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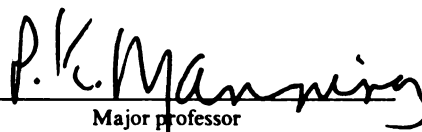
Police Social Capital and Officer
Performance of Community Policing

presented by

Amanda L. Robinson

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POLICE SOCIAL CAPITAL AND OFFICER PERFORMANCE
OF COMMUNITY POLICING

By

Amanda L. Robinson

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ABSTRACT

POLICE SOCIAL CAPITAL AND OFFICER PERFORMANCE
OF COMMUNITY POLICING

By

Amanda L. Robinson

Social capital is used as a theoretical framework to reveal the importance of networks of relationships between officers and their supervisors for performing community policing. Police social capital refers to the quality of officers' relationships within the police organization; for example, with their peers and their supervisors. It is expected that officers with higher levels of social capital will be able to accomplish more community policing than their peers who have lesser amounts of this resource, controlling for officer characteristics and features of their work environment. Using data from the Project on Policing Neighborhoods (PPON), two measures of community policing were developed: acts of community policing provided to citizens (comfort, referrals, and information) per citizen encountered, and time spent on community policing activities (attending community meetings, problem-solving, and crime prevention) per shift. Separate models were tested on these two measures to determine the relative influence of social capital (trust, cooperation, group cohesion, social support), officer characteristics (sex, race, education, tenure, assignment, training) and work environment (department, shift, beat problems, organizational support of community policing) on officer performance of community policing. Interaction models were also tested to determine the extent to which social capital interacts with characteristics of officers and features of their work environments.

Results from Negative Binomial and Zero-Inflated Negative Binomial regression models did not support the central hypothesis of this research: social capital was not a significant predictor of either measure of community policing. Instead, work environment characteristics tended to offer more consistent explanations of community policing performance. Specifically, community policing varied significantly according to the department in which the officer worked, whether officers were assigned to be community policing specialists, and their levels of tenure. Implications of these findings are discussed in terms of their relevance to organizational factors which promote or hinder the implementation of community policing.

This dissertation is dedicated to the beloved memory of James Eldridge Robinson,
Minnie Lee Camp, and Jenny Lea Simpson.

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INTRODUCTION

Social capital is expected to provide an important new perspective on the social organization of policing within the new era of community policing. Like employees in other work organizations, police employees rely on work relationships for information, access to opportunities, and support to increase the likelihood of productivity. In this research, the term “social capital” is used to refer to the quality of officers’ relationships with their peers and their supervisors. Dimensions that are important to these relationships include the level of trust, the frequency of cooperative exchanges, the level of group cohesion, and the amount of social support. Police officers’ work relationships are considered to be a resource (if social capital is high) or a barrier (if social capital is low or not present) affecting how often officers will perform community policing activities. In short, it is expected that police officers are able to draw upon their social capital in order to “get things done.” Community policing activities may be especially dependent on police social capital, as this new policing movement is substantially marginalized within the traditional police subculture. Investigating the relationship between social capital and the likelihood that officers will engage in community-oriented activities can provide us with both a broader and deeper understanding of police behavior in the community policing era.

The application of the concept of social capital (a sociological term) to the field of criminology has resulted in research that primarily focuses on the social capital of communities, and how this is an important resource resulting from strong police-

community partnerships (a major tenet of the community policing philosophy). For example, Greene (1998) refers to the importance of measuring the “changes in the frequency, duration, and quality of police and community interactions” and “public service networks created through such efforts” (p. 150). Referring to the quality and quantity of police-community relationships can be considered an implicit reference to social capital. Although various efforts made by the police and/or community actors to enhance social control are dependent in part upon levels of social capital, as of yet no one has examined the levels of social capital among police officers. If we do not know the distribution of social capital among police officers, and the barriers preventing and resources promoting its utilization, then our methods of encouraging strong police-community partnerships will remain limited. This could have dire consequences for the success of community policing initiatives, which have in recent years been embraced by the public, police administrators, many police scholars, and the federal government.

Criminal justice research on police behavior would benefit from the theoretical perspective of social capital. Limited research exists that incorporates a theoretical perspective which can help us understand and predict officer engagement in many police activities, particularly community policing. This issue becomes even more salient as the police are being evaluated by more audiences in more different ways than ever before. As expectations of police performance expand, so should our knowledge of the theoretical underpinnings that guide their behavior. Only then will we be able to understand why certain officers perform in certain ways, suggest how to facilitate better outcomes from officers engaged in community policing activities, and describe the types of relationships

that most effectively increase officers' stocks of social capital.

Several questions are answered by the current study:

(1) Is social capital related to how police officers perform their jobs?

Specifically, what is the relationship between levels of social capital and officers' engagement in community policing activities?

(2) What is the relative contribution of police social capital in a model that also includes characteristics of the individual officer and their work environment?

(3) Do officer characteristics, such as their sex, race, education, or tenure moderate the relationship between social capital and community policing?

(4) Do features of officers' work environment, such as their department and their perceptions of the department's support for community policing, moderate the relationship between social capital and community policing?

Although there is an extensive body of sociological literature on social capital, there is substantial room for improvement. Many researchers have not specifically defined what they mean by the concept "social capital," explained their measurements of this construct, or been able to simultaneously incorporate all of the variables that may influence the social capital-outcome relationship they are investigating. Using limited measures of social capital also has precluded a full understanding of this complex construct. Additionally, the majority of the studies in this area have been qualitative in nature, usually involving in-depth accounts with small samples or a case study approach. While informative and particularly important in laying the theoretical groundwork, the social capital literature suffers from a lack of research on sample sizes large enough to be

quantitatively tested. This study could make a valuable theoretical contribution by empirically testing a model of police social capital, helping us specify which relationships are important to the theory and which are not. Furthermore, in his monograph on the “state of the state” of social capital research, the noted social capital researcher Portes (1998) concluded that, “the greatest theoretical promise of social capital lies at the individual level” (p. 21). This study moves social capital research forward by specifically defining the term, providing multiple measures of the different dimensions of social capital, testing a model which includes all of the variables that could potentially affect the police social capital – community policing relationship, and providing this information at the officer-level.

A final reason why this research is important is that only a handful of police scholars has linked the social capital idea to policing, and they have only done so in an indirect or tangential way. This concept is rich enough to be the primary focus in a study of police behavior using detailed observational and survey data. Only then will we be able to assess the true value of employing a social capital framework to the study of policing.

CHAPTER 1

REVIEW OF THE SOCIAL CAPITAL LITERATURE

The Sociological Significance of Social Capital

Historical Background

The term that has come to the forefront of current sociological research, social capital, was originally introduced by French sociologist Pierre Bourdieu in the late 1970's. He made distinctions between four types of capital: (1) economic, (2) cultural, (3) social, and (4) symbolic (Bourdieu, 1986). The first type corresponds with material goods or wealth, and its relationship to the human condition has been under investigation since the inception of sociology. The second type, cultural capital, refers to goods such as art, language, or books which are proxies for “the long-lasting dispositions of the mind and body” (Bourdieu, 1986, p. 243). Bourdieu used this term to understand the differences in educational attainment of French children originating from different social classes, as these outcomes were hypothesized to be a function of the cultural capital possessed by the family. Specifically, when children’s cultural capital mirrors the dominant form of cultural capital in society (i.e., upper-middle class), scholastic achievement is greater. Thus, the generative nature of capital was revealed by Bourdieu, as the educational system reproduces larger social structures in society that favor certain groups over others.

The third form of capital, social capital, was developed by Bourdieu to give a name to the resource present within communities or groups that facilitates collective

action. Bourdieu defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (p. 248).

Bourdieu’s definition of social capital contains two elements: (1) the network of social relationships which a person can mobilize, and (2) the volume of capital (economic, cultural, social, symbolic) possessed by the network members. Social capital, then, represents the *quality* of social relationships that can be linked to various outcomes.

Bourdieu’s fourth form of capital is symbolic capital, which refers to all types of capital once they are perceived as legitimate. In other words, “when the possession of any kind of capital is justified not only in the eyes of those who benefit most from its distribution, but also in the eyes of those who are most deprived of it” (Peillon, 1998, p. 218). Symbolic capital confers “the power to create the official version of the social world” (Mahar, Harker, & Wilkes, 1990, p. 13). Symbolic capital may be equated with legitimacy and prestige. An important commonality of Bourdieu’s four types of capital is their conceptualization as inherently positive and productive; in his view, people strive to increase their stocks of all four types of capital.

Bourdieu’s Theoretical Framework

To fully comprehend the importance of Bourdieu’s contribution to our understanding of the social world, it is first necessary to put his forms of capital into a broader context. Just as paper money only has value because it can be exchanged, substituted, or transformed into tangible goods and services in society, concepts of capital must also be recognized above and beyond their intrinsic value. *Capital* is just one

element in Bourdieu's theoretical framework. He sought to make a contribution that would provide a balance to the (often mutually exclusive) sociological traditions of individualism and structuralism. He provided the concept of a *field* to identify areas of social space where people struggle for position. Their struggle, and resulting position, is affected by the distribution of various forms of *capital*.

Referring to an earlier example, the French educational system was considered by Bourdieu to be a *field*, and the children in it actors whose struggle and outcome varied according to their levels of cultural *capital*, which were dependent on those of their families. Evident in this example is not only the force of social structure to pattern actions, but also the potential of individuals to fight for position, to use their agency to the best of their advantage. Bourdieu used the term *habitus* to explain the process by which individuals are molded by social structure; it is a mediating construct between social structure or *fields* and people struggling in them for *capital*. So what is *habitus*? It can be thought of as a person's world view -- the knowledge, beliefs, and dispositions that are produced by socializing agents such as parents and also the social world in which they exist. As Bourdieu (1990) explained, *habitus* consist of "schemes of perception, thought, and action" (p. 54), or on a more basic level, "things to do or not to do, things to say or not to say" (p. 53).

But all *habitus* are not created equal. As "the internalization of externality," (Bourdieu, 1990, p. 55) we can see that some externalities have more resources and support compared to others, which affects the development of *habitus*. "Habitus is intimately linked to capital in that *some* habitus (those of dominant social and cultural

factions) act as multipliers of various kinds of capital, and in fact constitute a form of capital (symbolic) in and of themselves” (Mahar, Harker, & Wilkes, 1990, p. 12).

Habitus may be mental perceptions or attributes, but in the real world, in hierarchical societies, these also translate into differences along lines of class, race, and gender.

Bourdieu conceptualized *habitus* as generative; that is, they tend to generate, promote, or reproduce themselves. Returning to the school example, Bourdieu (1984) stated that school “transforms social classifications into academic classifications, with every appearance of neutrality” (p. 387) in part because it is patterned on the *habitus* of the upper-class. In short, *fields* are not level, *capital* is not evenly distributed, and your *habitus* counts for a lot.

The interaction between these various concepts provides a foundation for understanding the behavior of individuals and groups in society. We are all embedded in *fields* of struggle, seeking to acquire and exchange various forms of *capital*, constrained by the limits of our *habitus* (or, conversely, propelled if our *habitus* is consistent with that of the dominant group in society). The strategies we develop and incorporate into this “game” of positioning and struggle in various *fields* are referred to by Bourdieu as *practice*. *Capital*, as one feature of this game, is an important mechanism which facilitates the style, content, and success of *practice*. As the title of Bourdieu’s (arguably) most important book, *The Logic of Practice* (1990) indicates, these actions and strategies are not random, but patterned. Because there is an underlying logic to our *practice*, we can expect or predict certain behaviors or outcomes based on the knowledge we have about the *field* under investigation and the distribution of *capital* among the players of the

game.

Existing Literature on Policing and Social Capital

Although the literature linking social capital to the study of policing is limited, several scholars have joined these two fields, with promising results. One of the first to do so was Manning (1994), who incorporated one of Bourdieu's four forms of capital, symbolic capital, into his theoretical discussion of the police response to domestic violence. He provided a critical outlook on the exchange of capital in policing fields, arguing that "police arrests in domestic conflicts are seen by some as enhancing symbolic capital by 'empowering women'... [but] for other observers, it creates yet another intrusion of the state into private relations, an enforcement of class-biased notions about disputing, and a source of exacerbation of conflict and increased costs to lower-class domestic units" (p. 86). Because the police reflect and reproduce the *habitus* of the upper-classes, their symbolic capital is used to reinforce "the patriarchal order and class-biased character of policing" (Manning, 1994, p. 89). Consequently, he contended that police work tends to reduce the capital of the lower-classes.

Lyons (1999) used the concept of social capital in his study of the Seattle police department to illustrate his point that the contemporary community policing movement is not achieving its intended aims. He provides the following explanation of the relationship between social capital and community policing, "the most basic reciprocal exchange at the heart of stories about community policing is a police/state commitment to perform their duties in a way that enhances the generation of social capital in communities and a community commitment to invest a portion of that capital in

cooperative efforts with the police to improve public safety” (p. 28). Lyons (1999) is critical of community policing because its proponents operate under the assumption that these new police strategies are supposed to help communities reclaim lost social capital and use it to improve local, informal social control, yet this assumption is routinely violated. Instead, the police mandate is broadened as the fight continues “to control political, economic, and social resources for the power to say what policing is and who communities are” (Lyons, 1999, p. 4), usually at the expense of the very communities the community policing movement was originally intended to benefit.

Duffee et al. (1999) also touch upon the importance of community social capital for the success of community policing initiatives. As they stated, “without sufficient social capital... policing initiatives to prevent crime in such areas are particularly problematic – often engendering no citizen involvement at all or increasing, rather than reducing, dissension within the neighborhood” (p. 94). Although Henig (1982) found that poor perception of police services was related to declining local organization, Duffee et al. (1999) maintain that the plight of such neighborhoods needs to be understood in terms of a larger “urban struggle,” where the police are just one institution that should play a role in “constituency building” (p. 94).

Overall, this literature tends to focus on the social capital of communities, and how it pertains to their relationships with the police. The one exception is a recent study by Pino (2001) who specifically examined social capital and community policing in a small department in Iowa. Employing a qualitative methodology, he examined interactions among and between the police, the citizenry, and neighborhood groups. He

found that there was a substantial lack of trust between the public and the police, as well as between community policing and regular patrol officers, and that this had a detrimental effect on efforts at co-production of safety. This study, while restricted in generalizability due to the methodology and sample, points to the importance of understanding police relationships and their subsequent impact on the success or failure of community policing initiatives.

Definition and Dimensions of Social Capital

In the sociology literature, social capital refers to relationships among individuals, networks of relationships, and people's "ability to mobilize a wide range of personal social contacts" (Newton, 1997, p. 577) to accomplish a particular objective. Coleman (1988) was one of the first to apply this concept to sociology in America. He extended Bourdieu's merger of two streams of thought: (1) a sociological focus on the norms, rules and obligations which socialize people and subsequently govern their behavior, allowing for action to be explained in a social context, and (2) an economic focus on the independent and rational goals of people which they subscribe to purely out of self-interest. As Bourdieu explicated in his idea of *habitus*, neither of these views adequately explains the social world, for people are not just blank slates scribed upon by society, nor are their actions completely independent of the social context in which they occur. By "introducing social structure into the rational action paradigm," Coleman (1988, p. S95) made a valuable application of social capital to contemporary sociological thought in the United States.

While research on social capital has suffered due to ambiguous definitions and

poor operationalization of this construct, several themes emerge in the literature that I refer to as dimensions of social capital. These include the level of trust, the frequency of cooperative exchanges, the level of group cohesion, and the amount of social support present in relationships. That is, researchers have either used all or part of these dimensions to explain the formulation and/or utilization of social capital in various settings. The dimensions relevant to this study are discussed below.¹ Particular attention is paid to how these dimensions have been measured in past research, with implications for how these dimensions are measured in the current study (discussed in detail in Chapter 4).

Previous Measurement of Social Capital

The empirical research on social capital often includes measures of the number of relationships as a proxy for social capital (Bursick, 1999; Burt, 1997; Coleman, 1988; Frank & Yasumoto, 1998; Furstenberg & Hughes, 1995; Granovetter, 1973; McCarthy & Hagan, 1995; Molinas, 1998; Robinson & Morash, 2000; Teachman, Paasch, & Carver, 1997; Wellman & Wortley, 1990). Because numbers alone tell us nothing about the quality of the relationship or the potential of relationships to be a social resource for those in the relationship, other research (less often empirical) has described social capital not

1

Civic engagement, for example, has often been referred to as an important component of social capital in community-level research. This has been measured as the proportion of people volunteering in various religious, social service, or community-based associations (see Greeley, 1997; Portney & Berry, 1997; Furstenberg & Hughes, 1995; Brehm & Rahn, 1997). While this dimension is important for macro-level research on social capital (or research on social capital at the individual-level in a different context), civic engagement is not an important dimension in my study of police social capital and its affect on officer performance of community policing activities. It would be important to address, however, if the focus of the current study was on community social capital and its impact on community participation in community policing initiatives.

only in terms of the number of social relationships, but also in terms of the qualities present in these relationships which may enhance or constrain the potential of those relationships to be a resource. The literature has identified level of trust, cooperative exchanges, group cohesion, and social support as important qualities to assess when studying social capital. In other words, it is assumed that people who have relationships that are high in these qualities have more social capital than people whose relationships do not possess these qualities.

Level of Trust

People's level of trust, whether it is in a generalized form, in each other, in a particular group, or in a government, has been an important dimension of the social capital construct. Fukuyama (1995), for example, puts trust as central to his definition of social capital: "social capital is a capability that arises from the prevalence of trust in a society or certain parts of it" (p. 26), as does Molinas (1998): "social capital is defined here as the level of trust and community networking" (p. 413). Research at the micro-level has also found trust to be a central issue in how people create and maintain their levels of social capital. Specifically, the norms and values of individuals or, "those cultural values and attitudes that predispose citizens to cooperate, trust, understand, and empathize with each other" (Newton, 1997, p. 576) have been studied in relation to social capital by many researchers. Coleman (1988) alludes to these as 'social norms'; for example, the "norm that one should forgo self-interest and act in the interests of the collectivity" (p. S104). Foley and Edwards (1997) mention the "attributes of individuals which favor their civic engagement" (p. 551). Woolcock (1998) refers to "information,

trust, and norms of reciprocity” (p. 153) that inhere within relationships. Portes (1998) describes the internalized norms of trust and reciprocity that are necessary in the formation of social capital; similarly, Schmid (1999) mentions “an internalized sense of obligation and ethical norm” (p. 3).

Despite the wealth of literature on this subject, past measurement of this dimension is lacking for two reasons. For example, some researchers have used the General Social Survey’s questions on generalized trust as proxies for social capital, when these questions are not context-specific. For example, these questions ask respondents, “Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?” and “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” It would be more fruitful to ask whether a person trusts a specific person, place, or thing. Second, the social capital construct is more than “just trust.” Improved measurement of this construct would include many dimensions of social capital.

Cooperative Exchanges

Social capital researchers often refer to “norms of reciprocity,” which when present in social relationships increase the potential of those relationships to be a resource. The logic underlying this dimension of social capital is that this type of norm makes people give back in exchange for taking. After an exchange occurs (whether it is money, material goods, information, or emotional aid like support or advice), it is understood by both parties that the exchange will be paid back at a later date. This is a form of trust in itself; trust in the belief that cooperation is beneficial and that exchanges

will be reciprocated.

Past researchers have tapped into “norms of reciprocity,” or what I term cooperative exchanges, by looking at patterns of giving and receiving in a community (Hofferth & Iceland, 1998), or analyzing actions one person in a relationship took that helped the other person maintain or acquire certain resources (Frank & Yasumoto, 1998). Others have tapped into this dimension by asking respondents questions such as, “How often do you and people in your neighborhood do favors for each other?” and “When a neighbor is not at home how often do you and other neighbors watch over their property?” (Sampson, Morenoff, & Earls, 1999). The cooperative exchanges dimension could also be measured with questions tapping into how often people share particular goods, or the level of cooperation within a particular group, such as a family, neighborhood, work group, or community agency.

Group Cohesion

Because social capital research is often done at the community-level, researchers have been interested in what makes groups cohesive. It is assumed that cohesive groups, or groups that have members who are supportive or trustworthy of each other, who share norms, and/or have similar beliefs, will have more social capital. Measurement of this dimension can be as basic as the proportion of residents in a particular neighborhood that are friends or acquaintances, the frequency that a group engages in social activities, or the amount of people in a group that simply like each other (Sampson, 1991; Sampson, Morenoff, & Earls, 1999; Bursick, 1999). Social ties that have emotional density, for example, with a high level of mutual confiding and intimacy, also increase social capital

(see Granovetter, 1973). Norms about particular behavior also influence the performance of that behavior; for example, Coleman (1988) found that whether mothers expected their children to attend college affected whether they actually did. Cohesiveness has also been measured by questions assessing similarity among group members. Bursick (1999), for example, asked people whether they agree with the statements “I have a lot in common with people in my neighborhood,” and “The people in my neighborhood are a lot like me.” The underlying assumption of this dimension is that groups that “get along” and share similar beliefs and characteristics will have more social capital than those that are antagonistic or whose members share very different beliefs or values.

Social Support

This dimension of social capital has been closely tied to the actions of people in a social relationship that help one member accomplish a particular goal. For example, Furstenberg and Hughes (1995) examined the support given and received in a mother-child dyad, and found it related to the child’s successful school outcomes. Other researchers have investigated different types of social support in relationships, such as financial, emotional, and providing services, and found that the type of support is often a function of the type of relationship (e.g., whether the relationship is between friends, family members, neighbors, etc.) (Wellman & Wortley, 1990). In short, this dimension is usually measured in a particular context, such as the family, workplace, or community. When social support is high, positive outcomes are more likely, and when it is low, these outcomes are more difficult for the actors to obtain.

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Police Social Capital

In the present study, I am specifically concerned with police relationships with their peers and supervisors, and how these impact officers' performance of community policing activities. Patrol work is considered to occur "in the context of territorially based work groups" (Klinger, 1997, p. 283). This territoriality affects officers' attitudes and actions, depending on which work group they occupy in the department (Reuss-Ianni, 1983) (e.g., community policing, patrol, SWAT, or special gang-suppression or street-crimes units). Assigning officers to work together in a geographically defined area creates the opportunity for informal group norms to arise; they are considered to be far more important in governing officer behavior "on the streets" than are departmental regulations or police management (Klinger, 1997; Reuss-Ianni, 1983). Examples of these group norms include "watching out" for one's partners and the rest of the officers working on the same shift and beat, not "sucking up" to supervisors, and other variations of solidarity and loyalty (Crank, 1998; Reuss-Ianni, 1983). Group norms about appropriate levels of activity are also important modifiers of police behavior because they tend to "discourage innovation while they encourage the status quo" (Manning & Van Maanen, 1978, p. 267; also see Rubinstein, 1973). Past research has substantiated the importance of work groups in policing. An officer who does not conform to informal norms about what constitutes "real" police work and how to accomplish these tasks, for example, may not be fully included in his or her work group. Officers who cannot draw upon relationships that are rich in terms of trust, cooperative exchanges, and social support and/or who are not members of cohesive groups (i.e., they are excluded or

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marginalized from these groups), will have additional obstacles to overcome than officers who benefit from work relationships that are rich in social capital.

Miller's (1999) in-depth study of Neighborhood Policing Officers (NPOs) provides some insight into the importance of police-peer relationships in the community policing era. Specifically, she found that NPOs who assertively established relationships with beat officers experienced "greater understanding and cooperation from their colleagues" (p. 109). Although the community policing movement has drawn attention to the value of police relationships, we have not specifically examined the role that police peer relationships play in performance, and if and how it varies according to what policing tasks are being performed.

Quality relationships with supervisors also occupy an important place in police work. Social capital theory identifies people with decision-making authority, such as supervisors, as "targets" who may be especially important contributors to one's stock of social capital (Wood, 1997, p. 599). Officers rely on supervisors for information, support, and evaluations of their performance (Van Maanen, 1983). Positive relationships between officers and supervisors are so vital to efficient police work that programs specifically designed to increase positive interaction between the ranks have recently been suggested (Beck & Wilson, 1997). It is also important to remember that supervisor support is considered vital to the success of innovative community-oriented police activities (Geller & Swanger, 1995; Goldstein, 1990; Skogan & Hartnett, 1997). Without supervisor support the implementation, as well as instrumental success, of these programs is considered unlikely.

Miller (1999) documents how supervisor support allowed NPOs to overcome much of the stigma associated with performing community policing tasks (considered by many officers to be “social work” or “women’s work”; i.e., not *real* police work). Indeed, in the department studied by Miller (1999), many upper-level management positions were held by former NPOs; this had a legitimizing effect on the entire community policing program. Police social capital, then, may be more important to officers who are deemed to occupy marginalized roles within the police organization. Specifying these relationships becomes especially salient given the implications for performing community-oriented policing tasks.

The Impact of Social Capital

Research usually tends to link social capital to positive outcomes; however, the term is much more encompassing and flexible than this value judgment would imply. Accordingly, recent research has been critical of inherently benevolent views of social capital (e.g., that originally formulated by Bourdieu). As Foley and Edwards (1997) noted, “its uses may range from asocial to antisocial to broadly prosocial” (p. 552). This section summarizes the findings from research framing social capital in a positive light, followed by research that looks at its “dark side.”

Positive Outcomes

Much of the social capital literature refers to inherently positive yet ambiguous outcomes (i.e., civic virtue, quality of life, etc.), but empirical support for these benefits boils down to two variables: education and crime. Specifically, social capital has been shown to increase positive educational outcomes (Coleman, 1988; Teachman, Paasch, &

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Carver, 1997; Furstenberg & Hughes, 1995). Teachman, Paasch, and Carver (1997), for example, viewed social capital as a “filter through which human and financial capital flow from the parents and the community to the child” to produce improved educational achievement. Similar to Bourdieu, Coleman (1988) used social capital to explain the educational achievement of children growing up in economically and socially disadvantaged communities. As he stated, “if the human capital [skills or knowledge] possessed by parents is not complemented by social capital embodied in family relations, it is irrelevant to the child’s educational growth that the parent has a great deal, or small amount, of human capital” (p. S110). Furstenberg and Hughes (1995) also used the concept of social capital to explain the successful outcomes of a sample of disadvantaged youth. They defined social capital as a “resource upon which individuals may draw to enhance their opportunities” (p. 581). Their research suggested that family-based and community-based social capital played an important role in helping youth overcome socioeconomic disadvantage.

Most of the research employing a social capital framework to the study of crime has revealed a negative relationship: as one increases the other decreases (Bursick, 1999; Kawachi, Kennedy, & Wilkinson, 1999; Kennedy et al., 1998; Sampson, 1995, 1997). Sampson’s (1997) work on juvenile delinquency, for example, led him to conceptualize social capital as a “buffer” against the negative effects of high levels of delinquency in the community. As he stated, “in a system involving parents and children, communities characterized by an extensive set of obligations, expectations, and social networks connecting the adults are better able to facilitate the control and supervision of children”

(1997, p. 52). Positive relationships among community members are key, and can be partly facilitated by: (1) organizing supervised leisure-time for youths, (2) observing and reducing street-corner congregation, and (3) establishing mentor relationships between adults and youth, and also building adult acquaintances within communities (Sampson, 1995, p. 210). Thus, to build social capital in neighborhoods and communities is to build barriers against crime and violence.

Other researchers have also posited a beneficial relationship between social capital and crime rates. Using national state-level data, Kennedy et al. (1998) found support for their hypothesis that low levels of social capital were related to firearm homicide and violent crime. They measured social capital using indicators from the General Social Survey (GSS) such as levels of trust and civic engagement among community members. Their results supported a path model whereby income inequality (relative deprivation) decreased stocks of social capital, which in turn increased crime rates. Later work conducted by the same authors (Kawachi, Kennedy, & Wilkinson, 1999) tested similar conceptual framework using state-level ecological data. In addition to GSS trust variables, they also included a single-mother household variable as an indicator of social capital. This measurement of social capital was negatively related to state levels of violent crimes as well as property crimes. The authors took this as evidence supporting Sampson's work on social disorganization theory; specifically, "crime is... a mirror of the quality of the social environment" (Kawachi, Kennedy, & Wilkinson, 1999, p. 719).

Negative Outcomes

The majority of the literature either explicitly or implicitly refers to social capital as a positive feature of social life, but other research offers several examples of the negative consequences of social capital (Portes, 1998; Portes & Landolt, 1996). First, the same strong social relationships that are necessary for the formation of social capital within a group may also serve to exclude new members. When new members are excluded, so are new sources of social capital, and the resulting isolation may result in the group's downfall. In his analysis of neighborhood security, Hope (1998) pointed out the positive (e.g., membership, natural surveillance, etc.) as well as negative (e.g., exclusion, stagnation, etc.) effects of having a closed community structure. Waldinger's (1995) analysis of social capital in the New York City construction business, for example, led him to conclude that, "social structures such as closure or network multiplexity may generate social capital for insiders while also excluding outsiders from the resources that social capital generates" (p. 560). Referring to Granovetter's (1973) seminal work, these communities lack the benefits which accrue from *weak* ties.

Second, a highly cohesive group (i.e., one with a dense social network) may prevent the success of its members. This may result from strict demands for conformity which restrict group members' personal freedoms and subsequently encourage them to leave the group. For example, tight-knit communities such as the Amish, while benefitting from the social capital that rich networks of relationships produce, also suffer from the exodus of young people from their community. Wilson's (1987) work on the plight of America's inner-cities also provides evidence of the detrimental impact that may

occur to communities that experience a departure of people, skills, and resources.

Third, group solidarity may foster an “us versus them” mentality which in the long-term discourages successful initiatives and dissolves group cohesion. Referred to as “downward leveling norms,” these norms may take the place of “mainstream” norms, especially in communities traditionally marginalized, stigmatized, or victimized by society at large (Portes, 1998, p. 17). For example, “‘wannabes’ -- the latest lexical contribution of inner-city youth to mainstream culture -- are those who imitate the ways and lifestyles of the majority in search of success. Often, these efforts only meet scorn from fellow members of their community, who see them as a threat to solidarity and their own sense of self-respect” (Portes & Landolt, 1996, p. 21).

Few researchers have provided empirical evidence revealing the “dark side” of social capital. One exception is the research conducted by McCarthy and Hagan (1995), who incorporated notions of embeddedness (Granovetter, 1973), social capital (Coleman, 1988), and differential association (Sutherland, 1942) to explain onset of criminal activity. Specifically, they proposed that “embeddedness in networks of deviant associations provides access to tutelage relationships that facilitate the acquisition of criminal skills and attitudes, assets we call ‘criminal capital’” (p. 63). Analyzing rates of drug-selling, theft, and prostitution among a sample of homeless youth, they found evidence supporting their hypothesis; the acquisition of criminal capital led to detrimental consequences because the number and length of relationships increased criminal activity. Similar to the relationship between social capital and entrance into the mainstream world of work, criminal capital was related to entry into the underground world of criminal

work.

Although limited research exists on the negative consequences of social capital, it is still apparent that to equate the concept with only positive outcomes would be inaccurate as well as unnecessarily limiting. Conversely, taking a value-neutral stance with regard to social capital allows the researcher to investigate all the potential outcomes with which it may be associated. As it is doubtful that the outcomes discussed above are the only ones related to levels of social capital, it would seem constructive to broaden the research agenda. Policing as a public good can be considered an important outcome of social capital that requires investigation. How levels of police social capital affect the distribution of these “goods,” especially in a community policing context, is the focus of the current research. The next chapter examines the literature on community policing, the activities encouraged by this policing philosophy, and its place within the police subculture.

CHAPTER 2

THE PHILOSOPHY AND PRACTICE OF COMMUNITY POLICING

Community Policing as a New Police Mandate

Common wisdom points to three events which precipitated the policing reform movement known as “community policing.” First, civil unrest during the 1960s challenged police legitimacy and brought questionable police practices into the national spotlight. Second, recognition of the isolation of the police from the public led to interest in citizens being “co-producers” of police services. That is, police and community members should share responsibility for crime reduction and work together toward meaningful, long-lasting change. Third, the community policing movement arose out of the ashes of research findings that constituted a “systematic demolition” of the assumptions underlying the professionalism movement (Walker, 1984). As research indicated that “nothing works,” reformists attempted to identify and adopt policing strategies that might make a difference (e.g., foot patrol, permanent beat assignments, mini-stations, etc).

The philosophy of community oriented policing is currently widespread and embraced by many citizens, police administrators, scholars, and local and federal politicians. For example, the 1994 Crime Act authorized \$8.8 billion for community policing programs, with the result that almost 90% of Americans have community policing officers working in their communities (U.S. Department of Justice, 1999). The

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underlying premise of the community policing philosophy is that the police and various individuals, agencies, organizations, or community groups should work together to accomplish mutual goals. At the implementation level, however, there can be substantial variation in the tactics and strategies deployed by police departments as part of a community policing program. For example, in a study of community policing in eight cities, researchers concluded that there was more difference than similarity among the programs (Grinc, 1994; Sadd & Grinc, 2000). Some of these community policing programs focused on aggressive street enforcement and drug crackdowns while others attempted community organizing and interagency cooperation. There are several elements or categories of activities that are commonly recognized, and widely accepted, as community policing that are discussed in the next section.

However, given the wide variety of police activities subsumed under the community policing “umbrella,” it may be helpful to first document what community policing is *not* (see Trojanowicz, Kappeler, & Gaines, 2001, p. 18-27). Community policing is not a technique, it is a philosophy. Community policing is not public relations, it is a substantive change in the police-public relationship. Community policing is not soft on crime, it is “smart” on crime. Community policing is not flamboyant, it achieves results through steady, long-term efforts. Community policing is not paternalistic, it must empower officers and citizens in order to achieve results. Community policing is not an independent entity within the department, it is a philosophy that must inundate the entire department. Community policing is not cosmetic, it requires that the department make substantial changes in how it deals with the community.

Community policing is not just another name for social work, it recognizes the fact that the majority of police work involves non-crime related duties. Community policing is not elitist, and special efforts need to be made to counteract hostility from general patrol officers who might hold this belief. Community policing is not designed to favor the rich and powerful, it is an egalitarian view that promotes providing assistance and support to citizens of all jurisdictions. Community policing is not a panacea, it will not fix all problems but will be more effective at addressing problems than traditional policing. Community policing is not “safe,” but officers have to be trusted enough to take risks and make mistakes. The next section describes police activities that are generally considered to reflect a community policing philosophy, and the categories of activities operationalized as community policing in the current research.

Community Policing Activities

Reflecting the diversity and reality of police work, Trojanowicz and Bucqueroux (1992) identified 18 duties inherent in the role of officers engaged in community policing: law enforcement, directed patrol, community involvement, identifying and prioritizing problems, reporting, problem-solving, organizing, communicating, conflict resolution, referrals, visiting, recruiting and supervising volunteers, proactive projects, targeting special groups, targeting disorder, networking with the private sector, networking with non-profit agencies, and administrative/professional duties. The multitude of activities considered a reflection of the community policing philosophy can be grouped into three general categories: (1) police engagement of the community in the production of order, (2) a proactive response by police to community problems, for example using a problem-

solving strategy, and (3) use of the broadened police role to more frequently provide general assistance to citizens. These community policing activities are discussed in the sub-sections below, although it must be recognized that in practice these categories would not necessarily be mutually exclusive.

One example from California demonstrates the overlap between different elements of community policing: problem-solving and providing assistance to citizens. A police sergeant established a new domestic violence protocol for his department after analyzing crime data that revealed that the domestic incidents tended to escalate over time, as well as comprising a significant proportion of calls for service. The new protocol mandated that officers make personal contact with the victim within one week of the incident, and again after one month. The purpose of these follow-up visits was to provide victims with general assistance and information, and to provide referrals to appropriate agencies in the community. To assess whether the problem was being solved, additional crime data were analyzed. Results showed that calls for service decreased 57% from 1996 to 1997 in the “hot spot” domestic violence locations identified by the department (Sampson & Scott, 1999).

Community Engagement

This theme of the community policing philosophy emphasizes an expanded police presence in communities in order to facilitate community capacity to exercise social control. As Rosenbaum (1998) stated, “the challenge for police today and into the 21st century is to find creative ways to help communities help themselves” (p. 14). In other words, police are no longer simply expected to enforce the law but to provide a broad

array of services aimed at increasing safety and order within communities. The underlying premise guiding this expansion of the police role is that the police cannot solve community problems without the help of citizens and community agencies. Community policing advocates propose that the police and the public ought to become “co-producers” of public safety, each contributing to the maintenance of law and order, because “together, police and public are more effective and more humane co-producers of safety and public order than are the police alone” (Skolnick & Bayley, 1988, p. 1). The police must, therefore, engage the community in order to build a productive, meaningful, working partnership. For example, community policing officers could attend meetings with various community groups and associations to open channels of dialogue, ideally leading to the identification of community problems and the creation of strategies for their solution.

In Chicago, “building bridges between police and community members” was vital for the success of community policing (Skogan & Hartnett, 1997, p. 110). Beat meetings were how the department was able to convey to the community that the new policing philosophy was a long-term strategy intended to stay. Unlike some community policing initiatives in other departments, in Chicago the beat meetings were held regularly, at various locations, and were attended by the officers patrolled the beats. These meetings were an opportunity for community members to raise concerns to police officers, for the participants to identify and work together to solve problems, and to exchange information. As the authors conclude, “people can participate only where there are opportunities to do so” (Skogan & Hartnett, 1997, p. 160). Community engagement is

thus a particularly important aspect of any community policing project.

Problem-Solving

One part of the community policing philosophy that concerns improved policing is that police should not only respond in a reactive mode to crime and disorder, but should also work in a proactive way to address these issues. Problem solving has been recognized as a central characteristic of community policing departments because it uses community input to identify crime problems and determine the appropriate strategies to address them. To put it bluntly, “community policing without problem solving is not community policing” (Jolin & Moose, 1997, p. 291). As opposed to the traditional strategy of random or preventive patrol, whereby police hope to decrease crime and disorder by their mere presence, problem-solving is a strategy police use to fight specific crimes with specific plans (Goldstein, 1990).

Eck and Spelman (1987) developed the widely accepted and used SARA model of problem-solving, which identifies four stages of the problem-solving process: (1) *scanning* to collecting information to identify a crime problem, (2) *analysis* to determine the nature and extent of the problem, (3) *response* through the creation of a specific strategy to address the problem, and (4) *assessment* to determine whether the response alleviated the problem. For example, officers engaged in problem-solving would attempt to prevent the occurrence or recurrence of particular problems, and develop plans or projects that go beyond merely responding to a particular call in order to address the underlying cause of the problem. In contrast to traditional, reactive policing, the focus of police effort within a problem-solving model is on the underlying condition – when that

is addressed then it is likely that calls for service will decrease to a significant extent.

One frequently cited study documenting the success of a problem-oriented approach took place in Newport News, Virginia (Eck & Spelman, 1987). Police were inundated with burglary incidents originating from a particular apartment complex. Officers surveyed residents about this particular crime problem but also learned that the physical state of the complex was of major concern to residents. Information gleaned from other city agencies (e.g., the fire department, public works, etc.) confirmed that physical deterioration was a serious issue and directly contributed to the burglary problem (i.e., aged window and door frames that were rotting made break-ins easy to commit). Having a clearer picture of the underlying condition helped police create a long-term strategy for decreasing burglary incidents. Officers worked with the apartment manager and city agencies to improve the physical state of the buildings. A neighborhood association was formed with help from police that was able to successfully lobby for continued upkeep of the complex. Due to these efforts, the burglary rate decreased by 35%.

Providing Assistance to Citizens

The community policing reform emphasizes a broad, social role for the police, with the goal of police becoming more responsive to citizen concerns. Also referred to as “personal service,” and following the trend in the private sector of putting “customers first” or “listening to customers” (Skogan, 1998, p. 162), this philosophical dimension aims to build trust and positive interactions between the police and the community they serve (Cordner, 1998). No longer are police to be viewed solely as gatekeepers to the

criminal justice system; they are being called upon to monitor the turnstile to social service and government agencies as well. Some goals of providing citizens with assistance, information, and support include: alleviating citizen fear about particular problems in the community; garnering citizen support for police initiatives to solve problems; educating citizens about their vulnerability to crime; and helping citizens solve problems for themselves (Goldstein, 1990).

Guided by a community policing philosophy, the police serve as instigators and motivators for cooperation between agencies with the goal of creating networks of services that benefit citizens. Community policing officers, therefore, are encouraged to provide citizens with needed assistance and information, including referrals to other community agencies that might be better suited to handle the citizen's problem. Some departments have implemented "swaps" where agency workers and police officers spend time in each other's work environment to better learn how to assist citizens (Goldstein, 1990). In addition to the usual gun and radio, community policing officers might also be dispatched to calls armed with lists, contact information, and descriptions of services provided by local community agencies.

Miller's (1999) ethnography on community policing officers in one police department suggests that they are often able to provide citizens, and abused women in particular, access to more types of assistance compared to when they solely respond to calls for immediate help. Compared to their traditional 911-driven counterparts, "[t]he nature of the neighborhood position encouraged [community policing] officers to become actively involved with the community they served: in prevention programs, case follow-

ups, working on continuing problems, and acting as liaisons with residents, businesses, city services, and the criminal justice system” (p. 183). Consequently, community policing officers often had more information about the citizens they served, which they could then use to provide referrals, informally monitor problem citizens, and provide reassurance, advice and support to citizens, and victims especially.

Marginalization of Community Policing

Within the Police Subculture

While the community policing philosophy has been warmly embraced by the public, many police scholars and administrators, and the political establishment, it often has encountered resistance from the rank-and-file officers who must ultimately translate this complex and multifaceted concept into concrete policing strategies and tactics. Several reasons exist for this less-than-enthusiastic acceptance by officers are often cited in the community policing literature. First, it has often been unclear to officers what is meant by the term “community policing.” Officers may be able to understand and even admire the concept in the abstract, but difficulty arises when they have to actually put this philosophy into practice (Goldstein, 1990; Kelling & Moore, 1988; Sadd & Grinc, 2000). A common refrain has been “what *exactly* do you want us to do?” and until recently, police supervisors, scholars, and administrators were unable to adequately answer this question.

Second, officers often have been expected to “do” community policing in addition to other traditional police duties such as patrolling and responding to calls for service. A lack of resources (particularly training) has often made the burden of this new reform

movement fall primarily on the shoulders of those least-equipped to handle it (Williams & Sloan, 1990; Zhao, Thurman, & Lovrich, 2000). Lurigio and Skogan (2000), for example, found that patrol officers were significantly less confident with their ability to engage in community-oriented policing than their higher-ranking counterparts, although patrol officers are the police employees expected to actually engage in community policing. The above two issues facilitate patrol officer resistance to community policing initiatives, which in turn facilitates the marginalization of community policing within the police subculture.

Even when resources and training are devoted to community policing initiatives, resistance from officers is still encountered. For example, in a research design involving officer surveys before and after the implementation of a department-wide community policing strategy in Chicago, the conclusion reached was that “the bulk of the officers in the field had not yet ‘got the message’ or committed themselves to the program in a significant way” (Skogan & Hartnett, 1997, p. 105), despite a significant level of department-wide training. The first round of training involved an initial orientation and a 3-day skill building session of patrol officers. Supervisors were then given a 4-day training curriculum comprising nine community policing modules, and were responsible for conducting the second round of training during roll-call training sessions which covered the nine community policing topics. This training made it clear that community policing was to be a “real” program rather than a “paper” program and was in the department to stay.

A subculture is commonly defined as the attitudes, norms, and beliefs systems

adopted by employees to make sense of their work environment. The police subculture has been identified as the single largest barrier facing those who want to implement community policing (Sparrow, Moore, & Kennedy, 1990). To be successful, researchers suggest that community policing initiatives “be compatible with the existing culture and organizational climate in a department and with the basic concerns and needs of police personnel” (Lurigio & Skogan, 2000, p. 255). Unfortunately, the components of the traditional police subculture and the community policing philosophy are often at odds with each other. The police subculture rests on themes of uncertainty, danger, violence, suspicion, and coercive authority – often leading to an “us versus them” mentality regarding police relationships with citizens, and increasing the likelihood that officers adopt work group norms of loyalty and solidarity (see Bittner, 1970; Crank, 1998; Manning, 1997; Skolnick, 1997; Westley, 1970). These norms often put them at odds with management and other “outsiders” and make officers likely to resist change and protect the status quo.

Officers derive honor and status (and reduce uncertainty and degradation) from their official mandate which is to enforce the law. Departmental selection, training, reward, and promotion systems also reinforce the supremacy of law enforcement within the police subculture. The end result is that law enforcement is viewed as the only “real” police work. The police subculture also reinforces traditional notions of masculinity, with “real” police work being “men’s work”; all other policing activities are viewed as not “real” police work, and therefore the responsibility of female officers or social workers.

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The community policing philosophy directly challenges many of the norms and values underlying the traditional police subculture. For example, community policing supports cooperation and trust between police and citizens, in contrast to the traditional police view of the citizenry as a hostile enemy to be distrusted instead of engaged in a productive partnership. Within a community policing context, officers are encouraged to be creative and solve problems rather than to just “lay low” and “cover their ass” by doing the bare minimum to avoid potentially negative attention from the public, other officers, and their supervisors (see Van Maanen, 1978). Others have noted that the community policing philosophy represents the “feminization” of police work, by valuing stereotypical female qualities such as communication, cooperation, and supportive interpersonal relationships (Miller, 1998). The community policing reform movement, therefore, poses many threats to the officers whose cultural values have rested on themes of masculinity, danger, suspicion, and violence.

To handle this new threat to the traditional police identity, there is evidence to suggest that officers have marginalized community policing (and the officers who practice it) within the police subculture. Wesiburd and McElroy (1988) found that when given the choice, community policing officers in New York continued to choose policing strategies that had a traditionally high status within the police subculture, such as aggressive law enforcement. The officers who practice community policing are often derided by general patrol officers as not doing “real” police work (Pate & Shtull, 1994); the traditional police tactics of patrol, surveillance and arrest. Moore (1992) epitomized the view of community policing officers within the police subculture with his observation

that “they became known as ‘grin and wave’ squads and ‘rubber gun’ squads” by the regular patrol officers (p. 135). Marginalization may also arise from resentment related to practical issues such as staffing and resources. Regular patrol officers may perceive community policing officers to be “wasted resources” insofar as their assignments involve a lowered expectation to engage in traditional policing tasks; the “slack” from CPOs falls on the shoulders of patrol officers. One patrol officer reflected this sentiment when he expressed that community policing officers should be “arrested for theft when they pick up their paychecks” (Pino, 2001, p. 209). The pronounced lack of trust and respect noted in many departments has, not surprisingly, translated into negative work experiences for community policing officers. Winfree and Newbold (1999), for example, found that community policing officers perceived less supervisor support than regular patrol officers.

In their national assessment of community policing implementation, Zhao, Thurman, and Lovrich (2000) identified internal organizational impediments as the most significant obstacle to successful implementation (more significant, for example, than community impediments such as citizen resistance or a lack of local government support). The items comprising the “organizational impediments” factor included: resistance from middle-management, line-officer resistance, departmental confusion about what community policing is, problems in line-level accountability, officer’s belief that community policing is “soft” on crime, a lack of community policing training, and union resistance. The two items that had the highest factor loadings were middle-management and line-officer resistance. The authors concluded by suggesting that any long-lasting

organizational change toward community policing must correspond with a change in the values and norms underlying the police subculture. While there is some evidence to suggest that the traditional police subculture might be changing (see Haarr, 1997; Paoline, Myers & Worden, 2000), it still unfortunately presents a major challenge to community policing initiatives. The next chapter discusses three categories of factors hypothesized to influence the likelihood that officers will engage in community policing activities: (1) police social capital, (2) work environment, and (3) officer characteristics.

CHAPTER 3

FACTORS AFFECTING OFFICER PERFORMANCE OF COMMUNITY POLICING

Police Social Capital

Past literature has revealed the important of police work groups on police behavior, and there is no reason to expect these relationships to be less important in the community policing era. Research has documented that officers marginalized or excluded from their peer group (e.g., because they are of a minority race or are women) have suffered a lack of acceptance, a denial of needed information, sponsorship, and promotion opportunities (Buzawa, 1981; Ellison & Genz, 1983; Holdaway & Barron, 1997; Martin, 1980; Milutinovich, 1977). These issues can subsequently affect their work experiences, performance, and advancement within the police organization. Although not previously or explicitly stated as such, what makes certain officers marginalized is their lack of social capital. Officers who lack social capital in their work environments face higher hurdles and bigger barriers to getting the job done than their counterparts who are embedded in productive, supportive, and trustworthy work relationships. It is expected that officers who have relationships with peers and supervisors that are rich in social capital will be more productive than officers without this resource, who may not have the same level of opportunity or support to engage in various community policing activities. Community policing officers, therefore, might

particularly need relationships that are strong in terms of trust, cooperative exchanges, group cohesion, and social support to accomplish a type of policing not wholeheartedly accepted within the police subculture.

While it is hypothesized in the current study that the social capital dimensions will be positively related to the amount of time an officer spends engaged in community policing, the social capital literature suggests that negative outcomes may also result. If officers who have high levels of social capital are found to be significantly less likely to spend time on community policing activities, this could be interpreted as an example of the “dark side” of social capital. For example, officers rich in this resource might be better able to circumvent departmental dictates supportive of community policing. In this case, the support, cooperation, trust and group cohesion officers have in their work units and/or with their supervisors could be used to cover up poor community-policing performance or shirk community-oriented activities, or to further other (possibly negative) policing outcomes not included in this study. Despite this possibility, the central hypothesis of the current study is that as levels of social capital increase, so will the likelihood that officers engage in community policing activities.

Features of the Officer’s Work Environment

Department

The available evidence on the two departments included in this study suggests that their work environments might differ in important respects relevant to community policing, such as their interpretation of this policing philosophy. For example, one department (Indianapolis) takes a “broken window” aggressive order maintenance

approach, with the police chief emphasizing “‘traditional’ law enforcement activity” (Mastrofski et al., 2000, p. 317) while the other department (St. Petersburg) emphasizes building positive police-citizen partnerships (Paoline, Myers, & Worden, 2000). Furthermore, a greater proportion of officers in St. Petersburg are assigned as community policing specialists (22% compared to 5% in Indianapolis) (Mastrofski et al., 2000). This departmental difference could impact the frequency with which officers engage in community policing activities, resulting in St. Petersburg officers performing more community policing activities. Additional information about the two departments is provided below.

Indianapolis, Indiana. The jurisdiction of the Indianapolis Police Department (IPD) is referred to as the Police Services District, a portion of Indianapolis-Marion County for which the department is responsible. At the time of the POPN study, the IPD served a population of more than 377,000 people. The UCR Index Crime was 100 per 1,000 residents and 37 per officer (Parks et al., 1999). In the years 1996-1997, the department employed about 1,000 full-time sworn officers, about half of which were assigned to patrol. The sworn force was 83% male and 79% white (Parks et al., 1999).

The geographic responsibility for the Indianapolis Police Department was divided among four patrol districts: North, West, East, and South. Within each district, officers were assigned to one of five shifts: Day (5:00 am to 2:00 pm), Day Tact (9:00 am to 5:00 pm), Middle (1:00 pm to 9:00 pm), Late Tact (7:00 pm to 3:00 am), and Late (10:00 pm to 6 am). These shifts were staggered so that shifts overlapped when service needs were high. Officers’ and supervisors’ work schedules were determined by their assignment to

one of three work schedules with rotating days off (referred to as A, B, or C “letter days”). A work squad consisted of the officers and supervisors assigned to the same district, shift, and letter day.

The department implemented community policing in 1992. The Deputy Chiefs of each patrol district had considerable autonomy and latitude in determining the day-to-day operation of their districts. This resulted in wide variation in the organization and practice of community policing across districts. For example, in the West district the community policing strategy took an aggressive order maintenance approach. Conversely, the focus of community policing in the North district tended toward “community building” (Mastrofski, Worden, & Snipes, 1995) than aggressive order maintenance; for example, officers were encouraged to positively interact with community members. Community policing in the East district was practiced by a special unit and had a problem-solving focus. Finally, no community policing was practiced in the South district.

St. Petersburg, Florida. Just over 240,000 residents inhabited St. Petersburg at the time of the POPN study. While St. Petersburg has a smaller population, its UCR Index Crime Rate is similar to that of Indianapolis, with 99 per 1,000 residents (Parks et al., 1999). The violent crime rate in St. Petersburg was more than three times the national average: about 2,250 violent crimes per 100,00 residents compared to 716 (Bureau of Justice Statistics, 1995). The St. Petersburg Police Department (SPD) employed about 500 full-time sworn officers, and similar to the IPD, about half ($n=283$) were assigned to patrol. The majority of officers were white (78%) and male (87%) (Parks et al., 1999).

Officers working in St. Petersburg are deployed in four shifts: Day (7 am to 3

pm), Evening (3 pm to 11 pm or 4 pm to 12 am), 4th Relief (7 pm to 3 am), and Midnight (11 pm to 7 am or 12 am to 8 am). The department's geographic responsibility is divided into three districts (North, South, and West). The SPD implemented community policing in 1990. Each of the three districts is responsible for a "zone" of the department's 48 Community Policing Areas (CPAs). CPAs are analogous to the concept of a patrol beat; it is the smallest unit of geographic responsibility. A zone consisted of three sectors, with each sector representing a conglomeration of CPAs. At the time of this study, the SPD had 63 community policing officers (CPOs), over twice that of the IPD even though the department is half the size. In St. Petersburg, the permanent, geographic deployment of officers who focused on community-building with neighborhood organizations (Parks et al., 1999) resulted in a more uniform organization and practice of community policing compared to Indianapolis. The available evidence regarding the organizational contexts of the two departments suggests, therefore, that IPD officers will probably engage in less community policing compared to SPD officers. It is also reasonable to suggest that officers' perceptions of how supportive their department is of community policing efforts will also affect their proclivity to engage in community policing.

Beat Characteristics

Regarding the primacy of territorial knowledge, Rubinstein (1973) stated that an officer "combines his knowledge of local behavior with his conceptions of how the public streets are used to analyze and perform many of his routine obligations" (p. 151). An officer's assigned beat has been found to impact his or her level and type of activity (Klinger, 1997; Smith, 1986). The conclusion by some scholars that community policing tends to work the least where it is needed the most (i.e., in poor, crime ravaged, socially

disorganized and minority communities) also points to the profound impact that community or beat characteristics may have on whether community policing goals are accomplished (Skogan & Hartnett, 1997; Walker, 1999; Williams & Murphy, 1990). Officers who work in beats that have a significant amount of major crime problems (such as drug dealing, theft and burglary, or vandalism) might have less time to engage in community policing activities than their counterparts working in less troubled areas. As such, it is important to include officers' perceptions of beat problems in a model predicting community policing performance.

Shift and Assignment

Recent research has investigated performance differentials between community policing officers and 911-responders. Although the study conducted by Mastrofski et al. (1995) did find a difference in arrest rates, only 1 of the 17 variables examined differed to a statistically significant degree between the groups. Robinson and Chandek (2000a) failed to find a significant difference between community policing and traditional units when handling domestic violence calls. Recently, however, DeJong, Mastrofski, and Parks (2001) found that community policing officers spent more time engaged in problem-solving activities than did officers assigned to general patrol. Because the dependent variable in this study is officer engagement in community policing activities, it is important to include officer assignment (community policing versus general patrol officer) as a control variable, since theoretically community policing officers might be expected and given the resources to accomplish more community policing activities. Similarly, officers working the day shift would be expected to have more opportunity for

community policing activities because most citizens (and citizen groups) are awake and functioning during this time.

Characteristics of the Officer

Sex

While most research finds very little difference in the performance of male and female officers, performance differences might emerge when we start to measure non-traditional policing activities, such as those guided by a community policing philosophy. For example, DeJong (2000) found that female officers are more likely to provide comfort to citizens than their male counterparts, and Hale and Wyland (1999) report that female officers may communicate better and subsequently de-escalate potentially violent situations. Although the evidence is limited, it is reasonable to believe that female officers might more frequently engage in community policing activities.

Race

Research suggests that an officer's race is not an important variable to consider when measuring performance with traditional indicators such as making arrests or using excessive or deadly force (see Fyfe, 1981; Reiss, 1968). To conclude that minority officers and white officers are identical, however, may be misleading. Mastrofski (1981) found that black officers were more knowledgeable of local citizen organizations in black neighborhoods. In Chicago, it was found that minority officers were significantly more optimistic about community policing than their white counterparts (Lurigio & Skogan, 2000), and although we cannot assume that attitudes are always consistent with behavior, it may be the case that racial differences emerge when we investigate non-traditional

police activities, such as community policing. It is therefore expected that minority officers will engage in more community policing than their white counterparts.

Education

The relationship between levels of education and police performance is less straightforward. While there is no evidence to suggest that college educated officers behave differently on the street (Sherman, 1978), more recent research finds that performance improves as education increases. For example, college educated officers may receive fewer complaints compared to their less educated counterparts (Kappeler, Carter, & Sapp, 1992). Researchers who followed a cohort of officers for ten years found a positive relationship between college education and supervisor ratings of job knowledge (Truxillo, Bennett, & Collins, 1998). Kakar (1998) found that officers with some college or a college degree reported performing better, and Palombo (1995) found that they were more professional. The relationship between officer education and officer performance warrants further investigation, but it is likely that as education increases so would the skill and ability necessary for officers to engage in community policing activities.

Tenure

Most research tends to find that as years of experience increase, the amount of arrest activity decreases (Bittner, 1990; Muir, 1977; Stalans & Finn, 1995). Roberg, Crank and Kuykendall (2000) also report that younger officers tend to work harder and be more productive than older officers. The effect of tenure on community-oriented performance indicators has only recently been studied. DeJong (2000), for example, found that tenure improved the likelihood that female officers would provide comfort to

citizens. Conversely, more experienced officers were found to spend less time on problem-solving than their less experienced counterparts (DeJong, Mastrofski, & Parks, 2001). The available evidence, therefore, provides a conflicting account of the relationship between tenure and community policing. However, the present study assumes a relationship that has been supported by the majority of research, that tenure will decrease activity, in this case community policing.

Training

Officers who have received more training on how to perform community policing activities might be expected to spend more time engaged in these activities, due to an increase in ability (and perhaps confidence) in how to perform community policing. Although DeJong, Mastrofski, and Parks (2001) did not find community policing training to significantly increase the amount of time an officer spends problem-solving, others contend that training is the key to successful implementation of community policing (Glensor & Peak, 2000; Zhao, Thurman, & Lovrich, 2000). It is therefore expected that as the amount of training an officer has received on community policing increases, so will the likelihood that he or she will perform community policing activities.

Table 1 presents a summary of the direct relationships tested in the current study. The focus of this research is on the link between social capital and community policing. It is expected that all four dimensions of social capital (trust, cooperation, group cohesion, and social support) will significantly increase the likelihood that officers engage in community policing. Additionally, because officers are constrained by features of their work environment, it is expected that officers who are members of the IPD, who

are not assigned to community policing, who work at night, and who perceive a high level of problems in their assigned beat will engage in less community policing. Officer characteristics are hypothesized to play a small role in explaining community policing performance, with the exception that community policing training is expected to be an important predictor of community policing performance. Overall, police social capital and characteristics of the officer's work environment are expected to exert the strongest effects, while officer characteristics will exert a relatively weak influence on community policing.

Table 1

Summary of Expected Direct Relationships.

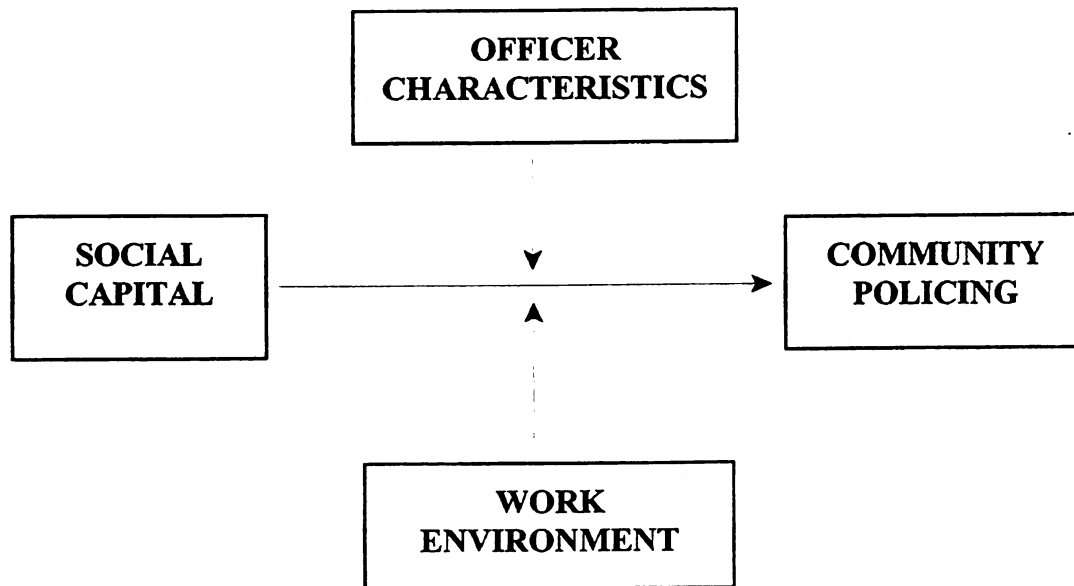
Variable expected to impact officer performance of community policing.	Direction of expected relationship.	Magnitude of expected relationship.
Social Capital		
Level of Trust	positive	strong
Cooperative Exchanges	positive	strong
Group Cohesion	positive	strong
Social Support	positive	strong
Work Environment Characteristics		
Department (Indianapolis)	negative	strong
Day Shift	positive	strong
Community Policing Assignment	positive	strong
Beat Problems	negative	strong
Department Support of CP	positive	strong
Officer Characteristics		
Sex (female)	positive	weak
Race (minority)	positive	weak
Education	positive	weak
Tenure	negative	weak
Community Policing Training	positive	strong

Moderated Causal Relationships

Research has documented relationships between social capital and the characteristics of individuals; however, we are still far from drawing blanket conclusions about these relationships. Because the extant research implies a strong possibility that stocks of social capital will vary according to different individual and organizational factors, included in the analytic plan are tests of moderated causal relationships, also known as interaction terms. The relationship between social capital and community policing is expected to vary depending on certain officer characteristics and features of their work environment (i.e., officer characteristics and work environment variables will moderate the relationship between social capital and community policing) (see Figure 1). Past studies that examine how social capital varies according to different individual and organizational characteristics are reviewed below.

Figure 1

Conceptual Model.



Sex and Social Capital

A person's sex has been shown to covary with his or her level of social capital, but the evidence suggests that information about the context in which these ties are located is vital, as men may have an advantage in workplace networks, whereas women may excel in familial or community networks (Hofferth & Iceland, 1998; Molinas, 1998; Moore, 1990; Rountree & Warner, 1999; Wellman & Wortley, 1990). Specific to the study at hand, Haarr's (1997) research in a police patrol bureau found that officers tended to interact most frequently with their same race-gender group. Martin (1980) found that female officers avoided many interactions with peers and supervisors as a result of these interactions being misconstrued as involving a sexual component. Because females are already marginalized both numerically and within the traditional police subculture, having fewer interactions with officers from other units or shifts compounds their disadvantage. If female officers are not incorporated into workplace networks to the same degree as their male colleagues, then their stocks of social capital would be lower since they are removed from relationships that could provide them with support, information, cooperation, and access to opportunities (Martin, 1980). Although women might have relationships of a higher quality (e.g., involving more trust, support, etc.), due to their small numbers in policing (especially in positions where they hold power, such as supervisors), this may not be sufficient for overcoming the likelihood that they will have lower stocks of social capital than their male peers. Since police departments, like all human organizations, incorporate societal notions and expectations related to gender, male and female officers probably have stocks of social capital that differ to a significant

extent.

Race and Social Capital

It is not unreasonable to believe that in a society where race is related to many important variables, such as crime, poverty, and health, that it would not also be related to social capital. Sociological research investigating this relationship has revealed its complex nature. For example, while some researchers have not found a significant relationship between race and levels of social capital (Antonucci et al., 1998), others have found that compared to whites, minority persons and communities tend to have less social capital (Bursick, 1999; Edwards & Foley, 1997; Portney & Berry, 1997; Sampson, 1997). Brehm and Rahn (1997) discovered a significantly negative relationship between race and generalized trust, considered to be a component of social capital because it affects civic engagement. Waldinger's (1995) ethnographic research into the construction trade found that ethnic enclaves could produce both positive and negative manifestations of social capital. On the one hand, close racial/ethnic work groups fostered trade and cooperation among minorities, but on the other hand these same relationships were detrimental for minorities trying to acquire the skills and connections necessary for success in predominantly white fields. In other words, minority contractors created their own networks apart from the 'old boys' network,' which both helped and hurt them. A notable exception to this trend of social capital racial differences is found in research conducted by Portney and Berry (1997). They did not find significant race effect with respect to social capital measures such as respondents' sense of community or levels of participation in neighborhood associations.

In the context of police work, however, the relationship between race and social capital might be more straightforward. For example, research shows that minority officers experience more isolation (Buzawa, 1981) and receive less encouragement (Milutinovich, 1977) than their white counterparts. Minority officers may also face “exclusion from informal channels of support and information” (Ellison & Genz, 1983), which may lead to negative consequences in terms of promotions. For example, Carter (1986) found evidence that Hispanic officers in one department believed that the administration discriminated in hiring promotions. Officers in Haarr’s (1997) study also believed that the department made hiring decisions based on race: white officers thought they were biased in favor of minority officers, while minority officers thought they were biased in favor of white officers. Black and Asian officers working in Great Britain identified many ways in which they were omitted from full participation by their co-workers (Holdaway & Barron, 1997).

The majority of the evidence (although much of it is dated) suggests that minority officers would have less social capital than their white counterparts. This prediction might be inaccurate, however, in departments that have significant minority representation (and at all ranks), or that have a history of cooperative and supportive relations between officers of different races. While this is not the case in the two departments involved in the current study, minority officers might invest *more* in relationships in order to counteract their marginalized status. The proposed research could clarify these issues.

Education and Social Capital

Social capital researchers have long been interested in the link between education and social capital. Not surprisingly, the available evidence indicates that these variables share a positive and mutually enforcing relationship. Social capital is a resource which facilitates successful school outcomes (Bourdieu, 1984; Coleman, 1988; Furstenberg & Hughes, 1995; Teachman, Paasch, & Carver, 1997) and in turn, the size of people's social networks tends to increase as they become more educated (Antonucci et al., 1998; Edwards & Foley, 1997; Moore, 1990; Stanton-Salazar & Sanford, 1995; Robinson & Morash, 2000). Additionally, Furstenberg and Hughes (1995) found that completion of high school and enrollment in college were related to many social capital measures in a positive direction. Brehm and Rahn (1997) found that education and civic participation shared a strong positive relationship; civic participation is often considered a component of social capital (Putnam, 1995).

In the context of policing, however, the available evidence suggests that a college education may decrease social capital. Stevenson (1988) found that more educated officers experienced higher levels of burnout and social isolation than their less educated counterparts. It is important to explore the relationship between education and social capital in the unique organizational context of policing. It might be expected that more educated officers do not have higher levels of social capital if they work in organizational environments that neither support nor reward educational achievement.

Tenure and Social Capital

The relationship between officer tenure and attitudes has been more thoroughly

investigated, beginning with Niederhoffer's (1967) finding that cynicism increases with time on the job. The least cynical officers are those with less than two years of experience (Wilt & Bannon, 1976). In general, research indicates that other negative attitudes also become more predominant with age. For example, as tenure increases so do negative attitudes toward domestic violence victims (Robinson & Chandek, 2000b) and community policing (Lewis, Rosenberg, & Lewis, 1999; cf. Lurigio & Skogan, 1994). Job satisfaction also decreases with tenure (Hoath, Schneider & Starr, 1998). Relevant to social capital, officers with more experience tend to hold more negative views about their work relationships, are more cynical about the flow of information between superiors and subordinates (Lewis, Rosenberg, & Sigler, 1999), and perceptions of supervisor support decrease (Winfrey & Newbold, 1999). Most of the available evidence suggests a negative relationship between officer tenure and any positive outcome related to their work, and the present research could help us determine whether this is also the case with social capital.

Work Environment and Social Capital

There is also research to suggest that social capital might vary according to the work environment in which the work is embedded. For example, in a study designed to assess the ability of the Michigan Victim Assistance Academy (MVAA) to increase the social capital of victim assistance providers, qualitative and quantitative analyses revealed that participants who reported substantial resources in their workplace (e.g., support from supervisors and co-workers, adequate staffing levels) were better able to utilize the social capital gained from attending the MVAA (Robinson & Morash, 2000). Specifically,

participants in supportive workplace environments were more likely to expand and improve their networks of relationships relevant to improving assistance to crime victims to a greater extent compared to participants who faced barriers in their workplace (e.g., negative attitudes from supervisors or co-workers, lack of time, money, or staffing, or organizational problems). In short, it appeared that some workplace environments helped rather than hindered the utilization of workers' social capital.

In a recent study examining community policing using a social capital framework, it was also apparent that the organizational context mattered a great deal (Pino, 2001). The implementation of community policing in "Small City" Iowa faced its biggest challenge from the police department itself. In particular, the department was always understaffed and underfunded, creating a situation where patrol officers were forced to work a lot of overtime to achieve adequate patrol levels. This contributed to patrol officers' animosity and lack of trust toward the few community policing officers who were hired under a federal grant. This lack of trust among police also generated a lack of trust between police and the neighborhood groups with whom they were supposed to create partnerships. Pino (2001) summarized the organizational effect, "in a climate of insufficient resources, an add-on COP program, and a lack of trust among officers, COP was doomed to not live up to its potential" (p. 209). Despite the existence of any social capital among officers, it would appear that the negative organizational climate was in effect a workplace barrier that could not be overcome.

Given the possibility that the organization can have an overwhelming influence on not only levels of police social capital, but the utilization of police social capital toward

community policing goals, the current study investigates whether the relationship between social capital and community policing is moderated by the department in which the officer works. In addition, officers' perception of their departments' support of community policing might also moderate the relationship between police social capital and community policing. It is an important indication of the officer's work environment and will also be included in the interaction models.

CHAPTER 4

DATA AND MEASUREMENT OF VARIABLES

The Project on Policing Neighborhoods

This study involves secondary data analysis from the Project on Policing Neighborhoods (POPEN), a large-scale study of police behavior funded by the National Institute of Justice. Data for the study were collected from the Indianapolis, Indiana and St. Petersburg, Florida Police Departments. This study was conducted during the summers of 1996 and 1997, respectively, and involved two primary sources of data relevant to the current study: Systematic Social Observation (SSO) and structured interviews of police officers. Each method of data collection is described below.

Description of Data Collection

Systematic Social Observation

The primary feature of the POPEN is the systematic observation of police officers at both research sites. It is ideal to have a comprehensive set of measures when investigating police behavior. Official data, citizen and officer surveys, and observational data are all useful in this regard. Observational data, however, may be particularly useful for assessing officer performance during police-citizen interactions – opening up for examination the “black box” of police performance (Wyckoff, 1982), or the “process” of policing (Mastrofski, 1996, 1999; Reiner, 1998). In short, observational data allow for a more accurate description of the craft of policing. Data are collected first-hand, rather

than relying on second hand sources.

Fieldwork in Indianapolis and St. Petersburg was conducted during the summer months. Trained observers accompanied patrol officers during their normally scheduled shifts. During ride-alongs, observers took notes on the behavior of patrol officers, as well as other officers (peers and supervisors) and the citizens with whom they interacted. At the conclusion of these observational sessions, observers used their notes to provide detailed narrative accounts of the rides. This information was then converted into coded data using observation instruments designed specifically for the project.

The observation instruments consisted of four forms: ride form, activity form, encounter form, citizen form. The observational data therefore contain four levels of analysis. One *ride form* was completed for every ride-along, and included information on the site, district, rank, and shift of the officer. The *activity form* was used for events that were not classified as “encounters” with other police or citizens (i.e., these behaviors were typically performed alone). This form included the type of activity in which the officer was engaged, the length of the activity, the type of problem at which the activity was directed, and whether the activity was part of a long-term plan or project.

The *encounter form* was used to code information about situations in which police engaged in some form of verbal or physical contact with a member of the public. Encounters were classified into three categories. Brief encounters involved contact with the public that lasted less than one minute and involved police business, such as an officer telling someone to “move along.” In these encounters fewer than three exchanges (verbal or gestures) between the police and the public occurred. Casual encounters

involved contact with the public, but no police business, such as an officer running a personal errand that involved talking with a clerk. Full encounters were police-public contacts that lasted longer than one minute and also involved police business. During these encounters words and/or gestures were exchanged more than three times.

Encounters that lasted less than one minute but involved the threat of violence by either police or citizens were also coded as full encounters. The encounter form was used to code information such as the length of the encounter, other participants in the encounter (i.e., officers, citizens, or both), the type of problem at which the encounter was directed, and the type of decisions that were made during the encounter. Lastly, the *citizen form* captured information such as the age, race, sex, income, and demeanor of all citizens involved in the encounter.

Structured Interviews of Officers

Structured interviews were conducted with patrol officers, sergeants and lieutenants in both sites by trained interviewers during the officer's regular work shift. The interviews were designed to capture information on a variety of topics, such as the officer's beliefs about proper police roles, goals, and priorities; the officers' perceptions of their work group and supervisor; and their attitudes toward community policing. Demographic information (e.g., race, sex) and background characteristics (e.g., education, tenure) were also obtained.

Sample

The current study uses both data sources for the measurement of independent and dependent variables. Trained observers collected and coded observational data during

361 ride-alongs in Indianapolis and 368 ride-alongs in St. Petersburg (totaling 729 rides). Ride-alongs lasted the duration of an officer's regular shift (8 hours in St. Petersburg and 8.5 hours in Indianapolis), resulting in more than 5,700 hours of field observation (Parks et al., 1999). Some officers were observed during more than one ride-along, some just during one ride-along, and others were not observed at all. A majority of officers in each site participated in the structured interview, resulting in a total of 728 surveyed officers. In Indianapolis, 93% of the 426 patrol officers were interviewed; in St. Petersburg 98% of the department's 246 patrol officers completed the interview (Paoline, Myers, & Worden, 2000).

Observational and survey data were merged at the officer level to obtain a sample of officers that had responses to all measures necessary for a test of the conceptual model proposed in the current study. Dependent measures were derived from the observational data and independent measures were obtained from the officer surveys. The sample of officers who both completed the interview and were observed by the POPN include 176 officers from Indianapolis and 142 officers from St. Petersburg. The total sample to be analyzed in the present study consists of 318 officers.

The reason for the reduction in sample size (from 728 to 318 officers) is that while most officers were interviewed, not all officers were observed during ride-alongs. Some officers were observed multiple times, instead of each officer being observed at least once, because the sampling plan was designed according to *rides* rather than *officers*. The sampling plan was created to ensure that rides were conducted for (1) every work shift for all beats in both sites, (2) all units working in all beats (3) during days of the week that varied in busyness (Parks et al., 1999). Consequently, the POPN captured

multiple observations for some officers, but no observations of others. The 318 officers in this sample were observed a minimum of once and a maximum of 10 rides, with the average officer observed for approximately two rides. Almost half (44%) were observed for one ride, while 25% were observed for two rides, and 31% were observed for three or more rides. The ride-based sampling strategy does have implications for this sample: about half of the officers were observed only once and about half received multiple observations. Whether the amount of observation varies according to characteristics of the officers, their work environment, their social capital, and their community policing performance is discussed in the next section.

The sampling strategy developed for the POPN is not ideal for the purposes of the present study. A more suitable sampling plan for this research would be based around officers rather than rides: the focus would be on observing every type of officer rather than every type of ride. An officer-based sampling plan would have increased the sample size of officers suitable for study and also avoided any biases resulting from comparing officers who have been observed for various lengths of time. It should be noted that these biases were addressed by standardizing the observational data to account for officers being observed for different lengths of time (see the next section for a detailed discussion of the measurement of the dependent variables). Furthermore, given the objectives of the present study, it is imperative to conduct the analyses at the officer level because social capital is an attribute of people, not rides. While the decision to conduct the analyses at the officer level might not be methodologically intuitive (given the ride-level sampling strategy), it reflects the theoretical framework of the current study.

Measurement of Dependent Variables

The present study is concerned with identifying the factors that significantly impact officer performance of community policing. Based on previous research that has identified three categories of activities guided by a community policing philosophy (community engagement, problem-solving, and providing assistance to citizens), the dependent variables are operationalized using six activities that reflect these community policing dimensions (more information is provided in Table 2, discussed in the next section). The six measures of community policing include: providing comfort to citizens; providing information to citizens; providing referrals to citizens; attending community meetings; problem-solving activity; and crime prevention activity.

Two dependent variables that provide different indicators of officer productivity were created from the six measures: (1) the number of community policing acts performed, per citizen encountered by the officer during the data collection period, and (2) the number of minutes the officer engaged in community policing activities, per 8-hour shift² worked by the officer during the data collection period. Creating two dependent measures avoided the problem of summing indicators that were measured at different levels of analysis. Specifically, three community policing indicators are measured at the activity level, and three are measured at the encounter level. Consequently, some of the community policing indicators are collected at the level where it makes intuitive sense to count the number of citizens receiving the act, while the other community policing indicators lend themselves to a measurement of the number of

2

St. Petersburg officers worked 8-hour shifts while Indianapolis officers worked 8.5-hour shifts. The decision was made to standardize the time measure by eight hours because most police departments use shifts of this duration. Indianapolis is the exception rather than the rule.

minutes the officer was engaged in the activity.

Community policing acts (providing comfort, information, and referrals to citizens) were coded from the observational data gathered during the ride-alongs. The citizen form was used to quantify information about police-citizen encounters. This allowed for a count of how many citizens were provided comfort, information, and/or referrals from each officer during the observational period. The 'comfort' indicator was derived from the question, "During the encounter, did the police comfort or reassure the citizen?" This was a yes/no question where comfort was only counted when it was preformed by the primary officer under observation, or the primary officer along with his or her partner or other police at the scene. Provided below are excerpts from the narratives that provide examples of how police provide comfort to citizens. The primary officer under observation is designated O1 (these are the officers included in my sample), while his or her partner is designated O2 and other police at the scene are designated O3, O4, etc. Citizens involved in the encounter are designated C1, C2, C3, etc.

- ▶ At a park where the marchers are dispersing, O2 is lecturing the children on their bad behavior during the march. O2 punishes the children by saying that they will not be taken for a treat after the march. The children are very upset and one in particular appears to be crying. O1 walks up to C1, who is a black male about 10 years old, and lower class based on dirty clothing. O1 comforts C1 and tells him to get in the van to get a ride home. C1 is very upset and his head hangs low. C1 acknowledges O1's request and heads into the van. O1 leaves the scene.
- ▶ O1 started walking to her patrol car when she spotted a black female walking up to the emergency room doors. O1 asked the lady if she is the mother of the accident victim from encounter 21. C1, black female about 40 years of age, stated that she is the mother. C1 is middle class based on her attire. She is wearing pants and a short sleeved shirt. C1 is neat in appearance. O1 explained to C1 what occurred and she explained that her son was taken to another hospital

for treatment. C1 seemed very concerned for her son's well being. O1 reassured her that he was going to be all right. The communication between the two was very friendly. O1 said that she could follow her over to the hospital and C1 stated that she knows where the hospital is and that she will meet her over there.

The measure 'providing information' was taken from the question, "Did the police provide this citizen information on how to deal with a problem on their own initiative (without the citizen's request)?" This was a yes/no question. The following examples demonstrate police providing information in practice:

- ▶ O1 walked to the front door of the house which was located in a residential neighborhood. The door was opened by C1, a 15-year-old black female. O1 asked C1 if she had called the police and C1 stated that her mother had called the police. C1 asked O1 to come inside and said she would go get her mother. Before C1 left the room O1 asked her if the dog sitting in the living room would bite. C1 told O1 that her dog wouldn't bite and O1 began to pet the dog hesitantly. C1 returned with her mother C2, a black female approximately 34 years of age. C2 explained that she had a restraining order against her husband and that he had been at her window harassing her. C2 stated that he left when she said she was going to call the police. C2 also told O1 that there is a warrant for her husband's arrest. At this point O1 asked C2 for a description of her husband and C2 told O1 his name and gave a brief physical description of him. C1 told O1 where her step-father usually stays and the type of car he drives. C2 left the room to get her husband's social security number... At this point C2 returned with her husband's social security number. O1 told C2 that he was going to do a report and would keep his eye out for him during the night. O1 told C2 that if he returned she should call the police. O1 told C2 to call 911 and then leave the phone off the hook. O1 told C2 that they would get an emergency 911 run and would get to her a lot faster if she did this. C1 and C2 thanked O1 and O1 wished them a nice night.
- ▶ C1 (a black female, 41 years old, middle class based on neat appearance and driving a newer model Toyota passenger car; upset but respectful) drove up and told O1 that she was the complainant. She said that her husband had called her from a store down the road and that he was out of breath and sounded really worried that someone was after him, and she was very worried about his welfare. O3 then departed to the store. She told O1 that her husband was out of breath when he called because he had run from the car wash to the store to escape the

robber. She said she did not know why her husband insisted on washing his car that late at night. [When] O3 returned to the car [he] was with C2 (a black male, 45 years old, middle class based on dress and driving a newer pickup; upset but respectful), who was C1's husband. C2 said he had just started to wash his truck when a black male wearing a black cap and green shirt stepped out of some bushes, pulled out a handgun and started to cock it. When C2 saw that, he sprayed the black male with a car wash hose and then took off running and called his wife. He said he probably could not identify the man again if he saw him. O1 advised C2 that there had been many robberies in this area and that C2 should wait until daylight to wash his vehicle. O1 provided C2 a pamphlet on victims' rights, and C1 and C2 then thanked O1 and left the area. O2 and O3 also departed.

The 'referral' indicator was supplied by the question, "Did the police ask/tell the citizen to seek the help of other service agencies to solve the problem?" The police could suggest, request, try persuasion, try negotiation, or command the citizen to seek the help of an agency. Examples of police providing citizens with referrals are provided below.

- ▶ As O1 was patrolling a residential neighborhood a black male waved at the officer and asked him to stop. C1, a black male of approximately 45 years of age was standing at the side of the road and walked over to the patrol car. C1 told O1 that he wanted some advice on a problem he was having. C1 told O1 that he had his car painted several weeks ago and that he was not pleased with the job the person had done. He said that when he returned the car to the individual they refused to fix the paint job. At this point O1 explained that this was a civil matter and that he might have a case in civil court. O1 gave C1 a brochure about small claims court and asked C1 some questions. O1 asked C1 if he had a receipt and C1 said that he didn't have a receipt. C1 said that he had several witnesses though. O1 told C1 that he might not have a very strong case if he didn't have a receipt or contract for the work but that the cost of the small claims court was only \$40. C1 thanked O1 for his advice and the encounter ended. The encounter was not witnessed by any bystanders. Both C1 and O1 interacted in a business-like manner.
- ▶ C1, a middle class white female in her late 20s, came to the door of the given address. The house was located in a small neighborhood with very nice houses and yards. C1 was dressed in clean shorts and a tank top. She had two small children with her, a boy aged 5 and a girl aged 2. She told O1 that her concern

was with children getting hurt in the dump site. O1 shook his head and said he could understand that. C1 said her husband was outside videotaping the area. We followed C1 through her yard then walked through some very tall weeds. As we got through the weeds, it began to smell very strongly of cow manure. C1 told O1 that trucks had been dumping all these materials in this vacant lot and there were some questionable materials in it. She said every time it rained the contaminated water ran into their yard and probably down to the septic tank. She said it was probably getting into the water. When we got past the weeds, there were several large hills of dirt and broken up concrete. C2, a middle class white male in his late 20s, was standing on one of the hills videotaping a large hole filled with very dirty water and building material. C2 came down and asked O1 if there was anything they could do to stop the company from dumping. C1 said she had already called the Health Department. O1 said that they wouldn't listen to him any more than they listened to her. He recommended that she call the Zoning Department, building inspectors, and/or the Environmental Protection Agency. O1 said that the EPA might test the water if they (C1 and C2) took a sample of it to them. O1 also suggested that they call the local news station. C2 said that they had called one of them and they were supposed to be coming out soon to do a story on it. O1 told them to keep pursuing the news station because once they made a big story out of it, the agencies involved would have to respond... O1 suggested that C1, C2, and C3 send fliers to their neighbors and inform them of the conditions nearby. He said that if the neighborhood banded together, they would probably get better results. He also said that if nothing else worked, they could file a class action lawsuit... He told me [observer] this situation was a good example of community policing: giving advice to citizens about resources in the community that they can go to when there really isn't anything the police can do.

The second dependent variable was derived from activity-level data. Activities are distinguished from encounters in that the former do not necessarily involve an interaction with a citizen, while the latter do. Narrative information was quantified and allowed for identification of activities where officers engaged in problem-solving, crime prevention, or attending community meetings. The variable for 'community meetings' was obtained from the question, "Did this activity involve a meeting with representatives of a citizen organization?" Citizen organizations could include neighborhood or other area-based groups, victim advocate groups, business groups, church or religious groups, school groups or other unspecified community groups. Additionally, the coding

instructions required that representatives of the organization had to be acting as members on behalf of that organization for the activity to count as a community meeting.

Examples of officers spending time at community meetings are provided below:

- ▶ En route to a meeting about weekly park activities at the Leisure Services department. When it came time for the meeting, the head of the department directed everyone to the conference room. O1 sat through the meeting which was a weekly thing to discuss the activities at a local park every Sunday. Those attending were some members of Vista, a police supervisor in the department, another CPO in charge of some of the park, a representative for activities in the park and another city representative. The meeting was supposed to be to discuss how the activities in the park went the past Sunday. Vista members complained about how their “Father’s day in the park” activity there the past Sunday had been cut shorter than they would have liked due to a lack of funding. One Vista member complained about the marijuana smoking that “was allowed” to go on in the park and wanted to know why this and public drinking were not being punished. The police supervisor from the department, a black male approximately 50 years old, claimed that those activities were illegal and were not being allowed to go on by the police who worked the park. Others issues were brought up during the meeting as well. O1 voiced some citizens’ concerns over public urination and the need to have some portable toilets placed in the park.

- ▶ The meeting was already in progress. Everyone attending the meeting was seated around a long wooden table. O1 took a seat on a couch located near one end of the table. There were 16 people attending this meeting. The meeting was held by the K Business Association. It consisted of business owners located on K Street. They were discussing a proposal for the 1st Annual K Baseball Festival (to celebrate the new baseball team). They were also discussing plans to convert a large portion of K Street into a commercial district. The goal was to offset the negative image given to K Street by the riots. Toward the end of the meeting, the group addressed O1 and asked if she had any suggestions based on their goals. O1 stated that the most important thing is that if a problem arises, don’t wait for the problem to get out of hand before calling the police. Contact the police during the initial stages of the project. O1 made her services available to everyone in the group and she handed out a few business cards to the group. The meeting officially concluded.

The ‘problem-solving’ indicator was derived from the question, “Was this activity

part of a long-term plan or project to deal with a problem?" Long-term was defined as longer than the ride being observed. Furthermore, the officer must have planned this activity prior to the ride. Plans that were developed spontaneously or during the ride were not considered long-term. Plans could focus on specific people or locations, this kind of problem or crime in general, or unspecified long-term plans. Below are examples of problem-solving activities from the narratives:

- ▶ O1 arrives at the scene where the drug march will begin. It is primarily a low-class neighborhood. Many of the houses are boarded-up. The residences are very run-down, with garbage in the yards. Windows do not have blinds or drapes, but instead are covered with old dirty blankets. O1 is told by O2 to follow the back of the march in the patrol car. Many of the citizens are wearing yellow T-shirts that say "up with hope, down with dope," the main chant of the march. The citizens walk down the street, some with megaphones, shouting this slogan as well as several others. Residents of the neighborhood come out of their homes to see what is going on. Some are pleased with the march, but others shout profanities at the marchers, telling them to leave. The marchers stop at one place [supposedly a known drug selling spot] and continue their chanting. They chant over and over differing slogans, while the neighborhood citizens stand in their front yards and watch. O1 gets out of her car and stands with the marchers sometimes clapping and shouting the slogans.

- ▶ C3 described how the Center attracts vagrants who congregate, beg, sleep, drink, and urinate about his property and other businesses along this street. C3 explained he is losing customers. The people who have done business with him in the past complain about the vagrants bothering them. He has spoken to some of the other business owners on this street. He intends to write a letter to the legislator who would be responsible for this district. Further, C3 would like police to help him. O1 told the owner that he had been working on the problem for the past year. He mentioned other business owners who had contacted him about the same issues. O1 asked C3 to inform him of any action C3 may take in organizing the business owners in the area. O1 added he would like a copy of the letter C3 plans to send to the legislator. O1 informed C3 of the legislator responsible for this district. Further, O1 gave C3 the name and address of the president of the neighborhood association who may also be able to offer assistance to C3. O1 told C3 that signs that read "no trespassing" needed to be posted on the property. [Later in the same shift...] The business owner with whom O1 spoke earlier had left the store to have lunch. His business partner and wife talked to O1. O1 helped her complete the [trespassing] forms. O1 stated she and

her husband needed to post “no trespassing” signs in several places about the property. During the encounter O1 was helpful and friendly. The business partner’s wife calmly filled out the necessary paperwork. She seemed pleased that police would take some action if they complained about the vagrants.

The final community policing activity, ‘crime prevention’ was derived from the following question, “During this activity, were the police trying to prevent the occurrence or recurrence of the problem?” This was a yes/no question where the activity was only coded as crime prevention if the officer’s efforts were focused on a period beyond the end of the shift. In other words, the action taken by the officer must be clearly future oriented.

- ▶ O1 stopped in a large parking lot in front of the store (a home maintenance outlet). He said that the store had suffered a string of shoplifting and other problems, but that since he had started parking there regularly in visible areas, they had only one small shoplifting reported. O1 said that his theory was that just by being visible to the public, the police can stop a lot of illegal activity because people see they are being watched and are likely to be more careful.
- ▶ O1 and O2 go to the ground level of the police station. They discussed getting new dead bolts with keys. O1 explained that they were currently using an apartment (located in a degraded, lower class apartment complex) as an office and wanted to get new locks for the door. They were concerned that people would attempt to break into the apartment once they found out that the police were using it as a pseudo headquarters. O1 continued by stating that the local drug dealers had already thrown rocks through the apartment’s windows after news of their presence got around. O1 and O2 met with a black male in his 30s, a maintenance worker employed by the police department. O1 informed the maintenance worker about getting the locks installed. O1 gave the worker the address of the apartment. The worker said he would relay the request to his superiors. O1 gave the worker her pager number and asked that his supervisor get in contact with her as soon as possible.

These narrative examples provide an indication of what types of police activities are conceptualized as community policing in the current study. The specific construction of the two measures of community policing (time per 8-hour shift and acts per citizen) is discussed in the next section, followed by a presentation of the descriptive statistics for these variables and the six community policing indicators used to create them.

Providing Acts of Community Policing to Citizens

This dependent variable (CP Acts) represents the number of citizens receiving community policing acts by the officer, divided by the total number of citizens coming into contact with the officer during the data collection period. Providing community policing to citizens is measured by the number of times the officer (1) provided comfort or reassurance to citizens, (2) provided referrals to citizens, and (3) provided information to citizens. These three measures were summed to provide a variable representing the total number of community policing acts the officer performed during the data collection period. According to Carmines and Zeller (1979), scales that produce reliability coefficients greater than .70 are considered reliable. The reliability coefficient (Cronbach's Alpha=.60) indicates that these three activities fall below the conventional standard; therefore findings related to this variable should be interpreted with caution.

Due to the method of data collection (i.e., field observation where some officers were observed more than others), the total number of community policing acts was divided by the total number of citizens with whom the officer came into contact during the data collection period. The resulting variable (CP Acts) is therefore a standardized measure of the number of community policing acts provided by officers per citizen encountered during the data collection period. Despite this standardization process,

results could still be impacted by the ride-based sampling strategy and therefore additional tests were performed on this variable. Analyses were conducted to determine whether CP Acts varied significantly depending on the number of rides for which the officer was observed. Results indicated that the mean CP Acts did vary according to amount of observation: officers observed for one ride provided about one CP Act; officers observed twice provided about two CP Acts; officers observed three or more times provided almost 5 CP Acts $F(2, N = 318) = 94.22, p < .001$. Despite the standardization of this variable, officers with multiple observations tended to provide more CP Acts than officers observed only once. What is different about officers who were observed multiple times? They were compared according to their demographic characteristics, features of their work environment, and their levels of social capital.³ Only three (out of 14) of the independent variables varied significantly according to the number of rides observed. Officers with more education were more likely to be observed more than once $F(2, N = 318) = 5.04, p < .01$, as were officers working in SPPD $\chi^2(2, N = 318) = 8.54, p < .05$. Conversely, officers with higher levels of community policing training were more likely to be observed only once $F(2, N = 318) = 3.47, p < .05$. These differences should be kept in mind as they indirectly affect the average number of CP Acts provided to citizens.

Time Spent Engaged in Community Policing

This dependent variable (CP Time) represents the number of minutes an officer spent on community policing activities, per 8-hour shift worked by the officer during the

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Detailed descriptions of these independent variables are provided in the next section.

data collection period. Community policing is measured by the time spent by the officer: (1) engaged in problem-solving activities, (2) engaged in crime prevention activities, and (3) attending community meetings. These three measures were summed to provide a variable representing the amount of time (in minutes) that the officer was engaged in community policing during the data collection period. The reliability coefficient ($\text{Alpha}=.72$) indicates that these three activities exceed the conventional standard of .70; thus, this scale can be considered reliable.

Due to the method of data collection (i.e., field observation where some officers were observed more than others), each officer's community policing minutes were divided by 480 minutes to standardize the measure for an 8-hour shift. The resulting variable (CP Time) is therefore a standardized measure of the number of minutes per shift the officer spent on community policing during the data collection period. Analyses were conducted to determine whether CP Time varied significantly depending on the number of rides for which the officer was observed. Results indicated that mean CP Time did not vary according to the number of observations $F(2, N = 318) = .64, p = .53$. Overall, this dependent variable appears to have less measurement error and sampling bias compared to CP Acts.

Description of Dependent Variables

Descriptive statistics for the two dependent variables, and the variables used to create them, are presented in Table 2.

Table 2

Measurement and Descriptive Statistics for Dependent Variables.

<u>Variable</u>	<u>Description</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>S.D.</u>
	# Citizens receiving comfort/reassurance	0.00	28.00	2.92	3.76
	# Citizens receiving information	0.00	45.00	6.19	7.45
	# Citizens receiving referrals	0.00	98.00	24.50	20.95
	Total # citizens receiving CP acts	0.00	145.00	33.61	29.19
	Total # of citizens encountered by officer.	1.00	54.00	17.17	9.25
CP Acts =	TOTAL CP ACTS / TOTAL CITIZENS ENCOUNTERED	0.00	14.50	2.42	2.41
	“Acts of comforting, providing information, and/or providing referrals per citizen encountered.”				
	Alpha=.60				
	# Minutes attending community meetings	0.00	319.00	4.46	30.20
	# Minutes problem-solving	0.00	640.00	9.37	53.53
	# Minutes engaged in crime prevention	0.00	791.00	26.52	87.46
	Total # Community Policing Minutes	0.00	1559.00	40.45	148.34
	Total Shifts Observed (Total Minutes Observed / 480 Minutes)	0.15	10.13	2.30	1.84
CP Time =	TOTAL CP TIME / TOTAL SHIFTS	0.00	194.17	11.02	25.37
	“Minutes spent attending community meetings, problem-solving, or engaged in crime prevention per 8-hour shift.”				
	Alpha=.72				

N=318

Notes: Values provided for CP Acts reflect the change of one outlier from 34.0 to 14.5.

CP Acts and CP Time were transformed to integers for Negative Binomial regression requirements.

The three community policing activities comprising the CP Acts variable include comforting or reassuring citizens, giving information to citizens, and/or providing citizens with referrals. During the approximately 3-month long data collection period, the average officer comforted approximately three citizens, provided information to six citizens, and gave referrals to 24 citizens. Summing these three acts reveals that the average officer provided a form of community policing to about 33 citizens during the data collection period. The average officer came into contact with about 17 citizens during the data collection period.

Descriptive statistics for the CP Acts variable indicate that the average officer provided more than two acts of community policing per citizen encountered. The variable ranges from a minimum of zero acts per citizen encountered, to a maximum of 15 acts per citizen encountered. The majority of officers ($n=290$; 91%) provided *at least* one community policing act per citizen. Similar proportions of officers provided one act per citizen ($n=132$; 42%) and from 2-5 acts per citizen ($n=126$; 40%). A small number of officers provided ($n=25$; 8%) 6-10 acts, and six officers (2%) provided 11-15 acts of community policing per citizen encountered. Only 28 officers (9%) did not provide a single act of community policing during the data collection period.

The three community policing activities comprising the CP Time variable include attending community meetings, problem-solving, and/or crime prevention. Each of these indicators is measured in minutes. During the data collection period, the average officer spent about four minutes attending community meetings, about nine minutes problem-solving, and about 26 minutes engaged in crime prevention. Summing these community policing indicators reveals that the average officer spent about 40 minutes on these

community policing activities during the data collection period. The average officer was observed for approximately two 8-hours shifts.

Descriptive statistics for the CP Acts variable indicate that the average officer spent about 11 minutes per shift on community policing, or roughly 2% of each shift. This variable ranges from a minimum of zero minutes per shift, to a maximum of 194 minutes per shift. Unlike the CP Acts variable, the majority of officers ($n=200$; 63%) spent no time engaged in community policing as measured by problem-solving, attending community meetings, or engaging in crime prevention activities. Per shift observed during the data collection period, 48 officers (15%) spent 1-15 minutes on community policing, 29 officers (9%) spent 16-29 minutes, 18 officers (6%) spent 30-45 minutes, seven officers (2%) spent 46-60 minutes, 11 officers (4%) spent 61-120 minutes, and four officers (1%) spent more than 120 minutes. Removing the officers who spent more than 120 minutes from subsequent bivariate and multivariate analyses (presented in Chapter 6) did not affect the results.

Measurement of Independent Variables

The independent variables included in the present study are grouped into three categories: (1) officer characteristics, (2) characteristics of the officer's work environment, and (3) social capital dimensions. The respective measurement of and descriptive statistics for these categories of variables are presented in Tables 3, 4, and 5. Measurement of the variables comprising each category is first described, followed by a discussion of the descriptive statistics for all the independent variables included in this study.

Officer Characteristics

Officer characteristics include dummy variables for officer race (0=white, 1=African American, Hispanic, Asian or Other) and sex (0=male, 1=female). The variable for officer education has eight categories: 1=less than High School, 2=High School/GED diploma, 3=Junior College, 4=Associate's Degree, 5=two or more years of college, 6=Bachelor's Degree, 7=some graduate work, 8=Graduate Degree. Officer tenure is an interval-level variable representing the number of years the officer has worked at the department, created by subtracting the year the officer began working for the department from 1996 (Indianapolis officers) and 1997 (St. Petersburg officers). A community policing training scale was constructed from seven types of training that the officer may have received: public speaking; computer/automated systems; community policing principles; code enforcement/civil regulations; mediation; analyzing neighborhood crime data; and organizing community groups. Items were coded so that high values represented more training (1=none, 2=less than one day, 3=1- 2 days, 4=3-5 days, and 5=more than five days). The scale ranged from 7 to 32 and the reliability coefficient for this scale is .81.

Table 3

Measurement and Descriptive Statistics for Officer Characteristics.

<u>Variable</u>	<u>Description</u>	<u>Values</u>	<u>% / Mean</u>	<u>S.D.</u>
Female	Officer is female.	1 = yes	20.8	0.41
		0 = no	79.2	
Non-white	Officer is non-white.	1 = yes	28.6	0.45
		0 = no	71.4	
Education	Officer's highest level of education.	1 = Less than H.S.	0.7	1.63
		2 = HS/GED	16.4	
		3 = Jr. College	26.6	
		4 = Assoc. Degree	6.8	
		5 = 2+ yrs. College	17.4	
		6 = Bach. Degree	27.3	
		7 = Some Grad.	4.4	
Tenure	Years at department.	0-31	9.1	7.21
CP Training	Scale of 7 types of Community Policing training (Alpha = .81).	7-32	15.6	5.25
	Public Speaking	1 = None	62.2	1.29
		2 = < 1 day	15.6	
		3 = 1 to 2 days	9.5	
		4 = 3 to 5 days	3.4	
		5 = > 5 days	9.2	
	Computer/Automated Information Systems	1 = None	2.4	0.98
		2 = < 1 day	21.1	
		3 = 1 to 2 days	41.5	
		4 = 3 to 5 days	23.8	
		5 = > 5 days	11.2	

Table 3 (cont'd).

Concepts/Principles of CP	1 = None	9.6	1.14
	2 = < 1 day	16.1	
	3 = 1 to 2 days	34.6	
	4 = 3 to 5 days	26.7	
	5 = > 5 days	13.0	
Code Enforcement/Civil Regulations	1 = None	33.0	1.28
	2 = < 1 day	28.9	
	3 = 1 to 2 days	19.9	
	4 = 3 to 5 days	8.2	
	5 = > 5 days	10.0	
Mediation	1 = None	54.8	1.14
	2 = < 1 day	18.5	
	3 = 1 to 2 days	16.4	
	4 = 3 to 5 days	6.5	
	5 = > 5 days	3.8	
Using Crime Data to Solve Problems	1 = None	50.2	0.99
	2 = < 1 day	29.4	
	3 = 1 to 2 days	13.7	
	4 = 3 to 5 days	4.8	
	5 = > 5 days	2.0	
Organizing Community Groups	1 = None	76.4	0.84
	2 = < 1 day	13.4	
	3 = 1 to 2 days	6.8	
	4 = 3 to 5 days	1.4	
	5 = > 5 days	2.1	

N=318

Work Environment

The second group of independent variables, officer's work environment, consists of five items. Three items are dummy variables: the officer works during a day shift (1=yes, 0=other shift), the officer has a community policing assignment (0=general patrol assignment, 1=community policing assignment) and the department where the officer works (1=Indianapolis, 0=St. Petersburg). The next item in this category of variables is an additive scale containing seven issues the officer perceives to be a major problem in his or her beat: theft or burglary; litter and trash; vandalism of cars and property; drug dealing; gangs; loitering; and abandoned buildings. All items in this scale were coded as follows: 1=not a problem, 2=minor problem, 3=major problem. The scale ranged from 7 to 21 and the reliability coefficient for the scale is .72.

The fifth item is a scale that was created to reflect the officer's perception of whether his or her department is supportive of community policing. This scale includes five items that were coded so that high values represent the officer's belief that the department does support community policing (1=poor, 2=fair, 3=good, 4=excellent). Statements comprising this scale include "the department clarifies the role of officers in community policing," "the department fairly distributes the workload of community policing and patrol officers," "the department gives officers enough time for community policing," "the department gives officers information for community policing," and "the department rewards officers for community policing." The scale ranged from 5 to 20 and the reliability coefficient (Cronbach's alpha) for this scale is .82.

Table 4

Measurement and Descriptive Statistics for Work Environment Variables.

<u>Variable</u>	<u>Description</u>	<u>Values</u>	<u>% / Mean</u>	<u>S.D.</u>
Department	Officer's department	1 = Indianapolis 0 = St. Petersburg	59.7 40.3	0.49
Day Shift	Officer works day shift	1 = yes 0 = no	37.7 62.3	0.49
CPA	Community Policing Assignment	1 = yes 0 = no	37.4 62.6	0.48
Beat Problems Scale	Officers' perceptions of 7 beat problems (Alpha = .72)	7-21	15.7	2.96
	Theft	1 = Not a problem 2 = Minor problem 3 = Major problem	1.4 50.3 48.3	0.53
	Litter	1 = Not a problem 2 = Minor problem 3 = Major problem	20.0 44.8 35.2	0.73
	Vandalism	1 = Not a problem 2 = Minor problem 3 = Major problem	15.9 57.8 26.3	0.64
	Drug Dealing	1 = Not a problem 2 = Minor problem 3 = Major problem	7.3 28.8 63.9	0.63
	Gangs	1 = Not a problem 2 = Minor problem 3 = Major problem	26.3 40.1 33.6	0.77

Table 4 (cont'd).

	Loitering	1 = Not a problem	17.2	0.74
		2 = Minor problem	37.6	
		3 = Major problem	45.2	
	Abandoned Buildings	1 = Not a problem	25.6	0.78
		2 = Minor problem	38.8	
		3 = Major problem	35.6	
Dept. Pro CP Scale	Officer's perceptions of dept. support of CP (Alpha = .82).	5-20	9.9	3.34
	Dept. clarifies role of officers in community policing.	1 = poor	29.5	0.90
		2 = fair	34.2	
		3 = good	30.8	
		4 = excellent	5.5	
	Dept. fairly distributes workload of community policing and patrol officers.	1 = poor	46.0	0.91
		2 = fair	30.4	
		3 = good	18.3	
		4 = excellent	5.2	
	Dept. gives officers enough time for community policing.	1 = poor	46.4	0.94
		2 = fair	28.2	
		3 = good	19.2	
		4 = excellent	6.2	
	Dept. gives officers info for community policing.	1 = poor	22.7	0.90
		2 = fair	40.5	
		3 = good	28.2	
		4 = excellent	8.6	
	Dept. rewards officers for community policing.	1 = poor	33.8	0.78
		2 = fair	45.6	
		3 = good	18.1	
		4 = excellent	2.4	

N=318

Social Capital Dimensions

Social capital dimensions include: (1) level of trust, (2) cooperative exchanges, (3) group cohesion, and (4) social support. Table 5 contains the measurement and descriptive statistics for each of the four social capital dimensions. Factor analyses were conducted on three of the four social capital dimensions (cooperative exchanges, group cohesion, social support), as they include multiple indicators. Results of those analyses are presented in Table 6, located at the end of this section.

Table 5

Measurement and Descriptive Statistics for Social Capital Dimensions.

<u>Variable</u>	<u>Description</u>	<u>Values</u>	<u>% / Mean</u>	<u>S.D.</u>
Trust	Officer has complete faith in supervisor.	1 = disagree strongly	5.2	0.88
		2 = disagree somewhat	11.9	
		3 = agree somewhat	29.0	
		4 = agree strongly	53.8	
Cooperation	Officer gathers public safety info from other officers.	1 = never	0.0	0.61
		2 = rarely	6.2	
		3 = sometimes	33.1	
		4 = often	60.7	
	Officer gathers public safety info from supervisor.	1 = never	5.9	0.83
		2 = rarely	26.2	
		3 = sometimes	45.9	
		4 = often	22.1	
	Proportion of unit that officer would share hard-to-get info.	1 = none	0.3	0.76
		2 = a few	15.4	
		3 = about half	10.9	
		4 = all or most	73.4	

Table 5 (cont'd).

Group Cohesion	Officer rating of work unit.	1 = not as good	3.1	0.55
		2 = about the same	36.3	
		3 = better than most	60.6	
	Proportion of unit that officer considers to be friends.	1 = none	2.1	0.87
		2 = a few	19.9	
		3 = about half	21.0	
		4 = all or most	57.0	
	Officer enjoys working with supervisor.	1 = disagree strongly	5.2	0.87
		2 = disagree somewhat	9.3	
		3 = agree somewhat	11.4	
		4 = agree strongly	74.0	
Support	Supervisor supports officer when he/she is right.	1 = disagree strongly	5.3	0.85
		2 = disagree somewhat	8.5	
		3 = agree somewhat	28.9	
		4 = agree strongly	57.4	
	Supervisor seldom criticizes officer.	1 = disagree strongly	3.8	0.77
		2 = disagree somewhat	5.9	
		3 = agree somewhat	19.4	
		4 = agree strongly	70.8	
	Supervisor looks out for welfare of subordinates.	1 = disagree strongly	4.5	0.82
		2 = disagree somewhat	7.3	
		3 = agree somewhat	21.6	
		4 = agree strongly	66.6	

N=318

As Table 5 indicates, level of trust is measured by the officer's response to the statement "I have complete faith in my supervisor,"⁴ and is coded 1=disagree strongly, 2=disagree somewhat, 3=agree somewhat, and 4=agree strongly. High values therefore represent a higher degree of trust self-reported by the officer about his or her supervisor.

The cooperative exchanges dimension is measured by three items. One item measures the frequency that the officer gathers public safety information from other officers, and one item measures the frequency that the officer gathers public safety information from his or her supervisor. Both items are coded as 1=never, 2=rarely, 3=sometimes, and 4=often. The third item is the officer's response to the question, "If you obtained some hard-to-get information about the identity of an offender causing a lot of trouble in your district, with how many of the officers in your unit would you share this information?" and coded as 1=none, 2=few, 3=about half, 4=all or most. Principal Components Factor Analysis yielded one component, or factor, from these items with an Eigenvalue of 1.18. The Kaiser-Guttman rule suggests that factors with an Eigenvalue greater than one should be retained (Kim & Mueller, 1978). The factor explains almost 40% of the variance in the included variables. Cronbach's Alpha (.23) indicates that this factor falls well below the conventional standard of reliability (.70). Overall, there is substantial measurement error in this factor and results should be interpreted with caution.

Group cohesion is measured by three items. First, officers were asked to give a

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Webster's dictionary defines faith as "confidence or trust in a person or thing." I am therefore using this variable as a measure of trust, although it could also be measuring confidence or faith.

rating of their work unit. Their responses were coded as follows: 1=not as good as most others, 2=about the same as most others, and 3=better than most other units. The second item represents a proportion of officers in the respondent's work unit that he or she considers friends, coded as 1=none, 2=a few, 3=about half, and 4=all or most. The third item was the officer's response to the statement, "My supervisor is the type of person I enjoy working with,"⁵ and was coded 1=disagree strongly, 2=disagree somewhat, 3=agree somewhat, and 4=agree strongly. Principal Components Factor Analysis yielded one component from these items with an Eigenvalue of 1.30. The factor explains 43% of the variance in the included variables. The Alpha (.29) indicates that this factor does not meet the conventional level of reliability and this may have a detrimental impact on the results.

Three items are used to measure the third social capital dimension, social support. They represent the officer's responses to the statements, "My supervisor will support me when I am right, even if it makes things difficult for him/her," "The decisions or judgments I make are seldom criticized or modified by my supervisor," and "My supervisor looks out for the personal welfare of his/her subordinates." All items were coded 1=disagree strongly, 2=disagree somewhat, 3=agree somewhat, and 4=agree strongly. Principal Components Factor Analysis yielded one component from these items with an Eigenvalue of 1.91. The factor explains 64% of the variance in the included variables. The Alpha (.71) indicates that this factor meets the conventional level of reliability and is therefore a reliable measure of the social support construct.

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This item originally read "My supervisor is NOT the type of person I enjoy working with." The item was reverse coded.

Table 6

Principal Component Factor Analyses of Social Capital Dimensions.

Factor	Item	Communality	Factor Loading
Cooperation	Officer gathers public safety information from other officers.	0.312	0.558
	Officer gathers public safety information from supervisor.	0.383	0.619
	Proportion of unit that officer would share hard-to-get information with.	0.488	0.698
Alpha		.23	
Eigenvalue		1.18	
% Variance Explained		39.43	
Group Cohesion	Officer rating of work unit.	0.572	0.756
	Proportion of unit that officer considers to be friends.	0.621	0.788
	Officer enjoys working with supervisor.	0.108	0.328
Alpha		.29	
Eigenvalue		1.30	
% Variance Explained		43.33	
Support	Supervisor supports officer when he/she is right.	0.791	0.89
	Supervisor seldom criticizes officer.	0.349	0.591
	Supervisor looks out for welfare of subordinates.	0.77	0.877
Alpha		.71	
Eigenvalue		1.91	
% Variance Explained		63.65	

N=318

Description of Independent Variables

The majority of officers **are male** (79%) and **white** (71%). More than **one** in four officers holds a bachelor's degree (27%), and more than half of the officers (56%) have an associate's degree or more education. The average officer worked in the police department for nine years. The mean **response** for the community policing training scale was 15.6. Most officers reported **receiving no training** on organizing community groups (76%), **public speaking** (62%), or **mediation** (55%). Most officers received some training in **computer/automated** information systems (98%), **concepts/principles** of community policing (90%), or **code enforcement/civil regulations** (67%). About half of officers received some **training on using crime data to solve problems** (50%).

Thirty-eight percent of officers worked the **day shift**, 60% worked in the Indianapolis police department during the data collection period, and about one in three officers was a **community policing specialist**. The mean response to the beat problems scale was 15.7, indicating that most officers perceived several issues to be problems in their beats. The problem most frequently described by officers as a "**major problem**" was drug dealing (64%), followed by theft (48%), and loitering (45%). The issues most frequently described by officers as "**not a problem**" were **gangs** and **abandoned buildings** (26% each), followed by **litter** (20%). The Department Support of Community Policing Scale had a mean response of 9.9. Less than one in ten officers described their department as "**excellent**" on any of the **five items comprising** this scale. Officers most frequently described their department as "**poor**" on two of the items: (1) "**my department fairly distributes the workload of community policing and patrol officers**" (46%), and (2) "**my department gives officers enough time for community policing**" (46%).

Regarding the social **capital** dimensions, most officers scored high on level of trust (83% agreed that they had "**complete faith**" in their supervisors). Items in the cooperation dimension reveal that **61%** often gathered public safety information from other officers, and 73% said they **would** share hard-to-get information with all or most of the officers in their work group. Fewer cooperative exchanges occurred with supervisors: less than one in four (22%) often gathered public safety information from their supervisors. The group cohesion dimension reveals that about 6 out of 10 officers consider their work units "**better than most others,**" (**61%**) and consider all or most officers in their unit to be friends (57%). A majority of officers (78%) enjoy working with their supervisor. The support dimension also shows a high degree of positive sentiment among the officers. More than eight of every ten officers agreed that their supervisor rarely criticizes them (90%), looks out for the welfare of their subordinates (88%), and supports the officer when he or she is right, even if it may make things difficult (86%).

CHAPTER 5

ANALYTIC MODELS AND METHODS

Analytic Models

Regression analyses were conducted on additive models (one per dependent variable) to determine the direct effects of the independent variables on community policing, and then a series of interaction models (seven per dependent variable) to determine whether the relationship between social capital and community policing is moderated by various officer characteristics and features of their work environment. For the additive models, 14 independent variables were included in the regression analysis of 262 officers,⁶ resulting in approximately 18 cases per variable. For the interactive models, 18 independent variables were included, resulting in approximately 14 cases per variable. According to Bryk and Raudenbush (1992), a common rule of thumb for multivariate analyses is a minimum of 10 cases per variable included in the model. The sample to be analyzed in the present study therefore exceeds this minimum requirement.

Additive Models: Assessing Direct Effects Among Variables

Additive models were analyzed to determine the independent effects of officer

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The statistical package used in this study, LIMDEP, requires that the dataset be free from missing data. The listwise deletion of cases missing scores on any of the variables resulted in the sample being reduced from 318 to 262 officers. In order to test whether this changed the sample of officers in any meaningful way, logistic regression analyses were run on the full sample ($N=318$) to determine whether any of the independent variables significantly predicted the officer being excluded from the LIMDEP sample ($n=262$). The dependent variable in these analyses, missing (coded 0=included in sample, 1=missing from sample), was not predicted by any of the independent variables to a statistically significant extent ($p<.05$).

characteristics (OC), work environment (WE), and social capital (SC) on officer performance of community policing (CP Time and CP Acts). These models test the hypothesis that social capital increases the likelihood that officers will spend time on community policing and provide community policing to citizens. The general equations for these models are presented below. Recall that OC, WE and SC represent categories of variables.

$$CP\ Acts = \alpha + \beta(OC) + \beta(WE) + \beta(SC) + e$$

$$CP\ Time = \alpha + \beta(OC) + \beta(WE) + \beta(SC) + e$$

Significant coefficients for the social capital variables indicate that social capital “does matter,” and a positive coefficient means that social capital significantly increases the likelihood of an officer engaging in community policing. A significant positive coefficient would provide evidence that the central hypothesis proposed by this research is supported by the data.

Independent variables included in the additive models were tested to determine if multicollinearity was a problem. A condition number was derived by dividing the largest characteristic root from the correlation matrix by the smallest, then taking the square root of that number.⁷ According to Greene (2000), a condition number less than 20 indicates that the variables are not multicollinear. The condition number for the matrix of independent variables included in the additive models was 4.32, indicating that concerns regarding multicollinearity are unwarranted for the additive models. A correlation matrix

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Practically, this was accomplished by entering the correlation matrix for the independent variables into a database that was then read into LIMDEP. Commands were then specified to obtain the characteristic roots for the matrix. The condition number was then derived “by hand.”

of all variables is provided in **Appendix A**.

Interactive Models: Testing **Moderated** Causal Relationships

Moderated causal relationships occur when the relationship between X (predictor variable) and Y (outcome variable) varies depending on the value of Z (moderator variable) (Jaccard, Turriss, & Wan, 1990). A moderator variable affects the direction and/or strength of the relationship between the predictor and outcome, so moderators are useful for establishing “when certain effects hold” (Baron & Kenny, 1986). In contrast to mediated relationships (which attempt to account for the relationship between X and Y, or suggest “why or how such effects occur”), moderated relationships are appropriate to test when there is greater interest in the predictor than the moderator. Mediated relationships, on the other hand, suggest that the researcher is most interested in the mediator variables rather than the predictor variables (i.e., officer characteristics and work environment rather than social capital). Since the theoretically-driven predictor of interest in the current study is social capital, the methodological literature supports the decision to examine moderated causal relationships rather than mediated relationships (Baron & Kennedy, 1986; Hardy, 1993; Jaccard, Turrisi, & Wan, 1990). Testing interactive models enables an evaluation of how the relationship between social capital and community policing (if one exists) is moderated by officer characteristics and/or features of their work environment.

In order to evaluate the presence of moderated causal relationships, several interaction models were analyzed to determine the joint effects of predictor (SC) and moderator (OC, WE) variables on officer performance of community policing. Recall that SC, OC, and WE represent categories of variables. The interaction models include

the independent variables from *the* additive model, with the addition of *interaction terms* representing the social capital *dimensions* (trust, cooperation, group cohesion, support) moderated by officer characteristics (*sex*, race, education, tenure) and features of their work environment (department, *community* policing assignment, department support of community policing). Descriptive *information* for the specific interaction terms to be included in the *interactive models* is *presented in Table 7*. Each of the seven interaction models was tested on the two dependent variables. For ease of presentation, the dependent variable in the equations is referred to as *CP*. In reality each equation is tested on both CP Time and CP Acts. The general equations for these models are presented below.

Social Capital × Officer Characteristics interaction models

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times Sex) + e$$

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times Race) + e$$

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times Education) + e$$

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times Tenure) + e$$

Social Capital × Work Environment interaction models

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times Dept.) + e$$

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times CPA) + e$$

$$CP = \alpha + \beta(SC) + \beta(OC) + \beta(WE) + \beta(SC \times Dept. Support of CP) + e$$

Results of the interaction analyses allow important *information* to be gained along two fronts: whether the coefficient is significant and whether the direction of the relationship is positive or negative. For example, if any of the social capital × officer female coefficients are statistically significant, this would indicate that the relationship

between social capital and community policing depends on the sex of the officer (i.e., female officers moderate or change the relationship between social capital and community policing in way that is significantly different from male officers). If the coefficient is positive, then the likelihood of community policing significantly increases when females have high levels of social capital. If the coefficient is negative, then the likelihood of community policing is significantly reduced when female officers have low levels of social capital. This interaction term can tell us, therefore, whether the community policing performance of female officers is better understood as a function of their levels of social capital being either high or low.

In general, the interaction terms indicate when the relationship between social capital and community policing is moderated by officer characteristics and features of their work environment. The interaction terms also enable an understanding of whether high or low levels of social capital are better able to account for community policing performance, for which officers and under which circumstances.

Table 7

Measurement and Descriptive Statistics for Interaction Terms.

<u>Interaction Term</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>S.D.</u>
Trust Variable × Ofc. Female	0	4.00	0.45	1.18
Cooperation Factor × Ofc. Female	-2.81	1.41	0.00	0.35
Group Cohesion Factor × Ofc. Female	-2.48	1.05	0.00	0.38
Support Factor × Ofc. Female	-2.78	0.79	0.00	0.27
Trust Variable × Ofc. Minority	0.00	4.00	0.72	1.42
Cooperation Factor × Ofc. Minority	-2.95	1.41	0.00	0.52
Group Cohesion Factor × Ofc. Minority	-2.77	1.05	0.00	0.53
Support Factor × Ofc. Minority	-2.94	0.79	0.00	0.51
Trust Variable × Ofc. Education	2.00	32.00	14.00	6.55
Cooperation Factor × Ofc. Education	-17.73	0.99	0.00	4.48
Group Cohesion Factor × Ofc. Education	-17.06	7.36	-0.26	4.74
Support Factor × Ofc. Education	-26.17	5.51	-0.20	4.73
Trust Variable × Ofc. Tenure	0.00	124.00	29.74	25.92
Cooperation Factor × Ofc. Tenure	-65.13	39.51	-1.20	11.90
Group Cohesion Factor × Ofc. Tenure	-56.33	32.58	0.00	11.05
Support Factor × Ofc. Tenure	-78.17	24.42	-0.19	12.15
Trust Variable × CP Officer	0.00	4.00	1.22	1.69
Cooperation Factor × CP Officer	-2.33	1.41	0.00	0.60
Group Cohesion Factor × CP Officer	-3.35	1.05	-0.01	0.66
Support Factor × CP Officer	-2.94	0.79	0.00	0.57
Trust Variable × Dept. (IPD)	0.00	4.00	1.79	1.77
Cooperation Factor × Dept. (IPD)	-2.95	1.41	0.00	0.75
Group Cohesion Factor × Dept. (IPD)	-3.35	1.05	0.00	0.76
Support Factor × Dept. (IPD)	-3.74	0.79	0.00	0.79
Trust Variable × Dept. Support	5	80.00	33.67	15.94
Cooperation Factor × Dept. Support	-37.22	28.22	0.74	9.99
Group Cohesion Factor × Dept. Support	-29.94	21.01	0.98	9.79
Support Factor × Dept. Support	-40.64	15.76	0.76	9.67

N=318

Independent variables included in the seven interactive models were tested to determine if multicollinearity was a problem. These sets of variables change for each model, so a condition number was derived for each model's independent variables. The condition numbers obtained for the sex and race interactive models (19.91 and 18.70, respectively), fell just below the value of 20 specified by Greene (2000), indicating that a problematic level of multicollinearity is (not quite) present in these models. The condition numbers derived for the other interactive models, however, did exceed the value of 20. Specifically, they were 29.02 for the education model, 25.50 for the tenure model, 21.53 for the CPA model, 24.93 for the department model, and 31.02 for the department support of CP model.

Concerns regarding multicollinearity are therefore warranted for many of the interactive models. Greene (2000) points out that one cause of multicollinearity problems is a shortage of information, the solution being to obtain more data. This is not a feasible solution for the present study, but is one that future researchers should bear in mind. The most practical solution suggested by Greene (2000) to deal with problems of multicollinearity is to drop the offending variables. This suggests that the researcher has not been guided by theory during model specification. The models in the current research, however, were specified according to theoretical considerations. Simply removing the offending variables (i.e., the interaction terms) is not a practical solution given the focus of the current research. Another method to reduce multicollinearity is to combine variables that are highly correlated by creating factors or scales. Many of the independent variables in these models were conceptualized as factors and scales, and already have been constructed as such.

Readers should be aware that multicollinearity is an issue that is present in the interactive models, but should also keep in mind that the most pronounced way that multicollinearity affects results is by making important interaction terms more difficult to detect statistically (Jaccard, Turris, & Wan, 1990). The adverse effects are therefore considered to be substantive rather than practical. Multicollinearity does not affect the properties of regression estimates: they remain the best linear unbiased estimates (BLUE) unless perfect collinearity exists (Jaccard, Turris, & Wan, 1990).

Analytic Methods

Dependent variables that involve counts of the number of times a particular act or event occurred, such as those being tested in the current study, can be found throughout social science research. Examples include studies of the number of articles published by academics (Allison & Long, 1990), the number of times that people visit the doctor in a certain period (Cameron & Trivedi, 1986; Beland, 1980), mortality rates (Hemstrom, 1999; Thoez, 1984; Vlahov et al., 2000), and suicide rates (Aasland, Ekeberg, & Schweder, 2001; Morrell et al., 1999), among others. Examples specific to criminology include studies of criminal careers (D'Unger et al., 1998; Land, McCall, & Nagin, 1996), victimizations in American cities (Nelson, 1980) and Britain (Osborn & Tseloni, 1998), police killings (Jacobs & O'Brien, 1998), domestic violence incidents (Sherman et al., 1992), and homicide counts (Grogger, 1990; Sampson & Raudenbush, 1999). The prevalence of count data in social science research, and criminological research specifically, has led to the widespread application of regression models designed for these data.

Regression Models for Count Data

There exists a burgeoning literature on regression models for count data that was consulted for this study (D'Unger et al., 1998; Greene, 2000; Land, McCall, & Nagin, 1996; Long, 1997; Nelson, 1980; Zorn, 1998). Count outcomes have distributions that are comprised only of nonnegative integers, and are often skewed toward zero. In other words, a count variable represents types of events that are generally not experienced by most of the sample being studied, and is characterized by a nonlinear distribution. Applying the linear regression model (LRM) would therefore produce values that are inefficient, inconsistent, and biased. A more basic concern is that applying the LRM to count data could produce predictions that are less than zero. In the context of the current research, applying the LRM could result in values indicating a negative number of citizens served, or a negative amount of time spent on community policing, both of which are nonsensical.

Fortunately there exists a group of regression models that have been developed particularly for count outcomes. In contrast to applying the LRM, these regression models make the estimation of count models more efficient, more consistent, and less biased. The most basic of these models is the Poisson regression model (PRM), which has two defining assumptions. The first assumption is that the events being counted are independent of each other. When they are not, the process is known as contagion and the assumption of independence has been violated. This can occur in two ways. First, if the probability of performing community policing is the same for all officers but depends upon prior community policing performance, then the events are dependent upon each other. Second, if the probability of performing community policing is constant over

time, but is not the same for all officers, then contagion has occurred. The second assumption for the PRM is that the conditional mean of the outcome is equal to the conditional variance. *Equidispersion* is another term for the equality of the mean and variance assumption. In practice both of these assumptions are often violated, leading to the development of additional regression models for count data.

Negative Binomial Regression Model. The negative binomial regression model (NBRM) builds upon the PRM design but provides added flexibility by relaxing the assumptions of independence and equidispersion that can limit the applicability of the PRM. Contagion violates the assumption of independence required for PRM and can result in a failure of the model to fit the data. Recall that one way contagion can occur is via heterogeneity in the rate among the individuals being studied; failure to account for this heterogeneity can contribute to overdispersion in the marginal distribution (see Long, 1997, p. 221). The PRM includes observed heterogeneity to account for a different likelihood of the count outcome across individuals, but the NBRM also includes unobserved heterogeneity in an attempt to more completely address the problem of contagion. With cross-sectional data, however, it is impossible to state definitively whether the observed counts are products of "apparent" contagion (i.e., addressed by including unobserved heterogeneity), or "true" contagion. It is a limitation of the NBRM, but it is less of a concern compared to the PRM.

The primary benefit of the NBRM is that it was designed to address the issue of *overdispersion* that often exists in count data as a result of the variance exceeding the mean. In "real life" it is rare that the variance equals the mean; the measures of community policing in the current study also failed to meet this requirement. The

NBRM allows for the estimation of overdispersed count variables by adding a parameter that allows the conditional variance to exceed the conditional mean, known as the dispersion parameter, or alpha. When the alpha coefficient equals zero, the central assumption of PRM has not been violated and therefore PRM is suited to the data. Another way of stating this is that the NBRM reduces to the PRM when the alpha coefficient is equal to zero. Conversely, when the alpha coefficient is significantly different from zero, the NBRM is a more suitable model than the PRM because the data are substantially overdispersed. Erroneously applying the PRM to overdispersed data will produce estimates that exaggerate the significance of the independent variables. The NBRM avoids this problem by including the dispersion parameter, thereby achieving more accurate indications of the statistical importance of the variables. Even among the specially designed regression models for count outcomes there are substantial repercussions for employing a model wrongly suited to the data.

When attempting to model count data, it is therefore imperative to determine whether overdispersion exists in the data to a significant degree. The statistical package LIMDEP computes alpha, the dispersion parameter, for the NBRM. The process of estimating the NBRM in LIMDEP is threefold: first the statistical software generates prediction values using linear regression (OLS), then uses these values to estimate the PRM, then uses the PRM values to estimate the NBRM. If the t-test of the alpha parameter provided in the NBRM is statistically significant ($p < .05$) this is evidence of a significant amount of overdispersion. A second way to test for overdispersion is to compare the log-likelihoods of the PRM and the NBRM. The Log Ratio (LR) test (see Long, 1997, p. 237) compares the log-likelihood of the two models in order to determine

which is better (i.e., closer to zero). Comparing the z-scores for the coefficients between the two models is a third method of testing for overdispersion. When a significant amount of overdispersion is present, the z-scores are generally smaller for the NBRM than the PRM. Recall that when the PRM is wrongly applied the z-scores are inflated and the significance of the variables is exaggerated. The NBRM, on the other hand, more precisely estimates the z-scores in overdispersed data, allowing the researcher to draw more accurate conclusions. All three indicators of overdispersion are evident in the models for both CP Acts and CP Time, indicating that PRM is an ill-suited regression model for these data.

Zero-Inflated Negative Binomial Regression Model. An additional issue raised with count models is the prediction of zeros. A large number of zero counts can facilitate overdispersion in the data because when the dependent variable is skewed toward zero it is not possible to achieve equality between the mean and variance. Typically, the PRM as well as the NBRM under-predict the amount of zeros in the dependent variable. These models would therefore be inefficient at predicting those officers that spend zero minutes per shift on community policing activities, or who provide zero acts of community policing per citizen encountered. Zero-inflated models for count outcomes address this problem by modeling the predicted zeros specifically. In other words, zero-inflated models assume that a different process occurs for officers who perform no community policing compared to officers who perform some community policing. Similar to evaluating the alpha parameter to determine whether the PRM or the NBRM is more suited to the data, the tau parameter evaluates whether the data should be modeled with a zero-inflated count model. If prior analyses demonstrate that the NBRM is more suited

to the data than the PRM, as was evident for both CP Time and CP Acts, then tau indicates whether the data would be even better suited to a zero-inflated NBRM (known as ZINB). LIMDEP thus adds a fourth stage (ZINB) to the threefold process described earlier (OLS, PRM, NBRM). A significant ($p < .05$) t-test of the tau coefficient indicates that the ZINB is a more efficient model and better at predicting zeros in the outcome measure compared to the standard NBRM.

In the present study, tau was significant for all the CP Time models, but was not once significant for the CP Acts models. The ZINB is therefore a more appropriate regression model for CP Time compared to the NBRM. This is not a surprising result given that the majority of officers did not engage in any minutes of community policing activity per shift (i.e., 165 of 262 officers had scores of zero). As an example, results for the CP Time additive model indicate that the ZINB predicted 162 of 165 actual zero scores, whereas the NBRM predicted 158 of 165, and the PRM predicted 0 of 165. Each successive model is better able to account for the large number of zeros present in the data. Similar improvements in the prediction of zero scores were observed for all of the CP Time models, and the tau parameter was statistically significant for all of the CP Time models.

For CP Acts, on the other hand, tau was never significant and the prediction of zeros never improved with the ZINB. When we consider that most officers did provide at least one act of community policing per citizen encountered (i.e., only 23 of 262 officers had scores of zero), it makes intuitive sense that the NBRM is better suited to CP Acts than is the ZINB. In conclusion, results from LIMDEP indicate that NBRM is the best suited model for CP Acts, whereas ZINB is the best suited model for CP Time.

CHAPTER 6

RESULTS OF ANALYSES

Bivariate Analyses

Table 8 presents the correlation analysis of the independent and dependent variables. What is most notable from this table is the lack of significant findings: only four of 28 relationships tested reached a level of statistical significance. Each dependent variable is significantly ($p < .01$) associated with two of the 14 independent variables. Female officers engage in more community policing as measured by CP Time. On average they spent 23 minutes per shift engaged in crime prevention, problem-solving, or attending community meetings, while male officers spent less than 10 minutes per shift on these activities. Indianapolis officers performed significantly less community policing, as measured by both CP Time and CP Acts, compared to St. Petersburg officers. For example, IPD officers spent about eight minutes per shift on community policing (compared to 18 minutes per shift for SPD officers) and provided two acts of community policing per citizen (compared to more than three acts per citizen provided by SPD officers). Officer tenure was also negatively related to the number of CP Acts per citizen encountered. As tenure increases, the number of community policing acts per citizen decreases. Of the four significant independent variables, then, only one (Officer female) increased the likelihood of community policing occurring – the other three significantly reduced its likelihood.

Table 8

Bivariate Correlates of Community Policing.

	<u>CP Time per shift</u>		<u>CP Acts per citizen</u>	
	r	p	r	p
Officer Characteristics				
Officer Female	0.178	0.004	0.074	0.234
Officer Non-white	-0.038	0.536	-0.052	0.4
Officer Education	-0.013	0.839	0.075	0.228
Officer Tenure	-0.054	0.388	-0.174	0.005
CP Training Scale	0.008	0.895	-0.084	0.177
Work Environment				
Department (IPD)	-0.185	0.003	-0.218	0
Day Shift	-0.01	0.899	-0.104	0.095
CPA	0.101	0.102	0.064	0.3
Beat Problems Scale	-0.03	0.626	-0.047	0.447
Dept. Pro-CP Scale	-0.016	0.792	-0.069	0.267
Social Capital				
Trust Variable	0.057	0.360	0.017	0.779
Cooperation Factor	-0.01	0.873	-0.072	0.243
Group Cohesion Factor	0.024	0.697	-0.042	0.502
Support Factor	-0.014	0.827	0.053	0.396

 N=262

Table 9 presents the correlations between the interaction terms and the two dependent measures. Trust $\times$ IPD was negatively associated with both CP Time and CP Acts, indicating that officers who work in Indianapolis and have low levels of trust tend to engage in significantly less community policing per shift and provide significantly fewer community policing acts per citizen. Another way of interpreting this finding is that the difference in community policing performance between IPD and SPD is a function of IPD officers reporting less trust in their supervisors. For example, almost one

in four IPD officers disagreed that they trusted their supervisor (21.5%), compared to only 12.5% of SPD officers. This difference in trust between the departments, however, did not reach the conventional level of statistical significance $\chi^2 (3, N = 262) = 6.04, p = .110$. This is one indication of the importance of computing interaction terms: when trust and department are combined they share a significant relationship with community policing, even though trust levels did not differ to a significant degree between departments.

Trust $\times$ Tenure was negatively associated with CP Acts per citizen. In other words, officers with a lot of time on the job who reported low levels of trust in their supervisors were less likely to engage in providing comfort, information, or referrals to citizens they encountered. Officers with less than two years on the job provided the highest mean CP Acts (2.98), while officers with 18 years or more on the job provided the lowest mean CP Acts (1.33). Mean CP Acts steadily decrease as officer tenure increases, and the difference in community policing based on tenure categories was also statistically significant, $F (4, N = 262) = 3.212, p < .02$. In short, tenure directly impacts the amount of community policing performed, and this relationship is also significantly moderated by the amount of trust an officer has in his or her supervisor.

Trust $\times$ Female was positively related to CP Time, indicating that female officers with high levels of trust tend to engage in more community policing per shift. There was also a significant difference between the amount of trust reported by male and female officers, $\chi^2 (3, N = 262) = 7.95, p < .05$. Four times as many male officers reported that they did not trust their supervisors (20.1% compared to 5.2%). About 95% of female officers, on the other hand, reported that they trusted their supervisors. The higher level

of reported trust among female officers is therefore one potential explanation for why they engage in significantly more community policing per shift than their male counterparts.

The four significant interaction terms mirror the significant findings presented in Table 8. We can infer from the bivariate results that trust is influencing the relationships between Officer Female, Officer Tenure, IPD and community policing. One interesting feature revealed by the interaction term analyses is that Trust, rather than Cooperation, Group Cohesion, or Support, is the social capital dimension that appears to make a difference, albeit slight. Overall, the findings presented in Tables 8 and 9 are notable in the lack of significant relationships between the independent variables, the interaction terms, and the dependent measures. Of the 84 bivariate relationships tested (42 per dependent variable), six were statistically significant. In other words, only one in every 14 relationships met the conventional level of significance.

Table 9

Bivariate Correlates of Community Policing – Interaction Terms.

	<u>CP Time per shift</u>		<u>CP Acts per citizen</u>	
	r	p	r	p
Trust Variable × Ofc. Female	0.190	0.002	0.078	0.208
Cooperation Factor × Ofc. Female	-0.02	0.750	-0.104	0.093
Group Cohesion Factor × Ofc. Female	0.00	0.904	-0.103	0.097
Support Factor × Ofc. Female	-0.08	0.220	0.011	0.863
Trust Variable × Ofc. Minority	-0.02	0.780	-0.033	0.592
Cooperation Factor × Ofc. Minority	0.030	0.628	0.055	0.376
Group Cohesion Factor × Ofc. Minority	-0.03	0.682	-0.015	0.803
Support Factor × Ofc. Minority	0.049	0.427	0.019	0.756
Trust Variable × Ofc. Education	0.032	0.608	0.066	0.288
Cooperation Factor × Ofc. Education	-0.02	0.695	-0.090	0.144
Group Cohesion Factor × Ofc. Education	0.033	0.590	-0.054	0.387
Support Factor × Ofc. Education	0.014	0.823	0.049	0.429
Trust Variable × Ofc. Tenure	-0.03	0.686	-0.148	0.017
Cooperation Factor × Ofc. Tenure	0.024	0.701	-0.046	0.461
Group Cohesion Factor × Ofc. Tenure	0.042	0.496	0.005	0.940
Support Factor × Ofc. Tenure	0.016	0.795	0.045	0.470
Trust Variable × CP Assignment	0.079	0.203	0.094	0.129
Cooperation Factor × CP Assignment	0.053	0.396	0.037	0.548
Group Cohesion Factor × CP Assignment	0.032	0.609	0.029	0.643
Support Factor × CP Assignment	-0.12	0.051	0.102	0.100
Trust Variable × Dept. (IPD)	-0.15	0.015	-0.199	0.001
Cooperation Factor × Dept. (IPD)	-0.04	0.494	-0.044	0.474
Group Cohesion Factor × Dept. (IPD)	0.028	0.656	0.008	0.897
Support Factor × Dept. (IPD)	0.005	0.936	0.039	0.532
Trust Variable × Dept. Support	0.016	0.791	-0.038	0.542
Cooperation Factor × Dept. Support of CP	-0.02	0.711	-0.052	0.401
Grp. Cohesion Factor × Dept. Support of CP	0.00	0.908	-0.037	0.550
Support Factor × Dept. Support of CP	-0.02	0.796	0.046	0.460

N=262

Multivariate Analyses

Additive Models

Table 10 presents the findings from the Additive Models. The Zero-Inflated Negative Binomial regression model (ZINB) was used to regress officer characteristics, work environment, and social capital variables on CP Time per shift. The Negative Binomial regression model (NBRM) was used to regress CP Acts on the same set of independent variables. Once again what is notable is the overall lack of statistically significant predictors of community policing. None of the independent variables were significant predictors of CP Time (although the department variable came close at $p = .087$), but the model itself is statistically significant. The regression for CP Acts produced three significant predictors that all reduce the likelihood of citizens receiving acts of community policing. First, as officer tenure increases, the likelihood of CP Acts decreases significantly (but not necessarily substantially – only by 3%).⁸ Second, officers having a community policing assignment reduces the expected number of CP Acts by 30% holding all other variables constant. Finally, being an IPD officer decreases the expected number of CP Acts by 47%, holding all other variables constant. None of the social capital dimensions were significant predictors of either dependent variable.

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Long (1997) provides a formula for transforming beta coefficients from Poisson or Negative Binomial regression into percentages for ease of interpretation (see page 228). The formula is $(= 100[\exp(\beta) - 1])$. The formula was computed for all significant ($p < .05$) coefficients.

Table 10

Additive Models for Community Policing Variables.

	<u>CP Time [ZINB]</u>			<u>CP Acts [NB]</u>		
	<u>B</u>	<u>SE</u>	<u>P</u>	<u>B</u>	<u>SE</u>	<u>P</u>
Constant	2.49	1.57	0.113	2.23	0.58	0.000
<u>Officer Characteristics</u>						
Officer Female	0.56	0.34	0.105	0.27	0.15	0.072
Officer Non-white	0.05	0.42	0.901	-0.14	0.15	0.334
Officer Education	0.05	0.10	0.587	0.03	0.04	0.442
Officer Tenure	0.01	0.03	0.721	-0.03	0.01	0.004
CP Training Scale	0.03	0.04	0.456	0.00	0.02	0.808
<u>Work Environment</u>						
Department (IPD)	-0.55	0.32	0.087	-0.63	0.16	0.000
Day Shift	0.15	0.35	0.675	0.00	0.14	0.989
CP Assignment	-0.04	0.41	0.922	-0.36	0.18	0.038
Beat Problems Scale	-0.01	0.06	0.816	-0.01	0.02	0.480
Dept. Pro-CP Scale	0.01	0.05	0.826	-0.01	0.02	0.581
<u>Social Capital</u>						
Trust Variable	0.07	0.32	0.829	-0.12	0.13	0.388
Cooperation Factor	-0.08	0.18	0.642	-0.07	0.05	0.196
Group Cohesion Factor	0.19	0.19	0.299	-0.02	0.07	0.826
Support Factor	-0.27	0.26	0.294	0.06	0.13	0.213
Alpha	1.09	0.22	0.000	0.27	0.07	0.000
Tau	0.13	0.04	0.002			
<u>Model Fit</u>						
Log-L	-593.33		Log-L	-503.52		
Vuong	10.91		Chi-sq.	52.86		
Df*	2		Df*	1		
Sig. Level	0.000		Sig. Level	0.000		

N=262

Notes: * Compared to the Poisson regression model.

Alpha compares Poisson to Negative Binomial (significance indicates a better fit of the NB model). Tau compares the NB model with the Zero-Inflated NB model (significance indicates a better fit of the ZINB model). ZINB regression models were tested on both dependent measures. Tau indicated that ZINB was always better than NB for CP Time, but not once improved the fit for CP Acts. A Vuong statistic less than 1.96 favors the ZINB over the NB model.

Interactive Models

Table 11 presents the results of the interactive models for CP Time and Table 12 presents the results for CP Acts. Interaction terms (created with the social capital dimensions and various officer characteristic and work environment variables) were included along with the variables from the additive models in order to assess the extent to which they might enhance our explanation of community policing performance. As these tables make readily apparent, the interaction terms do not contribute much explanatory power to the original models. Only one of the 56 interaction coefficients (28 per dependent measure) was a significant predictor of community policing.

The significant interaction term, Group Cohesion Factor $\times$ Department Support of Community Policing, reduces the likelihood of CP Time per shift by 11%. Officers who perceived they were part of a cohesive group, and who also perceived a high degree of departmental support of community policing, spent significantly less time per shift engaged in community policing. One of the original variables was also significant in this model: Group Cohesion. Officers who scored high on the group cohesion factor were more likely to spend time engaged in community policing; they increased the likelihood of community policing by 239%, holding all other variables constant. Together, these variables indicate that group cohesion will increase the likelihood of CP Time, but not when a high degree of departmental support of community policing is also present. Perhaps group cohesion is only effective at increasing officer productivity precisely when departmental support is lacking. Under these circumstances, officers who want to practice community policing may more heavily rely on support from their peers or workgroup because they cannot rely on similar support from the department. Overall, it

is important to place this finding in the context of a general pattern which suggests that social capital, whether in interaction form or not, does not help us understand or predict officer performance of community policing.

Additionally, the Likelihood Ratio test indicated that the interaction model with the significant term did not provide significantly more information compared to the additive model. One way to judge the importance of a significant interaction term is to determine whether the model including the interaction term fits the data better than does the original model without the interaction term. The Log Ratio Test [$LR = 2(-593.33 + 589.44) = 7.88$] indicated that the obtained chi-square (7.78) did not exceed the critical chi-square (9.49, with 4 degrees of freedom at the .05 significance level), so including the interaction terms did not provide significantly more information than excluding them. In other words, the two models were statistically indistinguishable, despite the presence of one significant interaction term. This casts further doubt on the importance of this finding. In conclusion, the results from Tables 11 and 12 should be considered notable for their uniformity of effect: nil.

Table 11

Interaction Models – Zero-Inflated Negative Binomial Regression on CommunityPolicing Time.

		<u>CP Time per shift</u>		
		<u>B</u>	<u>SE</u>	<u>P</u>
Sex	Constant	2.86	1.60	0.073
	Trust Variable × Ofc. Female	0.40	1.19	0.735
	Cooperation Factor × Ofc. Female	0.28	0.60	0.637
	Group Cohesion Factor × Ofc. Female	0.17	0.46	0.711
	Support Factor × Ofc. Female	-0.71	1.38	0.604
	Alpha	1.03	0.21	0.000
	Tau	0.14	0.04	0.001
	Log-Likelihood/Vuong/Sig. Level	-591.48	10.91	0.000
Race	Constant	2.82	1.66	0.089
	Trust Variable × Ofc. Minority	0.15	1.54	0.921
	Cooperation Factor × Ofc. Minority	0.16	0.60	0.795
	Group Cohesion Factor × Ofc. Minority	-0.66	0.39	0.089
	Support Factor × Ofc. Minority	0.72	0.97	0.455
	Alpha	1.01	0.20	0.000
	Tau	0.13	0.04	0.002
	Log-Likelihood/Vuong/Sig. Level	-589.79	11.25	0.000
Education	Constant	-2.53	3.59	0.480
	Trust Variable × Ofc. Education	-0.37	0.24	0.125
	Cooperation Factor × Ofc. Education	0.05	0.14	0.740
	Group Cohesion Factor × Ofc. Education	0.00	0.14	0.995
	Support Factor × Ofc. Education	0.24	0.23	0.294
	Alpha	1.02	0.20	0.000
	Tau	0.14	0.04	0.001
	Log-Likelihood/Vuong/Sig. Level	-591.43	11.14	0.000
Tenure	Constant	2.83	3.27	0.387
	Trust Variable × Ofc. Tenure	0.03	0.10	0.748
	Cooperation Factor × Ofc. Tenure	0.02	0.04	0.656
	Group Cohesion Factor × Ofc. Tenure	0.03	0.05	0.598
	Support Factor × Ofc. Tenure	0.00	0.08	0.968
	Alpha	1.11	0.23	0.000
	Tau	0.12	0.04	0.005
	Log-Likelihood/Vuong/Sig. Level	-592.6	10.05	0.000

Table 11 (cont'd).

CP Assignment	Constant	2.51	1.15	0.249
	Female**	0.77	0.37	0.037
	Trust Variable × CP Assignment	-0.02	0.75	0.977
	Cooperation Factor × CP Assignment	0.43	0.44	0.322
	Group Cohesion Factor × CP Assignment	-0.07	0.38	0.857
	Support Factor × CP Assignment	-0.67	0.63	0.289
	Alpha	1.04	0.22	0.000
	Tau	0.12	0.04	0.006
	Log-Likelihood/Vuong/Sig. Level	-589.61	10.83	0.000
Department	Constant	1.82	2.12	0.392
	Trust Variable × Dept. (IPD)	-0.5	0.81	0.534
	Cooperation Factor × Dept. (IPD)	-0.53	0.42	0.211
	Group Cohesion Factor × Dept. (IPD)	0.40	0.42	0.340
	Support Factor × Dept. (IPD)	0.37	0.64	0.566
	Alpha	1.02	0.21	0.000
	Tau	0.14	0.04	0.001
	Log-Likelihood/Vuong/Sig. Level	-590.63	10.97	0.000
Dept. Support of CP	Constant	-0.51	3.70	0.891
	Group Cohesion Factor	1.22	0.54	0.024
	Trust Variable × Dept. Support	-0.11	0.11	0.320
	Cooperation Factor × Dept. Support	0.03	0.71	0.712
	Group Cohesion Factor × Dept. Support	-0.12	0.06	0.050
	Support Factor × Dept. Support	0.14	0.11	0.197
	Alpha	1.00	0.20	0.000
	Tau	0.13	0.04	0.002
Log-Likelihood/Vuong/Sig. Level		-589.44	11.34	0.000

N=262

Notes: *Each interaction model was analyzed with the variables included in the additive model for CP Time, but only those variables that reached statistical significance are presented in the table.

** This variable also came close to attaining statistical significance in the following models: Race ($p = .06$), Department ($p = .07$), Dept. Support of CP ($p = .07$).

Table 12

Interaction Models – Negative Binomial Regression on Community Policing Acts.*

		<u>B</u>	<u>SE</u>	<u>P</u>
Sex	Constant	2.33	0.61	0.000
	Trust Variable × Ofc. Female	0.14	0.40	0.718
	Cooperation Factor × Ofc. Female	-0.04	0.20	0.818
	Group Cohesion Factor × Ofc. Female	-0.03	0.18	0.861
	Support Factor × Ofc. Female	0.00	0.37	0.987
	Alpha	0.27	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-503.24	51.84	0.000
Race	Constant	2.68	0.60	0.000
	Trust Variable × Ofc. Minority	0.51	0.40	0.202
	Cooperation Factor × Ofc. Minority	0.19	0.15	0.205
	Group Cohesion Factor × Ofc. Minority	-0.13	0.16	0.419
	Support Factor × Ofc. Minority	-0.4	0.32	0.210
	Alpha	0.26	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-500.47	48.41	0.000
Education	Constant	2.01	1.66	0.226
	Trust Variable × Ofc. Education	-0.02	0.10	0.862
	Cooperation Factor × Ofc. Education	-0.01	0.04	0.770
	Group Cohesion Factor × Ofc. Education	-0.02	0.05	0.696
	Support Factor × Ofc. Education	0.53	0.10	0.957
	Alpha	0.27	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-503.08	52.79	0.000
Tenure	Constant	2.77	0.87	0.001
	Trust Variable × Ofc. Tenure	0.02	0.02	0.465
	Cooperation Factor × Ofc. Tenure	0.00	0.01	0.637
	Group Cohesion Factor × Ofc. Tenure	0.00	0.01	0.802
	Support Factor × Ofc. Tenure	-0.01	0.02	0.609
	Alpha	0.27	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-502.86	52.31	0.000

Table 12 (cont'd).

CP Assignment	Constant	2.80	0.68	0.000
	Trust Variable × CP Assignment	0.37	0.28	0.188
	Cooperation Factor × CP Assignment	0.12	0.12	0.324
	Group Cohesion Factor × CP Assignment	0.01	0.15	0.941
	Support Factor × CP Assignment	-0.15	0.26	0.558
	Alpha	0.26	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-500.64	47.50	0.000
Dept.	Constant	2.02	0.77	0.008
	Trust Variable × Dept. (IPD)	-0.13	0.27	0.636
	Cooperation Factor × Dept. (IPD)	-0.1	0.11	0.341
	Group Cohesion Factor × Dept. (IPD)	0.06	0.14	0.666
	Support Factor × Dept. (IPD)	0.15	0.26	0.552
	Alpha	0.27	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-502.77	51.25	0.000
Dept. Support of CP	Constant	2.98	1.55	0.055
	Trust Variable × Dept. Support	0.02	0.05	0.686
	Cooperation Factor × Dept. Support	0.01	0.02	0.657
	Group Cohesion Factor × Dept. Support	0.01	0.02	0.554
	Support Factor × Dept. Support	0.01	0.05	0.870
	Alpha	0.26	0.07	0.000
	Log-Likelihood/Chi-Squared/Sig. Level	-501.87	51.00	0.000

N=262

Notes: * Each interaction model was analyzed with the variables included in the additive models.

** Significant coefficients from the additive model (tenure, CPA, IPD) also had the same sign and significance in these models, with the exception of tenure in the tenure interaction model, CPA in the CPA interaction model, and IPD in the department interaction model.

Summary of Findings

Table 13 presents a summary of the statistically significant coefficients produced by the bivariate and multivariate analyses.

Table 13

Summary of Findings.

Variable	Bivariate	Multivariate
Female Officer	+ CP Time	
Female Officer × Trust	+ CP Time	
IPD	– CP Time – CP Acts	– CP Acts
IPD × Trust	– CP Time – CP Acts	
Tenure	– CP Acts	– CP Acts
Tenure × Trust	– CP Acts	
CP Assignment		– CP Acts
Group Cohesion Factor		+ CP Time
Group Cohesion Factor × Dept. Support of CP		– CP Time

What should be given primary consideration from the results presented is the overall lack of significant findings produced by the bivariate analyses, the additive models, the interactive models, and the analyses of district effects. Of the 352 regression coefficients produced in these analyses, only about 5% reached the conventional level of significance. The findings related to social capital and community policing are notable in their consistent pattern of unimportance. Of the three categories of independent variables (officer characteristics, work environment, and social capital), the social capital group by

far offered the least explanatory power. The most consistent significant findings produced in the analyses were contributed by officer characteristics and features of their work environments. Moreover, the variables that were significant tended to reduce, rather than increase, the expected amount of community policing time per shift or the number of community policing acts per citizen performed by the officers.

The most consistent significant result (both statistically and substantively) was the organizational environment in which the officer worked. This was originally conceptualized at the department level. Officers working in Indianapolis were consistently found to produce fewer community policing minutes per shift and acts per citizen compared to officers working in St. Petersburg. The substantial difference in community policing performance between departments provides a strong indication of the importance that organizational factors play in the likelihood of community policing being performed.

The results of these analyses also reveal that different conceptualizations of community policing can lead to different results. The additive model for community policing time did not produce any significant results, but female officers spent significantly more time on community policing compared to their male counterparts in one of the interaction models. Additionally, another interaction model revealed that as officers' perceptions of group cohesion increased so did the amount of time they engaged in community policing activities.⁹ For the other dependent variable, the additive model

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While there was one significant interaction term for a CP Time model (group cohesion $\times$ dept. support of CP), recall that the LR test showed that the interaction model did not provide significantly more information than did the original model. The significance of interaction effects should be judged in terms of the entire research process; the general pattern of non-significance makes this finding especially dubious.

produced several significant findings while there were no significant findings for the interaction models. Officer tenure and CPA consistently reduced the expected number of CP Acts per citizen, holding other variables constant. A strong department effect also emerged: officers in Indianapolis were significantly less likely to provide acts of comfort, referrals, and information to citizens compared to officers in St. Petersburg. The next chapter puts these findings in context of the existing literature on social capital, community policing, and police organizations. Implications for promoting community policing activities across disparate organizational environments are discussed.

CHAPTER 7

ISSUES RAISED BY THE RESEARCH FINDINGS

The goal of this chapter is to discuss the issues raised by the present study. These are grouped into two sections. The first section of this chapter describes the substantive issues raised by the findings from the statistical analyses. The second section provides an overview of the methodological issues relevant to the current study as well as directions for future research investigating officer performance of community policing within a social capital framework.

Substantive Issues

Research Questions Revisited

Let us first examine how the results from the statistical analyses provide answers to the research questions presented in the introduction. The first question, “Is social capital related to how police officers perform their jobs?” and its follow-up question, “Specifically, what is the relationship between levels of social capital and officers’ engagement in community policing activities?” can be answered by referring to the bivariate results, as they provide an indication of whether a significant direct relationship is present. The multivariate results are used to answer the remaining research questions, as they deal with the social capital-community policing relationship in the context of other moderating variables.

Bivariate results did not indicate a direct relationship between social capital and community policing. However, trust was revealed as an important dimension of social

capital through the presence of several interaction terms that were significantly related to the measures of community policing. Specifically, the relationship between trust and community policing was moderated by gender, department, and tenure. Levels of trust significantly increased community policing time per shift for officers who are female. This means that trust in supervisors is more relevant to female officers' performance of community policing. Male officers engaged in community policing regardless of their levels of trust.

Levels of trust were negatively related to both community policing time and community policing acts for officers working in Indianapolis. In other words, trust influenced officers' performance of community policing in IPD but not SPD. The direction of the relationship suggests that trust makes community policing in Indianapolis less likely. This could be viewed as a negative outcome of social capital – perhaps having trust in their supervisors allowed officers to “get away” with performing less community policing. A similar relationship emerged for tenure and trust. Levels of trust decreased acts of community policing per citizen for experienced officers. When officers had a lot of time on the job, they tended to have higher levels of trust in their supervisors, and they used this trust to more easily circumvent the community policing mandate. The likelihood that rookies would engage in community policing, on the other hand, was unaffected by the amount of trust they had in their supervisors.

These results demonstrate that of the four social capital dimensions, trust played an important role at the bivariate level. It affected community policing performance in the expected direction only for female officers: high levels of trust promoted rather than hindered their engagement in community policing. For officers in Indianapolis and with

high tenure, however, high levels of trust decreased the likelihood they would engage in community policing.

The second research question addressed by the current research, “What is the relative contribution of police social capital in a model that also includes characteristics of the individual officer and their work environment?” can be answered in a straightforward manner: none. The quality of officers’ relationships with their peers and supervisors did not influence whether officers spent time on community policing or provided community policing acts to citizens, controlling for officer characteristics and features of their work environments. Given the wealth of literature pointing to the potential importance of social capital in understanding police behavior, how can the current results be explained? Aside from any methodological limitations that may have contributed to the null findings (discussed in the next section), why would levels of trust, cooperation, group cohesion, and social support among police *not* matter to community policing performance?

One explanation is that the relationships that are really important to officers wanting to engage in community policing are not *police* relationships, but rather *citizen* relationships. This study did not provide information on the extent to which officers were networked into relationships in the community. The four social capital dimensions of trust, support, cooperation, and group cohesion could be viewed as especially important elements of relationships between officers and citizens. Given that the central tenet of the community policing philosophy is that police and citizens should work together to reduce crime and increase safety in communities, describing the qualities of these relationships could provide an important explanation of community policing

performance. Future researchers should consider assessing community policing performance in terms of networks of relationships within police organizations, within other relevant agencies, and within the citizenry, as well as relationships that reach across these different groups.

Another way to interpret the finding that “social capital does not matter” is in positive terms. Some might argue that police performance should *not* be dependent upon levels of police social capital. In other words, police should engage in community policing regardless of whether they have relationships with their peers and supervisors that are rich in trust, cooperation, support and/or group cohesion. Police officers should do their jobs no matter what their level of resources. This interpretation relies on a model of policing that is individualistic and self-determined; officers’ performance is viewed as based solely on their own will, motivation, and determination. It removes consideration of environmental characteristics which have been shown to play an important role in behavioral outcomes among officers.

The third question, “Do officer characteristics, such as their sex, race, education, *or* tenure moderate the relationship between social capital and community policing?” can be answered by looking at the impact of the OC × SC interaction terms on the regression models of community policing time and community policing acts. No significant interaction terms were revealed by the analyses. So while officer characteristics might significantly moderate the relationship between social capital and community policing at the bivariate level, once other relevant factors are controlled these effects disappear. There was one interesting direct relationship among these variables: as officer tenure increased, the amount of community policing acts per citizen decreased. This replicates

the finding of most other research indicating that as years of experience increase, productivity decreases (Bittner, 1990; DeJong, Mastrofski, & Parks, 2001; Muir, 1977; Roberg, Crank & Kuykendall, 2000; Stalans & Finn, 1995).

The fourth question, “Do features of officers’ work environment, such as their department and their perceptions of the department’s support for community policing, moderate the relationship between social capital and community policing?” is answered by referring to the Work Environment $\times$ Social Capital interaction terms in the regression models for community policing time and community policing acts. Recall that one social capital interaction term significantly decreased the amount of community policing time per shift: Group Cohesion $\times$ Department Support of Community Policing. This was interpreted as indicating that a high level of group cohesion decreased time spent in community policing when a high degree of departmental support of community policing was also present. The importance of this finding is doubtful given the general pattern of non-importance of social capital, and the Log Ratio test that revealed that the interaction model did not provide significantly more information than the additive model (i.e., the interaction term did not significantly increase, in a statistical sense, our understanding of community policing time).

Two other direct relationships are also revealed by this group of variables: Community Policing Assignment and Department. First, officers assigned as community policing specialists provided significantly fewer acts of community policing per citizen than did regular patrol officers. This finding is inconsistent with original expectations that community policing officers would provide more community policing acts. It does, however, replicate another analysis of data from the POPN that found that community

policing officers in both sites spent less time in encounters with citizens than did patrol generalists (Parks, et al. 1999). These officers had more discretion than general patrol officers, and they used it to engage in less “face time” with the public, or to spend more time with citizens of higher status. This study generates a similar conclusion about how community policing and patrol officers tend to do their jobs. Community policing officers provided significantly fewer acts of community policing to citizens, and regarding community policing time per shift there was no difference between the two groups of officers.

The fourth research question does draw our attention to the most consistent finding produced by the current study: the importance of officers’ work environment. Specifically, the department where the officer works exerts a substantial impact on the expected amount of community policing time and community policing acts performed by officers, controlling for the effects of the other independent variables. To state it bluntly, officers in Indianapolis were far less likely to engage in community policing time or acts compared to their counterparts working in St. Petersburg. What organizational factors relevant to community policing can account for such a pronounced difference between the practice of community policing in these two departments? The community policing literature offers several explanations as to organizational variables that may affect officer performance of community policing. These are discussed below.

Leadership

“Providing leadership and vision is an important part of any organizational change strategy” (Skogan & Hartnett, 1997, p. 91). Top police administrators are supposed to communicate the department’s philosophy, mission statement, goals,

policies, and strategies to officers. They can provide leadership as to what activities are encouraged within the department, as well as the activities that are discouraged.

Leadership is considered by some scholars to be especially important in the community policing era, as leaders must effectively convey what community policing is, how officers should practice it, and how the organization will provide the necessary support to accomplish it. Leaders can also convey values and beliefs that they feel will increase efficiency and productivity within a community policing context. In one study that used social capital as a framework for understanding community policing partnerships, the failure of the community policing program was attributed in part to, “a lack of proper leadership in the police department to promote and enforce norms of trust, reciprocity, and co-production” (Pino, 2001, p. 213).

Chiefs in both Indianapolis and St. Petersburg were hired due to their support and promotion of a community policing philosophy, but they varied in how they translated this philosophy into practice (see DeJong, Mastrofski, & Parks, 2001; Parks, et al. 1999). In other words, the “vision” of community policing is substantially different for the two chiefs. In Indianapolis, the chief encouraged officers to engage in community policing via an aggressive order maintenance response. In other words, the leadership he provided facilitated an increase use of traditional police tactics (e.g., stops, arrests, searches and seizures) in an attempt to increase residents’ feelings of safety. The “partnership” element of community policing was accomplished primarily at the district level, with staff members attending community meetings. Officer-level engagement of the community was not encouraged. The small proportion of officers with specific community policing assignments were known as “Crime Bill” officers; they were

supposed to work together on community policing projects. Collaboration with community groups or patrol officers was not emphasized. In short, community policing efforts in Indianapolis were “compartmentalized” as the responsibility of a few organizational members.

Alternatively, the style of community policing exhorted by the chief in St. Petersburg focused on problem-solving. In fact, he had gained an international reputation for the geographic deployment of officers to enhance their ability to engage the community. In contrast to Indianapolis, community partnerships were encouraged at the officer-level rather than at the district-level. Community policing officers were supposed to work with patrol officers as a team to problem-solve in their assigned areas. The chief emphasized that community policing was a responsibility of all the officers in the department, not just those with special community policing assignments. In short, community policing efforts in St. Petersburg were integrated into the responsibilities of all organizational members. In addition, the Chief changed the performance appraisals of all officers to reflect the new emphasis on community policing.

It should be noted that there are limits to what leadership can accomplish. A nation-wide survey of police administrators found that 98% agreed that community policing was a worthwhile reform effort, but 47% admitted that what community policing actually meant in practical terms was not clear (Wycoff, 1994). Perhaps most troubling, only 27% felt that implementing community policing would require extensive organizational change, for example to policies, goals or training. Under these circumstances, Mastrofski (1998) cautions that “police agency leadership is not a driving force” for accomplishing organizational change; rather, successful long-term change in

policing usually results from leaders recognizing and “riding the wave” of broader demographic, economic, social, and technological forces (p. 183).

Empirical research using data from the POPN also reveals the limits of leadership. DeJong, Matrofski, and Parks (2001) concluded that leadership does not play an important role in implementing new programs because officers’ belief systems (i.e., their acceptance of the community policing philosophy) were not related to the amount of time they spent on problem-solving activities. To increase the amount of time spent on problem-solving activities, the authors recommend assigning officers to special units that emphasize this type of activity and where there is time to engage in these activities. Their study is consistent with much police research finding that situational or organizational factors are much more relevant determinants of officer behavior than are attitudes or beliefs. As Trojanowicz et al. (1998) note, “administrators may expect only a limited amount of problem solving to occur by decree” (p. 188). Leadership must be coupled with the structural changes needed to support officer engagement in community policing. Some of these relevant changes are discussed below.

Organizational Structure

Geographic Responsibility. “For community policing to be successful there must be some level of geographic permanence” (Trojanowicz, Kappeler, & Gaines, 2002, p. 13). Geographic permanence promotes ownership and responsibility among police for what happens “on their beat.” The community policing philosophy dictates that officers should be integrated into the community, and this is best achieved by having them permanently assigned to a particular area. In St. Petersburg, community policing officers worked with the general patrol officers in their assigned beats. The combined strategy of

geographic permanence and having all officers work together might be one explanation as to why community policing performance was more likely to occur in SPD.

On the other hand, in Indianapolis, community policing officers were supposed to work together to accomplish community policing goals. In effect, this meant that their geographic responsibility covered the entire city. Goldstein's (1990) sums up the limitation of such a strategy with his statement that "... so much of policing consists of dealing with problems. And while some problems can be viewed as citywide and relatively uniform wherever they occur, most have a local character to them or may even be unique to a specific beat. It requires officers close to a community to identify them and to deal with them" (p. 160). Coupled with the fact that officers in Indianapolis were not encouraged to work with the general patrol officers assigned to particular areas, it is not surprising that their levels of community policing performance were lower than in St. Petersburg.

Decentralization. This strategy assumes that community policing will be best accomplished when officers work in an organization that is not controlled centrally, but rather decentralized to enable variation in policing styles and strategies based on the characteristics and needs of different neighborhoods within a department's jurisdiction. Departments serious about community policing therefore push responsibility and authority down the organizational hierarchy rather than keeping it at headquarters. This restructuring is expected to enhance officer effectiveness because they are freed from rigid, standardized operating procedures and given the flexibility to create custom plans to address specific problems in their assigned beats. Decentralization empowers officers to use their discretion creatively without having their activities dictated to them by upper-

management.

Attempts to flatten the organizational structure to facilitate community policing took different forms in the two departments. In Indianapolis, community policing tasks were decentralized to the district level. This meant that district commanders were responsible for setting community policing goals and tasks and overseeing community policing projects occurring within their districts. To a certain extent then, officers still had their activities and priorities set for them by a member of management. St. Petersburg more fully realized decentralization because community policing was decentralized to the officer level. This meant that individual officers would implement and develop community policing projects with the citizens they encountered on a daily basis. They were trusted to use their discretion appropriately to determine the types of community policing activities in which to engage. In terms of designing an organizational structure that facilitated officers engaging in community policing, therefore, SPD was more successful than IPD.

Methodological Issues

Several methodological issues were raised by this research, including the inclusion of interaction terms in the study of social capital, the revelation that different regression equations are needed for modeling community policing time and community policing acts, the problem of establishing causality, the sampling strategy, and the measurement of social capital and community policing. They are discussed in the sections below.

Interaction Terms

Interaction terms are an important area for future researchers to explore. While

the present study did not reveal any significant interaction effects, it should be noted that this was more than likely due to the multicollinearity present in most of the interaction models. Recall that multicollinearity does not bias the regression results, but makes finding significant effects more difficult because the confidence intervals are increased and the t-statistics tend to be small. Significant interaction effects in the data, therefore, could have been masked by multicollinearity. Given that the interaction models tested in the current study were structured according to theoretical considerations, future researchers may want to test social capital interaction terms on larger sample sizes. This may enable enough statistical power to reveal significant effects.

Friedrich (1982) reminds us that there are many beneficial reasons for testing interaction effects. Most importantly, they are more accurate and detailed descriptions of relationships that exist in social science data. In other words, including interaction effects allows the researcher avoid falling into the trap of oversimplifying what is by all accounts an extremely complex social reality. Assuming additive effects is the most common oversimplification of the social world. Instances of an independent variable always having the same effect on a dependent variable, regardless of the levels of the other independent variables, are surely more rare than instances where these relationships are conditional. As Friedrich (1982) notes, conditional relationships may be “less than wholly satisfying” given our predisposition to favor simple, consistent relationships, but they are “often an accurate reflection of social reality” (p. 832). Interactive models are more likely to represent the effect of social capital on *any* outcome under investigation, and should be included in future studies of both social capital and community policing.

Regression Equations

That the Zero-Inflated Negative Binomial model provided the best fit to the community policing time models indicates that a different process is occurring for those officers who spend *no* time on community policing compared to those officers that spend *some* time on community policing. In contrast, no such distinction occurs for the community policing acts models, as the fit of these models to the data did not improve from zero alteration. How can this difference be explained?

Recall that community policing time was derived from activity-level data, including problem-solving, crime prevention, and attending community meetings. These activities are under the purview of individual officers; they could choose whether and when to engage in them. In this way they can be considered proactive activities, and evidently many officers used their discretion to avoid engaging in them. Community policing acts (providing comfort, referrals, or information), however, require the presence of a citizen. This implies that officers were responding to calls for assistance, or engaging in some form of reactive policing. Community policing acts could be considered less under officer control compared to community policing time. This is a fundamental difference between the two dependent measures that could explain why the different regression equations were necessary. Officers were ultimately able to choose whether to spend time on community policing, whereas providing community policing to citizens was at least in part a function of whether citizens were present and needing assistance. Future research on community policing should take into account that different equations are needed to model different conceptualizations of community policing.

Causal Order

The major problem with cross-sectional research, such as the current study, is that the researcher is unable to definitively specify the temporal order of variables, which is a major barrier to drawing causal inferences. Many researchers use theory or intuition to specify which variables are likely to come first, or predict the dependent variable in a regression equation. But these specifications may be faulty, or at least open to debate if they are tested using cross-sectional data. In the field of social capital, for example, researchers have expressed a concern related to social capital and how to “separate what it is from what it does” (Edwards & Foley, 1997, p. 669) because “equating social capital with the resources acquired through it can easily lead to tautological statements” (Portes, 1998, p. 5). The model tested in this research conceptualized social capital as a predictor of community policing, the idea being that officers with high levels of social capital would be more productive than officers who did not have this resource to draw upon to “get things done.” In light of the findings, however, it might be productive to reconsider this conceptualization. The relationship between social capital and community policing, if one exists, may be more complex. For example, a feedback-loop arrangement could exist where social capital and community policing are mutually reinforcing. That is, an increase in one leads to an increase in the other, and vice versa, and the cycle continues. The literature on social capital and educational outcomes has demonstrated that this is a distinct possibility.

Alternatively, we might conceptualize the relationship as having the reverse causal order: community policing performance could be influencing levels of police social capital. This model is feasible if we consider the possibility that productivity may

increase social capital. For example, it makes sense to think of officers who frequently engage in problem-solving, crime prevention, or attending community meetings as being able to increase their social capital because they are involved in projects that put them into contact with people with whom they may eventually form quality relationships. They may also be forced to share information and cooperate with other officers in order to successfully complete many community policing projects; this could also increase their social capital. Similarly, officers who frequently provide comfort, referrals, and information to citizens may be expected to have higher levels of social capital compared to officers who do not frequently engage the citizenry. These examples suggest that future researchers may want to carefully consider the causal order of the social capital and outcome constructs. However, it must be restated that the body of literature consulted for this research suggested that it was entirely appropriate to conceptualize social capital as a predictor, rather than an outcome, of community policing.

Sampling Strategy

One significant limitation of the present study was that it relied on secondary analysis of data that were collected using a sampling strategy based on rides instead of officers. Consequently officers included in the sample had varying levels of observation – some officers were observed for many rides while others were only observed once. Officers who were not observed at all (but who participated in the interviews) were excluded from the present study. Future researchers would be advised to carefully consider the implications of having a sampling framework that is not consistent with the goal of the study or the unit of analysis. The present study may have yielded different results had the observational data been collected according to an officer-level sampling

strategy, ideally with each officer being observed multiple times over an extended period (say, six months or one year). This would be a much more effective way for gather information about specific officers and the relative impact of social capital on their community policing performance.

Measurement of Community Policing

Community policing time per shift and acts per citizen represent less-than-perfect measures of community policing performance. While the goal was to create comprehensive measures that included all the activities relevant to community-oriented policing, it cannot be assumed that *every* community-oriented activity is captured by the data. Despite this limitation, the dependent variables in this study included a broad set of activities, all of which are guided by the community policing philosophy, representing the themes of community engagement, problem-solving, and providing assistance to citizens. The use of two different indicators (one based on time, one based on acts per citizen) also advances the study of community policing as it draws attention to the different ways that the philosophy is translated into practice.

Future researchers may want to consider the effect of combining different community policing indicators into global measures of community policing. It might be more instructive to model the impact of social capital on each of the community policing tasks separately to avoid masking different relationships across these tasks. For example, it is reasonable to suppose that police social capital might matter more to officers engaged in problem-solving efforts than to officers attending community meetings. The former is often a group activity where personal relationships could make a difference whereas the latter is usually conducted at the officer's discretion. Similarly, police social

capital could impact the proclivity of officers to provide information or referrals to citizens as they may draw upon their work relationships for information relevant to citizen needs. Providing comfort, however, is more than likely the result of either necessity or an individual officer's belief that comforting citizens is important rather than the quality officers' relationships with their peers or supervisors. Modeling these activities separately could shed light on the different ways that social capital might impact officer performance.

Measurement of Social Capital

The current study makes several improvements in the measurement of the social capital construct. While the social capital research has been plagued by inadequate operationalization of this complex construct, the measures used in the present study are both more specific and more comprehensive than those previously used in social capital research. Four social capital dimensions are specified: level of trust, cooperative exchanges, group cohesion, and social support. Previous social capital research typically uses only one or two variables representing one part of what has come to be known as "social capital," whereas this study advances the notion that this construct is multidimensional, and uses multiple items to measure these dimensions.

Despite the advances the current study makes over previous social capital research, there are limitations to the measures of social capital. The one that most clearly stands out is the variable used to measure trust. Ideally several measures would be used to tap into this dimension. In addition, it would be beneficial to have questions assessing officers' trust for each person in their work unit, as well as their supervisors. The same can be said for the social support dimension. Although a reliable factor, it only reveals

the level of support an officer receives from his or her supervisor. The level of support an officer perceives having from his or her peer group would also be an important element of social capital that is missing from this measure. The other two social capital dimensions (cooperative exchanges and group cohesion) have multiple measures that assess these areas in terms of both the officers' peers and supervisors, but neither scale reached the conventional standard of reliability. Given the limitations of these key theoretical variables, the lack of significant findings is not surprising.

Future research on police social capital should attempt to incorporate information on both the quantity and quality of both peer and supervisor relationships. An in-depth examination into one specific work group, including both qualitative and quantitative data collection, would aid our understanding of how and why police social capital is related to the performance of various policing activities. Officers could be asked specific questions about their peer and supervisor relationships, how these relationships help or hinder their performance, and their perceptions of the dimensions in these relationships that constitute the most important source of social capital (trust, cooperation, cohesion, or support). Additionally, observations of police-peer and police-supervisor interactions would constitute a valuable source of data that would reveal the formation and utilization of police social capital within this unique work environment.

APPENDIX A

Table 14

Correlation Matrix of All Variables.

	CP Time	CP Acts	Female	Non-White	Educ.	Tenure
CP Time	1	-0.04	0.07	-0.05	-0.07	-0.02
CP Acts	-0.04	1	0.07	-0.05	0.07	-0.17***
Female	0.07	0.07	1	0.15**	-0.03	0.02
Non-White	-0.05	-0.05	0.15**	1	0.06	-0.07
Education	-0.07	0.07	-0.03	0.06	1	-0.31***
Tenure	-0.02	-0.17***	0.02	-0.07	-0.31***	1
CPO	0.11*	0.06	-0.07	0.02	-0.05	0.04
CP Training	0.05	-0.08	0.11*	0.20***	-0.03	-0.28***
IPD	-0.1	-0.22***	0.09	0.03	0.11*	-0.04
Day Shift	0.01	-0.10*	0.04	0.08	-0.12**	0.42***
Beat Prob.	-0.09	-0.05	0.18***	0.06	0.16**	-0.21***
Dept. Pro-CP	0.00	-0.07	0.17**	0.04	-0.09	-0.05
Trust	0.05	0.02	0.06	0	-0.11*	-0.05
Cooperation	-0.01	-0.07	0.01	-0.07	-0.03	-0.14**
Cohesion	0.00	-0.04	-0.05	-0.11*	-0.14**	-0.02
Support	0.00	0.05	0.04	-0.03	-0.12*	-0.05

Table 14 (cont'd).

	CPO	CP Training	IPD	Day Shift	Beat Problems
CP Time	0.11*	0.05	-0.1	0.01	-0.09
CP Acts	0.06	-0.08	-0.22***	-0.1*	-0.05
Female	-0.07	0.11*	0.09	0.04	0.18***
Non-White	0.02	0.20***	0.03	0.08	0.06
Education	-0.05	-0.03	0.11*	-0.12*	0.16**
Tenure	0.04	-0.28***	-0.04	0.42***	-0.21***
CPO	1	-0.40***	-0.72***	0.32***	-0.21***
CP Training	-0.40***	1	0.39***	-0.26***	0.2***
IPD	-0.72***	0.39***	1	-0.08	0.33***
Day Shift	0.32***	-0.26***	-0.08	1	-0.04
Beat Prob.	-0.21***	0.20***	0.33***	-0.04	1
Dept. Pro-CP	-0.40***	0.43***	0.31***	-0.15**	0.05
Trust	0.05	0.1	-0.09	-0.02	-0.16**
Cooperation	-0.12*	0.24***	0.08	-0.11*	0.14*
Cohesion	-0.23***	0.25***	0.07	-0.21***	-0.01
Support	0.04	0.06	-0.06	-0.04	-0.13**

Table 14 (cont'd).

	Dept. Pro-CP	Trust	Cooperation	Cohesion	Support
CP Time	0	0.05	-0.01	0	0
CP Acts	-0.07	0.02	-0.07	-0.04	0.05
Female	0.17**	0.06	0.01	-0.05	0.04
Non-White	0.04	0	-0.07	-0.11*	-0.03
Education	-0.09	-0.11*	-0.03	-0.14**	-0.12*
Tenure	-0.05	-0.05	-0.14**	-0.02	-0.05
CPO	-0.4***	0.05	-0.12*	-0.23***	0.04
CP Training	0.43***	0.1	0.24***	0.25***	0.06
IPD	0.31***	-0.09	0.08	0.07	-0.06
Day Shift	-0.15**	-0.02	-0.11*	-0.21***	-0.04
Beat Prob.	0.05	-0.16**	0.14**	-0.01	-0.13**
Dept. Pro-CP	1	0.27***	0.23***	0.32***	0.25***
Trust	0.27***	1	0.25***	0.35***	0.83***
Cooperation	0.23***	0.25***	1	0.33***	0.26***
Cohesion	0.32***	0.35***	0.33***	1	0.35***
Support	0.25***	0.83***	0.26***	0.35***	1

N=262

Notes:

* (p < .10) ** (p < .05) *** (p < .01)

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