighbors (Bellair, 1997; Bursik, 1999; Bennett, 1989; Gibson, Zhao, Lovrich, & Gaffney, 2002; Lee, 2000; Lowenkamp et al., 2003; Lynch et al., 2002; Morenoff et al., 2001; Reauer, 2007;

Sampson & Groves, 1989; Simcha-Fagan & Schwartz, 1986; Kaspi, 1978; Taylor, 1996; Taylor, Gottfredson, & Brower, 1984). Residents' overall social interactions are key factors to predict the levels of informal social control in a neighborhood. Strong social ties among residents increase residents' capability to engage in informal social control and thus decrease crime and disorder (Sampson et al., 1997).

However, recent evidence has shown that the strength of social ties or networks is not sufficient to produce a level of informal social control in a neighborhood and sometimes even generates crime (Browning et al., 2004; Bursik & Grasmick, 1993; Bursik, 1999; Lynch et al., 2002; Pattillo-McCoy, 1999; Sampson et al., 2002; Wilson, 1987; Sampson et al., 1999). Bursik and Grasmick (1993) argue that

Perhaps the greatest shortcoming of the basic social disorganization model is the failure to consider the relational networks that pertain to the public sphere of control. The implications of this shortcoming have been illustrated in several studies that document the existence of stable neighborhoods with extensive interpersonal networks that nevertheless have relatively high rates of crime and delinquency (Bursik and Grasmick, 1993:37).

For example, in some neighborhoods, the density of social ties makes it difficult for residents to generate informal social control (Wilson, 1987). Pattillo-McCoy (1999) has also argued that although strong social ties increase social interactions and networks, sometimes these ties generate informal supervision and simultaneously encourage the activities of criminal organizations. Moreover, Sampson and his colleagues (1999) have argued that shared common values in a neighborhood can be achieved without solid social ties. In urban communities, strong social ties are not a general norm (Morenoff et

al., 2001; Belliar, 2000). Kubrin and Weitzer (2003:376-377) have also argued that although social ties provide network formations among law-abiding residents and conventional resources, they are not sufficient to activate purposive actions of informal social control. Sampson and his colleagues (1997; Sampson, 1997; Morenoff et al., 2001) state that a willingness to take action is dependent on mutual trust and solidarity among neighbors. Sampson and his colleagues (1997; 1999), therefore, have attempted to develop a new concept, called “collective efficacy,” which combines two basic concepts of community processes - informal social control and social cohesion. They argue that informal social control and social cohesion are key factors that contribute to a neighborhood’s ability to prevent and control community problems within its boundaries. These two concepts can be combined to create “a more parsimonious and readily interpretable measure of collective efficacy” (Sampson & Raudenbush, 1999:620-621). Collective efficacy is defined as “social cohesion among neighbors combined with their willingness to intervene on behalf of the common good” (Sampson et al., 1997: 918). The concept of collective efficacy is more a comprehensive measure of informal social control, compared to traditional informal social control.

The distinctiveness of social ties and informal social control or collective efficacy, however, has been challenged by Taylor (2002). In *Justice Quarterly*, Taylor’s reaction essay to Gibson et al. (2002) provides a conceptual argument for the measures of collective efficacy and social interaction. He argues that discriminate validity of both concepts has not been carefully attended in the literature on the systemic control model of social disorganization. In addition, the ambiguous measures of social interaction and collective efficacy hinder accurate statistical examination between social interaction and

collective efficacy. Moreover, it is unclear whether collective efficacy or social interaction surrounds the indicators of community climate, including “attachment to place, sense of community, residential satisfaction, and social dynamics, such as perceived homogeneity or perceived organizational or leaders’ effectiveness” (Taylor, 2002:787). Although it is not conclusive to distinguish between the concepts of social ties and collective efficacy, this dissertation premises that social ties are objective activities or entities of neighbors’ community lives (e.g. the extent and frequency of neighboring, the extent of participation in community organizations, number of friends/kins), while collective efficacy refers to residents’ affectional reflection of community (e.g. one’s decision to intervene in community problems, trust and solidarity to their community and neighbors). This elucidation of social ties and collective efficacy is also found in Morenoff et al. (2001). They state that “distinguishing between the resource potential represented by personal ties, on the one hand, and the shared expectations among neighbors for engagement in informal social control represented by collective efficacy, on the other may help clarify the systemic model” (Morenoff et al., 2001:521). Consequently, the hypothetical relationship between social ties and collective efficacy or informal social control is assumed that the extent of social ties may strengthen neighbors’ subjective inclination to solving in community problems and to share homogeneous understanding of community.

2.3. Social Ties, Informal Social Control, and Community Problems

Consistent findings from prior researches of the systemic model are that there exists negative relationships between ecological systemic process – social ties, informal social control, collective efficacy- and community crime problems - crime, victimization, and disorder (Bellair, 1997; 2000; Bennett, Holloway, & Farrington, 2006; Browning et al., 2003; Davis & Henderson, 2003; Dekeseredy, Schwartz, & Tomaszewski, 2003; LaGrange, Ferraro, & Supancic, 1992; Liska & Warner, 2001; Lowenkamp et al., 2003; Markowitz, et al., 2001; Morenoff et al., 2001; Rountree & Warner, 1999; Sabol, Coulton, & Korbin, 2004; Sampson & Groves, 1989; Sampson & Wooldredge, 1987; Sampson & Raudenbush, 1999; Sampson et al., 1997; 1999; Simcha-Fagan & Schwartz, 1986; Skogan, 1990; Smith & Jarjoura, 1989; Taylor, 2001; Taylor et al., 1984). For example, Taylor and his colleagues (1984) in a study of 63 Baltimore neighborhoods have shown that residents' perception of responsibility for neighborhood problems and participation in community organizations have a significant inverse relationship with violence rates in a neighborhood.

Simcha-Fagan (1986) has also found that the higher proportion of participation in neighborhood organizations has a negative relationship with the rate of self-reported delinquency. In a meta analysis, Bennett and his coworkers (2006) show that the participation in neighborhood watch groups reduces crime in a neighborhood. In the study of Sampson and Grove (1989), they show that the densities of local friendship and the level of community organizational participation are associated with lower levels of juvenile crime rates. Recently, Lowenkamp and his teammates (2003) have re-affirmed the findings of Sampson and Groves. Bellair (1997) has also showed that infrequent

neighboring among community residents has a negative impact on burglary, auto theft, and robbery. Bellair (2000) has also found that neighbors' informal surveillance of one another's property has a negative effect on some types of crime, but not on others. In addition, Markowitz and his colleagues (2001) in an analysis of the British Crime Survey, have shown that a lower level of social cohesion results in higher crime rates and disorder in a neighborhood. Davis and Henderson (2003), in their study of six minority communities in New York, have also found that communities' collective efficacy and communities' political empowerment have a strong preventive effect on crimes. Sabol and his coworkers (2004) have argued that community informal social control and collective efficacy could be substantial factors in preventing community violence. Finally, Sampson and his collaborators (1997) in a study of 343 Chicago neighborhoods, has showed the importance of collective efficacy. They have found a lower level of violence in neighborhoods showing higher collective efficacy and have concluded that collective efficacy is a key factor contributing to a neighborhood's ability to regulate crime and deviance (Sampson et al., 1997).

Although almost all literature of the systemic model perceives that neighborhood problems are outcomes of social disorganization, some point out that community crime and disorder may also affect ecological systemic variables, including social ties and informal social control (Bursik & Grasmick, 1993; Durkheim, 1933; Skogan, 1990; Taylor, 1995; Wilson & Kelling, 1982). Markowitz and his colleagues (2001) insist that unidirectional processes among relational networks, informal social control, and crime can be no longer simply conceptualized. In *Disorder and Decline*, Skogan (1990) also provides reciprocal effects of crime and disorder assuming that increased signs of

disorder in a neighborhood reduce residents' participation in community organizations and their cooperation in the community. Taylor (1995), more broadly, explains the impact of community crime problems on the community. He states that

Many assume that if a neighborhood experiences a high crime rate or an increasing crime rate, this will cause the neighborhood to decline. "Decline" is a broad term, usually including a wide range of behavioral, social, psychological, social psychological and economic consequences. The psychological consequences include decreased neighborhood satisfaction, an increased desire to relocate, increasing fear, and a weaker attachment to place and sense of community. The social psychological consequences include decreased willingness to intervene in events on the street, more mistrust between neighbors, and less cooperation. The behavioral consequences for residents include limiting their round of activities, avoiding dangerous places, participating less in local affairs, and moving out of the neighborhood or out of the city. The behavioral consequences also can be external. Those outside the neighborhood may be less likely to move into a neighborhood or buy a house or business there because of concerns about crime. Economic consequences include low or decreasing socioeconomic status of incoming as compared to current residents, and high or increasing vacancy rates. The behavioral consequences presumably emerge from the psychological and social psychological consequences and, in turn, drive the economic consequences (Taylor, 1995:29).

However, these negative associations among social ties, social cohesion, informal social control, and social problems are not always applicable (Taylor, 1996; 2001). In some neighborhoods, high crime rates lead neighbors to frequently join crime prevention

organizations. Some researchers support this positive impact of crime on community which was originally suggested by Durkheim (1933). Durkheim (1933) stated that

Crime brings together upright consciences and concentrates them. We have only to notice what happens, particularly in a small town, when some scandal has just been committed. They stop each other on the street, they visit each other, they seek to come together to talk of the event and to wax indignant in common (Durkheim, 1933:102).

Therefore, advocates of the functionalism of crime assume that crime inspires the community's reactions, such as bringing neighbors together and strengthening community's moral boundaries, and then neighbors, individually and collectively, will do something in response to the crime and disorder (see Skogan, 1989; Liska & Warner, 1991).

Many empirical studies provide mixed findings. For example, recent studies have shown the undermining effects of crime on community processes, including social ties, social cohesion, and informal social control (Belliar, 2000; Duncan et al., 2003; Garcia, et al., 2007; Liska & Warner, 1991; Ren, Zhao, & Gaffney, 2006; Markowitz et al., 2001; Morenoff et al, 2001; Morenoff & Sampson, 1997; Sampson et al., 1999; Silver & Miller, 2004; Swaroop & Morenoff, 2006). Specifically, Belliar (2000), in his examination of the reciprocal association between crime and informal social control, shows that robbery and stranger assault undermines a neighbors' likelihood to participate in informal surveillance. Sampson and his colleagues (1999) also find the negative effect of violence in supervision for the teenage in community. Silver and Miller (2004) and Morenoff and his colleagues (2001) also confirm that community's homicide rates obstruct the level of

informal social control and collective efficacy. Liska and Warner (1991) suggest the existence of negative associations between robbery and social interactions. Markowitz and his colleagues (2001) also find that burglary rates in a neighborhood deteriorate its social cohesion. Other studies have also shown the deteriorative effect of victimization on ecological systemic processes (Dugan, 1999; Sampson, 1988). For instance, Dugan (1999) examines the impact of victimization on a household moving decision. Using longitudinal data from the National Crime Survey, he has shown that victimized households are more likely to decide to move outside their communities. Morenoff and Sampson (1997) also provide insight about deteriorate effects of crime and disorder on community. They state that “crime and social disorder are especially salient and symbolic indicators of deterioration in the civility and inhabitability of urban areas” (Morenoff and Sampson, 1997:34); they find the differential spatial impact of crime throughout the levels of communities’ socioeconomic status on the change of population.

Another route of studies is to examine the effect of community disorder, defined as “a violation of norms concerning public behavior” (Skogan, 1990:4). Empirical studies show that community disorder has multiple undermining effects on community. Using three-city resident surveys from Council Bluffs, Iowa, Boise, Idaho, and Spokane, Washington, Gibson and his colleagues (2002) show that community perceived disorder is a major predictor of collective efficacy, along with social interactions among neighbors. Belliar (2000) and Duncan and his colleagues (2003) also find that perceived risk of attack and community problems undermine informal social control. Moreover, Sampson and his colleagues (Sampson, 1991; Sampson et al., 1999) attest the deteriorative effect of residents’ perception of community problems and fear of crime on community social

cohesion, community satisfaction, and child-centered informal social control. Markowitz and his colleagues (2001) also show the neighborhood informal social control is determined by community disorder. Other also found negative associations between community disorder and community organizational participation. Perkins and his colleagues (1990) in their study of Baltimore and Salt Lake City neighborhoods find that physical deterioration of community discourages neighbors' participation in community organizations.

On the other hand, other researchers have found positive associations between community problems and community. Specifically, Belliar (2000), in his examination of determining the reciprocal associations between crime and informal social control, shows that burglary rates of community increase community informal surveillance. Rountree and Land (1996) also demonstrate this positive relationship between burglary and informal social control. The findings show that household burglary rates are more likely to activate residents' precautionary behaviors, such as locking doors, purchasing a weapon, remaining home more often, installing extra locks, window bars, or an alarm system (Rountree & Land, 1996). With using Taylor's Baltimore survey data and police data, Lynch and his colleagues (2002) demonstrates the positive relationships between crime and social interactions among neighbors. In 1996, Taylor also showed that crime strengthens community attachment and residents' involvement in community organizations.

Chapter 3. State Control and Informal Social Control

3.1. Association between State Control and Informal Social Control

Despite the widespread recognition of the importance of community contexts as explanatory variables of local crime and deviance, there has been less paid attention to the role of criminal justice agencies on community building and preservation (Clear, et al., 2003; Lynch & Sabol, 2000; Lynch & Sabol, 2004; Rose & Clear, 1998; Taylor, 2001). Emerging literature looks at the role of formal criminal justice interventions which are commonly known as public social control, especially police, on community informal social control (Clear et al., 2003; Davis & Henderson, 2003; Krahn & Kennedy, 1985; Kerley & Benson, 2000; Kubin & Weitzer, 2003; Lynch & Sabol, 2000, 2004; Lynch et al., 2002; Matrofski et al., 1996; Reising & Park, 2004; Rose & Clear, 1998; Scheider, Rowell, & Bezdikian, 2003; Silver & Miller, 2004; Stoutland, 2001; Skogan & Hartnett, 1997; Scott, 2002; Tyler, 1990; Xie, Pogarsky, Lynch, & McDowall, 2006). In this study, formal social control refers to police control since “policemen and policewomen are the most visible and obtrusive agents of governmental authority and power to the average citizen” (Benson, 1981:46). The effects of policing and the police are crucial to determine community informal social control and social ties. For example, Kubrin and Weitzer (2003) argue that when the residents perceive the police as ineffective, illegitimate, and unsupportive, they will be reluctant to engage in controlling neighborhood problems. Silver and Miller (2003) also show that residents who are satisfied with police services are more likely to take the risk of intervening in community problems. However, the associations between police formal control and informal control have not been fully

tested in an ecological systemic control model of social disorganization. Formal social control may have a direct effect by influencing crime and disorder, and simultaneously, may also have an indirect effect by affecting residents' social interactions and informal social control. Consequently, it is necessary to elucidate the associations among police formal control, social ties, social cohesion and informal social control.

Even incomplete, recent integrated literature of policing and community research has begun to investigate the association between formal social control and community processes. Two major routes of literature exist. One premises that innovative policing initiatives may build strong community and then generate the density of social interactions among neighbors and the high level of informal social control. The latter assumes that the police force is coercive and may encourage community process if the police directly reduce crime and disorder. However, these two avenues of studies about police social control and community processes have a crucial measurement error and limited empirical support. Therefore, Chapter 3 reviews various attempts to examine the effect of formal social control, especially policing, on community and discusses the limitations of previous literature.

3.2. Community-Oriented Policing and Community Processes

The availability of examining the relationship between the police and community has been achieved by an emerging new paradigm of the U.S. policing, known as community oriented policing (COP). Over the past decades, many police departments in the U.S have converted from traditional reactive policing to COP. In the mid 1990s police agency survey, nearly 85% of police agencies across the U.S were practicing COP or were

planning to implement programs in the near future (Thurman & Reisig, 1996). The 2000 Bureau of Justice Statistics (Reaves & Hickman, 2004) showed that nearly all larger county (94%), municipal (95%) police departments and sheriffs' (88%) departments had full-time community policing officers in 1999. In addition, 68% of larger municipal and 66% of county police departments had a full-time community policing unit. Furthermore, larger local law enforcement agencies regularly participated in community organizations – 89% of neighborhood associations, 79% of school groups, 69% of business groups, 64% of domestic violence groups, 59% of senior citizen groups, 54% of advocacy groups, and 54% of youth service organizations (Reaves & Hickman, 2004). Many police agencies perceive COP as a mechanism for solving local problems, reducing crime and fear of crime, and improving police-community relations (Maguire, 1997; Zhao, 1996; Zhao & Thurman, 1997). The current developmental stage of COP is in its third generation and has been institutionalized in police departments all around the U.S (Oliver, 2000). COP, consequently, has become a leading police practice (Worrall & Zhao, 2003; Oliver, 2000). However, one of the weakest points of COP is the fact that there is no solid consensus about the definition of COP. For example, Bayley (1994) argues that “there is tremendous disagreement in professional circles about the meaning of community oriented policing” (Bayley, 1994:104). This ambiguity in the definition of COP led to generate numerous programs, named as COP programs: substation, foot patrol, beat meeting, school policing, community newsletters, neighborhood watch and so forth. Nonetheless, common themes of COP include a concentration of police-citizen partnership, the decentralization of police organizations, the empowerment of COP officers, a broader definition of police work, and an emphasis on proactive problem-

solving strategies (Cordner, 1995; Oliver & Bartgis, 1998; Rosenbaum & Lurigio, 1994; Thurman, Zhao, & Giacomazzi, 2001; Trajanowicz & Bucqueroux, 1990).

The basic logic of community policing, therefore, is that the goals of policing, maintaining social order and obtaining the legitimacy of the police, depend on residents' support. Cooperation between the police and residents as well as other governmental agencies is a central promise of COP (Goldstein, 1987). Cooperation will strengthen the connectivity and integration of members of neighborhoods and neighborhood-based organizations so that the police may effectively use community informal social networks and informal social control in order to maintain community social order (Hawdon, Ryan, & Griffin, 2003). Moreover, COP does not only focus on crime and fear of crime, but also the effective ways to improve the relationship between police and citizens and to solve community problems with community input (Duffee et al., 1999; Reising & Parks, 2004; Renauer, 2007; Scott, 2002). Therefore, the advocates of COP expect that COP strategies will bring positive impacts on community. To fulfill this expectation, COP is rooted in the co-production of social order, through the re-direction of police-based social control to neighborhood-based informal social control (Kerley & Benson, 2000).

Although many evaluation studies of COP in the U.S have been conducted, they have failed to produce a solid conclusion about its effectiveness (Kerley & Benson, 2000; MacDonald, 2002; Worrall & Kovandzic, 2007). One available answer for these mixed results may be attributed to officers' perception of COP since police officers who are the primary entities of implementing COP programs, some has reported that, show negative attitude toward the philosophy of COP (Lurigion & Skogan, 1994). Lurigion and Skogan (1994) state that

Officers were very ambivalent about community policing in Chicago. At the outset, officers expressed only moderate enthusiasm for involving themselves in solving non-crime problems. They were not very keen on adopting new tactics such as foot patrol or on marketing their new services to the public. They were willing to devote department resources to community policing, but only in moderate amounts. They did not think that the program would have any marked impact on the crime rate or their ability to make arrests, or that it would improve their relationship with racial minorities (Lurigion & Skogan, 1994:329).

Another explanation derived from ecological perspective is found in Kerley and Benson (2000). They have summarized current knowledge of COP in the U.S; they have pointed out that extant evaluation studies found mixed results. Though previous studies have diversely focused on examining the positive effects of COP on crime, fear of crime, and police-community relations, the main limitation is that earlier COP studies have paid less attention to the role of COP on the community contexts (Kerley & Benson, 2000). In the same venue, many police scholars have also pointed out the necessity of including community context variables in the evaluation of COP.

For example, Skolnick and Bayley (1986) review famous COP programs in six U.S. cities and conclude that COP has only modest impacts on crime rates, drug abuse and trafficking, and fear of crime. This failure of COP, they believe, is due to an ignorance of whether or not these new strategies have an impact on community organization and cohesion. If COP strategies essentially differ from traditional policing, a different manner of evaluation strategy should be adopted (Skolnick & Bayley, 1986). In their meta-analysis of COP in California, Texas, Kentucky, New York, Virginia, Oregon, Maryland,

and Arizona, Sadd and Grinc (1994, 1996) also found mixed results of COP on crime, fear of crime, and police-community relations. They argue that community organization and cohesion can affect crime and fear of crime in a community, but these community process variables have never been included in the evaluation of COP. Duffee and his colleagues (1999) also point out that previous evaluations of COP ignored the relevant community building processes. Skogan (1994) has concluded that it is necessary to include the impact of COP strategies on community cohesion and organization in order to adequately evaluate this new policing approach in the U.S.

However, very few studies have examined the relationship between police activities and community level outcome variables (Kerley & Benson, 2000; Mcdonal, 2002; Pino, 2000; Renauer, 2007; Rosenbaum, 1987; Scott, 2002; Scheider et al., 2003). Kerley and Benson (2000) have tested the effect of door-to-door COP contact and the presence of police substations on community cohesion, informal organization, and cooperative security. The results reveal that there is a marginal positive impact of COP on social interactions among residents. Reisig and Parks (2004) have also found that police-community collaboration had a statistically significant negative association with residents' perceived incivility and a positive relationship with safety in neighborhoods. However, the limitation of Reisig and Park's study is that they do not examine the effect of police-community collaboration on community social ties or informal social control.

Another study conducted by Scott (2002) tests the impact of police-community coproduction on neighborhood level social capital. Social capital is measured by combining community trust/cohesion, community shared norms, and collective efficacy.

The finding shows that a higher collective social capacity is found in neighborhoods where residents perceived that the police are more accessible.

Using a 1998 supplement to the National Crime Victimization Survey from twelve U.S. cities, Scheider and his colleagues (2003) examine the role of citizens' perception and knowledge of community oriented policing on fear of crime, crime preventive activities, and satisfaction with police. The findings show that community oriented policing has positive relationships with satisfaction with police and crime preventive behavior. However, citizens' perception about community oriented policing does not have a link with fear of crime. Nonetheless, it has an indirect effect on fear of crime through satisfaction with police (negative) and crime preventive behavior (positive).

Renauer (2007) has found, however, an opposite effect - that the frequency of police attendance at community meetings is negatively related to informal social control and that perceptions of community cohesion and government responsiveness are the best predictors of informal social control. He discusses that these results indicate COP may fail to overcome "deeply entrenched attitudes toward the police in the most disadvantaged communities and at worst may discourage informal social control" (Renauer, 2007:61).

Although previous studies on the association between police and informal social control are valuable to develop a new direction of ecological research, many methodological limitations make it hard to identify the relevance of COP to neighborhood strengthening processes. Firstly, almost all previous studies in the examination of COP on community processes are heavily underlined on OLS regression models. For instance, the OLS model of Renauer's study only considers main effects of

policing variables, including police-community problem solving, police effectiveness, police accessibility, and fear of police encounter on informal social control. This statistical method often ignores indirect effects among variables. In addition, Renauer's study also fails to consider distinct multilevel effects. In order to reduce statistical errors, hierarchical linear models should have been used.

Another crucial limitation of previous COP studies on community is the incomplete measure of state control. Although COP is the most broadly adopted police program in contemporary U.S. policing, it does not mean that COP represents all about police social control. Therefore, without a comprehensive measure to estimate entire police control, it will be hard to provide genuine connections between police control and community context. It can be stated, more importantly, that previous studies did not control the combinational impact of traditional policing and innovative police strategies in the same neighborhoods. In other words, the U.S police departments are not only practicing COP or innovative police strategies in the field, but also are practicing traditional ways of policing, such as 911 calls, car patrols, detectives, and so forth. Therefore, police agencies in the U.S are simultaneously performing both traditional and innovative methods of policing. Some police departments deploy traditional random car patrols in their jurisdictions. At the same time, they are implementing neighborhood watch programs or citizen and police foot patrols. Payne and his colleagues (2004) support these overlapping roles of police officers in small town. They argue that the majority of U.S police departments are located in rural areas, albeit almost all police literatures are disproportionately based on urban policing in large cities. And they state that

Small Town police officers fulfill five overlapping roles: (1) law enforcement, (2) friend, (3) social work, (4) dispute resolution, and (5) animal control. As law enforcers, they respond to requests to handle acts of disorder that clearly violate legal codes. As friends, they are called upon to help individuals solve personal crises. As social workers, they are asked to provide needed assistance in attempts to deal with long-term problems. As dispute resolving agents, they are asked to solve immediate personal crises. At least in part because they are willing to respond to such calls, Small Town police serve in the capacity of dogcatchers and are frequently the first agency contacted when animals are causing problems in a community (Payne et al., 2004:38).

Moreover, there is variation in COP implementation across the geographic areas served by a single agency and by special police teams (Condner, 1996; Skogan, et al., 2000). Although community policing specialists spend more time for information gathering and problem direct, COP officers are less likely to spend their time to make informal contacts with citizens than general patrol officers (Parks et al, 1999). Parks and his colleagues (1999) also show the limited organizational investment of police personnel to COP. They find that there are only 24 community policing specialists of a total of 1000 police officers, including 492 patrol officers, in the Indianapolis police department and 63 COP officers among 505 sworn officers in the St. Petersburg police department. Moreover, in Indianapolis, neither patrol generalists nor community policing specialists spend much time in participating in community meetings of community members, business people, and school groups (Parks et al., 1999).

Consequently, the outcomes of contemporary policing in the U.S may not be completely attributable to innovative police strategies. Overall possible outcomes of policing (e.g. crime, disorder, victimization, fear of crime, police-community relation, satisfaction with the police, and so forth) could be collective products of the overlapping police activities in a community. In order to precisely examine the influence of police formal social control on community's ecological systemic variables, it is necessary to develop a comprehensive measurement of policing to illuminate the impact of criminal justice agency's activities on a community.

3.3. Police Force: Coercive or Non-coercive

Consideration should also be given to defining the nature of police force in a society. The police are generally perceived as a coercive governmental power. The police are eligible to use physical force in order to enforce laws. Its authorized power results from four elements of police control— authority, power, persuasion, and force, making the police unique (Klockars, 1984). Police scholars, in turn, often perceive that the nature of police force is coercive. Previous studies, therefore, have focused on studying the relationships between community informal social control and coercive police activities, in particular, arrests (Lynch, et al., 2002; Lynch & Sabol, 2000).

In literature on police coercion and community, previous researches have investigated negative or positive effects of police coercion on the community (Lynch et al., 2002; Lynch & Sabol, 2000; 2004; Nagin, 1998; Rose & Clear, 1989). For example, Lynch and Sabol (2004) argue that although “there is virtually no theory or empirical work that associates imprisonment directly with building or supporting less coercive institutions of

social control” (Lynch & Sabol, 2004: 271), coercion, defined as “a threat or use of force,” might reduce crime and disorder in the communities by removing problematic individuals from a community. There might be a greater likelihood that residents’ social interactions could generate a higher level of informal social control in a neighborhood (Lynch et al., 2002; Wilson & Kelling, 1982). The latter perspective argues that formal social control, by using coercion such as aggressive arrest strategies and high incarceration rates, may undermine the strength of communities and disrupt community social ties (Lynch & Sabol, 2000; 2004; Rose & Clear, 1998). The two key issues are central to the preceding discussion - “Can the police reduce crime and disorder?” “Is the nature of police force really coercive?”

First, the empirical evidence of the positive model of criminal justice interventions, premising the police can reduce crime and disorder, make it hard to reach a firm conclusion because of the mixed findings. For example, some researchers have found deterrent effects of policing on community social problems (Braga, et al., 1999; Chamlin, 1991; DiIulio & Piehl, 1991; D’alessio & Stolzenberg, 1998; Kohfeld & Sprague, 1990; Green, 1996; Greenberg & Kessler, 1982; Koper, 1995; Marvell & Moody, 1996; McDonald, 2002; Paternoster et al., 1997; Rosenfeld et al., 2007; Sampson & Cohen, 1988; Sherman & Weisburd, 1995; Sherman, Smith, Schmidt, & Rogan, 1992; Weisburd & Green, 1995), while some has shown opposite findings (Farrington, 1977; Hagan et al., 1978; Kane, 2005; McDonald, 2000; Sherman et al., 1992) or no significant effects on crime and disorder (Bursik et al., 1990; Felson et al., 2005; Greenberg & Kessler, 1982; Harcourt & Ludwig, 2006; Kane, 2005; Katz, Webb, & Schaefer, 2001; McDonald, 2002; Rosenbaum, 1986; Sherman, 1990; Sherman & Rogan, 1995; Wycoff & Skogan,

1986). Major literature in this field has focused on the direct effect of police-initiated programs and practices, including the extent of police forces and use of police forces (e.g. police size, special units, proactive response to traffic violation, stop and frisk, and certainty of arresting) and problem-oriented policing (e.g. hot spot police patrol and presence, arresting domestic abusers, aggressive response to drug, quality of life policing, and order-maintenance policing).

Many researchers, for a long time, have believed that certainty of arrest and enforcing the law may significantly reduce crime. Greenberg and his colleagues (Greenberg, Kessler, & Logan, 1979), the earliest empirical examination of the effect of arrest on crime, find that there is no meaningful association between crime rates and arrest rates in a sample of U.S. cities for the year 1964 to 1970. Greenberg and Kessler (1981) also confirm the limited deterrent effect of arrest on crime in their panel data. The results show that higher arrest clearance rates consistently reduce aggravated assault, but for other index crimes police arrest fails to produce either inconsistent or no deterrent effects. Although arrest clearance rate reduce five of eight index crimes in bivariate analyses, the effect size is small. However, it does not mean that “police practices have no effect on crime” (Greenberg and Kessler, 1981:786) Nonetheless, “marginal increases in clearance rates are unlikely to lead to measureable reduction in index crimes” (Greenberg and Kessler, 1981:786). In Chamlin (1991)’s study of seven U.S. cities in Pennsylvania, the findings re-affirm that arrest does not have substantial deterrent effects, but limited marginal effects for specific crime on bi-variate analyses.

D’alessio and Stolzenberg (1989) insist that previous studies have a limitation in showing the causal process between police arrest and crime since generally deterrence

literatures use weekly or monthly data of arrest and crime. They adopt daily arrest and crime data and examine the deterrent effect of arrest. Although they find a negative effect of arrest rates on crime, there also exists a significant positive relationship between criminal activity and arrest. They state that “the causal processes linking crime and arrests are contingent on time. That is, it appears that criminal activity has a relatively immediate impact on arrest levels, while the effect of police activity on crime levels seems to transpire more gradually” (D’alessio & Stolzenberg, 1989:753). These simultaneous communicative associations between arrest and crime are also found in previous studies (Greenberg & Kessler, 1982; Kohfeld & Sprague, 1990; Lynch et al., 2002; Marvell & Moody, 1996,). For example, Marvell and Moody (1996:632) show that when there is an increase of ten percentages of crime rates of cities and states, local and state governments add a small amount - about 1.5% more – of police officers to the force.

Although general police arrest strategies are not consistently supportive in the evidence of previous studies on crime rates, specific police practices suggest a positive phase of police control on crime and disorder (Katz et al., 2001, Sherman et al., 1997). For instance, Rosenfeld and his colleagues (2007) find that order-maintenance policing in New York City reduces robbery rates by 4% and homicide rates by 10%. Sherman and Weisburd (1995) in an evaluation of hot spot policing in Minneapolis also suggest that two times increase of police patrol in high crime areas reduce 6 to 13% of the phone calls related to crime and disorder. In an evaluation of drug hot spot policing in New Jersey, Weisburd and Green (1995) also find that policing in the targeted areas can reduce the number of suspicious persons and the diminishing of public morals. Along with drug hot spot policing, Braga and his colleagues (1999) suggest that problem-oriented policing can

also reduce citizens' call for service and criminal incidents (e.g. robbery, property crime) in high offense places in New Jersey. However, the duration of police presence in high crime areas is only effective in the range of 14 to 15 minutes of police presence, but simply driving through a hot spot (Koper, 1995). Tittle and Rowe (1974:459) also argue that the deterrent effect of arrest or certainty of punishment can be expected to reduce crime until it reaches a critical level.

Other have found empirically supportive evidence of the deterrent effect of police arrest on crime rates as well. For instance, Sampson and Cohen (1988) show that visible proactive policing increases residents' perception of probability of arrest for misconducts. Specifically, the results show that aggressive policing has deterrent effects on white and black adult robbery and black juvenile robbery. McDonald (2002) also supports that the aggressive enforcement can reduce the national level of violence. For domestic abusers, previous studies have also found the deterrent effect of arrest on the later committing violence for the arrestees who are employed (Sherman et al., 1992; Pate & Hamilton, 1992). Paternoster and his colleagues (1995) point out the importance of police responses to spouse abusers. They find that making respective arrest of domestic abusers can reduce the later domestic violence.

Kennedy and his colleagues (2001) in the Boston Operation Ceasefire Project also demonstrate the deterrent effect of problem-oriented policing. The results show a substantial reduction of the city's yearly youth homicide number, from 46 homicide incidents in 1995 to 17 in 1997. Kennedy (1997) in his "pulling lever theory," which supports the possible deterrent effect of criminal justice interventions on criminals and provides a way to develop precise crime prevention and control models, suggests that

collective responses of multiple criminal justice agencies may effectively deter criminal behavior (see also Kennedy, Braga, & Piehl, 2001). Further analysis of Operation Ceasefire in Boston results in a significant reduction of youth homicide and gun violence (Braga, Kennedy, Piehl, & Waring, 2001). Since the Boston Gun Project, other police departments have accepted the “pulling lever model” and have shown negative effects on crime. For example, in the High Point West End Initiative, Frabutt and his coworkers (2004) found a significant reduction of drug dealing and drug-related crimes.

However, there also exist opposite empirical findings that police practices do not significantly have deterrent effects on crime or sometimes increase crime and disorder. For instance, some has found unexpected side effects of policing in communities (Farrington, 1977; Hagan et al., 1978; Kane, 2005; McDonald, 2000; Sherman et al., 1992). Kane (2005) finds that police deployment is more frequently made in low disadvantage neighborhoods, but a greater number of violent crime arrests is made in extremely disadvantaged communities in New York City. In addition, arrest rates have a positive effect on violent crime in extremely disadvantaged neighborhoods. Farrington (1977) has also shown that juvenile arrests for minor offenses lead them to become more delinquent in the future. Sherman and his colleagues (1992) advise the deteriorative effect of arresting domestic abusers who are unemployed. They find that police arrests for unemployed spouse abusers are strong predictors of future violence. Clear and his colleagues (2003) also showed that the high incarceration rates in a community, when it reaches beyond the tipping point, increases crime rates in the community. Renauer and his colleagues (2006) re-affirm Rose and Clear’s argument and found that the incarceration-crime relationship at a neighborhood level is curvilinear. Lynch and Sabol

(2004), meanwhile, concluded that previous studies of the relationship between incarceration and crime rates have a few limitations. For example, they did not separate the impacts of deterrence and incapacitation, nor differentiate the impacts of incarceration across deviations of imprisonment rates in communities; they also did not consider the possibility of displacement of crime. In order to fix these limitations, Lynch and his colleagues (2002) used an instrumental variable in their analysis.

Some other researchers find no empirical support for the deterrent effect of police practices on crime and disorder. For instance, in a comparison of homicide rates in the U.S, Rosenfeld and his colleagues (2005) showed that new policing activities, such as Boston Ceasefire, New York Compstat, and Richmond Virginia's Exile, did not produce a significant difference in homicide rates before or after 1994, as compared to 95 other U.S cities (Rosenfeld, Fornango, & Baumer, 2005). With the exception of Richmond, the decline of crime rates in U.S cities was a general trend. Walker (2003) also argued that the positive effect of policing may not totally result from the Boston Gun Project since there was a nationwide decrease in the crime rate in the U.S. In addition, Harcourt and Ludwig (2006) also showed no significant relationship between misdemeanor arrests and the New York City violent crime trend. Other researchers also reject a hypothetical association between arrest and violence crime (e.g. robbery) and violence victimization (Bursik et al., 1990; Felson et al., 2005; Sherman, 1990; Katz et al., 2001). Sherman and Rogan (1995) also suggest that proactive drug arrest has only a short term deterrent effect on drug dealing and disorder, but a long term effect. In sum, extant literature on police coercion does not provide steady conclusion. If it is not definite that the police reduce the

level of crime and disorder, then it is hard to support the positive models of coercion on a community.

Moreover, overall studies examining the effect of state control on crime have not directly scrutinized the associations between coercion and community processes. Even very few studies fail to express significant relationships (Lynch et al., 2002; Warner, 2003) or depreciative impacts on community processes (Lynch et al., 2002; Warner, 2003). For example, Warner (2003)'s study shows that arrest rates do not directly predict informal social control, but negatively affect informal social control through undermining cultural strength of community. Lynch and his colleagues (2002) using Baltimore data in 1994 and 1990 Census also show that arrest rates have negative effects on community organizational participation and solidarity and no statistically significant association with informal social control. They also suggest that incarceration and arrest rates do not have direct effects on informal social control; nonetheless incarceration may have indirect positive effects on informal social control through reducing crime. These results presented by Lynch and his colleagues (2002) are crucial in indicating the complicated relationships among coercion, crime, and community organizations. Therefore, it may be safe to conclude that there could be both positive and negative effects of coercion and crime on community.

A crucial limitation of overall research investigating the relationships between coercion, crime, and community processes, however, is that they have ignored the impacts of non-coercive police activities in the evaluation models. Although the primary goal of the police is to keep safer streets and maintain healthier community, the crime-fighting role of the police is only a part of police field work. For example, police

deployments requested by citizens are either related to criminal issues or other assistances and services. Hoover and his colleagues (1998) show that many of citizen-initiated contacts with the police are derived from the variety of reasons such as disturbance near home, disturbance near business/employment, loud noise, medical emergency for family members or non-family member and so forth (Hoover, Dowling, & Fenske, 1998). Consequently, policing is always accomplished by either coercive or non-coercive methods. For example, police officers can be coercive in daily practices, including arrest, frisk, warning or just presence since these activities contain the threat or use of force. Meanwhile, the police can be perceived by citizens as a non-coercive force: police officers often communicate with residents in their precincts, and with leaders of the communities, or communities' institutions. Police officers also visit residents' houses to distribute news on community crime and disorder, information on preventive strategies of victimization, or information of neighborhood crime prevention meetings. Citizens often voluntarily contact the police in order to ask their ways or report victimization. Since community-oriented policing in U.S cities became more prevalent, non-coercive police activities have been more frequently witnessed in communities (Dunham & Alpert, 2001). It is a fact that coercive police activities may not cover the whole story of police activities in the field. As a result, it is necessary to consider a more comprehensive measurement to assess overall police activities in a society.

Chapter 4. Residents' Perception of Police on Community

4.1 An Alternative Measure of State Control

Pervious measures of state control were often centered on specific police strategies (e.g. community-oriented policing, problem-oriented policing) and/or police practices and resources (e.g. simple arrest, police size). These objective measures of policing, however, are limited in gauging cumulative effects of entire police practices which can, respectively and/or jointly, affect community process since almost all measures of state control rely on specific practice-based policing which are always overlapped in a community and are simultaneously practiced by a group of police personnel and police resources which are assigned into the neighborhood. Even in experimental studies in order to evaluate specific police programs or policies, it may be hard to exclusively distinguish treatment effect from the impact of regular police practices in the same jurisdictions or police beats. As discussed in Chapter 3, the practice-based police activities provide a limited scope of measuring the overall police social control in community. When a comprehensive measurement of police interventions in a community is devised, it will make it possible to adequately examine the relationship between cumulative public control and community process.

An alternative measure of police practices in a neighborhood, suggested in this dissertation, is to use the variations of residents' perception of policing in a community. Although previous studies in police science have used diverse labels of citizens' perception of the police – attitude toward police, belief of the police, perception of the police, satisfaction with police, police effectiveness, police responsiveness, trust of the

police, in this study, perception of policing is defined as “residents’ subjective evaluation of police activities in order to 1) prevent and control crime, 2) provide adequate services for criminal victims, and 3) deal with neighborhood problems.” This definition is based on three primary roles of the police in a society: fighting crime, maintaining social order, and providing charitable services. In their measurements of satisfaction with police, Sampson and Bartusch (1998) and Silver and Miller (2004) also included these three components. Silver and Miller (2004) argue that “this scale captures residents’ satisfaction with the ability of local police to control crime and maintain order in the neighborhood, to respond to victims of crime, and to deal with local problems” (Silver & Miller, 2004:564).

Citizens’ perception provides a valuable feedback of police practices in a neighborhood because the members of community are the primary recipients of government services (Osborne & Gaebler, 1992). Many police scholars have also argued that community residents’ perception of police services is a meaningful performance measure of policing (Bayley, 1996; Mastrofski, 1981, 1996; Wycoff & Oettmeier, 1994). Although the residents’ perception is less objective than using numbers from traffic violation tickets, numbers of arrests, or reduced crime rates, their subjective evaluation can reflect the collective quality of police services in a community. Moreover, this measurement is better in evaluating overall police activities, regardless of whether the police are using traditional or innovative approaches, or coercive or non-coercive practices of policing. Subjective perception of police services, rather than objective numbers, may also have more influential behavioral and attitudinal effects on residents’

lives in a community. In fact, residents' perception may also provide useful information to politicians about the attitudes of the citizens living in a neighborhood or city.

The most important benefit of using a perceptual measure as state control is that this measure is compatible to the systemic control model of social disorganization. Bursik and Grasmick (1993) in their book of *Neighborhood and Crime* articulate the definition of public control as consisting of two components – the ability to solicit external resource and the ability of external organizations in maintaining social order. Traditional measure of state control, however, does not explicate these two elements of state control in a time. For example, arrest rates or specific police strategies only explain what the police practices in a community. Although his measure of state control is broader than this study, Velez (2001) has used residents' perception about the quality and responsiveness of police and local government officers. This subjective measure of state control, therefore, contingently explains the extent of the ability of communities' solicitation for external resources and the ability of external organizations in controlling social order.

4.2 Modifications of a New Measurement

The measures of citizens' attitude toward or perception of policing consist of two ways of operationalization – global or specific. Generally, previous studies about citizens' satisfaction with the police have focused on a global measure. The global measure of perception is often manipulated by a single question, for instance, “are you satisfied with police services?” This global measurement is used to estimate citizens' perception of the quality of law enforcement or the overall quality of policing (Cao, Frank, & Cullen, 1996; Reisig & Rarks, 2000; Scaglione & Condon, 1980). A consistent

finding is that public perception of the police is favorable in U.S (Davis, 1990; Sullivan, Dunham, & Alpert, 1987). However, the general perception measurement has critical limitations in reflecting accurate residents' perception of the police in certain neighborhoods; the public image of the police is a complex function of individuals and communities which can have distinct beliefs, values, attitudes, and social experiences.

Wells and his colleagues (2005) argue that the public perception of the police is “most likely formed through a potpourri of other sources” (Wells, Horney, & Maguire, 2005:175). Many unrealistic factors, which have little connection to the reality of policing, result in the general public perception of the police. For example, fictitious stories of police work in novels, television shows, or movies can affect individuals' perception of policing. The image of the police is also tailored by the news media. Consequently, the global measure of public perception is not able to reflect the variations of residents' subjective evaluation of policing, derived from the distinct police services and practices in different neighborhoods.

Because the goal of using citizens' perception of the police is to alternatively measure state control, this dissertation does not aim to predict the general perception of the police in a neighborhood, but the subjective evaluation of policing in a community; it is necessary, therefore, to modify the perception measurement. First of all, this study limits the scope of measurement to residents' perception of the police in their “neighborhoods.” As a member of a certain neighborhood, residents are asked what their perception of the police is: as major agents in fighting crime and deviance in a neighborhood, taking care of victims after incidents occur in a neighborhood, and providing supportive help on community problems in a community. This limited scope of perception measurement –

residents' perception of the police only in their local neighborhood – at least, could reduce the impact of these external sources on forming attitudes toward the police. Many previous researches also used this modification (see Sampson & Bartusch, 1998; Silver & Miller, 2004).

However, simply limiting the scope of geographical boundaries in satisfaction measure may not effectively exclude the effects of external variables. For example, the demographic characteristics of residents may bias a measure of state control through perception of the police. Prior policing literature provides much detail about the effects of demographic characteristics on public perception of the police. Much empirical evidence has demonstrated that minority youth are less likely to have favorable attitude toward the police (Bordua & Tifft, 1971; Brandl et al., 1994; Cao et al., 1996; Frank, Brandl, Worden, & Bynum, 1996; Frank, & Smith, Novak, 2005; Hindelang, 1974; Howdon et al., 2003; Jefferson & Walker, 1993; Reisig & Correia; Reisig & Giacomazzi, 1998; Reisig & Park, 2000; Sampson & Bartusch, 1998; Scaglione & Condon, 1980; Schafer et al., 2003; Sims, Hooper, & Peterson, 2002; Smith, Novak, & Hurley, 1991; Smith & Hawkins, 1973; Tuch & Weitzer, 1997; Weitzer & Tuch, 2005; Worrall, 1999), while other demographic characteristics (e.g. SES, gender, education) have produced mixed results. In some studies, female respondents show more favorable attitude toward the police (Cao et al., 1996; Reisig & Giacomazzi, 1998; Smith et al., 1991), while other researchers have shown opposite associations (Brown & Coulter, 1983; Reisig & Correia, 1997; Sampson & Bartusch, 1998) or no relationship (Davis, 1990; Huang & Vaughn, 1996; Reisig & Park, 2000; Smith & Hawkins, 1973; Weitzer & Tuch, 2005; Worrall, 1999). Nonetheless, it is clear that individual characteristics may explain a certain portion

of attitude toward the police regardless of pro or con. Consequently, another modification is to use a residual of residents' perception after controlling residents' demographic variables.

The exclusion of demographic characteristics, however, is not enough to clean up the measure of public social control which refers to the ability to solicit external resource and the ability of the police to prevent crime. External factors including community structural characteristics, community problems (e.g. crime rates, victimization, and disorder), and police misconduct experience (e.g. harassment by the police) may also affect residents' perception of the police. For example, Reisig and Parks (2000) argue that when analyses consider neighborhood conditions into predictive models of residents' perception of the police, the impacts of other individual and experiential characteristics are often reduced or eliminated. Depending on neighborhoods and crime problems, the police may discriminately supply their resources and deploy police personnel (Smith, 1986; Klinger, 1997; Scalion & Condon, 1980). In addition, "police behave differently in different neighborhoods" (Smith, 1986:389). These differential reactions of the police depending on community structures and crime problems may obstruct to develop accurate measure of police control. Consequently, along with the exclusion of demographic characteristics, it is also necessary to consider the effects of community variables on the perception measure as well.

Extant research has often shown the effects of external factors on policing. For example, in poor minority communities with pervasive social problems, the police often less respectfully treat residents and less vigorously intervene in community problems, residents may often experience coercive police misconduct and excessive use of police

force, and more likely residents are stopped and harassed by the police (Kane, 2003 ; Hagan et al., 1978; Smith, 1989; Stark, 1987). The stigmatized labels of community such as “offensible space” (Hagan et al., 1978) or “deviant place” (Stark, 1987), in turn, lead the police to act differently in these communities. “Unwarranted police stops, verbal and physical abuse, and racial bias toward residents of poor minority communities have a long history in the United States and continue to strain residents’ relations with the police (Kubrin & Weiterzer, 2003:160). Hagan and his colleagues (1978) also explain that the term “offensible space” refers to “those areas in which the police perceive a disproportionate incidence of deviant behavior and beyond this take some initiative in processing offenders” and “offensible space consists of areas where prior police conceptions encourage an aggressive pattern of police work” (Hagan et al., 1978:389). Stark (1987) also support these differential reactions of the police in a certain neighborhood and explain how the police are less likely to care about deviance in high crime areas and about victims of crime. He states that

Stigmatized neighborhoods will suffer from more lenient law enforcement. This is one of those things that “everyone knows,” but for which there is no firm evidence. However, evidence may not be needed, given the many obvious reasons why the police would let things pass in these neighborhoods that they would act on in better neighborhood. First, the police tend to be reactive, to act upon complaints rather than seek out violations. People in stigmatized neighborhoods complain less often. Moreover, people in these neighborhoods frequently are much less willing to testify when the police do act-and the police soon lose interest in futile efforts to find evidence. In addition, it is primarily vice that the police tolerate in these

neighborhoods, and the police tend to accept the premise that *vice* will exist somewhere. Therefore, they tend to condone vice in neighborhoods from which they do not receive effective pressures to act against it.....Finally, the police frequently come to share the outside community's view of stigmatized neighborhoods-as filled with morally disreputable people who deserve what they get (Stark, 1987:902, emphasized in the original).

Klinger (1997) also supports these differential police responses depending on the characteristics of community and suggests that since patrol officers have high degree of autonomy and work with community-based work groups of other officers, various levels of deviance across their patrol beats lead them to apply different approaches to regulate deviance and then "ultimately work group negotiations will occur in different structural contexts" (Klinger, 1997:287). In high crime areas, patrol officers tend to suffer from a high workload and have less time to handle citizens' complaints. Frequently exposure of crime and disorder lead officers to become cynical and less likely to care about victim. Klinger (1997) explains that

In both absolute numbers and proportionally, as levels of crime and deviance in areas increase, more criminals are victimized. Thus, officers in higher crime districts encounter more situations in which the line between victim and offender is blurred. Consequently, as district deviance increases, officers increasingly believe that larger segments of the population are undeserving. Territorial stereotyping magnifies this so that officers view citizens who live in higher crime areas as generally less worthy than those who reside in less crime filled districts (Klinger, 1997:290).

In sum, it is premised that community structural characteristics may generate community social problems such as crime, victimization, and disorder which then depending on these factors, the police act differently across communities – sometimes also using unnecessary force or harassing citizens’ in poor minority communities with high crime rates. Overall these factors may affect residents’ perception of the police and this perceptual evaluation may have an influence on residents’ social ties (e.g. neighboring, participation in community organization) and their cohesiveness of neighbors and willingness to engage in community problems and cooperate with the police.

Many previous studies provide empirical support for the variations of police practices and police behaviors across neighborhoods, and neighborhood characteristics strongly determine residents’ perception of the police (Alberecht & Green, 1977; Carr, Napolitano, & Keating, 2007; Fagan & Davis, 2000; Hagan et al., 1978; Kane, 2003; Klinger, 1997; Jacobs & Helms, 1997; Jacobs & O’Brien, 1998; Reisig & Parks, 2000; Sampson & Bartusch, 1998; Skogan, 1989; Smith, 1986; Stark, 1987; Weitzer, 1999; 2000). For instance, a general finding of previous studies about the relationship between community structural components and police behaviors and police strategies is that in concentrated disadvantaged communities with population turnover, police officers are more likely to use actual force (e.g. deadly force, stop and frisk) and commit deviance (e.g. corruption, harassment) (Fagan & Davis, 2000; Kane, 2002; 2003; Jacobs & O’Brien, 1998; Smith, 1986; Smith & Holmes, 2003; Weitzer, 1999; 2000). Kane (2003) finds that although Latino population in New York City may link to the number of police deployment, but this association becomes nonlinear when the Latino population in a community is over

23%. Simultaneously, police misconduct is also linked to Latino population. Jacobs and Helms (1997) show the nonlinear relationship between economic inequality and police size. At the same time, a greater number of police deadly forces are found in black neighborhoods with low political power (Jacobs & O'Brien, 1998). Fagan and Davis (2000) also find the greater likelihood of all stop and weapons stops initiated by the police in ethnically heterogeneous and beneficial communities of social security supports.

Residents in disadvantaged communities also tend to show unfavorable attitude toward the police (Albercht & Green, 1977; Boggs, 1971; Carr et al., 2007; Cao et al., 1996; Dunham & Alpert, 1988; Reisig & Parks, 2000; Sampson & Bartusch, 1998; Skogan, 1989). For instance, in extremely disadvantaged communities with large numbers of immigrants, residents' satisfaction with policing is lower than in middle-class neighborhoods (Sampson & Bartusch, 1998). However, this negative relationship between community structural components and satisfaction with the police is not simply generated. It may be assumed that structural characteristics of community may affect differential inputs of the police, although these different practices cannot be measured in this study, and then shape residents' perception of the police. Therefore, it may be stated that in disadvantaged and instable communities the police may provide limited services to maintain social order and fail to provide adequate services.

Community crime problems (e.g. crime, victimization, disorder) are consistently perceived as primary factors that undermine the favorable perception of the police (Benson, 1981; Cao et al., 1996; Carter, 1985; Davis, 1990; Hawdon et al., 2003; Hawdon & Ryan, 2003; Frank et al., 1996; Klinger, 1997; Krivo & Perterson, 1996; Reisig & Giacomazzi, 1998; Ren, Cao, Lovrich, & Gaffney, 2005; Ren, Zhao, & Gaffney,

2006; Sampson & Bartusch, 1998; Sims, et al., 2002; Smith, 1986; Weitzer & Tuch, 2005; Xu, Fielder, & Flaming, 2005). Two plausible explanations can be suggested. First, the differential levels of community crime problems across communities may affect decision making of the police in order to allot police personnel and resources. Kane (2003) finds that high grand larceny and violent crime rates in communities increase police deployment. However, this increasing attention of the police regarding community crime problems often produces negative side effects – stigmatization of community, less vigorous responses to crime, increase of involuntary contacts of the police which then often negatively affect minority citizens' perception of the police (Klinger, 1997; Smith, 1986; Sampson & Bartusch, 1998; Scaglione & Condon, 1980; Frank et al., 1996). For instance, Fagan and Davis (2000) have shown that disorder in Latino neighborhoods generates frequent police-initiated contacts with citizens (e.g. increase of all stops and weapons stops). Smith (1986) also finds that in high crime neighborhoods the police are less likely to file victimization and citizens are more likely to be stopped by the police. Klinger (1997) also argues that in high crime neighborhood the police enforce laws less vigorously and less concerned about victims as well.

A second possible connection between community crime problems and perception of the police is that high crime and victimization rates in communities with both physical and social disorder (e.g. noisy neighbors, loitering by rowdy teenagers, graffiti, deteriorating property) may send a message that the police fail to maintain social order and therefore that policing in a community is ineffective (Ren et al., 2005). Hawdon and his colleagues (Hawdon & Ryan, 2003; Hawdon et al., 2003) have found that informally gaining information about neighborhood crime incidents, fear of being victimized, and

victimization rates in communities strongly undermine residents' trust in police effectiveness. In addition, extant studies consistently support that a direct victimization experience leads to deteriorating satisfaction with the police and police service (Carter, 1985; Frank et al., 1996; Payne & Gaaney, 2007; Smith, 1986). The negative effect of neighborhood official crime rates and perceived crime on citizens' attitude toward the police has been also supported by empirical studies (Benson, 1981; Davis, 1990; Hawdon & Ryan, 2003; Reisig & Giacomazzi, 1998; Reisig & Parker, 2000; Sampson & Bartusch, 1998; Smith, 1986; Weitzer & Tuch, 2005). Finally, community disorder is also found to have a negative impact on confidence in the police and satisfaction with the police (Cao et al., 1996; Ren et al., 2006; Sims et al., 2002; Xu et al., 2005).

Another external factor affecting residents' perception of policing in a neighborhood is residents' negative experience with the police. Empirical studies have consistently supported the deteriorating effects of negative contacts to the police on citizens' perception of the police which leads citizens to have legal cynicism (Bayley & Mendelsohn, 1969; Brandl, Frank, Worden, & Bynum, 1994; Bordua & Tifft, 1971; Cao et al., 1996; Carr et al., 2007; Frank et al., 1996; 2005; Reisig & Correia, 1997; Reisig & Park, 2000; Ren et al., 2005; Scaglione & Condon, 1980; Schafer, Huebner, & Bynum, 2003; Sims et al., 2002; Skogan, 2005; Smith & Hawkins, 1973; Weitzer, 1999; 2000; 2002; Weitzer & Tuch, 2004; 2005). Bayley and Mendelsohn (1969) have found that citizens who hold negative views from their contact with the police may express a less favorable perception. Schafer and his colleagues (2003) also argue that individuals' perceptions of the police are a function of their contacts and interactions with officers (Schafer et al., 2003). Scaglione and Condon (1980) argue that individuals' experiences

with the police are stronger predictors than any demographic factors. Kane (2005) finds that neighborhoods with high rates of police misconduct are more likely to experience violent crime since the legitimacy of the police is attenuated in this community. Tyler (2001) suggests that people perceiving the legitimacy of the police and the court are more likely to be complied with their directives. While the evaluation of police competency is determined by rate of change in crime, police controlling crime, magnitude of crime problem, and effectiveness of police efforts, the quality of police treatment by the members of the public are accessed by residents through character of the police, degree that the police are trying, degree to which the police care, and whether the police harass people (Tyler, 2001). Consequently, it is assumed that citizens may express unfavorable attitude toward the police when the greater numbers of neighbors are harassed by the police.

Therefore, three external factors – community structural components, community crime problems, and negative experience of the police may undermine the accuracy of a new police control measure. Moreover, in regression model, the measure of police control cannot be independent without controlling these factors and demographic characteristics. Consequently, the residual of perception of the police after controlling individual level and community level of variables is used as genuine perception measure of the police in order to assess the ability of police agency on preventing crime and the ability of neighbors to solicit police resources without the impacts of external factors.

4.3 Perception of Policing, Social Ties, and Informal Social Control

Residents who perceive that the police provide them with proper resources in order to maintain social order and believe that the police do their job well - the police effectively prevent and/or control crime, provide proper responsiveness when an incident occurs, and are helpful in handling neighborhood problems - may show a favorable attitude toward the police in their neighborhood, than those who experience unsatisfactory or unfair police services. Residents' perception of policing may affect individual willingness to participate in crime prevention activities, either directly or indirectly, through increased community interactions. Silver and Miller (2004) shows that residents' satisfaction with the police has a substantial impact on residents' shared expectation for order. Kelling and Coles (1996) also show that subjective perceptions of police practices in communities are linked to residents' hope to live in a safe place. Also, the perception of police activities is strongly linked to residents' perceptions of institutional legitimacy (Triplett, Randy, & Ivan, 2003).

Triplett and his colleagues (2003) provide an elaborate explanation about the linkage between perception of the police and collective efficacy. They argue that residents' perception of the legitimacy of the local police agency has connections with crime rates directly and indirectly through neighborhood informal social controls. They suggest that when citizens become to perceive criminal justice agencies less legally this perception may prohibit or inhibit the bonds that thwart them from breaking the law. In addition, the pervasiveness of distrust of formal social control stemming from feelings of injustice may make individuals feel that participation in crime prevention activities is not supported by the larger community. Triplett and his colleagues (2003) state that

One central idea is at the root of predictions that neighborhood perceptions of institutions as illegitimate affect crime rates indirectly through neighborhood levels of social control. In a context of pervasive distrust of institutions (particularly public institutions like the police) stemming from feelings of injustice, individuals may not feel that their values are supported by the larger community. This may in turn affect the feeling that they have a right to intervene. They might also feel that their attempts at control will not be supported by the system. The reluctance to participate in control ranges from an unwillingness to supervise teens to an unwillingness to call the police (Triplett et al., 2003:449).

Advocators of the procedural justice perspective, consequently, believe the notion that neighborhood structural characteristics affect three levels of social organizations – private institutions (e.g. family, friendships, kinships), parochial institutions (e.g. school, civic league, church, business), public institutions (e.g. police, city services) through determining institutions' stability, resources, clarity of role, and interconnectedness. And then private and parochial institutions generate informal social control which utilizes informal surveillance, recognition of strangers, and direct and indirect intervention. At the same venue, public institutions may affect private and parochial social controls through effecting neighborhood perceptions of institutions as legitimate and also this legitimacy of public institutions affect cultural disorganization which is also resulted from structural components of community. Positive effects of police control on private and parochial control can be expected when the citizens perceive fairness of police service. Tyler and Wakslak (2004) argue that fairness is determined by the process-based criteria which include that “quality of decision making-perceived neutrality and

consistency, quality of treatment-being treated with dignity and respect, having one's rights acknowledged, and trustworthiness-believing that the authorities are acting out of benevolence and a sincere desire to be fair" (Tyler & Wakslak, 2004:255). Therefore, both the three levels of social controls and cultural disorganization may explain crime rates in neighborhoods (Triplett et al., 2003:443; Tyler & Wakslak, 2004).

Silver and Miller (2004) also provided a comprehensive explanation that linked perception of police services to community and social control. They argued that ordinary individuals prefer to "live in a safe and orderly environment but that their willingness to act informally to promote such an environment varies from place to place based in part on their perceptions of, and perception with, policing in the neighborhood" (Silver & Miller, 2004:558). Therefore, it is reasonable to hypothesize that resident who is generally satisfied with the police and their services will be more likely to feel a greater sense of empowerment to intervene in neighborhood crime and other problems (Silver & Miller, 2004).

Wells and his colleagues argue that residents holding favorable attitudes toward the police will be more likely to engage in crime prevention activities (Wells, Schafer, Varano, & Bynum, 2006). They found that there is a significant relationship between residents' perception of the police and residents' formal response of neighborhood problems. For instance, the findings showed that lower levels of satisfaction with the police significantly decrease residents' willingness to contact the police when the residents identify neighborhood problems.

Residents' perception of policing can also have associations with social ties. Neighbors who are very satisfied with police services in their neighborhood are more

likely to engage in conventional social interactions. Frequent neighboring and participation in community voluntary organizations will result from the perception of legitimacy of the police and safety. Lynch and his colleagues (2002) showed that communities' lower crime rates due to arrest may reduce residents' fear of crime and then increase social interaction. Ren and his colleagues (2006) find that the high confidence in the police increases residents' participation in COP programs. Similarly, residents who are satisfied with police services may be more likely to feel safer than those having lower satisfaction with the police. Individuals in these communities may actively participate in community organizations and interact with neighbors frequently. This positive perception will increase social interaction; it promotes a sense of community and encourages residents' need to intervene in community problems, including crime and disorder. However, this causal relationship has not been tested in previous studies. Therefore, the main purpose of this study is to examine the impact of residents' perception of policing in the community on social ties and informal social control.

Chapter 5. Research Overview and Hypotheses

5.1. Empirical Frameworks (Figure 1 to 5)

The primary purpose of this study, therefore, is to examine the impact of residents' perception of policing on social ties, social cohesion and informal social control. The effects of residents' perception of the police on social cohesion and informal social control can be direct and/or indirect. An indirect association is mediated by residents' social ties measured by neighboring and community organizational participation. To examine the impact of state control on social ties and collective efficacy, including social cohesion and informal social control, it is necessary to consider multilevel analyses. Neighborhood variables will be the structural characteristics of communities and community problems. Individual level variables are residents' perception of policing, social ties, and collective efficacy. Empirical frameworks for this dissertation are in the following Figures 1 to 5. In addition, research hypotheses are presented in Table 1.

In this study, crime rates, disorder, victimization, and police harassment in a community are considered as major indicators of disorganized society. Community structural characteristics – concentrated disadvantages and residential mobility – are perceived as primary generators of community problems in a neighborhood. Moreover, structural characteristics of communities, crime, victimization and disorder problems can also affect the level of residents' perception of policing in a neighborhood. Police harassment will negatively affect citizens' perception of the police. Kane (2003) has shown that socially declined communities promote a likelihood of police deviance, which will weaken residents' positive perception of policing. Sampson and Bartusch (1998)

have also shown that neighborhood contexts – high crime rates, immigrant concentration, and concentrated disadvantage – are key factors explaining neighborhood levels of perception of the police. Anderson (1999) argued that in disadvantaged neighborhoods, many residents are socially isolated and demonstrate a lower level of faith and trust in the police. Community levels of disorder and safety are also a substantial predictor of perception of the police (Reisig & Parks, 2000). The expectation of this model is that perception of the police as a new measure of police social control should be independent from these external factors and residents' individual characteristics since the researcher assumes that the levels of perception of the police are a primary outcome of police practices. It is reasonable to expect the large amount of unexplained variance of perception of the police to be attributed to police practices themselves. To measure this unexplained variance of perception of policing, it is necessary to extract a factor from the construct of perception of policing, by creating a new variable of perception of policing. As seen in Figure 5, the residuals of perception of policing, when the individual and community level of variables are considered, is an accurate measure of perception of policing. Individual levels of perception of the police may have an effect on residents' social interactions, such as neighboring and participation in community organizations. Residents' social interactions will mediate the impacts of perception of the police to social cohesion and informal social control. Directly, the perception of policing will also affect residents' perception of informal social control and social cohesion. As we discussed above, overall associations among variables are not conclusive. Some previous studies have shown that there are negative and/or positive associations among social ties, state control, community crime problems and social control. Nonetheless, research

hypotheses are presumably directional. Table 1 shows primary research questions and hypotheses in this study.

5.2. Significance of Study

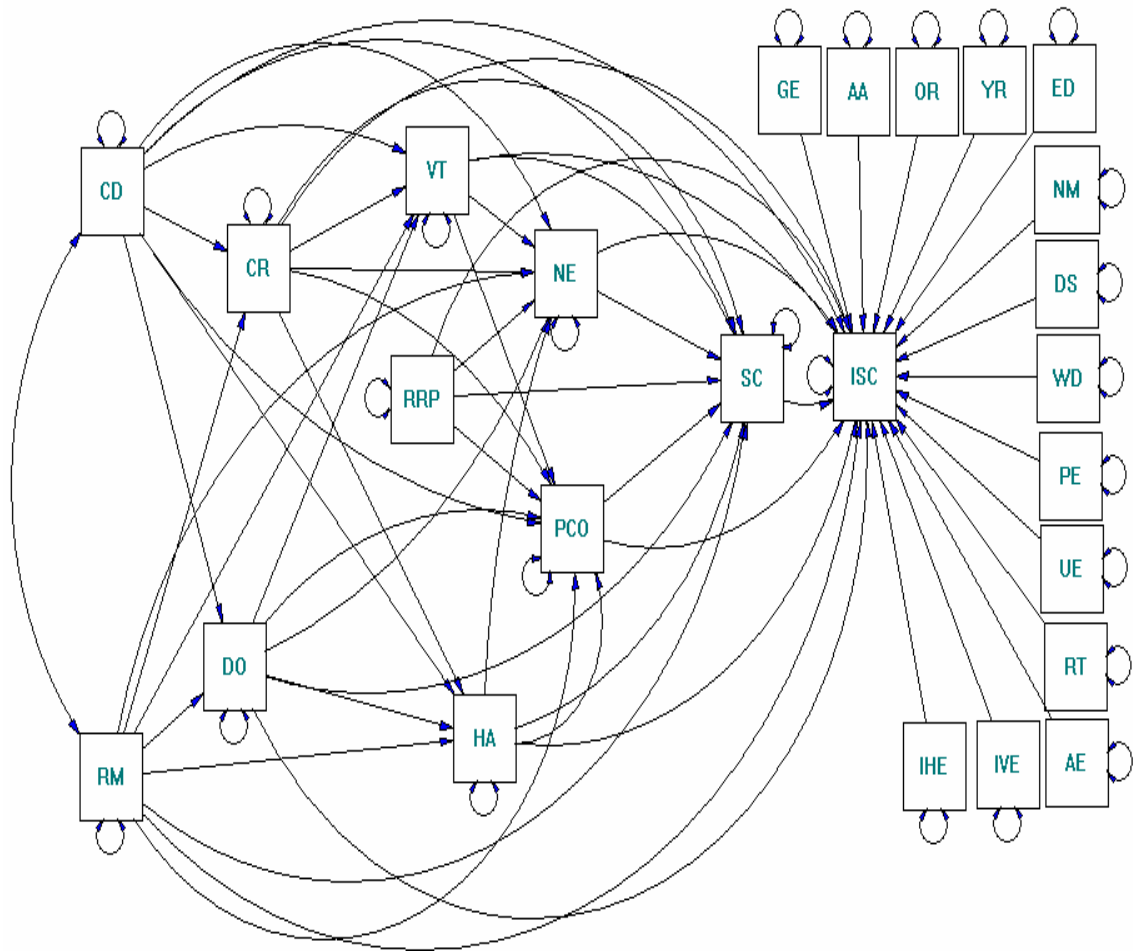
The expected theoretical contribution of this study is crucial. This research is unique in that it examines the effects of formal control on informal social control. Almost all police policies in U.S have been interested in direct reduction of crime and disorder in a society. Consequently, the roles of formal control in the study of social disorganization theory have been ignored for a long time. However, recent studies have shown that there are inter-mechanisms among formal control, informal social control, crime, disorder, and victimization. Specifically, this study will provide a hidden pathway between state control, social ties, and informal social control. Residents' perception, including satisfaction, trustiness, confidence, legitimacy, fairness, and accountability of police services may affect residents' daily lives. When the police become the confident service providers and peacekeepers in a neighborhood, residents will be more likely to frequently interact and participate in community organizations, be more likely to respect the value of social order, and be more likely to attach and share community values and norms. Finally, they will be more likely to be motivated to take a risk to intervening in community social problems.

This research will also show the reciprocal effect of neighborhood problems. Crime, victimization, police deviance, and disorder are outcomes of structural characteristics of social disorganization and simultaneously, criminal justice interventions. Community crime problems and the illegitimacy of the police will affect residents' social interactions

and collective efficacy either directly or indirectly. Structural equation models in this dissertation illustrate complex associations among variables.

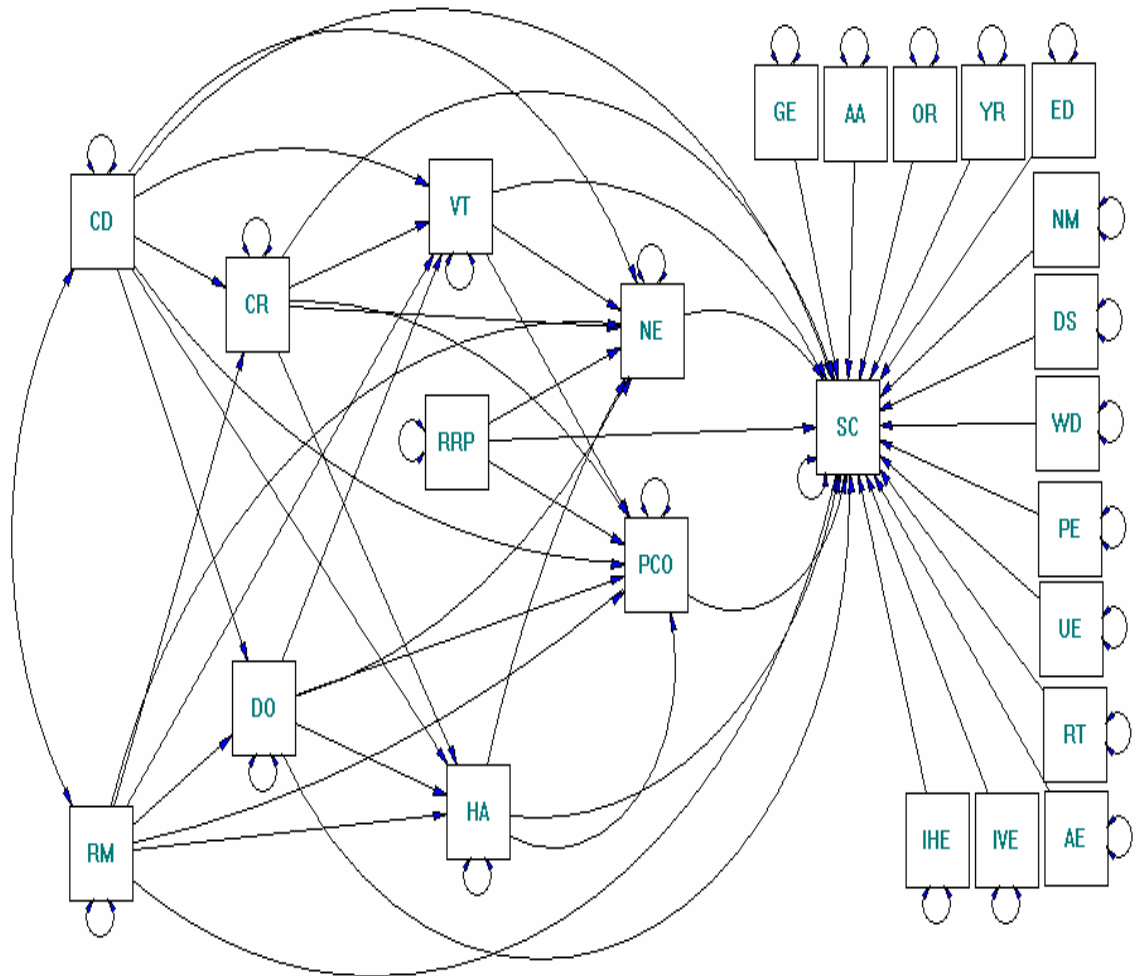
This dissertation also provides an improved understanding concerning the impact of residents' perception of police services in a neighborhood on residents' social interactions and private and parochial control. Contemporary policing is becoming more interested in providing unprejudiced services regardless of characteristics of individuals and communities and concerning the roles of cooperation of community members in handling neighborhood problems, including crime, drugs, and disorder. If criminal justice interventions strengthen the community's ability to maintain social order throughout residents' positive perception of policing, the lives of community entities will be substantially improved. The philosophy of community-oriented police can provide a theoretical possibility to achieve this result. U.S police departments should consider how to accomplish the improvement of relations between the police and community through community policing. Further efforts are also needed to test what the programs or the manners of police practices are better to generate residents' positive perception of policing.

Figure 1. Pathway Model of Informal Social Control



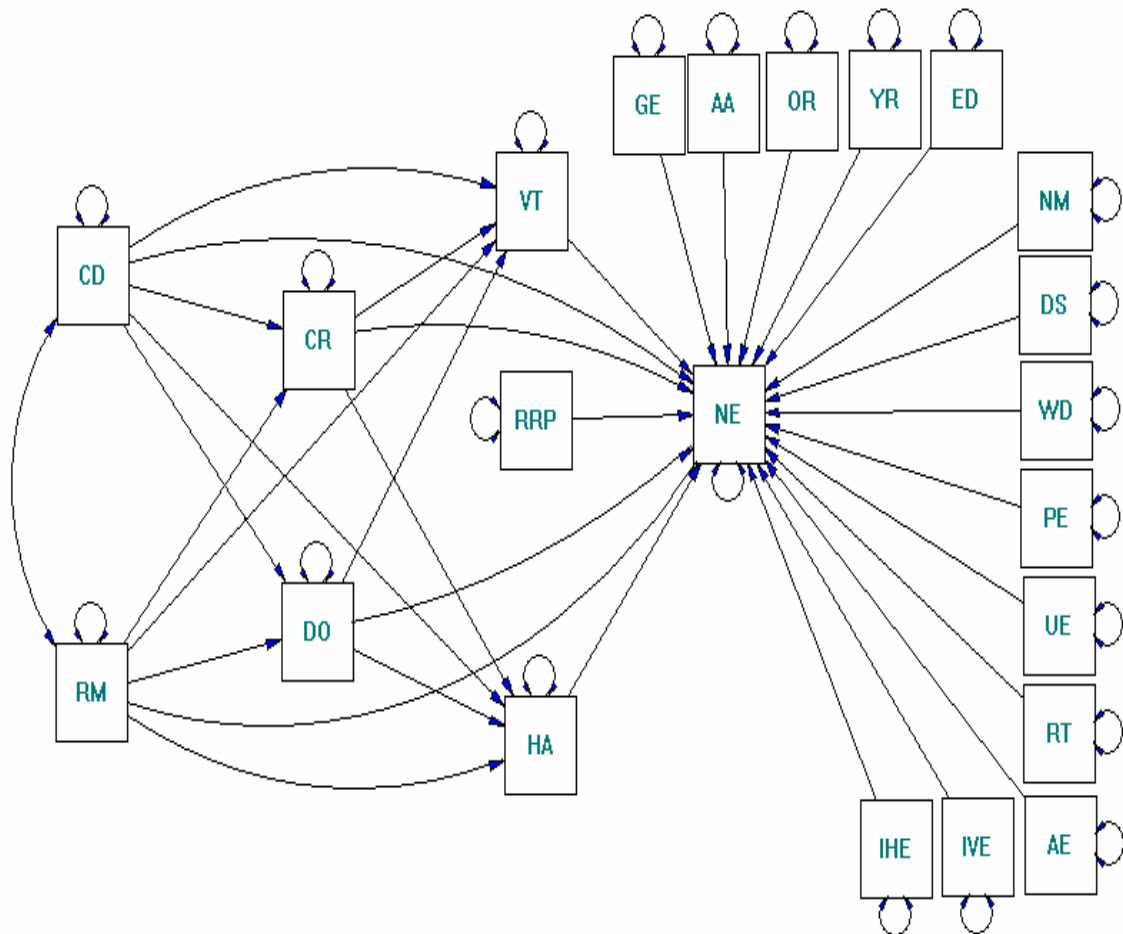
CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, VT = Victimization, Ha = Harassment by the police, RRP= Residual of Residents' Perception of Policing, NE=Residents' Neighboring, PCO= Participation in Community Organization, SC=Social Cohesion, ISC=Informal Social Control, GE= Gender, AA= African American, OR=Other Races, YR= Years of Residency, ED= Education, NM= Never Married, DS= Divorced or Single, WD= Widow, PE= Part-time Employment, UE= Unemployed, RT= Retired, AE= Age, IVE = Individual Victimization Experience, IHE = Individual Harassment Experience.

Figure 2. Pathway Model of Social Cohesion



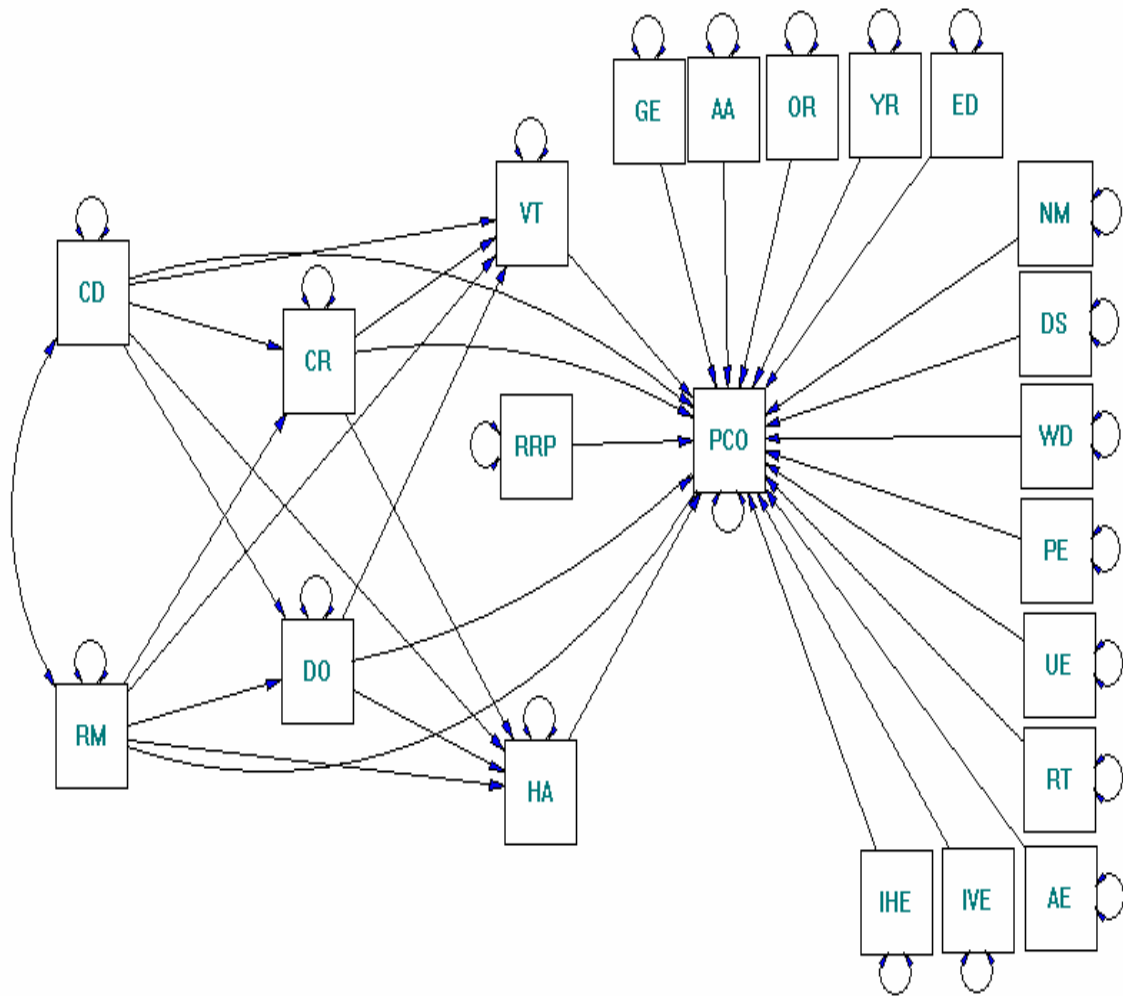
CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, VT = Victimization, Ha = Harassment by the police, RRP= Residual of Residents' Perception of Policing, NE=Residents' Neighboring, PCO= Participation in Community Organization, SC=Social Cohesion, GE= Gender, AA= African American, OR=Other Races, YR= Years of Residency, ED= Education, NM= Never Married, DS= Divorced or Single, WD= Widow, PE= Part-time Employment, UE= Unemployed, RT= Retired, AE= Age, IVE = Individual Victimization Experience, IHE = Individual Harassment Experience.

Figure 3. Pathway Model of Neighboring



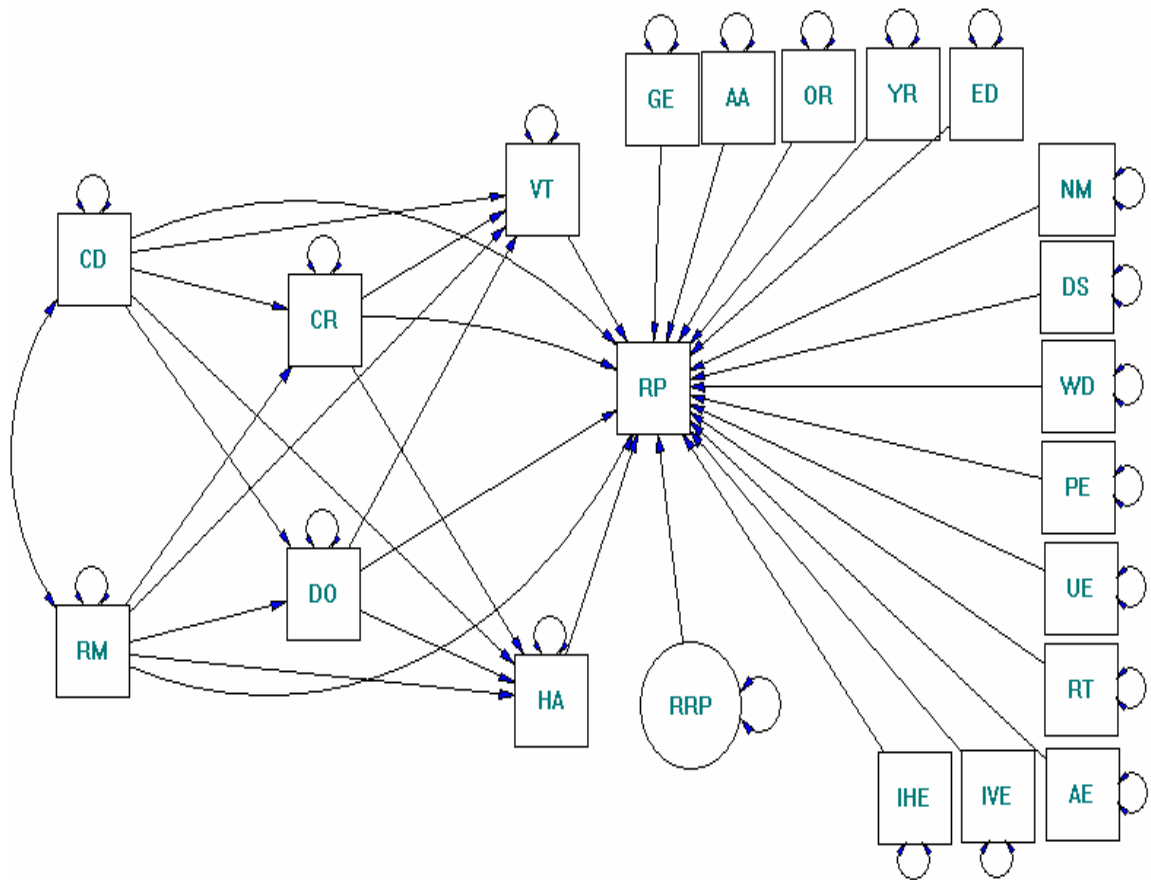
CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, VT = Victimization, Ha = Harassment by the police, RRP= Residual of Residents' Perception of Policing, NE=Residents' Neighboring, GE= Gender, AA= African American, OR=Other Races, YR= Years of Residency, ED= Education, NM= Never Married, DS= Divorced or Single, WD= Widow, PE= Part-time Employment, UE= Unemployed, RT= Retired, AE= Age, IVE = Individual Victimization Experience, IHE = Individual Harassment Experience.

Figure 4. Pathway Model of Participation in Community Organizations



CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, VT = Victimization, Ha = Harassment by the police, RRP= Residual of Residents' Perception of Policing, PCO= Participation in Community Organization, GE= Gender, AA= African American, OR=Other Races, YR= Years of Residency, ED= Education, NM= Never Married, DS= Divorced or Single, WD= Widow, PE= Part-time Employment, UE= Unemployed, RT= Retired, AE= Age, IVE = Individual Victimization Experience, IHE = Individual Harassment Experience.

Figure 5. Pathway Model of Residents' Perception of the Police



CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, VT = Victimization, Ha = Harassment by the police, RP= Residents' Perception of Policing, RRP= Residual of Residents' Perception of Policing, NE=Residents' Neighboring, PCO= Participation in Community Organization, CE=Collective Efficacy, GE= Gender, AA= African American, OR=Other Races, YR= Years of Residency, ED= Education, NM= Never Married, DS= Divorced or Single, WD= Widow, PE= Part-time Employment, UE= Unemployed, RT= Retired, AE= Age, IVE = Individual Victimization Experience, IHE = Individual Harassment Experience.

Table 1. Research Questions and Hypotheses**1. Do Community Structural Components Matter on Crime, Disorder, Victimization, Harassment, Residents' Perception of Policing, Social Ties, and Social Control?****Do Crime and Disorder Differ Across Community Structural Components?**

- The greater the residential mobility in a neighborhood the higher the crime rates.
- The greater the concentrated disadvantage in a neighborhood the higher the crime rates
- The greater the residential mobility in a neighborhood the greater likelihood that residents will witness disorder.
- The greater the concentrated disadvantage in a neighborhood the greater likelihood that residents will witness disorder.

Do the Levels of Victimization and Harassment Differ Across Community Structural Components?

- The greater the residential mobility in a neighborhood the greater likelihood that residents will be victimized by crime.
- The greater the concentrated disadvantage in a neighborhood the greater likelihood that residents will be victimized by crime.
- The greater the residential mobility in a neighborhood the greater likelihood that residents will be harassed by the police.
- The greater the concentrated disadvantage in a neighborhood the greater likelihood that residents will be harassed by the police.

Do Community Structural Components Matter on Social Ties and Collective Efficacy?

- The greater the residential mobility in a neighborhood the less likelihood that residents will interact with their neighbors.
- The greater the residential mobility in a neighborhood the less likelihood that residents will interact with their neighbors.
- The greater the concentrated disadvantage in a neighborhood the less likelihood that residents will interact with their neighbors.
- The greater the residential mobility in a neighborhood the less likelihood that residents will participate in voluntary community organizations.
- The greater the concentrated disadvantage in a neighborhood the less likelihood that residents will participate in voluntary community organizations.
- The greater the residential mobility in a neighborhood the less likelihood that residents will have robust social cohesion.
- The greater the concentrated disadvantage in a neighborhood the less likelihood that residents will have robust informal social control.
- The greater the residential mobility in a neighborhood the less likelihood that residents will have robust social cohesion.
- The greater the concentrated disadvantage in a neighborhood the less likelihood that residents will have robust informal social control.

Do Community Structural Components Determine Residents' Perception of Policing?

- The greater the residential mobility in a neighborhood, the greater likelihood that residents will have a negative perception of police services
- The greater the concentrated disadvantage in a neighborhood, the greater likelihood that residents will have a negative perception of police services.

2. Do Crime and Disorder Have Effects on Victimization, Harassment, Residents' Perception of Policing, Social Ties, and Collective Efficacy?

What Are the Associations between Crime Problems (crime and disorder) and Social Ties?

- The higher the crime rates in a neighborhood, the less likelihood that residents will interact with their neighbors.
- The higher the crime rates in a neighborhood, the less likelihood that residents will participate in voluntary community organizations.
- The greater disorder in a neighborhood, the less likelihood that residents will interact with their neighbors.
- The greater disorder in a neighborhood, the less likelihood that residents will participate in voluntary community organizations.

What Are the Associations between Crime Problems (crime and disorder) and Collective Efficacy?

- The higher the crime rates in a neighborhood, the less likelihood that residents will have robust social cohesion.
- The greater disorder in a neighborhood, the less likelihood that residents will have robust informal social control.
- The higher the crime rates in a neighborhood, the less likelihood that residents will have robust social cohesion.
- The greater disorder in a neighborhood, the less likelihood that residents will have robust informal social control.

What Are the Associations between Crime Problems (crime and disorder) and Residents' Perception of Policing?

- The higher the crime rates in a neighborhood, the greater likelihood that residents will have a negative perception of police services.
- The greater the disorder in a neighborhood, the greater likelihood that residents will have a negative perception of police services.

What Are the Associations between Crime Problems (crime and disorder) and Residents' Victimization?

- The higher the crime rates in a neighborhood, the greater likelihood that residents will be victimized in communities.
- The greater the disorder in a neighborhood, the greater likelihood that residents will be victimized in communities.

What Are the Associations between Crime Problems (crime and disorder) and Residents' Harassment by the police?

- The higher the crime rates in a neighborhood, the greater likelihood that residents will be harassed by the police in communities.
- The greater the disorder in a neighborhood, the greater likelihood that residents will be harassed by the police in communities.

What are the Indirect Effects of Crime Problems (crime and disorder) on collective efficacy through constraining social interactions?

- The higher the crime rates in a neighborhood, the less the participation in voluntary organizations, the greater likelihood that residents will have lower level of social cohesion.
- The higher the crime rates in a neighborhood, the less the participation in voluntary organizations, the greater likelihood that residents will have lower level of informal social control.
- The higher the crime rates in a neighborhood the less the interactions among neighbors, the greater likelihood that residents will have lower level of informal social control.
- The higher the crime rates in a neighborhood the less the interactions among neighbors, the greater likelihood that residents will have lower level of informal social control.

3. Do Residents' Experiences (Victimization and Harassment) Matter in their Perception of the Police?

The greater the residents' victimization in communities, the greater the residents will show negative perception of police services in their neighborhood.

The greater the residents' harassed by the police in communities, the greater the residents will show negative perception of police services in their neighborhood.

4. Does Residents' Perception Matter Social Ties and Collective Efficacy?

What are the Relationships between Social ties and Residents' Perception of Policing?

- The greater the residents' positive perception of police services in their neighborhood, the greater the residents will interact with their neighbors.
- The greater the residents' positive perception of police services in their neighborhood, the greater the residents will participate in voluntary community organizations.

What are the Relationships between Collective Efficacy and Residents' Perception of Policing?

- The greater the residents' positive perception of police services in their neighborhood, the greater the residents will have high level of social cohesion.
- The greater the residents' positive perception of police services in their neighborhood, the greater the residents will have high level of informal social control.

What are the Relationships between Informal social control and Social Interactions?

- The greater the frequent of residents interactions amongst their neighbors; the greater likelihood that residents will have a high level of social cohesion.
- The greater the frequent of the residents participating in voluntary community organizations; the greater likelihood that residents will have a high level of informal social control.
- The greater the frequent of residents interactions amongst their neighbors; the greater likelihood that residents will have a high level of social cohesion.
- The greater the frequent of the residents participating in voluntary community organizations; the greater likelihood that residents will have a high level of informal social control.

What are the Indirect Effects of Residents' Perception of Policing on Informal Social Control through encouraging Social Interactions?

- The greater the residents' positive perception of policing, the greater the participation in voluntary organizations, and the higher level of social cohesion.
- The greater the residents' positive perception of policing, the greater the interactions among neighbors, the higher level of informal social control.

What are the Relationships between Social Cohesion and Informal Social Control?

- The greater the solidarity amongst their neighbors, the greater likelihood that residents will have a high level of informal social control.

5. What Are Other Indirect Effects?

- Do Community Structural Components Have Indirect Effects On Residents' Perception of Policing Through Increasing Crime and Disorder?
- Do Community Structural Components Have Indirect Effects On Social Interactions Through Constraining Residents' Positive Perception of Policing and Increasing Crime and Disorder?
- Do Community Structural Components Have Indirect Effects On Social Interactions Through Constraining Residents' Positive Perception of Policing and Social Interactions and Increasing Crime and Disorder?

Chapter 6. Research Method and Analysis

6.1. Data and Sample

This dissertation examines the roles of residents' subjective evaluation of the police on social ties, social cohesion, and informal social control. Recent theoretical and methodological developments in community research allow for testing this multilevel explanatory model of social ties, social cohesion, and informal social control (Bursik & Grasmick, 1993; Raudenbush & Bryk, 2002). The data used in this study have been drawn from a multi-method collection of primary data sources. The overall research data are publicly available secondary data including individual surveys, Census data, and police records. Since this study examines the variations of social ties and collective efficacy depending on residents' perception of policing across neighborhoods, multilevel data are needed. In addition, the data sets used in this dissertation need to concurrently reflect the proxies of community and individual properties. Consequently, neighborhood-based research data are needed to accomplish the goals of this dissertation.

The selection of adequate secondary data is aligned with the criteria for data sources, which include 1) individual survey data with information about perception of policing, social ties, informal social control, individuals' demographic variables (e.g. gender, race, age, years of residency, marital status, education, annual income), 2) Census information to measure community structural components (e.g. percentage of blacks, percentage of female headed households, percentage of owned houses), 3) official crime records to measure crime rates in a neighborhood (e.g. total counts of homicide, robbery, burglary,

rape, and so forth), 4) large numbers of sample neighborhoods to examine the impacts of communities, and 5) large numbers of persons in each neighborhood.

Data for this dissertation, finally, have been found in the process of searching the website of the Inter-university Consortium for Political and Social Research (ICPSR). The title of the data is “Informal Social Control of Crime in High Drug Use Neighborhoods in Louisville and Lexington, Kentucky, 2000” researched by Warner (2003). Initially, this study was to explore the associations between informal social control and cultural disorganization, which refers to weakened conventional culture and value heterogeneity. The data include three types of information: (1) the data of census block groups in 1990 and limited data of the 2000 census; (2) survey data from a telephone survey and face-to-face interviews of Lexington and Louisville residents in 2000; (3) police crime data from 1997 to 1999 and police arrest data in 1999.

The cities of Lexington and Louisville are major metropolitan areas in Kentucky. The population of Louisville was 256,231 and Lexington population was 260,512 in the 2000 Census. Lexington population increased 7.5% from 1990 to 2000 and Louisville Population decreased 5% from 1990 to 2000. The decrease of the Louisville population was due to extension of the Louisville-Jefferson County metropolitan area, whose estimated population was 701,500 in 2006. 21.6% of the Lexington population and 8.2% of the Louisville population are living in families below poverty level.

In Warner’s study, 66 neighborhoods were selected by a non-proportional stratified sampling of block groups. The unit of analysis, therefore, is block groups since “they are relatively small, homogenous areas appropriate for the examination of community dynamics” (Warner, 2003: 81). The 66 neighborhoods were not randomly selected in two

cities since the main purpose of this study was to compare drug and non-drug use neighborhoods. Therefore, Warner assures sufficient “drug use” neighborhoods. All sample neighborhoods, however, have adequate distributions of racially mixed, white dominant, and minority predominant, individual households that were selected randomly (Warner, 2003).

In each neighborhood, the researcher collected 35 randomly selected individual households by telephone surveys (75%) and face-to face interviews (25%) since some residents did not have telephones. Cover letters explaining the aims of the study were mailed to sample households in Louisville on February 10, February, 16, February 22, and February, 25, 2000 and in Lexington on April 1, April 5, and April 10, 2000. Letters informed recipients that survey respondents would be paid 15 dollars for participating in the study. Individual household data were collected by one household member 18 years of age or older residing at the sampled address. Around 2,300 ($N = 2,309$) households completed their interviews and were used as a final sample for the analysis in the original study. In household surveys and interviews, respondents were asked to report their interaction with neighbors, perception of policing, criminal incidents and victimization in their neighborhoods in the last 6 months, cohesion and informal social control, perception of disorder in their neighborhoods, and demographic variables including gender, age, race, and marital status.

6.2. Study Variables

Variables used in this dissertation are derived from three sources such as household survey, 2000 Census, and police official recode. The aggregated Census data is used to measure community structural characteristics including concentrated disadvantage and community residential instability. Police official data reflect community crime problem. Household survey provides information about individual level of variables such as demographic characteristics of respondents, social ties, social cohesion, informal social control, and perception of the police. The aggregated information of household survey also supplies community level disorder, victimization, and police deviance.

6.2.1. Individual Level Variables

6.2.1.1. Dependent Variables

Two main dependent variables in this study are social ties and collective efficacy. Specifically, social ties are measured by residents' general social exchanges with neighbors and participation in community organizations, while collective efficacy can be measured by the composite of social cohesion and informal social control (Sampson et al, 1997).

First, in this dissertation, the primary dependent variable is collective efficacy. Collective efficacy is composed of two domains, the degree of cohesion and trust of residents, and a "willingness to intervene on behalf of the common good" (Sampson et al., 1997:918). Factorial analysis will show the availability of aggregating social cohesion and informal social control. If these two components are highly correlated, it is plausible to composite. If not, two concepts will be separately used. Twelve items are used to

measure social cohesion and informal social control. More precisely informal social control is measured by asking residents about the likelihood that their neighbors could be counted on to take action if: children were spray painting graffiti on a local building, showing disrespect to an adult, a fight broke out in front of their house, someone was breaking into your house in plain sight, someone was trying to sell drugs to a neighborhood child in plain sight, and someone was trying to sell drugs to an adult in plain sight (very likely =1, somewhat likely =2, somewhat unlikely =3, or very unlikely=4).

Social cohesion/trust is measured by six items. Respondents were asked how strongly they agreed to the following: people in their neighborhood care about the neighborhood, respect others' property, take an interest in the welfare of the neighborhood children, generally get along with each other, can be trusted, and share the same values (strongly agree =1, somewhat agree =2, somewhat disagree =3, strongly disagree =4). Sampson and his colleagues (1997) state that social cohesion and informal social control are strongly correlated since "the collective willingness to intervene in the neighborhood is enhanced under conditions of mutual trust and cohesion" (Sampson & Raudenbush, 1999: 620). Therefore, Sampson and his colleagues (1997) suggest that two concepts are combined and create a more parsimonious measure of collective efficacy. If informal social control and social cohesion show a consistent positive relationship together, it is necessary to combine these two concepts. Therefore, twelve items of those two concepts will be factor-loaded. Since the higher scores of social cohesion and informal social control indicate a lower willingness to intervene in community problems and solidarity,

the interpretation of statistical results will be complicated. Therefore, the scales of items for social cohesion and informal social control are reversed.

Social ties are measured by two components of residents' social interactions – neighboring and participation in community organizations. Traditional operationalization of social ties has been extremely limited (Bellair, 1997). Many researchers have used the number of relatives and friends in their neighborhoods, the frequency of visiting neighbors' houses, and frequency of participation in community organizations. Bellair (1997) argues that infrequent interactions among neighbors are common in urban neighborhoods. Frequencies of social interactions are not sufficient to activate informal social control (Morenoff et al., 2001; Sampson, 2002). Therefore, the intensity of social ties or solidarity is important. However, this dissertation assumes that social ties and interactions are objective, while social control in community is affectional concept. Therefore, this dissertation uses the frequency of neighboring and the frequency of participating in community organizations as measures of social ties. And then it is possible to examine the impact of social ties, per se, on collective efficacy. Since social interactions and voluntary participation in community organizations are residents' daily activities, residents' community organizational participation is not necessary to be limited to crime prevention activities. The more frequent conventional activities there are among neighbors, the stronger social cohesion and trust will be achieved and then informal social control will be activated.

Residents' neighboring, therefore, is measured by six items asking, “how often do you talk to someone in the neighborhood at their house or go to their house for a meal, to play cards, watch TV, or talk; borrow or exchange things with neighbors such as food,

recipes, tools or other equipment; ask neighbor for help, like getting your car started, getting a ride with them, or asking them to watch; talk about personal problems you or they are having; go out for an evening with someone from the neighborhood to a movie, sports event, for a drink, or something else?; and about stores and sales, programs for neighborhood kids, church, activists, and so forth (about once a day=1, about once a week =2, about once a month=3, several times a year =4, about once a year =5, never =6).” The scales of items for residents’ neighboring also need to be reversed since a low score of neighboring indicates higher frequency of interaction among residents.

Residents’ participation in community organizations is measured by the number of times each person attends any neighborhood based groups or organizations, such as neighborhood churches, PTAs, neighborhood associations, neighborhood watch group, political associations, etc. during the last six months.

6.2.1.2. Independent Variables in Individual Level

This study use residents’ subjective perception of police services in a neighborhood as a primary measure of police social control. Residents’ perception of the police is measured by asking the respondents about their perception of “how the police play an important role in preventing crime in this neighborhood, the police do a good job in responding to people in this neighborhood after they have been victims of a crime, and police are generally helpful when dealing with people in this neighborhood (strongly agree=1, somewhat agree=2, somewhat disagree=3, and strongly disagree=4).” Since the scales of items for residents’ perception of policing, all of items’ value is reversed and then the higher value of this variable refers to the higher level of perception of the police.

After controlling demographic characteristics, community structural components, and community crime problems, a residual of perception of the police is used as a true measurement of police state control. Previous studies (e.g. Silver & Miller, 2004; Velze, 2000) have treated the measure of police control as a community level variable by using aggregated scores of respondents in a community. Although police social control seems being treated as a community level, this dissertation argues that police social control is a part of community processes, which are measured in the individual level. The first justification is because police social control in the individual level may be better to predict the individual level of community processes, including social interactions, social ties, and informal social control. Another argument is that the aggregated police social control in the community level may show small between-variations among communities, while the individual level of police social control will show larger within-variations among residents in a community. Therefore, this dissertation treats the measurement of police social control as an individual level variable.

Residents' experiences of victimization and harassment are used as supplemental measures of community victimization and police deviance in individual level. To measure residents' negative experiences from crime and the police, residents are asked their experiences by answering the questions which are "thinking back over the last three months, have you or anyone in your household been a victim of a crime" and "have you been harassed by the police (1=No, 2=Yes)."

6.2.2. Community Level Variables

6.2.2.1. Community Structural Components

Traditional measures of community structural characteristics were poverty, heterogeneity, and residential instability. However, recent studies have developed a new comprehensive measure, called concentrated disadvantage. Many researchers believe that concentrated disadvantage is an undermining factor of informal social controls (Bellair, 2000; Sampson et al., 1997; Morenoff et al., 2001). To measure the concentrated disadvantage in a neighborhood, Sampson and his companions (1997) used six items from Census data – the percentage of families below poverty line, the percentage of families on public assistance, the percentage of female-headed families, the percentage of unemployed people in a neighborhood, the percentage of people less than age 18, and the percentage of black population – in order to measure the level of concentrated disadvantage. Because Kentucky data include the 1990 Census to gauge community structural characteristics and the survey data was collected in 2000, there is a ten-year gap. Consequently, the 1990 Census may not provide accurate aspects of block groups. An alternative way to use Census data is to use the 2000 Census. However, the original data collected from Warner only provide limited information about the 2000 Census. In addition, this data does not include geographical identification numbers of block groups since Warner's study was anonymous. The author, therefore, directly contacted Dr. Warner in order to inquire about the availability of the 2000 Census data since she used these data in recent article (Warner, 2007) in *Criminology*. Finally, in this dissertation the 2000 Census data are used to measure community structural components – concentrated disadvantage and residential mobility. Kentucky data for the 2000 Census includes five

items of concentrated disadvantages such as the percentage of blacks in a neighborhood, the percentage of female-head household with a child, the percentage of below poverty line, the percentage of public assistance, and the percentage of less than high school. Factorial analysis is used to verify this concept and the standardized score of community characteristics is used.

The second component of structural characteristics of community is residential mobility. Many researchers have tested the impacts of residential instability on crime (Bellair, 2000; Kasarda & Janowitz, 1974; Sampson et al., 1997). This construct is often measured by the number of people in same house in 1995 and the number of owner-occupied housing units. However, in this dissertation the opposite items are used – the percentage of people in different houses in 1995 and the percentage of renters in 2000. The combination of these two items is used to measure residential instability in a neighborhood.

6.2.2.2. Community Crime Problems and Police Harassment

Community crime problems (e.g. crime rates, victim rates, disorder) in a community are important indicators of social disorganization. Although the available data include all categories of UCR-based criminal incidents - homicides, assaults, rapes, robberies, burglaries, auto theft, larcenies, shoplifting, and arsons, the distribution of homicides, rapes, and arson is infrequently occurred around entire communities. Therefore, community crime is measured by total counts of six violent and property crimes - assaults, robberies (street and commercial), burglaries (residential and business), theft (auto theft and moped theft), larcenies, and shoplifting. These six violent and property crimes

reported to police within each block group during the year 1999, dividing by the corresponding total block group population and multiplied by 1,000. This measure indicates violent and property crime rate in a community for per 1,000 residents. Since the distribution of crime rate per 1,000 residents is significantly skewed, the log transformation is adopted (Warner & Rountree, 1997).

Community disorder is measured by eleven items of physical and social disorder. Physical disorder is measured by the proportion of respondents who have “very often” seen litter, broken street lights, and abandoned cars in a neighborhood. Social disorder is measured by the proportion of respondents who have “very often” seen teenagers hanging out, people drunk in public places, like streets, parks, or playgrounds, people buying or selling drugs, people used drugs, and people drinking in public and “very often” heard noisy parties, loud arguments, and people using foul language. Factorial analysis is used to clarify whether these two concepts are separated. Physical disorder and social disorder may combine to indicate disorder in his neighborhood. The z-score of disorder is calculated and used for model estimation.

Community crime victimization and police harassment is measured by the proportion of respondents who had been victim of crime in last 3 months and who were harassed by the police in last 3 months. The z-score of each variable is also calculated.

6.2.3. Control Variables

Residents’ demographic variables are used as control variables, including gender (male=1, female=2), age, year of residency, educational level (from less than high school to graduate school), race (White=1, Black=2, Other=3), marital status (Married=1, Single,

never married=2, Separated or Divorced=3, Widowed=4), and employment status (Full time=1, Part time=2, Retired=3, Unemployed=4). Null variables are created across race, marital status, and employment status. Whites are a reference variable for race, while fulltime employees are a reference variable for employment status. In marital status, married people are a reference variable.

6.3 Analysis Plan

Since the model to predict the impact of community residents' perception of the police on residents' collective efficacy and social interactions is complex, it is necessary to perform multilevel analyses. In addition, because this model attempts to test both direct and indirect effects of perception of the police services in a community on social interactions and collective efficacy, a system of equations is needed. Moreover, the data includes not only information on individuals in a neighborhood, but also information about the neighborhoods themselves. In this situation, the use of OLS regression with the nested data may violate some assumptions of this statistical technique. For example, OLS regression model assumes the independent observation of variables and a constant variance on the variable within neighborhoods. However, the nested data using OLS regression may violate these assumptions. The violation of these assumptions may bias standard errors for each coefficient, which could make it difficult to believe the accuracy of OLS analyses (Lynch et al., 2002). As a resolution of these problems, Bryk and Raudenbush (1992) have recently suggested Hierarchical Linear Models (HLM), which are useful to "simultaneously estimate within neighborhood and between-neighborhood equations (Sampson et al., 1999, p.640)." Lynch and his colleagues (2002) state "these

methods can produce superior estimates of coefficients and robust standard errors that will be unbiased even when the assumptions required by OLS are violated” (Lynch et al., 2002: 22). Therefore, two level multivariate HLM is used to examine the impact of residents’ perception of policing in their neighborhoods on collective efficacy and social interactions.

6.3.1. Regression Equations of Hierarchical Linear Models

6.3.1.1. Regression Equations for Residents’ Perception of the Police

Because of measurement issues, the equation of residents’ perception of policing needs systemic considerations. First, a regression equation of residents’ perception of the police is generated. In this model, residents’ demographic variables and individual experiences of victimization and harassment are included in the level 1 model.

$$\text{Equation 1: Residents' Perception of the Police} = B_{0k} + \sum_{q=1}^{14} B_q * X_{qik} + \epsilon_{ik}$$

Where B_{0k} is the intercept; X_{qik} is the individual demographic predictors associated with respondent i in neighborhood k ; and B_q is the coefficient of X_{qik} on residents’ perception of the police. The residual term is ϵ_{ik} . In this model, fourteen individual level of variables are used – gender, age, educational level, never married, divorced or separated, widow, part time, retired, unemployed, black, other races, year of residency, victimization experience, harassment experience.

Equation 2: Residents' Perception of the Police

$$\begin{aligned}
B_{0k} = & \theta_{00} + \theta_{01}*(\text{Concentrated Disadvantage}) + \theta_{02}*(\text{Residential Stability}) \\
& + \theta_{03}*(\text{Community Disorder}) + \theta_{04}*(\text{Community Crime}) + \theta_{05}*(\text{Victimization}) \\
& + \theta_{06}*(\text{Police Harassment}) + U_{0j}
\end{aligned}$$

Where θ_{00} is the constant of the community level model, θ_{01} to θ_{06} are the regression coefficients of the impacts of concentrated disadvantage, residential stability, community disorder, community crime, victimization, and police harassment. U_{0j} is an error term of the community level model.

Equation 3: Residents' Perception of the Police (using the residual from equation 1)

$$\text{A New Measure of Police Control} = U_{0j} + \epsilon_{ik}$$

After predicting residents' perception of the police in this HLM model, a residual of this variable is calculated and used as a new measure of police social control.

6.3.1.2. Regression Equations for Social Interactions**6.3.1.2.1. Regression Equation for Neighboring**

$$\text{Equation 1: Neighboring} = B_{0k} + \sum_{q=1}^{15} B_q * X_{qik} + \epsilon_{ik}$$

Where B_{0k} is the intercept; X_{qik} is the individual level predictor associated with respondent i in neighborhood k ; and B_q is the coefficient of X_{qik} on informal social control. The error term is ϵ_{ik} . In this model, fifteen individual variables are used – gender,

age, educational level, never married, divorced or separated, widow, part time, retired, unemployed, black, other races, year of residency, perception of the police, victimization, and harassment.

Second, the community-level model is

$$B_{0k} = \theta_{00} + \theta_{01}*(\text{Concentrated Disadvantage}) + \theta_{02}*(\text{Residential Stability}) \\ + \theta_{03}*(\text{Community Disorder}) + \theta_{04}*(\text{Community Crime}) + \theta_{05}*(\text{Victimization}) \\ + \theta_{06}*(\text{Police Harassment}) + U_{0j}$$

Where θ_{00} is the constant of the community level model, θ_{01} to θ_{06} are the regression coefficients of the impacts of concentrated disadvantage, residential stability, community disorder, community crime, victimization, and police harassment. U_{0j} is an error term of the community level model.

6.3.1.2.2. Regression Equation for Participation in Community Organizations

Equation 1: $\text{Participation} = B_{0k} + \sum_{q=1}^{15} B_q * X_{qik} + \epsilon_{ik}$

Where B_{0k} is the intercept; X_{qik} is the individual level predictor associated with respondent i in neighborhood k ; and B_q is the coefficient of X_{qik} on informal social control. The error term is ϵ_{ik} . In this model, fifteen individual variables are used – gender, age, educational level, never married, divorced or separated, widow, part time, retired, unemployed, black, other races, year of residency, perception of the police, victimization, and harassment.

Second, the community-level model is

$$B_{0k} = \theta_{00} + \theta_{01}*(\text{Concentrated Disadvantage}) + \theta_{02}*(\text{Residential Stability}) \\ + \theta_{03}*(\text{Community Disorder}) + \theta_{04}*(\text{Community Crime}) + \theta_{05}*(\text{Victimization}) \\ + \theta_{06}*(\text{Police Harassment}) + U_{0j}$$

Where θ_{00} is the constant of the community level model, θ_{01} to θ_{06} are the regression coefficients of the impacts of concentrated disadvantage, residential stability, community disorder, community crime, victimization, and police harassment. U_{0j} is an error term of the community level model.

6.3.1.3 Regression Equation for Collective Efficacy

$$\text{Social Cohesion} = B_{0k} + \sum_{q=1}^{17} B_q * X_{qik} + \epsilon_{ik}$$

Where B_{0k} is the intercept; X_{qik} is the individual level predictor associated with respondent i in neighborhood k ; and B_q is the coefficient of X_{qik} on informal social control. The error term is ϵ_{ik} . In this model, seventeen individual variables are used – gender, age, educational level, never married, divorced or separated, widow, part time, retired, unemployed, black, other races, year of residency, perception of the police, victimization, harassment, neighboring, and participation in community organizations.

Second, the community-level model is

$$\begin{aligned}
B_{0k} = & \theta_{00} + \theta_{01}*(\text{Concentrated Disadvantage}) + \theta_{02}*(\text{Residential Stability}) \\
& + \theta_{03}*(\text{Community Disorder}) + \theta_{04}*(\text{Community Crime}) + \theta_{05}*(\text{Victimization}) \\
& + \theta_{06}*(\text{Police Harassment}) + U_{0j}
\end{aligned}$$

Where θ_{00} is the constant of the community level model, θ_{01} to θ_{06} are the regression coefficients of the impacts of concentrated disadvantage, residential stability, community disorder, community crime, victimization, and police harassment. U_{0j} is an error term of the community level model.

$$\text{Informal Social Control} = B_{0k} + \sum_{q=1}^{18} B_q * X_{qik} + \epsilon_{ik}$$

Where B_{0k} is the intercept; X_{qik} is the individual level predictor associated with respondent i in neighborhood k ; and B_q is the coefficient of X_{qik} on informal social control. The error term is ϵ_{ik} . In this model, seventeen individual variables are used – gender, age, educational level, never married, divorced or separated, widow, part time, retired, unemployed, black, other races, year of residency, perception of the police, victimization, harassment, neighboring, participation in community organizations, social cohesion.

Second, the community-level model is

$$\begin{aligned}
B_{0k} = & \theta_{00} + \theta_{01}*(\text{Concentrated Disadvantage}) + \theta_{02}*(\text{Residential Stability}) \\
& + \theta_{03}*(\text{Community Disorder}) + \theta_{04}*(\text{Community Crime}) + \theta_{05}*(\text{Victimization}) \\
& + \theta_{06}*(\text{Police Harassment}) + U_{0j}
\end{aligned}$$

Where θ_{00} is the constant of the community level model, θ_{01} to θ_{06} are the regression coefficients of the impacts of concentrated disadvantage, residential stability, community disorder, community crime, victimization, and police harassment. U_{0j} is an error term of the community level model.

6.3.2. Multilevel Pathway Models

Additional statistical technique used in this dissertation is SEM since HLM has limitations in showing pathways among contextual characteristics, neighborhood processes, and informal social controls and HLM does not permit the assessment of model fit for any single model (Bryk & Raudenbush, 1992). Unlike HLM, SEM offers an assessment of model fit via a variety of fit indexes. One recommendation is to use multiple criteria, which are normally the measures of absolute fit, incremental fit, and some measure of parsimony (Bentler, 1990; Hu & Bentler, 1999). Therefore, in this dissertation, the following fit indices (Appendix 1) are reported: an incremental model fit statistic – comparative fit index (CFI: Bentler, 1990); absolute model fit measures - the root mean squared error of approximation (RMSEA: Hu & Bentler, 1999) and the standardized root mean square residual (SRMSR: Hu & Bentler, 1999). Hu and Bentler (1999) suggested the fit-index cutoff values guiding for good fitting models (CFI>.95; RMSEA <.06, and SRMSR <.08). In the analysis of multilevel data, many researchers showed the comparability of HLM and SEM approaches (Chou, Bentler, & Pentz, 1998; Li, Duncan, Harmer, Acock, & Stoolmiller, 1998; MacCallum, Kim, Malarkey, & Kiecolt-Glaser, 1997; Wendrof, 2002). Moreover, SEM is useful to assess construct validity. In particular, CFA (Confirmative Factor Analysis) in SEM is used to study

“the relationships between a set of observed variables and a set of continuous latent variables” (Muthen & Muthen, 2007:49). CFA is a measurement model providing a valuable tool for evaluating construct validity (Kline, 2005). Although the application of SEM with multilevel data is theoretically available, diverse SEM software were unable to handle multilevel data. The recent development of statistical software and technique in M plus make it possible to use multilevel data in SEM (Bauer, 2003; Mehta & Neale, 2005; Muthen, 1991; Muthen & Muthen, 2007). Therefore, in this dissertation M Plus 5.0 is used to draw the pathways among variables and also used to examine construct validity of variables.

Chapter 7. Analytic Findings

7.1. Descriptive Statistics of Data

7.1.1 Demographic Compositions of Sample

Table 1 presents descriptive statistics of demographic characteristics and negative experiences of respondents. Among 2309 respondents who participated in this study, 32.7% are male and 67.3% are female. Descriptive statistics of gender show that there are over-represented female samples in the data. This result may be attributed to the limitations of telephone surveying and face-to-face interviews. Face-to-face interviews were conducted in the daytime for households which did not have a telephone. Given the interview time and place, it was more likely for the respondent to be female. 46.7% of the residents are white, 48.8% are African-Americans and 3.7% are 'Other' (Hispanic, Asian, other races). The average ages of subjects are 46.03 years old. More than 47.7 % of respondents are working at a full-time job, 11.7% work part-time, 20.7% are retired, and 19.7% are unemployed. Among the respondents, 31.2% are married, 35.7% are single, 21.1% are separated, and 11.7% are widowed. The average duration of living in their neighborhoods is 10.4 years. 7.8% of respondents report that they were victims of crime; 4% of all respondents responded that they had been harassed by the police in last three months.

Table.2 Descriptive Statistics of Demographic Characteristics

	N (%)	Mean
Gender	Male: 755 (32.7%) Female: 1,553 (67.3%)	46.03
Race	White: 1,078 (46.7%); Black: 1,127 (48.8%); Other: 86 (3.7%)	
Age	18 to 94 years old (N=2298)	
Academic Level	Less than High School: 464 (20.1%); High School Degree: 659 (28.5%); Some 2-year College Degree: 651 (28.2%); Bachelor's Degree: 281 (12.2%); Graduate or Professional Degree: 251 (10.9%)	
Employment	Full time: 1,101 (47.7%); Part time: 270 (11.7%); Retired: 477 (20.7%); Unemployed: 454 (19.7%)	10.4
Marital Status	Married: 721(31.2%); Single, never Married: 824 (35.7%); Separated, Divorced: 488 (21.1%); Widowed: 269 (11.7%)	
Year of Residency	From 4 months to 74 years	
Victimization	No = 2126 (92.1%), Yes = 181 (7.8%)	
Harassment	No = 2211 (95.8%), Yes = 93 (4.0%)	

7.1.2. Descriptive Statistics and Factor Analysis of Study Variables

7.1.2.1. Collective Efficacy: Social Cohesion and Informal Social Control

In this dissertation, the primary dependent variable is collective efficacy. In 1997, Sampson and his colleagues attested that trust and cohesion among neighbors and intervening component of informal social control could be combined. They found that social cohesion is strongly linked to informal social control ($r=.80$, $p<.001$) and that they argued that social cohesion and informal social control can be combined as a well-known concept of collective efficacy. This dissertation has also attempted to replicate this method. Factorial analysis with varimax rotation in the collective efficacy index is performed in SPSS 16. Table 3 shows that social cohesion and informal social control are separate conceptual constructs. An additional analysis in order to examine the validity of two constructs is a CFA with continuous factor indicators. A CFA was performed in M Plus version 5.0. The results presented in Figure 6 show that the CFA measurement model of social cohesion and informal social control produces a good model fit ($CFI=.954$, $RMSEA=.000$, $SRMR=.033$), which proves the convergent validity of social

cohesion and informal social control. Unlike component scores in factor loading, path coefficients in CFA refer to unstandardized regression coefficients of observed items on latent variables. Bivariate correlation between social cohesion and informal social control also shows that the association between two components is weaker than the previous finding of Sampson and his colleagues ($r=.578$, $p<.001$). It indicates the discriminant validity of social cohesion and informal social control. Therefore, in this dissertation, social cohesion and informal social control are considered as distinct latent variables. Social cohesion means community's ability to share common values and also indicates the solidarity among neighbors, while informal social control means community's ability to regulate their neighbors. Respectively, the average of social cohesion ($M=19.05$, $SD=4.34$) and informal social control ($M = 19.17$, $SD=4.323$) scores are calculated in order to impute it into missing cases.

7.1.2.2. Social Ties

Social ties were measured by neighboring among neighbors and participation in community organizations. First, a factor analysis of neighboring is presented in Table 4. About 53 % of neighboring behaviors are explained by these six items. Internal reliability of these items is also consistent ($\alpha=.824$). The average of neighboring variable ($M=16.63$, $SD= 7.498$) was calculated and assigned to missing data. The participation in community organizations was measured by the number of attendance in community organizations for last 6 month (range from 0 to 97). Since the distribution is severely skewed, the natural log transformation was used (Figure 7 to 8).

Table.3 Factor Loadings of Collective Efficacy Index

Items	Informal Social Control	Social Cohesion
If children were spray painting graffiti on a local building, how likely is it that someone in your neighborhood would do something to stop it? (IF1)	.705	
If children were showing disrespect to an adult in your neighborhood, (IF2)	.684	
If a fight broke out in front of your house and someone was being beaten up (IF3)	.679	
If someone was breaking into your house in plain sight, (IF4)	.655	
If someone was trying to sell drugs to a neighborhood child in plain sight, (IF5)	.749	
If someone was trying to sell drugs to an adult in plain sight, (IF6)	.670	
People in my neighborhood care about the neighborhood (SC1)		.769
People in my neighborhood respect others' property (SC2)		.808
People in my neighborhood take an interest in the welfare of the neighborhood children (SC3)		.658
People in my neighborhood generally get along with each other (SC4)		.737
People in my neighborhood can be trusted (SC5)		.790
People in my neighborhood share the same values (SC6)		.750
Eigen values	1.350	5.714
Chronbach's Alpha	.820	.884

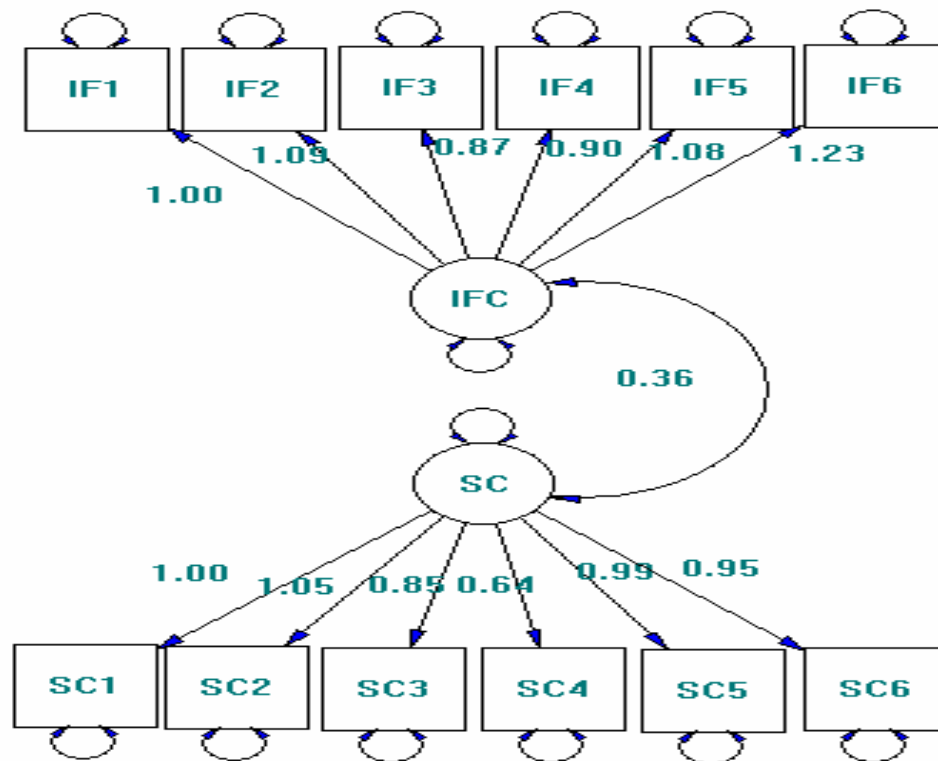
Figure 6. CFA Measurement Model of Social Cohesion and Informal Social Control

Table 4. Factor Loadings of Neighboring

Items	Neighboring
How often do you ask someone from the neighborhood over to your house or go to their house for a meal, to play cards, watch TV, or talk?	.783
How often do you borrow or exchange things with neighbors such as food, recipes, tools or other equipment?	.741
How often do you ask a neighbor for help, like getting you car started, getting a ride with them, or asking them to watch?	.716
How often do you go out for an evening with someone from the neighborhood to a movie, sports event, a drink, or something else?	.706
How often do you talk to someone in the neighborhood about personal problems you or they are having?	.728
How often do you talk to someone from the neighborhood about stores and sales, programs for neighborhood kids, church, activities, and so forth?	.709
Eigen values	3.205
Chrobach's Alpha	.824

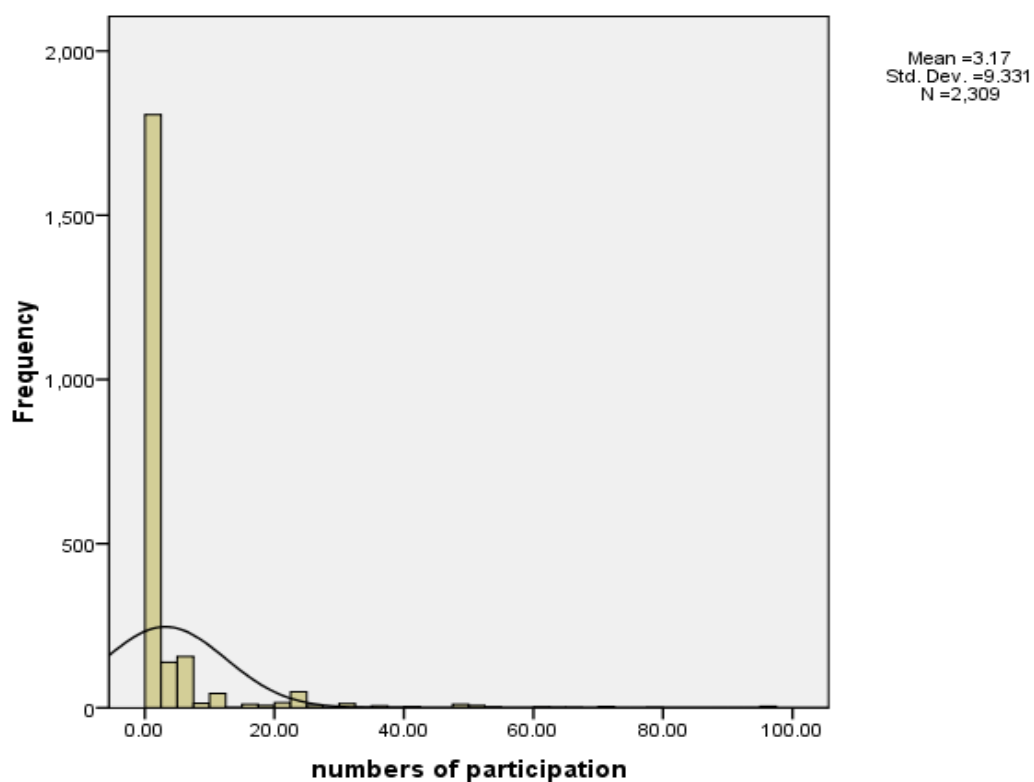
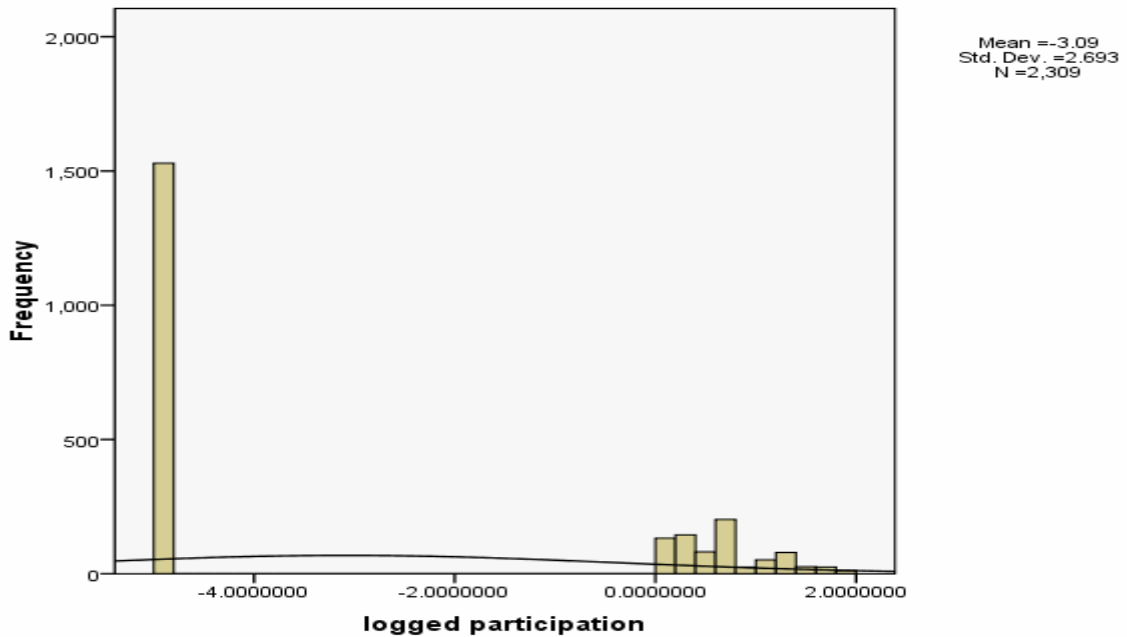
Figure 7. Numbers of Participation in Community Organizations in the last 6 months

Figure 8. Logged Participation in Community Organizations

7.1.2.3. Community Structural Characteristics

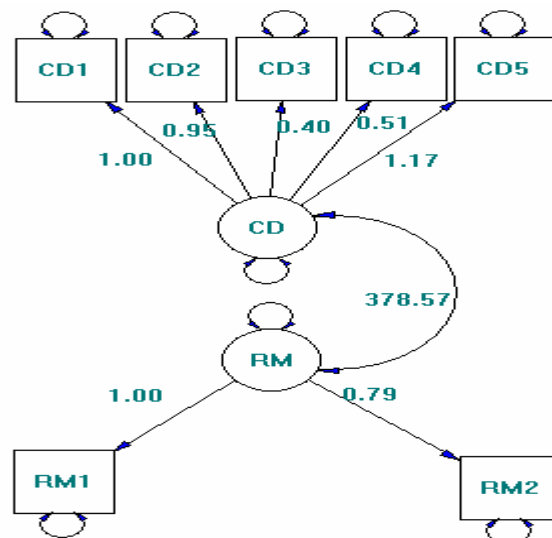
For 66 block groups in Louisville and Lexington, Kentucky, the structural characteristics of these communities were measured by two constructs – concentrated disadvantage and residential mobility. Although prior community research has used three structural characteristics of communities - ethnic heterogeneity, residential instability, and concentrate disadvantage - in this dissertation, the author decided to exclude ethnic heterogeneity in the measures of community structures because of the small amount of Hispanic population (.6%) which has been often used to measure ethnic heterogeneity in extant research (see Sampson et al, 1997). In addition, the percentage of Black population is considered in the measure of concentrated disadvantage. A factor analysis with varimax rotation was performed with seven items from the 2000 Census and seven items were successfully loaded into two constructs (Table 5). Additional analysis of measurement error was also examined in a CFA measurement model (Figure 9). The

model fit scores of two community structural latent variables produced somewhat modest goodness-fit scores (CFI =.842; RMSEA =.000, SRMR =.073). Bivariate correlation between concentrate disadvantage and residential mobility is not strong ($r=.504$, $p<.001$) so that the discriminant validity of two latent variables is supportive. Internal reliability of both factors was also high. Z-score of each community structural variable was calculated for concentrated disadvantage (Min = -1.7239, Max = 2.05163) and residential mobility (Min = -1.802, Max = 1.7179).

Table 5. Factor Loadings of Community Structural Characteristics

Items	Concentrate Disadvantage	Residential Mobility
% on public assistance in 2000 (CD1)	.887	
% of Black population in 2000(CD2)	.861	
% of female-headed household with children in 2000(CD3)	.806	
% of less than high school degree(CD4)	.768	
% of below the poverty line in 2000(CD5)	.723	
% of residents who lived in different addresses in 1995 (RM1)		.944
% of renters in 2000 (RM2)		.890
Eigen values	4.350	1.379
Chronbach's Alpha	.849	.782

Figure 9. CFA Measurement Model of Structural Components of Community



7.1.2.4. Community Crime Problems and Police Deviance

Community crime was measured from total counts of property and violent crimes in 1999, including assault, robbery (street-based and commercial-based), burglary (residential-based and business-based), theft (auto theft, moped theft), larceny (normal larceny and auto-based larceny), and shoplifting. Since total counts of homicide, rape, and arson occurred very rarely, these types of crime are dropped in measuring community crime rates. These total counts of ten categories of crime were divided by the corresponding total block group population and multiplied by 1,000 ($M = 1.8351$, $SD = .46884$, $Min = .24$, $Max = 2.84$).

Community disorder was initially designed to measure social disorder and physical disorder. However, the factor analysis showed that these two concepts were allocated in a single factor ($M = .1945$, $SD = .12976$, $Min = .01$, $Max = .50$). Community victimization and police harassment were measured by the proportion of respondents who had been victims of crime ($M = .0785$, $SD = .0518$) or had been harassed by the police ($M = .0578$, $SD = .0917$) in last 3 months. Z-score of community disorder ($Min = -1.4588$, $Max = 2.3486$), victimization ($Min = -1.515$, $Max = 2.345$), and police harassment ($Min = -.6296$, $Max = 4.9755$) were calculated.

Table 6. Factor Loadings of Community Disorder

Items	Initial Community Disorder
Proportion of respondents who have “very often” seen teenagers hanging out in the last 6 months (D1)	.897
Heard people using foul language in streets in the last 6 months (D2)	.947
Seen litter in streets in the last 6 months (D3)	.909
Seen people drinking in public in the last 6 months (D4)	.966
Seen people buying or selling drugs in the last 6 months (D5)	.936
Seen people drunk in public places, in the last 6 months (D6)	.926
Seen people using drugs in the last 6 months (D7)	.909
Heard noisy parties in the last 6 months (D8)	.698
Heard loud arguments in the last 6 months (D9)	.920
Seen Broken street lights in the last 6 months (D10)	.615
Seen abandoned cars in the last 6 months (D11)	.640
Eigen values	8.143 (74%)
Chronbach’s Alpha	.953

7.1.2.5. Residents’ Perception of the Police

Police social control was measured by residents’ subjective evaluation of police work in their neighborhoods. Three items – effectiveness of police on preventing crime (.806), the quality of police services for victims of crime (.900), and the level of police assistance to help community (.905) – are factor-loaded (Table 7). Internal reliability of these items is also high ($\alpha = .838$). The average scores of perception of the police ($M=10.02$, $SD=2.22$) are calculated and are imputed to the missing cases.

Table 7. Factor Loadings of Perception of the Police

Items	
The police play an important role in preventing crime in this neighborhood	.806
The police do a good job in responding to people in this neighborhood after they have been victims of crime	.900
Police are generally helpful when dealing with people in this neighborhood	.905
Eigen values	2.279
Chronbach’s Alpha	.838

The actual measure of perception of the police, proposed in this dissertation is a new conceptual measure of police social control. Since this concept is a residual of variance of the perception of the police after controlling external factors, such as demographical characteristics, community structural components, community crime problems, individual

and community experiences of victimization and police harassment, an analysis of HLM was used to produce this residual (Table 8). In this HLM model, the intra-class correlation was computed with both between variance from the baseline model. This calculation revealed that the 4.34% of the total variance of residents' perception occurs between communities ($.21527 / (4.74222 + .21527)$). In addition, the explained between variance across communities computed by the proportion of difference of both between variances in the baseline model and this model was 85.7% ($((.21527 - .03075) / .21527)$). 11.08% of total variance of residents' perception of the police is explained by this model. It means that 89.92% of total variance was unexplained and located in the residual of the perception. This unexplained portion of the perception of the police may reflect an independent effect of policing in community on residents' perception of the police. Consequently, this residual variable of the perception is an actual measure of police social control proposed in this dissertation.

As consistently demonstrated in previous studies, citizens' perception of the police are generally explained by negative contact with police officers (Brandle, et al., 1994; Cao et al., 1996; Carr et al., 2007; Scaglione & Condon, 1980; Weitzer & Tuch, 2004). In a community, residents who witness more frequently police deviance are less likely to believe that the police are effective in preventing crime and supplying adequate resources and services in their neighborhoods. In addition, someone who has been victim of crime is more likely to have negative attitude toward the police (Hawdon et al., 2003; Krivo & Peterson, 1996; Smith, 1986). Age is one of the strongest predictors of the perception of the police. Youths tend to have a less favorable attitude toward the police. This result is consistent with previous studies (Cao et al., 1996; Reisig & Correia, 1997; Reisig &

Giacomazzi, 1998; Sampson & Bartusch, 1998; Ren et al., 2005). Other demographic variables including family structure, race, education level, gender and victimization were also not significant in predicting the perception of the police.

At the community level, community disorder and police deviance have a statistically significant undermining effect on residents' perception of the police. Citizens living in disorderly communities that frequently experience police deviance are more likely to have an unfavorable attitude toward the police (Cao et al., 1996; Weitzer & Tuch, 2005). However, community structural components and community crime problems, especially crime rate and victimization, were not found to be significant predictors of residential perception of the police. These findings are also found in previous studies (Cao et al., 1996; Garcia & Cao, 2005; Reisig & Parks, 2000).

Bivariate correlation among perception measures was investigated. Table 9 reveals that the original residents' perception variable and a residual produced from OLS regression were strongly correlated ($r=.933$, $p<.001$), while a residual of residents' perception from HLM has shown a weakened linear association with the initial perception of the police ($r=.675$, $p<.001$). This result may be attributed to the impact of the list-wise deletion of missing data in the analysis of HLM. Since the analysis of HLM is superior in considering the existence of multilevel errors and provides more robust standard errors in predicting the outcome variables, the residual of the perception of the police produced by the equation of HLM is more adequate to measure the unexplained variance of residents' perception of the police in the multilevel model. Therefore, in the further analyses, the residual derived from HLM was used.

Table.8 Hierarchical Linear Model of Residents' Perception of the Police

	B	Standard Error	T-ratio
Constant	10.0236**	.046212	216.902
Level 2			
Community Crime Rate	-.0749	.0942	-.795
Community Disorder	-.21408*	.08953	-2.391
Community Victimization	-.08447	.0560	-1.508
Community Harassment	-.1200*	.04895	-2.451
Community Residential Mobility	-.00569	.05627	-.101
Community Concentrated Disadvantage	-.1601	.08827	-1.814
Level 1			
Gender	-.0713	.1089	-.654
Age	.03179**	.00473	6.719
Education	-.03017	.03891	-.775
Single	-.01999	.11045	-.181
Divorced or Separated	-.07944	.11227	-.647
Widow	-.1499	.1651	-.908
Part time	-.11554	.1242	-.930
Retired	-.1576	.1498	-1.52
Unemployed	-.1507	.1382	-1.090
Black	.0716	.1618	.442
Other races	-.0098	.2485	-.040
Year of Residency	.00152	.005	.228
Victim experience in 3months	-.47966*	.2052	-2.337
Harassment experience in 3 months	-1.691**	.3200	-5.286
Variance Component			
Within Variance	4.377		
(Baseline Model Variance)	(4.742)		
Between Variance	.0307		
(Baseline Model Variance)	(.215)		
Percent of Variance Explained			
Within Neighborhoods	8.3%		
Between Neighborhoods	85.7%		
Total Neighborhoods	11.08%		

* p<.05, **p<.01

Table 9. Correlation Matrix for Perception Measures of the Police

	Residents' perception	OLS residual	HLM residual
Residential perception of the police	1 N=2309		
OLS residual of residents' perception of the police	.933*** N=2262	1 N=2262	
HLM residual of residents' perception of the police	.675*** N=2262	.730*** N=2218	1 N=2262

p<.05, **p<.01, ***p<.001

7.2. OLS Regression for Community Variables

The results presented in Table 10 are the estimations of the roles of community structural components on community crime problems. Four regression models were created in the community level. Three of the regression models were found to be significant. First, a regression model of official crime rates shows that the number of crime per 1,000 people is positively associated with residential instability and that communities' socioeconomic status was not a significant factor to determine crime rate in community. As discussed in the chapter 2, extant studies consistently support positive relationships between crime and concentrate disadvantage (Baumer, 2002; Brody et al., 2001; Browning et al., 2001; Knapp, 2003; Krivo & Peterson, 1996; Morenoff et al., 2001; Sampson et al., 1997). However, in this dissertation, this association is not supported. This finding is consistent with the findings of Hagan and his colleagues (1978). They found that the socioeconomic status of the community fails to explain the level of delinquent rate in community. However, this simple regression supports the importance of community stability. Many studies have shown that stable communities have a lower crime rate (Crutchfield et al., 1982; Krivo & Peterson, 1996; Warner & Rountree, 1997).

A regression model for community disorder shows that a disadvantaged community with high population turnover is significantly associated with community disorder, including social disorder (e.g. teenagers hanging out, selling and using drugs) and physical disorder (e.g. litter, abandoned cars, broken lights). Geis and Ross (1998) show that in poor Chicago neighborhoods community disorder are more likely to be witnessed.

Markowitz and his colleagues (2001) also support the positive relationships between concentrated disadvantage and disorder.

Regression model 3 shows that the probability of victimization in last three month is insignificantly related to official crime rates and community structural components. Only community disorder could explain the likelihood of victimization. Nonetheless, it can be stated that the effects of community structural variables are mediated by community disorder in explaining community victimization. The insignificant relationship between official crime rate and victimization is somewhat surprising since previous studies have shown that prior official crime rates are strongly related to reporting victimization (Browning et al., 2003).

The final regression model was to predict the community level of police harassment. Previous studies have shown that the police act differently in certain communities (Smith1986). However, the significance of model fit was not statistically supportive. Therefore, it may be stated that police deviance in community is not explained by community structures and crime problems. However, these results indirectly show that this hypothesis is not supportive.

Table 10. OLS Regression of Community Crime Problems

	Crime Rate	Disorder	Victimization	Harassment
	B (S.E)	B (S.E)	B (S.E)	B (S.E)
Constant	1.835**(.009)	-2.00(.066)	.642(.51)	
Level 2				
Mobility	.174**(.064)	.249**(.077)	.041(.157)	
Concentrated Disadvantage	-.013(.064)	.695**(.077)	-.252(.206)	
Crime Rate			-.350(.271)	
Disorder			.541*(.223)	
R-square	.129*	.719**	.164*	

* p<.05, **p<.01

7.3. Hierarchical Linear Models of Social Interaction

7.2.1. Predicting Neighboring among Neighbors

Hierarchical linear models for neighboring among neighbors are presented in Table 11. Six hierarchical models were estimated. Model 1 is a baseline model including total within variance and between variance. Intra-class correlation was calculated from these variances. The results shows that 0.77% of total variance of neighboring occurs between communities ($.43539/(55.80212+.43539) = 0.77\%$).

Model 2 includes all of the demographic variables. 1.36% of total within variance is explained by this model ($((55.802-55.0393)/55.802)$). Among twelve demographic characteristics of respondents, age and education were found to be significant predictors of the density of neighboring. The results presented in Table 11 indicate that educated youths are more likely to visit their neighbors' homes. The negative age effect is different from previous studies suggesting that age has a positive association with social ties and community interactions (Garcia et al., 2007; Geis & Ross, 1998; Sampson, 1991). Nonetheless, this negative relationship between age and neighboring is also found in Sampson (1988). In the extant literature, many studies have suggested the importance of the duration of residency on social ties (Sampson, 1988; 1991). However, this result is not supportive in this dissertation. Years of residency fail to show significant association with residents' neighboring.

Model 3 in Table 11 includes residents' negative experience variables (e.g. victim of crime, victim of police harassment) reflecting individual's negative experiences with the police and criminal victimization. Although the explanatory power of this model was increased, one of two experience variables, harassment, was significantly associated with

neighboring. Unlike hypothesized, residents who had been harassed by the police are more likely to have frequent interactions with their neighbors than persons who had not been harassed by the police. Age and education were also significant in this model. The impact of age on neighboring is slightly decreased after controlling residents' negative experience.

Model 4 is designed to include police social control. In this dissertation, one primary hypothesis is that persons who have a positive perception of the police are more likely to interact with their neighbors since they may perceive that their communities are safe to live in and do community activities. The explanatory power of this model is slightly increased, but the result shows that police social control does not have a significant effect on neighboring.

A community effect model of neighboring was estimated in Model 5. This model explained 40.66% of community variation (.77% in total) of neighboring. However, this model did not support the significant predictive power of community variables on social interactions among neighbors (Lowenkamp et al., 2003; Geis & Ross, 1998; Sampson, 1988; 1991; Rountree & Warner, 1999; Warner & Rountree, 1997). The results show that residents' social interaction is not determined by either community crime problems or structural characteristics of community. One important factor is police behavior. Among community level variables, respondents who live in a community with a high probability of police deviance are less likely to interact each other in daily lives (Model 5).

The final model of neighboring is presented in Model 6. The overall explanatory power of this model is 2.15%. Specifically, 1.79% of total within variance and 47.82% of total community variations of neighboring are explained by this model. With the

exception of age, education, and harassment experience, overall individual variables fail to show significant associations with neighboring. Less educated residents do not interact frequently with neighbors in their communities. Lynch and his colleague (2002) also found a positive relationship between education and neighboring, holding constant all of the variables in the model. Non-significant predictive effects of other demographic variables including race, gender, employment, and marital status are also consistent with prior studies (Geis & Ross, 1998; Lynch et al., 2002; Samson, 1988; 1991).

It is important to mention that individuals' negative experience of the police, especially being harassed by the police, shows a positive effect on neighboring, while the community level of police harassment is found to be non-significant. Although an appropriate theoretical explanation is not available, a tentative understanding of this association is that residents' who had been harassed by the police in the last 3 months are more dependent on their neighbors when they need help since they may perceive that the police, in spite of a main external governmental organization to maintain social order, do not legitimately and fairly treat them (Kane, 2000; Tyler, 2001; 2003). However, the undermining effect of community harassment disappears in this model when individual level of harassment is included in the model. This result may indicate that in determining the pattern of neighboring the effects of individuals' experience is more important than the community level of police deviance. Finally, a primary investigation of this dissertation was to examine the existence of positive relationships between police social control and neighboring. The result shows that this positive expectation is not supported. Regardless of residents' perception of the police, the frequency of neighboring is determined by other factors.

In sum, the hierarchical models of neighboring show that the frequency of neighboring is not accurately predicted by either structural components of community or community crime problems. In addition, individual demographic characteristics and the perception of police services are not also related to the pattern of residents' neighboring behaviors. The external variables which were not included in the predicting models should exist and the pattern of neighboring is more complex than what previous studies expected.

Table 11. Hierarchical Linear Model of Neighboring

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Reliability	B(S.E)	B(S.E)	B(S.E)	B(S.E)	B(S.E)	B(S.E)
Constant	.214 16.6**(17)	.215 16.6**(62)	.209 13.75**(1.4)	.224 13.67**(1.38)	.139 16.6**(15)	.149 16.6**(16)
Level 2						
Crime Rate					.27(.46)	.31(.45)
Disorder					-.22(.30)	-.30(.30)
Victimization					.10(.18)	.15(.18)
Harassment					-.29(.14)*	-.26(.17)
Mobility					.18(.20)	.24(.20)
Concentrated Disadvantage					.56(.31)	.58(.31)
Level 1						
Gender		-.41(.33)	-.32(.33)	-.28(.33)		-.24(.33)
Age		-.05**(.01)	-.04**(.01)	-.04**(.01)		-.061**(.01)
Education		.49*(.18)	.49*(.19)	.50*(.19)		.47*(.19)
Single		.69(.40)	.63(.40)	.62(.40)		.35(.41)
Divorced		.58(.43)	.54(.43)	.55(.43)		.48(.45)
Widow		.39(.61)	.36(.61)	.36(.61)		.50(.64)
Part Time		-.14(.56)	-.16(.56)	-.21(.57)		-.45(.58)
Retired		.50(.54)	.43(.54)	.35(.55)		.65(.58)
Unemployed		.93(.48)	.83(.48)	.83(.49)		.49(.50)
Black		-.018(.34)	-.007(.34)	-.123(.35)		-.55(.50)
Other Races		.84(.87)	.78(.88)	.82(.84)		.77(.90)
Year		.01(.017)	.009(.017)	.009(.017)		.008(.017)
Victim			.91(.64)	.98(.64)		1.10(.66)
Harassment			1.78*(.84)	1.78*(.83)		1.9*(.88)
Police Control				.065(.07)		.07(.07)
Variance Component						
Within	55.80212	55.0393	54.85347	54.80601	55.80210	54.80063
Between	.43539	.43885	.42323	.38797	.25836	.22719
Explained						
Within		1.36%	1.70%	1.78%		1.79%
Between					40.60%	47.82%
Total						2.15%

* p<.05, **p<.01

7.2.2. Predicting Participation in Community Organization

Compared to hierarchical models for neighboring, the predicting models of participation in community organizations provide a more reliable estimation in each model. The overall explanatory power of community involvement models is generally larger than neighboring models. To predict the frequency of participation in community organizations, six hierarchical models were also estimated. The baseline model shows that 4.06% of total variance of community involvement occurs between communities.

Model 2 in Table 12 includes demographic characteristics of respondents. 5.56% of total within variance is explained by this model. With the exception of employment status and the length of residency, other individual variables, such as gender, age, race, education, and marital status, show significant associations with community organizational participation. These results are consistent with previous findings. Many studies have found positive effects of age, gender, marital status, and education on community involvement and social ties (Geis & Ross, 1998; Lynch et al., 2002; Sampson, 1991; 1988). The results show that a stable family structure has a positive relationship with community involvement; males are more active in participating in community organizations; and the educated persons are also vigorous participants of community organization. However, this model shows a different pattern of racial effects on community involvement. For example, Geis and Ross (1998) found that white residents have much more social ties than African American neighbors, while other have shown non-significant associations between race and community involvement (Lynch et al., 2002; Ren et al., 2006). The findings in this analysis are the opposite. The unstandardized coefficient of African Americans on community involvement shows a statistically

significant positive direction. African Americans are more likely to participate in community organizations than white neighbors.

Negative experiences in victimization and police harassment were included in Model 3. This model successfully explains 5.84% of total within variance in community involvement. However, unlike what was hypothesized, respondents who had been a victim of crime in past three months are more likely to participate in community organizations. Negative experience with the police, however, is not significantly associated with community involvement. The effects of demographic variables are increased when residents' negative experiences are considered in this model.

Model 4 includes the effect of police social control on the frequency of participating in community organizations. This model explains 5.73% of total within variance of community involvement. When the police social control is considered in this model, the effects of demographic variables and residents' negative experiences are increased. However, the primary hypothesis of this dissertation that the favorable attitude toward the police has a positive association with community involvement is not statistically supported, although the p-value of police social control is marginally significant ($p=.050$).

Model 5 is to estimate the effect of community structural components and community crime problems on community involvement. Intra-class correlation shows that 4.06% of total variance of community organizational participation occurs between communities ($1.24526 / (37.64615 + 1.24526)$). The intercept of community level variance is significant and 22.1% of total between variance are explained by six community variables ($((1.59691 - 1.24526) / 1.59691 = .221)$). The findings presented in Table 12 reveal that residents' community involvement is not determined by either community crime

problems or residential mobility, while structural components of community significantly explain residents' community involvement. Regarding the effects of community crime problems on community involvement, the empirical findings do not support the positive association argument assuming that community crime problems stimulate community involvement (Perkins et al., 1990; Skogan, 1989; Swaroop & Morenoff, 2006; Taylor, 1996). The result also doesn't support the deteriorative effects of crime on community organizational participation (Geis & Ross, 1998; Garcia et al., 2007; Liska & Warner, 1991; Perkins et al., 1990; Ren et al., 2006; Sampson, 1988). Residents' community involvement is not depending on the conditions of community safety.

Among community factors, only community socioeconomic status is significantly related to community organizational participation. However, the direction of this association is not the same as what was hypothesized. This result provides an important implication to the ecological study, which consistently suggests the negative association between community involvement and community's socioeconomic status (Bellair, 1997; Garcia et al., 2007; Liska & Waner, 2001; Sampson, 1988; 1991; Skogan, 1989; Swaroop & Morenoff, 2006; Taylor, 1996) or the non-significant associations (Geis & Ross, 1998; Warner & Rountree, 1997; Rountree & Warner, 1999; Sampson, 1988; 1991). Even in poor communities, residents are frequently involved in community organizations rather than those living in affluent communities. Although the effect of concentrate disadvantage of community is weakened when the individual levels of variables are controlled in the full model (Model 6), the positive relationship between concentrated disadvantage and participation in community organization is a unique finding (Lynch et al., 2002).

The full model of community involvement explains 6.27% of total variance of community organizational participation. Respectively, 5.74% of total within variance and 18.63% of total between variance are explained by this model. However, the reliability of estimation is slightly dropped to .551. When community level variables are considered in this model, the standard error of police social control is slightly decreased, but significant, while the impacts of other individual variables are constant.

Along with neighboring models, these community involvement models reveal that the effect of community crime problems and community structural components on community involvement is slightly small, although concentrated disadvantage is found to be a significant factor. Compared to the effects of community level variables on community organizational involvement, the individual level of variables has shown a more influential impact.

In the full model, a victimization experience shows a positive association with community participation. Residents who had been victims of crime frequently participate in community organizations. This finding can be understood that for the neighbors who had been victimized in the last three months the frequency of participation in community organizations can be seen as means to strengthen community interaction in order to get resources and help from community institutions. Residents perceive that criminal justice agencies fail to satisfy the demand of community. Unlike what was hypothesized, the effect of police social control on community involvement is not statistically supported. Although this finding does not statistically support the positive associations between police confidence and community participation (Ren et al., 2006), this also reject the

negative association between satisfaction with the police and community involvement (Skogan, 1989).

Table 12. Hierarchical Linear Model of Community Participation

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Reliability	B (S.E)	B(S.E)	B(S.E)	B(S.E)	B (S.E)	B (S.E)
Constant	.597 -7.0** (.20)	.538 -11.09** (.60)	.539 -13.39** (1.084)	.517 -13.26** (.99)	.536 -7.00** (.18)	.551 -13.20** (1.03)
Level 2						
Crime Rate					.34(.44)	.25(.48)
Disorder					-.60(.37)	-.33(.34)
Victimization					.19(.20)	.27(.20)
Harassment					-.30(.20)	-.30(.22)
Mobility					-.42(.25)	-.20(.22)
Concentrated Disadvantage					1.03**(.33)	.73*(.33)
Level 1						
Gender		.80**(.28)	.86**(.28)	.93**(.28)		.91**(.28)
Age		.04**(.01)	.04*(.01)	.04**(.01)		.048**(.012)
Education		.91**(.12)	.91**(.11)	.89**(.13)		.93**(.13)
Single		-1.25**(.29)	-1.29**(.34)	-1.36**(.29)		-1.32**(.28)
Divorced		-1.29**(.33)	-1.35**(.36)	-1.39**(.33)		-1.39**(.34)
Widow		-1.27*(.55)	-1.30*(.49)	-1.31*(.55)		-1.34*(.56)
Part Time		.48(.42)	.45(.41)	.48(.43)		.49(.42)
Retired		.33(.48)	.25(.44)	.30(.48)		.27(.46)
Unemployed		.19(.33)	.13(.35)	.099(.36)		.03(.37)
Black		2.03**(.37)	2.01**(.30)	1.99**(.30)		1.69**(.34)
Other Races		1.09(.82)	1.05(.68)	.92(.81)		.86(.81)
Year		.011(.011)	.01(.01)	.013(.012)		.013(.012)
Victim			1.24*(.47)	1.29*(.54)		1.222*(.548)
Harassment			.889(.67)	.70(.57)		.777(.58)
Police Control				.108#(.0554)		.108#(.0552)
Variance Component						
Within	37.64628	35.55155	35.44527	35.48661	37.64616	35.48308
Between	1.59691**	1.20409**	1.20981**	1.13250**	1.24526**	1.29931**
Explained						
Within		5.56%	5.84%	5.73%		5.74%
Between					22.02%	18.63%
Total						6.27%

p<.10, * p<.05, **p<.01

7.4. Hierarchical Linear Models of Social Cohesion

The results presented in Table 13 reveal that the small amount of variance of social cohesion is explained by community variables. Community structure and crime problems critically undermine the reliability of model estimation, while the level 1 models show large explanatory power, high reliable estimation, and significant variations between neighborhoods. Baseline model shows that intra-class correlation is $.1689(3.18774/(3.18774 + 15.68228))$ which means that 16.89% of total variance of social cohesion occurs in community variations.

Model 2 presented in Table 13 includes demographic characteristics of respondents. This model explains 5.26% of total within variance of social cohesion. Unlike previous studies suggesting that residents who have lived in their community longer are more likely to be satisfied with, and be strongly attached to their neighborhoods (Sampson, 1991; 1988), the length of residency is not significantly associated with social cohesion (Sampson et al., 1997). In addition, residents who are unemployed or have part-time jobs are less likely to trust their neighbors and share common values of communities. The older, educated neighbors tend to perceive strong social cohesion in their neighborhoods. Finally, single or never married residents are less likely to trust their neighbors and share community value rather than married persons.

The hierarchical model 3 reveals the importance of community social interaction and negative experiences in determining the level of social cohesion among neighbors. This model explains 10.93% of total within variance of social cohesion. Individual residents' perception of community solidarity is strongly related to their social interactions. Respondents who are more frequently interacting with neighbors and participate in

community organizations are more likely to care about their community and trust their neighbors. As hypothesized, victimization experience undermines the strength of residents' solidarity. Compared to the demographic model of social cohesion, when social interaction and negative experiences were considered in this model, the impacts of demographic characteristics on social cohesion are weakened.

When the impact of police social control is included in the model (Model 4), the explanatory power of this model is slightly improved than Model 3 (from 10.93% to 13.37%). The inclusion of police social control also slightly reduces the impacts of social interactions and negative experiences of neighbors. However, the effects of demographic characteristics of neighbors on social cohesion are increased.

Model 4 also demonstrates the positive associations among social interaction, police social control, and social cohesion. The primary theoretical implications of these models are that both of community social interactions and police social control are significant predictors of residents' perception of their communities. The more frequent social interactions increase residents' trust and solidarity. Concomitantly, the police social control predicts community solidarity including trust among neighbors and share common values of communities. These findings are consistent with previous findings. For example, Sampson (1991) attests that community friendship networks and acquaintanceship are strongly related to social cohesion. Morenoff and his colleagues (2001) show that community involvement and social ties increase collective efficacy which contains the concept of social cohesion. Lynch and his colleagues (2002) also state that the participation of community organization is positively related to community

solidarity. Reisig and Park (2000) also state that sense of neighborhood is strongly related to satisfaction with the police.

Model 5 is a community variable only model. This model explains 96.4% of total between variance of social cohesion. Community disorder and residential mobility are negatively associated with social cohesion. Shaw and MaKay (1994) state that rapid inclusion or exclusion of population in a community prevents residents from sharing common values of communities. Sampson (1991) also demonstrates that residential instability weakens the solidarity of community. Consequently, residential stability is an important determinant of community social cohesion (Markowitz et al., 2001; Sampson, 1991). Community crime problems, especially disorder, have also the undermining effect on community solidarity and cohesion. Many studies support this hypothesis (Markowitz et al., 2001; Skogan, 1990; Taylor, 1996). For example, Markowitz and his colleagues found a negative relationship between burglary rates and community social cohesion. Unlike residential mobility and community disorder, the structural characteristics of community, crime rates, victimization rates, and police harassment fail to show significant associations with social cohesion. For residents, crime and police deviance may be witnessed rarely than community disorder so that the effects of factual crime and police deviance are not significant. In addition, socioeconomic status of communities is not a significant determinant to solidify neighbors.

In the full model (Model 6), overall findings in previous models are replicated again. Although the effects of community variables on social cohesion are slightly reduced, unlike theoretical expectation, the mediated effects are very small. In this model, the explanatory power is larger than previous analyses of HLM. In addition, the explained

portion of social cohesion in community variations is 94.78%, while 13.41% of total within variance of social cohesion is explained by this model. However, the reliability estimation is very low. This might be the inclusion of community variables in the model. The between sample means is slightly unreliable to measure the true neighborhood mean for social cohesion.

The main finding of this model is that police social control, with holding other variables constant in this full model, has a statistically significant positive impact on social cohesion. A hierarchical model including both individual and community levels of variables demonstrate independent effects of police social control on residents' perception of community solidarity. This empirical evidence is significantly important since previous studies in examining the associations between formal social control and community processes have for a long time focused on the impacts of objective measures of formal social control. In this dissertation, the results support that police social control measured by residents' subjective evaluation of policing is also a significant predictor to enhance community. Although police social control does not explain residents' social interactions including neighboring and community involvement, it has a direct effect on community's ability to share common values and the solidarity of communities.

Table 13. Hierarchical Linear Model of Social Cohesion

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Reliability	B(S.E)	B(S.E)	B(S.E)	B(S.E)	B(S.E)	B (S.E)
Constant	.877 19.05** (.23)	.854 18.69** (.43)	.864 20.4286** (.66)	.866 20.394** (.67)	.202 19.05** (.092)	.203 20.08** (.67)
Level 2						
Crime Rate					.29(.22)	.18(.19)
Disorder					-1.35**(.18)	-1.32**(.13)
Victimization					-.06(.10)	-.004(.10)
Harassment					.023(.098)	-.0008(.08)
Mobility					-.633**(.126)	-.52**(.09)
Concentrated Disadvantage					.042(.16)	-.01(.14)
Level 1						
Gender		.01(.19)	-.01(.18)	.04 (.18)		.046(.17)
Age		.05**(.008)	.05**(.008)	.054**(.008)		.059**(.008)
Education		.30**(.09)	.20*(.08)	.18*(.08)		.17* (.08)
Single		-.54*(.24)	-.49*(.22)	-.53* (.22)		-.369 (.22)
Divorced		-.42(.23)	-.37(.22)	-.37(.22)		-.358(.21)
Widow		-.54(.31)	-.53(.31)	-.54(.31)		-.61(.29)
Part Time		-.51*(.24)	-.49*(.22)	-.518*(.22)		-.477*(.22)
Retired		-.26(.28)	-.33(.27)	-.36(.27)		-.445(.27)
Unemployed		-.71*(.28)	-.75**(.27)	-.81**(.277)		-.67*(.26)
Black		.35(.22)	.34(.22)	.35(.21)		.57**(.22)
Other Races		-.52(.41)	-.62(.36)	-.56(.36)		-.50(.36)
Year		-.006(.009)	-.008(.008)	-.007(.008)		-.007(.008)
Victim			-.90*(.34)	-.83*(.31)		-.71*(.32)
Harassment			-.45(.41)	-.49(.40)		.089(.38)
Neighboring			.112**(.013)	.111**(.013)		.112**(.013)
Participation			.04**(.014)	.037**(.014)		.038**(.014)
Police Control				.29**(.04)		.29**(.04)
Variance Component						
Within	15.6822	14.85716	13.9677	13.58533	15.68221	13.56750
Between	3.187**	2.53742**	2.59942**	2.60832**	.11379	.10297
Explained						
Within		5.26%	10.93 %	13.37%		13.48%
Between					96.4%	96.76%
Total						27.55%

* p<.05, **p<.01

7.5. Hierarchical Linear Model of Informal Social Control

As a final inquiry of this dissertation, eleven hierarchical linear models of informal social control were estimated (Table 14). Reliability estimation of these models is quietly high with the exception of community level-only model (Model 10) and the full model including community and individual factors (Model 11). Model 1 in Table 14 is a baseline model of informal social control. Intra-class correlation shows that 10.4% of total variance of informal social control occurs in community variations.

The results presented in Model 2 include the effects of demographic characteristics of residents on informal social control. This model explains 1% of total within variance of informal social control. Intercepts of level 1 and 2 are significant. Among twelve demographic characteristics of respondents, age, marital status and employment status are significantly related to informal social control. Compared to the employed persons regardless of full time or part time jobs, residents who had retired or unemployed are less likely to intervene in community problems and to maintain community social order. The significant effect of employment status is rarely found in previous studies. Many studies did not often include employment status in the model of predicting informal social control. Indirectly, some studies used SES and found a significant association (Silver & Miller, 2004; Sampson et al., 1997). In this model, other demographic characteristics of neighbors including gender, race, and length of residency fail to show significant associations with informal social control. These findings are similar with previous studies (Davis & Henderson, 2003; Lynch et al., 2002; Sampson et al., 1997).

Individuals' negative experience in victimization and police harassment was included in Model 3. This model slightly increases the explanatory power (1% in Model 3 to

1.42% in Model 3). In addition, the impact of demographic characteristics of respondents is reduced. Victimization shows statistically negative significant impact on informal social control, while harassment experience fails to show statistical significance. Residents who had been victims of crime in last three months are less likely to intervene in community problems and regulate community neighbors. This finding is consistent with Davis and Henderson's (2003) findings. They reported that victimization experience last year significantly reduce residents' intention to report later crime and victimization.

In Model 4, residents' neighboring was included. The explanatory power of this model is significantly increased from 1.42% to 8.26%. Overall effects of significant variables are also enhanced. The finding re-affirms the importance of social interaction on the level of informal social control. Dense interaction among neighbors strengthens communities' collective ability to maintain social order. The strong social ties among neighbors stimulate residents' willingness to intervene in community problems. Previous studies consistently show the positive associations between social ties and informal social control (Bursik, 1999; Bennett, 1989; Gibson et al., 2002; Lynch et al., 2002; Morenoff et al., 2001; Sampson, 1991; Warner, 2003). This result is also a count empirical support for the hypothesis of the null association between social ties and informal social control proposed by Sampson and his colleagues (1997). They argue that social ties are not sufficient to activate residents' informal social control. However, the empirical finding in this dissertation provides an opposite impact of social ties on informal social control. Residents' frequent interactions are strongly related to the level of informal social control.

Model 5 examines the effect of participation in community organizations. Compared to the neighboring model, the explanatory power of this model is slightly small. However,

the result shows that regardless of the goals of community organizations the frequency of involvement stimulates neighbors' willingness to intervene in community problems. Morenoff and his colleagues (2001) also found that the significant impact of voluntary associations on communities' ability to regulate their neighbors. Another significant finding is that when community involvement is included in this model, the impacts of marital status and age disappear.

The next model (Model 6) estimates the relative importance of neighboring and community involvement. The result presented in Table 14 reveals that when neighboring and participation in community organizations are simultaneously considered the explanatory power of this model is not significantly improved (9%). In addition, the effects of both social interaction variables are slightly decreased. The decrease is significantly larger in community involvement variable. In the variables of social interaction, the predictive power of the frequency of informal interaction among neighbors is stronger than the impact of participation in community organizations. Interestingly, the statistical significance of age and marital status is upheld in this model again.

A primary inquiry in this dissertation examines the effects of police social control on informal social control. The results presented in Model 7 show empirical support. As hypothesized, residents' positive evaluation of policing in their communities is strongly associated with the level of informal social control ($t(2201) = 7.216, p < .001$). This model explains 3.918% of total within variance of informal social control. It means that the explanatory power of police social control on informal social control is about 3% since

1% of total within variance of informal social control is attributed by a demographic only model.

The strongest impact among community process variables on informal social control is found in Model 8. This model includes social cohesion and demographic characteristics of neighbors. This model explains 28% of total within variance of informal social control. As hypothesized, social cohesion is the most important factor to determine informal social control. This finding is consistent with previous studies (Lee, 2000; Lynch et al., 2002; Silver & Miller, 2004; Taylor, 1996). Although Sampson and his colleagues (1997) combined social cohesion and informal social control and created a concept called collective efficacy, in this dissertation, the correlation between social cohesion and informal social control is not strong enough to composite these two concepts. In addition, the factor analysis and CFA measurement model have proven independency between social cohesion and informal social control. Therefore, social cohesion is considered as an independent construct. Nonetheless, as Sampson and his colleagues (1997) argued, trust and cohesion among neighbors are strongly related to activate informal social control. This model shows strong empirical evidence supporting this discussion.

Among four significant demographic predictors in Model 2, 'unemployment' and 'single or never married' show statistical significance, but the effects of these variables are decreased, while the predictive power of age and victimization disappear.

In Model 9, all of level 1 variables, such as demographic characteristics of respondents, neighboring, participation in community organizations, police social control, and social cohesion, were considered in this model. The results presented in Table 14

show that residents' demographic characteristics and victim experience become non-significant predictors of informal social control with the exception of unemployment. The effects of social interactions and police social control are also decreased. This model explains about 31% of total within variance of informal social control. The finding repeatedly emphasizes the importance of social ties and social cohesion in determining communities' ability to regulate their neighbors. In addition, this finding strongly supports the positive impact of police social control on informal social control.

Model 10 is a hierarchical linear model of community-only variables. This model explains 94.8% of total between variance of informal social control. It means that this model explains 9.86% of total variance of informal social control ($10.4 * .948 = 9.86$). As seen in the social cohesion models in Table 14, two of community variables were significant in this model. Residential mobility and community disorder undermine the likelihood of residents intervening in community problems. Many previous studies support these associations (Belliar, 2000; Markowitz et al., 2001; Sampson et al., 1999; Silver & Miller, 2004; Warner, 2003). However, unlike previous studies assuming positive or negative relationships among crime, victimization, informal social control, and police deviance (Belliar, 2000; Duncan et al., 2003; Lynch et al., 2002; Markowitz et al., 2001; Rountree & Land, 1996; Sampson et al., 1997; 1999; Silver & Miller, 2004), this dissertation does not support associations between crime and informal social control or between victimization and informal social control.

The results from the full model of informal social control are crucial. This model explains 36.93% of total variance of informal social control. In addition, 30.9% of total within variations and 88.42% of total between variance of informal social control are

explained by this full model. Four of primary factors including social cohesion, neighboring, community involvement, and police social control are found to be significant. Two of six community variables are also significant. Only two demographic variables, retirement and unemployment, show statistically significant negative impacts on informal social control. Firstly, the final model does not strongly support the mediating effect of community processes including social interactions and social cohesion on informal social control. Although the effects of significant community variables (e.g. residential mobility and community disorder) are slightly reduced, the extent of the reduction is slightly small. In the full model, even the impacts of social interactions are reduced when the community variables are considered. In addition, the variable of retirement among employment status variables became a significant predictor of informal social control in the full model. This finding suggests that among demographic characteristics of residents the employment status is the most important determinant of informal social control. Unemployed or retired residents tend not to care about community problems. However, community solidarity and social interactions may supplement the negative effects of structural characteristics of community and individuals' employment status. Finally, when residents perceive that the police in their neighborhoods are satisfactory providing their resource and service the ability to maintain community social order will be strengthened.

Table 14. Hierarchical Linear Model of Informal Social Control

	Model 1	Model 2	Model3	Model4	Model5
Reliability	B(SE)	B (S.E)	B(S.E)	B(S.E)	B(S.E)
Constant	.804 19.17**(.19)	.763 19.50**(.44)	.756 20.85**(.70)	.773 21.21**(.87)	.757 21.23**(.87)
Level 2					
Crime Rate					
Disorder					
Victimization					
Harassment					
Mobility					
Concentrated					
Disadvantage					
Level 1					
Gender		.24 (.22)	.21 (.19)	.25(.22)	.12(.22)
Age		.02**(.007)	.019**(.008)	.28**(.007)	.014(.007)
Education		.109 (.10)	.105 (.08)	.038 (.09)	.008 (.10)
Single		-.63* (.26)	-.621* (.23)	-.65*(.26)	-.48 (.26)
Divorced		-.25(.26)	-.222(.25)	-.29(.24)	-.07(.25)
Widow		-.56(.31)	-.49(.33)	-.55(.28)	-.34(.29)
Part Time		-.41(.31)	-.42(.28)	-.36(.28)	-.47(.31)
Retired		-.52*(.23)	-.50*(.30)	-.61**(.22)	-.51*(.23)
Unemployed		-.90**(.29)	-.88**(.24)	-.94**(.27)	-.88**(.28)
Black		-.10(.26)	-.08(.22)	-.006(.25)	-.24(.26)
Other Races		-.43(.41)	-.41(.47)	-.52(.47)	-.52(.50)
Year		-.003(.009)	-.003(.009)	-.0004(.009)	-.004(.009)
Victim			-.72*(.32)	-.85*(.36)	-.84*(.38)
Harassment			-.52(.46)	-.77(.65)	.63(.63)
Neighboring				.144**(.01)	
Participation					.107**(.015)
Cohesion					
Police Control					
Variance					
Component					
Within	16.75182	16.58416	16.51277	15.36743	16.12254
Between	1.96183	1.55409**	1.49567**	1.52970**	1.47018
Explained					
Within		1%	1.42%	8.26%	3.75%
Between					
Total					

* p<.05, **p<.01

Continued

	Model6	Model7	Model 8	Model 9	Model 10	Model 11
	B(S.E)	B(S.E)	B(S.E)	B(S.E)	B(S.E)	B(S.E)
Reliability	.772	.745	.829	.854	.174	.397
Constant	21.409** (.86)	20.762** (.86)	20.098** (.77)	20.461** (.76)	19.17** (.08)	20.06** (.76)
Level 2						
Crime Rate					.13(.13)	.13(.15)
Disorder					-1.06**(.17)	-1.01**(.17)
Victimization					-.004(.08)	.05(.09)
Harassment					-.08(.09)	-.067(.11)
Mobility					-.38**(.126)	-.35**(.13)
Concentrated Disadvantage					-.05(.16)	-.024(.17)
Level 1						
Gender	.20 (.22)	.30(.23)	.21 (.18)	.26 (.18)		.29 (.17)
Age	.02**(.007)	.017*(.007)	-.009(.006)	-.004(.007)		-.0007(.007)
Education	-.01 (.09)	.06 (.10)	-.015 (.08)	-.094 (.07)		-.079(.077)
Single	-.56* (.26)	-.72** (.26)	-.37 (.209)	-.45* (.21)		-.29(.21)
Divorced	-.18(.24)	-.24(.25)	-.039(.24)	.045(.21)		.043(.23)
Widow	-.46(.28)	-.57(.32)	-.20(.29)	-.28(.28)		-.29(.28)
Part Time	-.40(.28)	-.43(.30)	-.12(.24)	-.13(.23)		-.10(.23)
Retired	-.61**(.22)	-.54*(.24)	-.32(.22)	-.42(.22)		-.52*(.21)
Unemployed	-.94**(.27)	-.93**(.28)	-.50*(.22)	-.59**(.22)		-.45*(.22)
Black	-.10(.25)	-.10(.25)	-.29(.22)	-.28(.21)		-.060(.21)
Other Races	-.57(.46)	-.28(.50)	-.17(.45)	-.28(.42)		-.12(.41)
Year	.005(.009)	.0003(.009)	-.0004(.009)	.0015(.009)		.0023(.009)
Victim	-.91*(.35)	-.68*(.32)	-.32(.30)	-.48(.30)		-.44(.30)
Harassment	-.82(.63)	-.54(.46)	-.42(.55)	-.59(.55)		-.489(.53)
Neighboring	.13**(.013)			.076**(.010)		.07**(.001)
Participation	.06**(.015)			.036**(.013)		.035**(.01)
Cohesion			.54**(.026)	.49**(.02)		.49**(.027)
Police Control		.30**(.04)		.13**(.036)		.13**(.036)
Variance						
Component						
Within	15.24252	16.0916	12.04872	11.59255	16.75173	11.5741
Between	1.50874**	1.40251	1.70515	1.60463	.1011	.22714
Explained						
Within	9%	3.918%	28.07%	30.79%		30.9 %
Between					94.8%	88.42%
Total						36.93%

* p<.05, **p<.01

7.6. Multilevel Pathway Models of Social Interactions

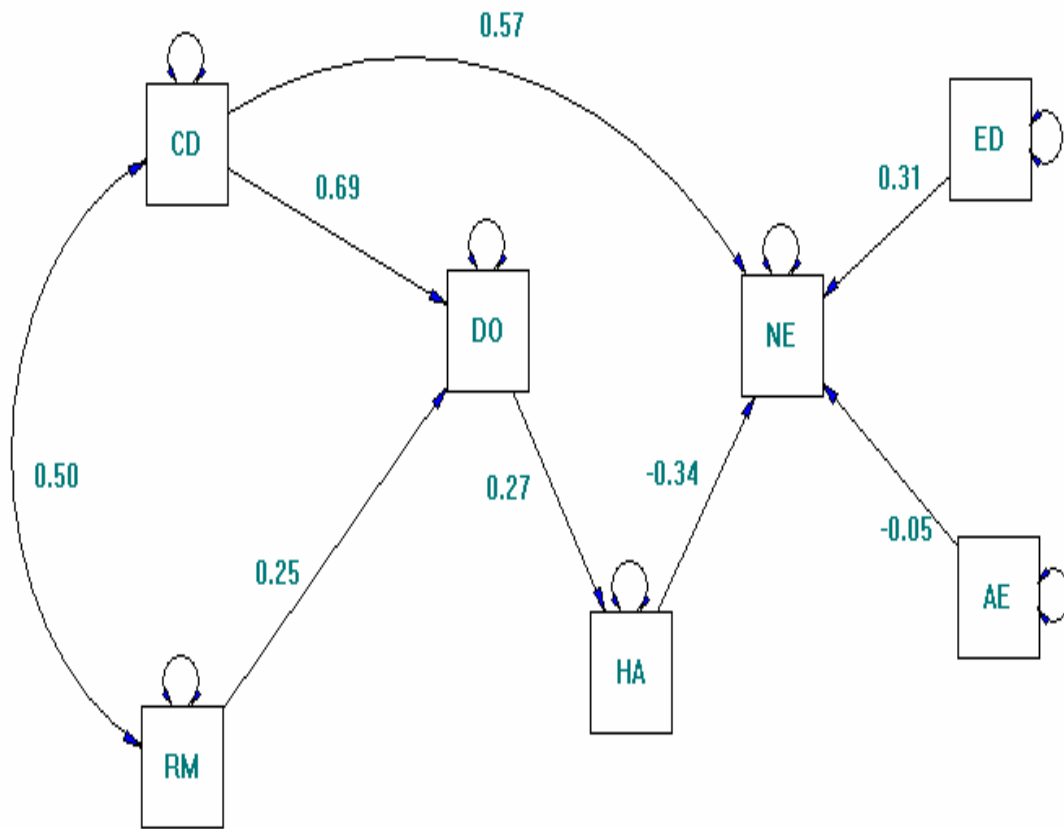
In the former HLM analyses, the results provide theoretically important implications in the research of community and policing. However, HLM analyses have shown a limitation providing visual linkages between multiple predictors and an outcome variable. Like a multivariate regression analysis, statistical results are complicatedly displayed in multiple tables. This type of reporting of statistical findings sometimes hinders the reader to catch systemic results of the study. In addition, the distribution of multiple tables does not provide sequential pathways among variables. A resolution is to provide visual linkages between variables. However, in the literature of this study, many researchers have ignored the importance of drawing the pathways. In addition, extant statistical tools and SEM techniques (e.g. SPSS, SAS, STATA, Mx, AMOS, and LISREL) have a limitation to handle multilevel data in their analysis. A good statistical tool, M Plus, developed by Muthen and Muthen (2007) is possible to provide visual linkages with multilevel data. The following part of this chapter is the model fit results and visual figures among variables by using the M-plus program.

7.6.1. A Multilevel Pathway Model of Neighboring

The results presented in Table 12 have shown that residents' neighboring activities are not accurately predicted by structural components and community crime problems, even demographic characteristics and negative experiences of respondents explains the small amount of variance of neighboring. Consequently, it is less likely to expect a good model fit of an initial multilevel pathway model for neighboring (Figure 3). To examine the model fit of neighboring model presented in Figure 3, a dat file was created. The dat

file is a format of inputting data in M plus (Muthen & Muthen, 2007). Since the data used in this dissertation is multilevel, a two-level pathway model with continuous outcomes ((Muthen & Muthen, 2007: 221-240) has been created (see Appendix 1). The results show that the full model of neighboring fails to produce a goodness-fit score (CFI = .105; RMSEA = .089, SRMR for within = .043, SRMR for between = .147). Although SRMR score in the pathways of within groups is satisfied with the cut-off value (SRMR <.08), the scores of CFI and RMSEA for this model indicate that the initial model specification fails to produce a good model fit score.

Based on the statistical results, a reduced model is re-created (see Appendix 2). For this model, only statistically significant predictors in each pathway are selected to be inputting variables. The results of this model specification are presented in Figure 10. Among twenty one predictors, four community level variables and two demographic variables remain in this pathway model. In the HLM analysis of neighboring, all of community variables were not significant. However, in the pathway model, community concentrated disadvantage and community harassment show significant linkages with neighboring. The goodness-fit scores of this model are CFI =.993, RMSEA = .011, SRMR for within groups =.003, and SRMR for between groups =.034. The goodness fit scores indicates the final model specification is satisfactory.

Figure 10. Multilevel Pathway Model of Neighboring

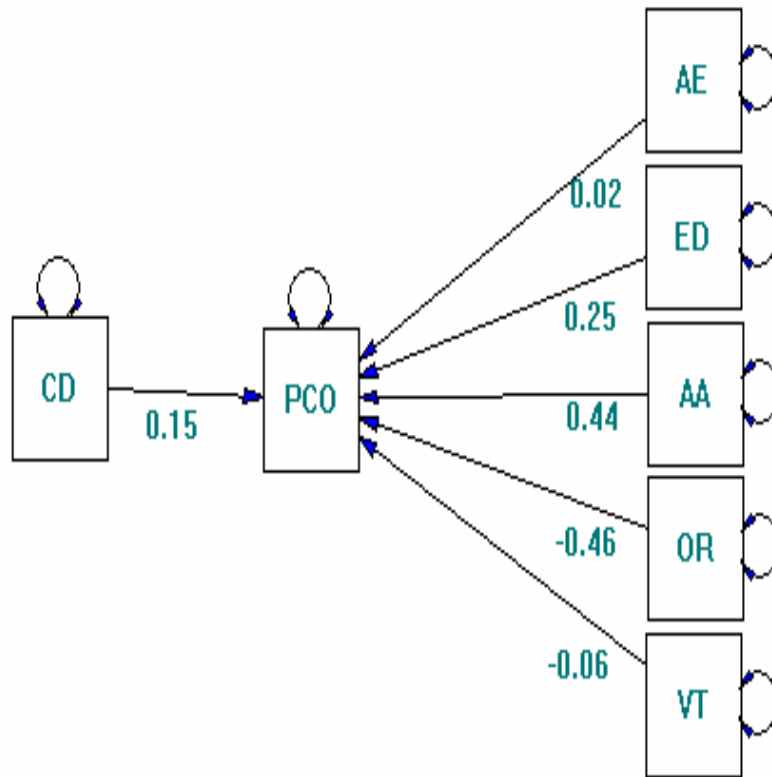
CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, Ha = Harassment by the police, NE=Residents' Neighboring, ED= Education, AE= Age.

7.6.2. A Multilevel Pathway Model of Participation in Community Organizations

A model specification for the multilevel pathway model for participation in community organizations presented in Figure 4 is applied in the analysis of M plus (see Appendix 3). The initial model of community involvement fails to produce a satisfactory good-fit score (CFI =.117, RMSEA = .088, SRMR for within groups =.042, SRMR for between groups =.156). A re-specified multilevel pathway model of participation in community organizations is created with significant variables (see Appendix 4). The results presented in Figure 11 show a final model of community involvement. This model

produces significantly improved goodness-fit scores (CFI =1.000, RMSEA =.000, SRMR for within groups =.000, SRMR for between groups =.000). The final model shows that residents who live in concentrated disadvantages communities are more likely to participate in community organizations. Unlike the results in the analysis of HLM, victimization experience shows a negative relationship with community involvement. In addition, compared to White neighbors, Hispanic and other races are less likely to participation in community organizations.

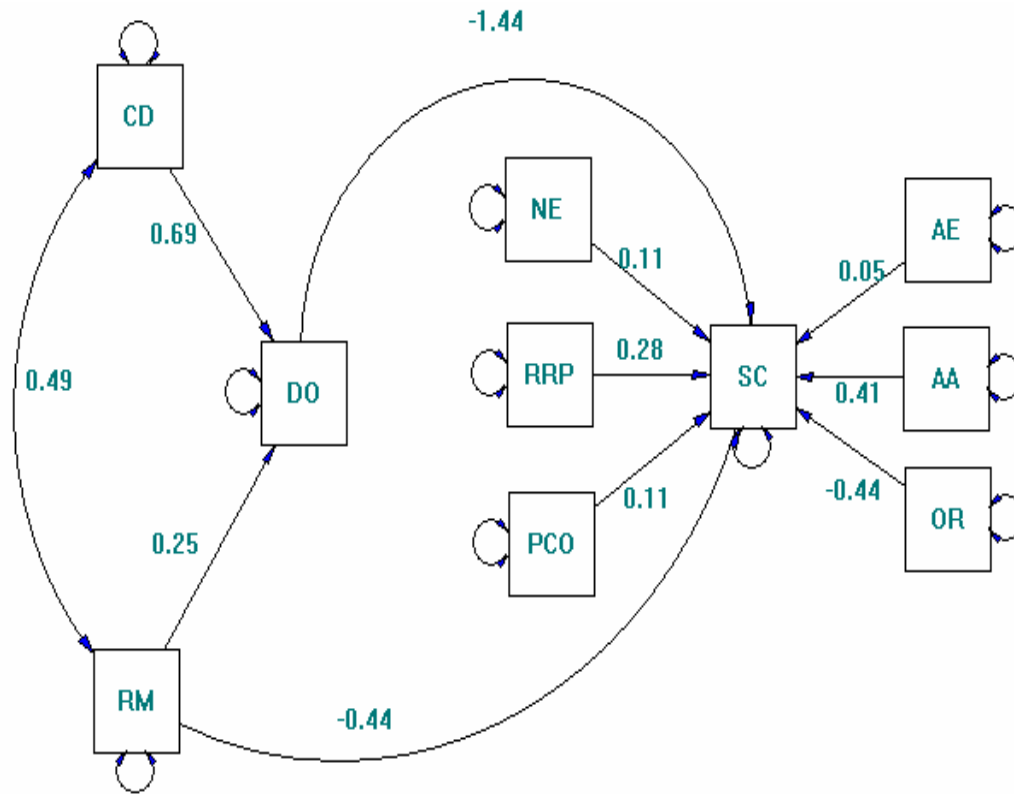
Figure 11. Multilevel Pathway Model of Participation in Community Organizations



CD = Concentrated Disadvantage, PCO= Participation in Community Organization, AA= African American, OR=Other Races, ED= Education, AE= Age, VT= Individual Victimization Experience.

7.7. Multilevel Pathway Models of Social Cohesion

A multilevel pathway model for social cohesion, presented in Figure 2, is created (see Appendix 5). Since the model fit scores for this model are also very unsatisfactory (CFI =.302, RMSEA =.09, SRMR for within groups =.04, SRMR for between groups =.109), a further model specification is estimated (see Appendix 6). For this model, three of community level variables, such as crime rates, community victimization, and community harassment, were dropped. In addition, three of fourteen level 1 variables remains in the model. Police social control, primary variable in this dissertation, and two social interaction variables are included in the final model (Figure 12). The result presented in Figure 12 show the multilevel pathways in predicting social cohesion. The model goodness-fit scores for this model are adequate (CFI =.979, RMSEA =.023, SRMR for within groups =.000, SRMR for between groups =.139). The values of CFI and RMSEA satisfy the cut-off value for the goodness-fit, while SRMR for between groups is unacceptable. However, since three of four criteria are satisfied, this model is accepted. The pathways to social cohesion presented in Figure 12 show that community disorder mediates the effects of community structural components on social cohesion. Social interactions are not affected by either community structures or community disorder. As hypothesized, police social control is positively linked to social cohesion. Social cohesion also has positive associations with age and African Americans. However, other races show negative associations with social cohesion.

Figure 12. Multiple Pathway Model of Social Cohesion

CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, RRP= Residual of Residents' Perception of Policing, NE=Residents' Neighboring, PCO= Participation in Community Organization, SC=Social Cohesion, AA= African American, OR=Other Races, AE= Age.

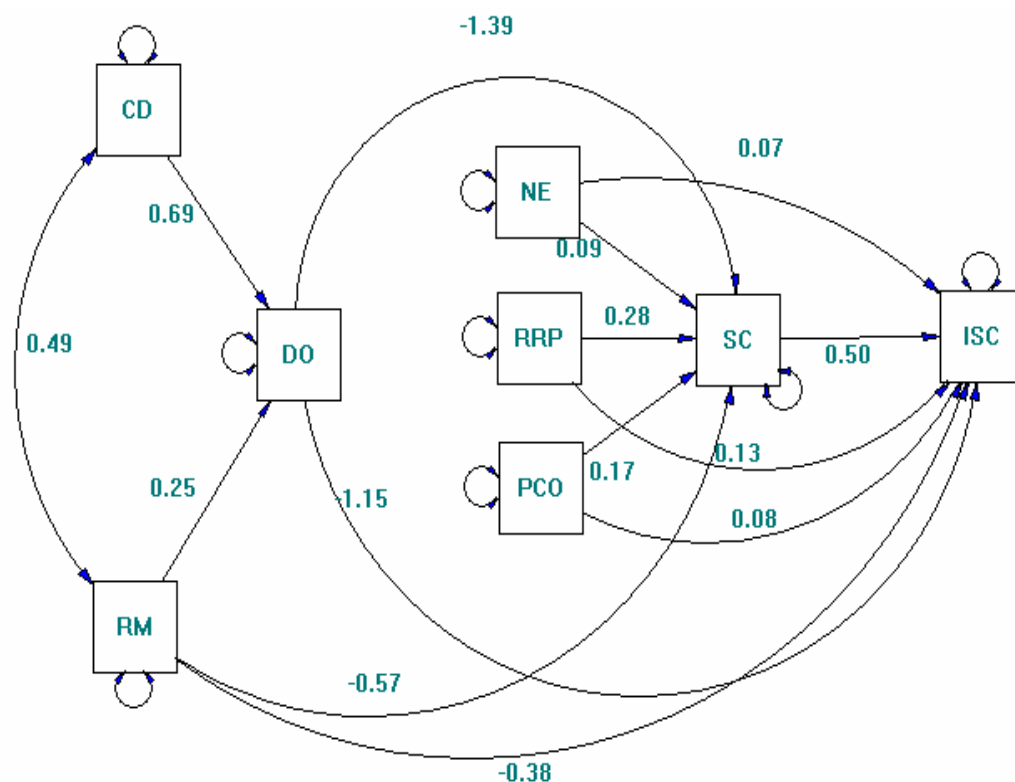
7.8. Multilevel Pathway Models of Informal Social Control

A multilevel pathway model was created to uncover hidden pathways linked to informal social control (Figure 1). Skaw and McKay's social disorganization theory addresses that structural components of communities (e.g. poverty, ethnic heterogeneity, residential mobility) undermine communities' ability to regulate their neighbors and share common values of communities among neighbors. In this dissertation, two structural characteristics of communities are concentrated disadvantage and residential

mobility. The next steps are the associations between community structure and community crime problems (e.g. crime rates, community disorder, community victimization, and community harassment). Community crime problems mediate the effects of community structural components to social interactions, social cohesion, and informal social control. In addition, residents' perception of the police as a new measure of police social control independently affects communities' ability to control community problems and share common values of communities. To assess the model fit of this inquiry, a multilevel pathway model is created (see Appendix 7). The results reveal that this inquiry fails to produce adequate goodness-fit scores of the model (CFI =.773, RMSEA, .058, SRMR for within groups =.025, SRMR for between groups =.036). Although SRMR scores for within and between groups satisfy the cut-off value less than .8, CFI and RMSEA scores are not fitted. Therefore, a reduced multilevel pathway model was re-created (see Appendix 8). Goodness-fit model scores produced in M plus analysis successfully satisfy the cut-off values of the criteria (CFI =.988, RMSEA =.019, SRMR for within groups =.000, SRMR for between groups =.211). Although the value of SRMR for between groups is significantly increased, other goodness-fit scores are satisfactory. The visual pathway of the final model is displayed in Figure 13. The results reveal that community disorder mediates the effects of community structure components on social cohesion and informal social control. Although residential mobility has direct impacts on both of residents' attitude toward communities (social cohesion) and behavioral perception (informal social control), it is also found the mediating effects of community disorder which significantly reduces the influence of residential mobility on social cohesion and informal social control (see Appendix 10). However, community

disorder and structural characteristics of communities do not explain the frequency of neighboring and participation in community organizations. Social interactions independently affect social cohesion and informal social control. A primary linkage in this dissertation is the impacts of police social control on solidarity and communities' ability to regulate their neighbors. The results show that residents' perception of the police is significantly associated with social cohesion and informal social control. As Sampson and his colleagues (Sampson et al., 1997, Morenoff et al., 2001) assumed, social cohesion also shows a significantly positive association with informal social control.

Figure 13. Multilevel Pathway Model of Informal Social Control



CD = Concentrated Disadvantage, RM = Residential Mobility, DO=Disorder, CR= Crime Rate, VT = Victimization, Ha = Harassment by the police, RRP= Residual of Residents' Perception of Policing, NE=Residents' Neighboring, PCO= Participation in Community Organization, SC=Social Cohesion, ISC=Informal Social Control.

Chapter 8. Discussion and Conclusion

8.1. Discussion of Findings

In this dissertation, the main inquiries were five-fold: to develop a new comprehensive measure of police social control in order to extend theoretical discussion about the associations between formal social control and community; to examine the effect of police social control on residents' social interactions, including neighboring and participation in community organizations; to assess the effects of police social control on social cohesion and informal social control; to examine the effects of structural components of communities and community crime problems on social interactions, social cohesion and informal social control; and finally to investigate the role of social interactions on social cohesion and informal social control. To accomplish these goals, the stringent statistical techniques, such as HLM and multilevel pathway models by using M plus, were used. The multiple hierarchical linear regression models and multilevel pathway models were created. The empirical results provided precious theoretical lessons and policy implications. This chapter will discuss the importance of these outcomes in the research of community and policing.

One primary discussion of this dissertation was to create a new comprehensive measure of police social control. In the previous study in examining the role of formal social control on informal social control, many researchers have used the practical-based police activities as primary measures of police social control. For example, the advocates of COP tended to discuss comparative effectiveness of innovative police strategies and traditional policing. However, these comparisons generally fail to explain the entire

activities of the police in a community since the police departments are practice both traditional and innovative policing.

Another route of discussion in examining the effect of formal social control and informal social control is theoretical argument between positive and negative perspectives. In these arguments, the advocates of positive perspective believe that criminal justice interventions enhance the deterrent effects of punishment by removing criminals and reducing crime rates. In turn, state control strengthens communities' ability to maintain social order. However, this expectation is not conclusive since previous studies have not made a consensus about the effectiveness of criminal justice interventions on crime. The crucial limitation of this discussion is also that almost all extant studies assume criminal justice interventions as inherently coercive (e.g. police use of force, incarceration). However, in the field of policing, individual police officers rarely uses force, but often they act non-coercively (e.g. informal contacts with citizens, participation in community meetings). Therefore, the primary measure (e.g. arrest rates or incarceration rates) of state control in coercion literature fails to include the effect of non-coercive criminal justice interventions on community process.

To examine the entire influences of police activities regardless of traditional and innovative policing or (coercive and non-coercive police practices), this dissertation developed a new way to measure police social control by using residents' perception of the police. This new attempt was resulted from the definition of public social control proposed by Bursik and Grasmick (1993) - community's ability to solicit external resources and the ability of external agencies to maintain social order. Residents in a community are primary clienteles of criminal justice system and their subjective

evaluation may explain their own ability to solicit resources from the criminal justice system and also reflect their perception of the ability of criminal justice system on maintain social order. Previous studies (Sampson & Bartusch, 1998; Silver & Miller, 2004; Velze, 2001) had also used the perception of the police as a quasi-measure of public social control. However, these studies failed to control measurement error of this construct since residents' perception of the police is generally explained by external factors, such as demographic characterizes, individual experience in crime and the police, community structural components, community crime problem, and so forth. Therefore, in this dissertation, multiple modifications were devised in order to extract a genuine conceptual construct of residents' perception of the police regardless of the impacts of external factors. Finally, a residual of the perception of the police in a predictive model of HLM analysis became a new measure of police social control. Although this measure may not completely exclude the impacts of external factors which can explain the perception of the police, compared to previous studies, these modifications are statistically confidential.

Main findings in a HLM analysis in predicting residents' perception of the police (Table 8) reaffirm the importance of negative contact with the police. Previous studies consistently found that residents who had dissatisfied contact with the police were less likely to be satisfied with police services. In addition, residents' perception of community disorder is also a negative indicator of the perception of the police. However, neither community characteristics nor crime problems (e.g. crime rates, victim rates) explain residents' perception of the police. Finally, demographic characteristics of residents also do not have significant impacts on the perception of the police. These results indicate that

some portions of variance of residents' subjective evaluation may be explained by actual police activities in a neighborhood. Nonetheless, it is necessary to find external factors which may explain residents' perception in future research. Consequently, a main limitation of this modification is the failure to include entire external factors in HLM analysis in order to extract an unexplained variance of the perception of the police.

A new measure of police social control extracted from the unexplained variance of residents' perception of the police was used to predict residents' social interactions, social cohesion, and informal social control. Initially, this dissertation attempted to predict collective efficacy. However, a factor analysis and a CFA measurement model reveal that social cohesion and informal social control, which were composited in the study of Sampson and his colleagues (1997), turned out to be separate conceptual constructs. Therefore, community processes indicated neighboring, participation in community organizations, social cohesion, and informal social control. Multiple HLM analyses were performed to examine the relationships between variables.

Primary findings in predicting residents' social interactions reveal that police social control does not explain neighbors' community lives. Regardless of police social control, residents independently interact. It is also interesting that the findings conflict with Skogan's (1988) argument that "community organizations, and especially those concerned with crime, are least common where they appear to be most needed-in low-income, heterogeneous, deteriorated, renting, high-turnover, high-crime areas" (Skogan, 1988:45). Even concentrate disadvantage of communities are even increasing residents' neighboring and community involvement. Specifically, residents' neighboring behaviors are limitedly explained by community variables. In demographic characteristics of

respondents only age and education explain the level of residents' neighboring. In addition, negative experience with the police (e.g. harassment from the police) significantly increases neighbors' social interactions. This finding is consistent with previous studies (Anderson, 1999; Wilson, 1987). When the police discriminate against and unfairly use force on members of the community, this leads to the community to become cynical about the legitimacy and effectiveness of the police. When criminal incidents occur in the community, neighbors resist reporting the incident to the police, attempting instead to solve it themselves.

An interesting finding in the predictive model of residents' participation in community organizations is that neighbors living in poor neighborhoods are more likely to engage in community organizations. They frequently participate in school meetings, political parties, church, and community watch programs. In addition, African Americans are also more likely to be involved in community organizations. Victimization and police harassment experiences also show positive associations with community involvement. These findings may be explained by the resource solicitation argument. African Americans from poor communities may satisfy their needs by engaging in community organizations. In addition, when they become victims of crime or police harassment, they are more likely to solicit the communities' support by participating in community organizations. Other findings are that the educated older male residents from intact families are more frequent participants in community organizations. This finding is consistent with previous studies arguing that the middle-class neighbors are more likely to participate in community organizations (Geis & Ross, 1998; Lynch et al., 2002; Sampson, 1991).

In the predictive model of social cohesion, the results reveal the positive impact of police social control on social cohesion. Residents having a more favorable attitude toward policing in their neighborhoods are more likely to trust, respect, care, and get along with their neighbors and share communities' common values. This affection evaluation about their community is an important indicator of strong community and a generator of informal social control. Reisig and Park (2000) also support the links between community attachment and satisfaction with the police. They argue that residents who rate highly their neighborhoods as good places to live are more likely to show favorable attitude toward the police. Reciprocal effect of residents' subjective evaluation of the police is also possible. When the residents evaluate their community as whether or not it is a good place to live, they may consider multiple conditions of residency, such as educational institutions, shopping centers, employment, values of property, and community safety. Therefore, it may be more reasonable to think that the evaluation of community is partially an outcome of neighbors' evaluation of police services in their community. In temporal order, police social control may precede communities' social cohesion.

As hypothesized, residential mobility weakens the community's ability to share common values and solidarity. However, communities' socioeconomic status does not explain the solidarity of a community. Nonetheless, the effect of communities' structural characteristics indirectly undermine community cohesion since structural components of community is linked to community disorder which significantly weaken the solidarity of community. Community crime problems do not show significant associations with social cohesion. However, the effects of residential mobility and community disorder are

slightly reduced when community processes (e.g. neighboring, participation) and police social control are controlled in the model. The positive linkages between social interactions and social cohesion are consistent with previous studies. Many research found that the frequency of social interactions strengthen trust and solidarity of communities (Morenoff et al., 2001; Sampson, 1991). In the systemic model of social disorganization, residents' social networks or social ties are mediating the effects of communities' structural components on communities' ability to regulate their neighbors (Bursik & Grasmick, 1993). However, the hierarchical linear regression and multilevel pathway model reveal that the mediating effects of social interactions on social cohesion are not supported since community variables poorly predict residents' social interactions.

The final model of this dissertation is to predict informal social control. The primary hypothesis that police social control may strengthen the level of informal social control is strongly supported in this model. After controlling for community processes, even including social cohesion, police social control is significantly associated with informal social control. It indicates that residents who show a favorable attitude toward police services in their neighborhoods are more likely to show their willingness to intervene in community problems. This finding is also found in examining the multilevel pathway model of informal social control. The positive effect of police social control on informal social control is statistically supported in the final pathway model. The importance of this result is that the high quality of police service in a neighborhood increases residents' trust and cohesion and also directly encourages their willingness to engage in maintaining social order. In their prior study examining the roles of satisfaction with the police on informal social control, Silver and Miller (2004) found the importance of satisfaction

with the police on informal social control. However, they did not recognize that the concept of residents' perception of the police may be an alternative way to measure public social control. They did not provide a theoretical linkage between formal social control and informal social control. An extended argument can be found in Velze (2001). He argues that the perception of public officers and police officers can be used to measure public social control and the level of satisfaction reduces the risk of victimization. However, his finding shows a direct effect of public social control on victimization, but it does not provide links between public social control and informal social control. This empirical gap is tested in this dissertation. The result strongly supports the positive effect of police social control on informal social control. Unlike Rose and Clear's (1998) argument, the finding supports the positive perspective of state control on community.

Another important finding in this dissertation is that residents' frequent social interactions are strongly linked to informal social control. This result is opposite to the nullifying argument assuming the lack of association between social interactions and informal social control (Browning et al., 2004; Bursik, 1999; Pattillo-McCoy, 1999; Sampson et al., 1999; Sampson et al., 2002; Wilson, 1987). Wilson (1987) argues that the frequent social interactions among neighbors sometimes hinder generating informal social control. Sampson and his colleagues (1999) also argue that the density of social ties may not be sufficiently able to activate communities' ability to regulate their neighbors. However, in this dissertation, the results support positive associations between social ties and informal social control. In addition, social ties indirectly strengthen informal social control through enhancing social cohesion, which encourage residents'

willingness to take action. Consequently, social ties strengthen neighbors' subjective inclination to solving in community problems and to share homogeneous understanding of the community.

Although the effect of crime and victimization on informal social control is not empirically supportive, the results consistently show that community disorder has multiple undermining effects on community. In particular, residents' perceived disorder in communities has negative associations with informal social control (Belliar, 2000; Duncan et al., 2003; Gibson et al., 2002; Markowitz et al., 2001). Therefore, this dissertation does not support positive associations between community crime problems and community (Belliar, 2000; Rountree & Land, 1996; Lynch et al., 2002).

In sum, the main findings of this dissertation are that police social control has positive effects on social cohesion and informal social control, but not on residents' social ties. Concentrated disadvantage does not have strong determining impacts on community process with the exception of participation in community organizations, while residential mobility shows negative impacts on social cohesion and informal social control. Community disorder mediating the effects of both community structures has negative associations with social cohesion and informal social control, but not on social interactions among neighbors, while community crime rates and victimization fail to show significant linkages with community process. As hypothesized, the density of social ties shows statistically significant positive associations with social cohesion and informal social control, while social ties are not explained by community structures and community crime problems; finally, the effects of demographic characteristics of

residents are not strong in predicting community process with the exception of community involvement.

8.2. Theoretical Implications

The fact that crime rates disproportionally vary across communities has been paid attention in criminology for a long time. Varying criminological theories have attempted to explain the disproportionate crime rates across community. The main theoretical perspective used in this dissertation is the systemic control model of social disorganization theory. The systemic control model provides a valuable discussion about community and crime. According to Hunter's (1985) explanations, community social control consists of three levels: private, parochial, and public social control. In the levels of social control, the well-known public social control is police social control. The primary purpose of this dissertation is to examine the role of police social control on informal social control. In addition, this dissertation attempts to assess the impact of police social control on social cohesion and social interactions, including neighboring and participation in community organizations. The results in this dissertation provide important implications in the research of community and crime. Firstly, this dissertation has attempted to link the associations between formal social control and informal social control. This inquiry has been limitedly examined. Extant studies have also failed to provide a statistically stringent consideration about the operationalization of formal social control. Therefore, the second contribution of this dissertation is the necessity of developing a new comprehensive measure of police social control and the availability of empirical endeavors. The essential implication of this attempt is to extend the scope of

current argument about police coercion and community and add an alternative measure of police coercion in order to examine its impacts on community process, including neighboring, community involvement, social cohesion, and informal social control. Thirdly, this dissertation revealed that police social control can be an important determinant of social cohesion and informal social control. Although residents' social interactions are not at all explained by police social control, the underlying mechanism of social interactions is more complex than expected. Fourth, this dissertation shows the importance of social interactions on social cohesion and informal social cohesion. Unlike previous arguments, social ties can activate informal social control directly and indirectly by enhancing social cohesion. This dissertation has also shown the significance of community disorder in determining communities' ability to share common values and ability to regulate their neighbors. Prior arguments on the impacts of crime and disorder on community are controversial. The findings in this dissertation seem to support the negative view of disorder on community. However, crime and victimization fail to show the direction of their effects on community. Finally, unlike previous studies, the deteriorative effects of concentrate disadvantage in communities on community process are not strongly supported. In the disadvantaged communities, residents more frequently participate in community organizations. However, communities' socioeconomic status indirectly undermines community process through generating community disorder. On the other hand, the results show that the impacts of residential mobility are more influential on community. In the regard of community's ability to regulate their neighbors and to share common values of communities, residential instability is an important

determinant. This finding is consistent with previous argument in social disorganization theory.

8.3. Policy Implications

Primary goals of policing in the U.S. have been, for a long time, thought to maintain social order and prevent crime. However, current interest in contemporary policing seems to expand their fundamental roles in a society. For example, innovative policing strategies (e.g. COP, Problem-oriented policing, quality of life policing) are not only focusing on crime but also concerning about community disorder and quality of life in communities. The social roles of policing are not only controlling crime. The police are expected more and more to provide resources and services to solve community problems and enhance community relations.

This changing paradigm in U.S. policing, in turn, lead criminologists to examine the roles of policing on community. In this dissertation, the author attempted to examine the impact of police social control on community rather than crime or disorder. The primary finding reveals the importance of residents' perception of the police on strengthening communities. A main difference of this study compared to prior research was the focus on subjective evaluation of police performance on community as a new measure of police social control. The implication of this dissertation is that regardless of types of policing in a community it is important to develop or find a policy that can improve residents' subjective evaluation of the police in preventing crime, providing adequate services for criminal victims, and caring about community problems. For residents, the subjective evaluation of the police in preventing crime, providing adequate services for criminal victims, and caring about community problems is a way to assess communities' ability to

solicit external resource from criminal justice agency and simultaneously it become an instrument to gauge police agencies' ability to maintain social order in communities.

Although we cannot definitely state how effective a particular police practice of in a community affects residents' satisfaction with the police, if COP can make residents much more satisfied than traditional policing, the extensive implementation of COP in police departments is recommended. If problem-oriented policing is effective in generating a more favorable attitude toward the police in a neighborhood, it is also needed to extensively implement. This study cannot support a specific police strategy or program; however, the main point of this dissertation is to address the importance of residents' perception of the police as an alternative measure of police social control. A practical suggestion of this dissertation is that residents' subjective evaluation of the police can be undermined by citizens' negative contact with police officers. When the police treat citizens irrespectively or unfairly, the reputation and legitimacy of the police in a community may become damaged. This evaluation is important for both the police and citizens. For citizens, the performance of the police officers may be an important indicator in evaluating the quality of life in their communities. This affection evaluation of the community strongly determines neighbors' ability to maintain social order. Therefore, it becomes an important issue to educate and train the police officers who could provide police resource and service properly without causing conflicts with citizens. As service providers, the priority of policing is needed to direct on residents' responses and needs. Individual officers are also required to improve their susceptibility to hear neighbors' needs and responses.

The empirical findings suggested in this dissertation strongly support the negative effects of community disorder on community process. As previous arguments stated (Skogan, 1990; Taylor, 1995; Wilson and Kelling, 1982), communities' incivility obstructs enhancing residents' trust and cohesion, and even undermines the community's ability to maintain social order. In their daily lives, residents are more concerning about community disorder rather than crime or victimization rates. A good strategy to reduce community incivility, as suggested by previous studies, is problem-oriented policing in crime-prone hot spots in a community. However, previous studies also suggest that there is the risk of community conflict between the police and residents in the practice of problem-oriented policing. Consequently, what should be also considered is how to reduce this side effect which could undermine residents' perception of the police.

A final suggestion of this dissertation is that the police are expected to encourage residents to participate in community organizations. Although the police cannot be involved in all existing community organizations, they can utilize the existing police-related community organizations such as neighborhood watch groups, school meetings, community meetings and so forth. In addition, the police can formally distribute news letter to the community and also informally visit the community's households in order to stimulate community involvement.

8.4. Limitations of Study

Although this dissertation contributes to expand the theoretical argument of social disorganization theory and suggest important policy implications in the U.S. contemporary policing, it also contains methodological and theoretical limitations. First,

the new measure of police social control suggested in this dissertation is not a complete resolution in clarifying the measurement issue of state control since the development of a new measure is absolutely depending on residents' subjective perception. Although it does not mean that a subjective evaluation of the police is inferior to the objective performance measures - arrest rates, number of citation, incarceration rates, and so forth - this dissertation cannot control all external factors in the modification of developing a new measurement. In addition, the association between formal social control and informal social control does not have strong theoretical foundation and even it have not been empirically tested much. Therefore, the endeavor of this dissertation to link police social control and community process is an early explorative stage in this research.

Another limitation of this dissertation is the use of the non-probability sampling data. The 66 block groups were not randomly selected in spite of selecting randomly respondents in each block group. Therefore, the representativeness of the data and generalization of the findings are not strongly assumed. In addition, the multiple sources of the data, such as Census, household survey, and official data of crime, may have limitations in displaying the contingency of information across communities. Furthermore, the use of Census data in measuring structural characteristics of communities may be inaccurate to reflect actual characteristics of the community.

Although this dissertation examines the causal link between variables, temporal order among variables is incomplete. For example, it is not definite whether police social control precedes social cohesion or informal social control. In addition, some may challenge the temporal order in determining the association between social interactions and informal social control. Additionally, community disorder may be a product of the

lower level of informal social control or social cohesion. The use of the 2000 Census also is problematic in predicting crime rates which were collected in 1999.

8.5. Future Research

The lessons of this dissertation provide valuable implications for future research in this field of study. First, it is necessary to replicate the examination of the impacts of formal social control on community process by using the same measure of police social control and empirical treatments employed. Second, a theoretical foundation should be developed so that it can provide a strong link between formal social control and informal social control. Third, although this study only focused on police social control, it is necessary to examine the differential effects of diverse public social control on community. Finally, in order to show temporary order among community process, community crime problems, structural characteristics of communities, and public social control, the future study should utilize a longitudinal setting and collect the longitudinal data.

Appendix

Appendix 1. Fit Statistics in SEM

Comparative Fit Index (CFI: Bentler, 1988)

-This statistic assesses model fit using a non-central χ^2 distribution. The range of the CFI is from 0 to 1. The values greater than .95 indicate the good-fitting models. The value about .90 is acceptable. The CFI is calculated:

$$\frac{[\chi^2 - \text{df}(\text{Null Model})] - [\chi^2 - \text{df}(\text{Alternative Model})]}{\chi^2 - \text{df}(\text{Null Model})}$$

Root Mean Square Error of Approximation (RMSEA: Hu & Bentler, 1999)

-The RMSEA assess the lack of model fit between the saturated model and a hypothesized model. The range of the RMSEA score is from 0 to 1. Values greater than .10 indicate poor-fitting models, while values less than .06 show a good-fitting model. The RMSEA is calculated:

$$\sqrt{[\chi^2 / (\text{df} - 1) / (n - 1)]}$$

Standardized Root Mean Square Residual (SRMSR: Hu & Bentler, 1999)

- SRMSR estimates differences between observed and predicted covariances. This statistic based on transforming both the sample covariance matrix and the predicted covariance matrix into correlation matrices. Therefore, SRMSR is a measure of the mean absolute correlation residual (Kline, 2005, p.141). A value of zero indicates perfect fit. The values less than .08 is considered a good fit.

Appendix 2. Command Input for Initial Model of Neighboring

Title: Initial Model of Neighboring;

Data: File is c:\sample10.dat;

Variable: Names are neighno a1-a14 y1-y4 o1-o6 k1;

 WITHIN = a1-a14 k1;

 BETWEEN = o1-o6;

 CLUSTER = neighno;

Analysis:

 Type = twolevel;

MODEL:

 %WITHIN%

 y1 ON a1-a14 k1;

 %BETWEEN%

 y1 ON o1-o6;

 o3 o4 ON o1-o2;

 o5 o6 ON o1-o4;

 o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 3. Command Input for Final Model of Neighboring

Title: Final Model of Neighboring;

Data: File is c:\sample10.dat ;

Variable: NAME = neighno a1-a14 y1-y4 o1-o6 ;

USEVARIABLE = neighno a2 a3 y1 o1 o2 o4 o6;

WITHIN = a2 a3;

BETWEEN = o1 o2 o4 o6;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y1 ON a2 a3;

%BETWEEN%

y1 on o1 o6;

o6 on o4;

o4 on o1 o2;

o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 4. Command Input for Initial Model of Community Involvement

Title: Initial Model of Participation;

Data: File is c:\sample10.dat ;

Variable: Names are neighno a1-a14 y1-y4 o1-o6 k1 ;

WITHIN = a1-a14 k1;

BETWEEN = o1-o6;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y2 ON a1-a14 k1;

%BETWEEN%

y2 ON o1-o6;

o3 o4 ON o1-o2;

o5 o6 ON o1-o4;

o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 5. Command Input for Final Model of Community Involvement

Title: Final Model of Participation;

Data: File is c:\sample10.dat ;

Variable: Names are neighno a1-a14 y1-y4 o1-o6 k1 ;

USEVARIABLE = a2 a3 a10 a11 a14 y2 o1;

WITHIN = a2 a3 a10 a11 a14;

BETWEEN = o1;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y2 ON a2 a3 a10 a11 a14;

%BETWEEN%

y2 ON o1;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 6. Command Input for Initial Model of Social Cohesion

Title: Initial Model of Social Cohesion;

Data: File is c:\sample10.dat ;

Variable: Names are neighno k1 a1-a14 y1-y4 o1-o6;

USEVARIABLES = neighno k1 a1-a14 y1-y3 o1-o6;

WITHIN = a1-a14 k1;

BETWEEN = o1-o6;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y3 ON y1 y2 a1-a14 k1;

%BETWEEN%

y1-y3 ON o1-o6;

o3 o4 ON o1-o2;

o5 o6 ON o1-o4;

o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 7. Command Input for Final Model of Social Cohesion

Title: Final Model of Social Cohesion;

Data: File is c:\sample10.dat ;

Variable: Names are neighno k1 a1-a14 y1-y4 o1-o6;

USEVARIABLES = k1 a2 a10 a11 y1-y3 o1 o2 o4;

WITHIN = a2 a10 a11 k1;

BETWEEN = o1 o2 o4;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y3 ON y1 y2 a2 a10 a11 k1;

%BETWEEN%

y3 ON o2 o4;

o4 ON o1 o2;

o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 8. Command Input for Initial Model of Informal Social Control

Title: Initial Model of Informal Social Control;

Data: File is c:\sample10.dat ;

Variable: Names are neighno k1 a1-a14 y1-y4 o1-o6;

USEVARIABLES = neighno k1 a1-a14 y1-y4 o1-o6;

WITHIN = a1-a14 k1;

BETWEEN = o1-o6;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y4 ON y1 y2 y3 a1-a14 k1;

y3 ON y1 y2 k1;

%BETWEEN%

y1-y3 ON o1-o6;

o3 o4 ON o1-o2;

o5 o6 ON o1-o4;

o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 9. Command Input for Final Model of Informal Social Control

Title: Final Model of Informal Social Control;

Data: File is c:\sample10.dat ;

Variable: Names are neighno k1 a1-a14 y1-y4 o1-o6;

USEVARIABLES = k1 a2 a10 a11 y1-y3 o1 o2 o4;

WITHIN = k1;

BETWEEN = o1 o2 o4 o5;

CLUSTER = neighno;

Analysis: Type = twolevel;

MODEL:

%WITHIN%

y4 ON y1 y2 y3 k1;

y3 ON y1 y2 k1;

%BETWEEN%

y4 ON o2 o4;

y3 ON o2 o4;

o4 ON o1 o2;

o1 WITH o2;

Neighno = Block Number; A1= Gender, A2 = Age, A3 = Education, A4 = Single, A5 = Divorced or Separated, A6 = Widow, A7 = Part Time Employment, A8 = Retired, A9 = Unemployment, A10 = Black, A11 = Other Races, A12 =Years of Residency, A13 = Victim Experience, A14 = Harassment Experience, Y1= Neighboring, Y2 = Participation in Community Organization, Y3 =Social Cohesion, Y4= Informal Social Control, O1 = Concentrate Disadvantage, O2 = Residential Mobility, O3= Crime Rate, O4= Community Disorder, O5=Community Victimization, O6= Community Harassment, K1= Residual of Police Social Control.

Appendix 10. The Impacts of Community Structural Components and Community Disorder on Social Cohesion and Informal Social Control

	Social Cohesion		Informal Social Control	
Intercept	19.05**(.12)	19.05**(.088)	19.17**(.11)	19.17** (.08)
Concentrated Disadvantage	-.91**(.11)	.08(.14)	-.80**(.13)	-.040(.15)
Residential Mobility	-.92**(.13)	-.565**(.08)	-.64**(.13)	-.368**(.12)
Community Disorder		-1.43**(.15)		-1.09**(.16)
Variance Component				
Within Variance	15.6825	15.6822	4.09294	16.751
Between Variance	.69439	.10961	.42219	.08479

* p<.05, ** p<.01

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