Police Innovation:

Enhancing Research and Analysis Capacity through Smart Policing

by

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ABSTRACT

There has been a tremendous amount of innovation in policing over the last 40 years, from community and problem-oriented policing to hot spots and intelligence-led policing. Many of these innovations have been subjected to empirical testing, with mixed results on effectiveness. The latest innovation in policing is the Bureau of Justice Assistance's Smart Policing Initiative (2009). Created in 2009, the SPI provides funding to law enforcement agencies to develop and test evidence-based practices to address crime and disorder. Researchers have not yet tested the impact of the SPI on the funded agencies, particularly with regard to core principles of the Initiative. The most notable of these is the collaboration between law enforcement agencies and their research partners. The current study surveyed SPI agencies and their research partners on key aspects of their Initiative. The current study uses mean score comparisons and qualitative responses to evaluate this partnership to determine the extent of its value and effect. It also seeks to determine the areas of police agency crime analysis and research units that are most in need of enhancement. Findings indicate that the research partners are actively involved in a range of aspects involved in problem solving under the Smart Policing Initiative, and that they have positively influenced police agencies' research and crime analysis functions, and to a lesser extent, have positively impacted police agencies' tactical operations. Additionally, personnel, technology, and training were found to be the main areas of the crime analysis and research units that still need to be enhanced. The thesis concludes with a discussion of the implications of these findings for police policy and practice.

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INTRODUCTION

Why do people commit crime? This question has eluded scholars for many years and has brought about many theories and much research on the causes and correlates of crime. Another important question asks: What can be done about crime? Police have been around in the United States for about 160 years, with the primary responsibility of preventing and responding to crime. "Policing is an activity characterized by protecting individuals so as to maintain a safe and secure order in society" (Das & Verma, 2003). However, as times change, the role of officers changes, as do policing tactics and strategies. The mission and focus of policing can expand, but must always include the prevention and reduction of crime as the main goals. So what is being done to prevent and reduce crime today? What is the current status of police-enabled crime reduction strategies?

The traditional reactive model of policing that defined much of the 20th century was replaced by a wave of innovation that began in the late 1970s. Innovations in policing have taken different routes, from focusing on problem solving (Problem-oriented policing and the SARA model), order maintenance (Broken Windows), and creating better relationships with communities (Community-oriented policing), to place-based interventions (Hot spots policing), and crime/intelligence analysis (intelligence-led/predictive policing). These innovations have been empirically studied and results vary by strategy. Weisburd and Eck (2004) note that hot spots policing and problem-oriented policing both have strong evidence bases, with weaker support for the other innovations.

In 2009, the Bureau of Justice Assistance created a grant program called the Smart Policing Initiative, which was designed to harness and disseminate the evidence

on what works in policing. Specifically, the Smart Policing Initiative (SPI) is the latest attempt in police innovations to effectively and efficiently prevent and reduce crime.

Under the SPI, select U.S. law enforcement agencies have been working to find the best solutions to dealing with crime. One of the core features of the SPI is an ongoing collaboration between the law enforcement agency and a research partner (typically a university professor). The research partner should be a core member of the SPI team, involved in all aspects of the project from problem identification and analysis to response development and assessment. By the end of 2012, more than 30 law enforcement agencies (and research partners) had been funded through the SPI.

Much is known about recent innovations in policing, which will be reviewed shortly, but little is known about the key aspects of the latest innovation involving the Smart Policing Initiative – especially the role of the research partner. The goal of this thesis thus is to uncover and explain these key aspects.

The current study examines the nature of the police agency/researcher partnership under the SPI and evaluates its impact on law enforcement's research and crime analysis capacities. The primary research question involves an examination of whether the funded SPI sites have achieved the goals outlined by BJA as part of the SPI, particularly with regard to the role of the research partner. For example, what is the overall impact of the research partners on agency crime analysis operations? And what is the optimal role of a research partner in the SPI sites? In addition to evaluating the police agency/researcher partnership, the current study seeks to determine what enhancements are still needed in law enforcement's research and crime analysis units, questioning: What are the biggest limitations of the police agencies' research and crime analysis units? And what areas need the most enhancements? As times change, policing methods and strategies will continue to change and grow; staying current with the most

effective techniques will allow for the best crime prevention, control, and reduction possible.

The rest of this paper is laid out as follows: first there is background on policing under the Political and Professional Models with discussion of the political and societal issues leading to the end of these models, explicitly showing the need for a re-thinking of policing methods. Second is a description of the key policing innovations over the past few decades. Third, the thesis provides a descriptive overview of the Smart Policing Initiative and details the current research study, including methodology and results. Fourth, there are suggestions for improved research and crime analysis, based on the opinions of university researchers and police agencies under the Smart Policing Initiative and a discussion of the implications of the findings and future directions. Fifth, the thesis ends with final thoughts about the importance of the researcher/agency partnership and considers whether more police agencies should engage in future partnerships like this to stay current with proper data collection, research, and crime analysis techniques.

<center>**Chapter 2**</center>

<center>**BACKGROUND**</center>

An understanding of the models of policing throughout United States' history is helpful for understanding why police innovation is still important today. A historical framework allows us to see how far the policing profession has come, why innovation is needed, and where current policing strategies are today.

Political Era/Model

The political era (1840s-1900s) is known and named for the closeness between politics and the police that was evident during the beginning years of policing in the U.S. Authorized by politicians, police performed numerous functions including crime prevention, order maintenance, and other social services. They were decentralized and quasi-militarily organized. They had very close connections with the neighborhoods they serviced as foot patrol was the favored tactic (Kelling & Moore, 1988). This closeness and citizen satisfaction of police allowed for proper control of disorder, crime prevention, and the solving of crimes. But the bond with political leaders and citizens and decentralized organization made it easy for corruption to take place. Little supervision of officers allowed for bribes to be taken when they did not want to enforce certain political laws on their communities, and political bonds led to interferences in elections. This also led to discrimination against strangers and minorities, and major disorganization and inefficient police work (Kelling & Moore, 1988). Police control by politicians, conflicts over law enforcement, and major abuses and corruption issues called for police reform, but it was a long struggle.

Professional Model

Police professionalism and law became the ruling foundations for police authority under the Professional Model (1930s-1960s). The law enforcement function

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was strictly criminal apprehension and crime control. Organizational control was centralized and agents received strict supervision, functions and investigations were limited, and programs for public relations were developed. Command was also centralized and special units were there for special tasks (e.g. juvenile, vice, tactical, drugs). Proper relationships between police and citizens were defined and citizens were to be passive recipients of police crime control assistance (Kelling & Moore, 1988).

As part of the move toward professionalism, Uniform Crime Reports were developed in 1930 as a "uniform system of crime classification and reporting" (Kelling & Moore, 1988, p14) for recording and maintaining police data. Revolutionizing crime metrics at the time, number of arrests, police response time, and crime rate were all considered measures of police effectiveness, and became the standard for performance measurement (Kelling & Moore, 1988). This standardization system became widespread and endures at a national level today.

As Chief of Police, August Vollmer, the founder of "professional policing," (Vollmer, 2005, p723) made changes to the Berkley Police Department that transformed policing across the U.S. He instituted training, the use of college educated officers, the use of female officers, and endorsed technology implementations such as polygraphs, fingerprinting, and crime laboratories (Vollmer, 2005).

The emergence of technology altered law enforcement into a reactive mode, mainly responding to calls for service. Telephones and two-way radios became heavily used, and 911 systems and dispatch aided by computers were created and spread across the nation (Kelling & Moore, 1988). The use of patrol cars allowed police to cover more areas and respond to citizen calls faster; automobile patrol and "rapid response to calls for service" (Kelling & Moore, 1988, p15) became the favored tactics of the Professional Model. Along with reactively responding to calls, it was thought that routine car patrol

would also prevent crime by creating an omnipresent appearance. These strategies that were predominant in this era were coined the "standard model of policing" (Weisburd & Eck, 2004):

> This model relies generally on a 'one size fits all' application of reactive strategies to suppress crime...[it] is based on the assumption that generic strategies for crime reduction can be applied throughout a jurisdiction regardless of the level of crime, nature of crime, or other variations. Such strategies as increasing the size of police agencies, random patrol... rapid response to calls for service... and generally applied intensive enforcement and arrest policies are all examples of the standard model of policing. (Weisburd & Eck, 2004, 44)

The professional model was successful in its incorporation of strategic elements into a rational model that was internally reliable and logically attractive. Focusing on crime fighting seemed logical. The minimization of officer discretion was appealing and preventative patrol and rapid responses were straightforward ideas of policing. The police car and radio represented power, mobility, control of officers, proficient distance from citizens, and conspicuous presence (Kelling & Moore, 1988).

Towards the End of the Professional Model. Social issues of the 1960s, however, began to create many unstable conditions and numerous questions about the standard model of policing were raised (Weisburd & Braga, 2006). Crime rose drastically despite increases in police numbers and technological expenditures (Kelling & Moore, 1988). Police were no longer meeting their own or public expectations in dealing with crime. Fear also began to rise. Citizens stopped going to public places as often and some even left their neighborhoods. Another major issue was that of unfair treatment perceived and protested by minorities, mostly blacks. The antiwar and civil rights movements were in full force and were of great challenge for the police. Police legitimacy was questioned; the massive resistance and riots by students and minorities led observers to question police tactics. The numerous riots resulted in many injuries and deaths (Kelling & Moore, 1988).

From 1960-1965 violence broke out in the south because of rising segregation issues and reaction to the civil rights movement. There were the 1960 sit-ins, the 1961 freedom rides, and aggressive but peaceful segregation protests by blacks. Whites responded aggressively, with broad police sweeps of violence, occasionally doing their own provocation within certain geographic segments (Graham, 1980). On July 2, 1964, the Civil Rights Bill was signed and passed by Congress, only to be followed by an eruption of black rioting in reaction to police violence. These riots happened in the northeast from Harlem and Brooklyn, to Rochester and Philadelphia. The following year, Los Angeles riots led to thousands of injuries and arrests and 34 deaths. By 1966, black ghetto riots erupted throughout the entire U.S. (Graham, 1980). Law enforcement response to these issues was not the same everywhere, and the police violence was very much localized.

Social Research

Research by the American Bar Foundation in the 1950s had previously "discovered" that police discretion destroyed the myth of total enforcement, tearing down the perception that police work is under control and is simple work. The research showed that:

> police work is complex, that police use enormous discretion, that discretion is at the core of police functioning, and that police use criminal law to sort out myriad problems. The research suggested that the control mechanisms that pervaded police organizations—especially rules and regulations, oversight, and militaristic structure and training—were incompatible with the problems that confront police officers daily and the realities of how police services are delivered. (Kelling, 1999)

Police administration previously did not understand how "out of touch" the current practices were, compared to the reality of day to day police encounters. A policing practice that was supposed to be about control actually left officers with more discretion to conduct their own daily activities (Kelling, 1999).

As the riots finally settled, commissions were developed to explain what was going on (Graham, 1980). In 1967, the National Commission on Civil Disorders was appointed to determine where the violence was coming from; they were to find specific leading occurrences, general aggravating conditions, and to offer suggestions to the problems. The Kerner Report was published the following year, 1968, and reported that the violence and upheaval resulted from minorities' anger over police bias, discrimination, unemployment, poor health care and poor schools (Report of the National Advisory, 1968). It suggested that white oppression of blacks had been a major factor leading to the riots; that these protests were about the oppressed seeking equal opportunity in society. It stated that segregation and discrimination were running deep through America and that we were "moving toward two societies, one black, one white—separate and unequal" (Report of the National Advisory, 1968, p1). The police were at the core of the riots too- "police practices were perceived as attacks against personal dignity" (Report of the National Advisory, 1968, p143). It also noted that most of the killings were done by the "trigger happy," "under trained," and "over gunned" National Guard (Graham, 1980).

Arguing for the establishment of a Police Development Fund, Ford Foundation president McGeorge Bundy noted that:

> The need for reinforcement and change in police work has become more urgent than ever in the last decade because of rising rates of crime, increased resort to violence and rising tension, in many communities, between disaffected or angry groups and the police. (Bundy, 1970)

Once the Police Foundation was established and federal support and funding were secured, research on the criminal justice system and police activities began (Weisburd & Braga, 2006), challenging the foundation of the Professional model that preventive patrol was effective at controlling crime.

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In 1973, "The Police Foundation sought to establish whether empirical evidence actually supported the broadly accepted assumptions regarding preventive patrol" (Weisburd & Braga, 2006, p6), and their Kansas City Preventive Patrol Experiment became a highly influential study. Under this experiment, fifteen beats of the Kansas City Police Department were divided into three groups, including control beats, reactive beats, and proactive beats, for statistical comparison. Control beats included "routine preventive patrol [that] was maintained at its usual level of one car per beat" (Kelling, Pate, Dieckman, & Brown, 1974, p3). In the reactive beats, "routine preventive patrol was eliminated and officers were instructed to respond only to calls for service" (Kelling et al. 1974, p3). In the proactive beats, "routine preventive patrol was intensified by two to three times its usual level through the assignment of additional patrol cars" (Kelling et al. 1974, p3). This study established that routine police automobile patrol was actually not effective at crime suppression. This research showed that simply reacting to incidents had very little effect on crime, response time, and citizen satisfaction (Kelling et al. 1974; Weisburd & Eck, 2004). This study was said to be a "radical and important change in the quality of police research" (Weisburd & Braga, 2006, p6).

Flint, Michigan was the first city to return to foot patrol, and many other cities began to fund foot patrol programs. In 1982, Flint researchers found that foot patrol resulted in more non-confrontational citizen contact and less confrontational contact with citizens than motorized patrol. Additional research showed that foot patrol reduced citizen fear, enhanced citizen approval of police, increased positive police attitudes towards citizens, and increased job satisfaction and morale in officers (Trojanowicz & Baldwin, 1982).

Following the ideas of the Kansas City Preventive Patrol Experiment, another large study conducted by Spelman and Brown (1984) under the National Institute of

Justice, sought to challenge the effectiveness of rapid response to calls for service. Four thousand victims, bystanders, and witnesses of 3300 serious crimes were interviewed in four U.S. cities. The data they collected showed that "rapid police response may be unnecessary for three out of every four serious crimes reported to the police" (Spelman & Brown, 1984, pxix). Their results showed little support for rapid police response as an effective crime reduction method.

The Police Foundation conducted foot patrol studies in Newark and Houston to suppress social and physical disorder, using problem solving techniques and door-to-door contact. Foot patrol was used to initiate citizen contact, develop relationships, maintain order, and enforce laws. Evaluation showed positive effects of foot patrol on social and physical disorder and fear of crime decreased, but actual crime did not (Pate, 1986).

These studies suggest that the policing methods used throughout the 20th century under the Professional model were not completely effective anymore. They fostered re-thinking of how police should go about their business. Things needed to change. This notion that traditional policing did not reduce fear or crime and was thus futile helped push for rapid new police innovations. Over the next few years, new ideas for policing emerged. The next section describes these innovations.

Police Innovation

The following police innovations came from the re-thinking of how police should do their work. New crime theories and policing propositions were introduced, and are discussed here.

 Problem Oriented Policing

 Problem Oriented Theory. In 1979, Herman Goldstein introduced the idea that the current ideas for improving policing were too focused on means over ends, and

did not go far enough to create grand enough policing goals. He argued that they were too focused on the structure and preparation of the internal policing organization, modernizing and upgrading staff and equipment with hopes that these efforts would improve policing. Many of the published findings after the 1960s even suggested internal organization improvements. Although this method was appropriate at one time, Goldstein (1979) argued that current issues including financial crisis, ineffective research findings, a growing consumer (citizen) demand for better services, questioning of the effectiveness of these organizational advancements, and rising opposition to these internal changes all were pushing the need for police to also focus on the substantive results of policing.

But what are the "ends" of policing? The function of police has long been defined as primarily law enforcement. Goldstein's (1979) approach suggests that "the police job requires that they deal with a wide range of behavioral and social problems that arise in a community- and that the end product of policing consists of dealing with these *problems"* (p242). These problems are all the issues that cause citizens to call the police, from robberies and vandalism to run away children, speeding cars, accidents, and even fear. These societal problems are too prevalent to expect the police to be able to solve them, so a much more reasonable action is for police to focus on reducing the number of incidents, preventing recurrent incidents, and lessening suffering and other effects created by these problems (Goldstein, 1979).

Problem-Oriented Policing Adopted.

Many calls to the police are repeated requests for help. They have a history and a future- sometimes tragic. Rather than treat the call as a 30-minute event and go on to the next incident, police need to intervene in the cycle and try to eliminate the source of the problem. (Stewart, 1987)

Problem oriented policing, developed from Goldstein's (1979) ideas, does just this; it allows officers to address community crime and problems by looking for root causes of

crime and intervening before they get worse. Goldstein (1979) acknowledged the need for a sense of balance of police being reactive and proactive. Problem oriented-policing does just that and it allows for more substantive problems to be addressed, guiding police function and policy in a new direction. Problem oriented policing focuses on figuring out and fixing underlying causes of reoccurring problems versus simply responding to incidents in a triage approach and ignoring any patterns those incidents might be involved in.

"Problems" become the unit of analysis for police action. Police effort is shifted towards preventing crime and away from only reacting and routinely applying the law. Problem oriented policing "fundamentally redefines policing" (Eck, 2006, p117), and it is a philosophy just as much as it is procedures and techniques (Stewart, 1987). Problem oriented policing requires redefining the front line officer's role by adding challenge, discretion, and responsibility (Goldstein, 1990).

Eck (2006) describes three principles of problem-oriented policing, the empirical principle, the normative principle, and the scientific principle. The empirical principle affirms that the public insists that a number of different problems are to be dealt with by the police. The normative principle states that police are to do more than merely respond to incidents and enforce the law, but they are to ameliorate community problems as well. The scientific principle claims that sound theory and evidence should guide the police towards analytical approaches to problems.

Development of the Problem Oriented Policing Process. Knowing more about the types of problems citizens and police face can guide police discretion to handling situations in an appropriate manner (Goldstein, 1979). In order to move beyond simply responding to incidents, police must first identify relationships among incidents based on persons involved, behavior, location, or other similar factors. They

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must also take interest in getting to know the circumstances, conditions, and other factors that create and enable these community problems (Goldstein, 1990):

> While many problems are likely to be crime-oriented, disorderly behavior, situations that contribute to neighborhood deterioration, and other incidents that contribute to fear and insecurity in urban neighborhoods are also targets for the problem-solving approach. (Stewart, 1987)

The SARA method allows the advancement of theory into practice for problem oriented policing (Eck, 2006), and includes the following components: (1) Scanning: identifying the problem, (2) Analysis: learning basis, range, and consequences of the problem, (3) Response: actions taken to rid the problem, and (4) Assessment: evaluation of the response (Goldstein, 1990). Examples can be seen in Table 1.

A problem can be defined as a "cluster of similar, related incidents rather than a single incident" that creates a "substantive community concern" and is a "unit of police business" (Goldstein, 1990, p66). Characteristics of clusters include behavior, territory, persons, and time. Of late, there has been an added component to this definition, that the similarly related events are "harmful" to community members (Eck, 2006).

After a problem has been accurately acknowledged, related information needs to be gathered and analyzed to understand the scope, motive, prevalence, and causes of the problem (Goldstein, 1990). Sources of information include police data, residents, and business owners, among others. Analysis includes multiple queries of large and varied data sets of individuals (offenders, victims, and third parties), events, and community responses. The need for quality information cannot be stressed enough. Inaccurate information can cause unnecessary stresses and harms, emphasizing the necessity of gaining valid and accurate facts. Responses cannot be developed without good analysis, which greatly enhances problem oriented policing efforts when done correctly. If analysts and police can use data and have a broader focus on multiple factors verses just typical crime categories, they can get a better understanding of the nature of the crimes

and issues at hand. Many police agencies may be reluctant to acknowledge and to admit to their diminished analysis capacities (Goldstein, 1990), but continued development of analysis capacity will continue to improve problem oriented policing efforts.

The next step in the SARA process is to tailor specific made responses; to enact a response that will be most likely to effectively reduce or eliminate the specific problem (Goldstein, 1990). Finding new and creative ways to deal with problems, using a mixture of tactics, is the backbone of problem oriented policing (Goldstein, 1990). Proper identification and analysis of the problem at hand will allow officers to do this, to find new alternatives to address the problem in a way that has not been done before (Goldstein, 1979). Police should propose these ideas to their specific communities and request their active involvement in dealing with the problems efficiently. In addition, they should partner with other agencies for the greatest problem solving effect. Taking an active role in helping the community sheds a positive light on the police in citizen eyes, and creates a better working environment for officers, one where people can actually see the work officers are doing and the progress they are making (Goldstein, 1990). An example of an alternative response would be that of concentrating on repeat offenders. Because a small number of people are responsible for the majority of crime, focusing preventative tactics on certain repeat individuals in a community would likely result in a decrease in disorder and crime in the area (Goldstein, 1990).

The final step in the SARA process is assessment. Here officers can assess the response they made, to see if it has a significant impact or not. An accepted measure for success must be adapted and understood in order to accurately measure the effectiveness of the response (Goldstein, 1990). There may be many measures of effectiveness. A main measure is if the goal was visibly achieved, for example, if crime or disorder in a certain area was reduced. Another measure is to determine if certain major areas of the goal

were achieved, for example if overall crime reduction was the goal and numbers on the

open sale of drugs were decreased, then that could be measured as a success. Another

measure of effectiveness might include a scale of varying degrees of impact

acknowledged ahead of time, such as Eck and Spelman identified in their Newport News

project (Goldstein, 1990). A final measure of success would be if there was no diffusion

of benefits or displacement effects. If crime was reduced in the target area, but

significantly increased in another area, that aspect would need to be factored into the

assessment. Assessment of responses clearly now go beyond simply measuring crime

numbers, as details of each crime problem should be measured in substantially

differently ways. The following table reviews specifics of the SARA techniques.

Table 1. *SARA Model*

Scanning:
- Identifying recurring problems of concern to the public and the police.
- Identifying the consequences of the problem for the community and the police.
- Prioritizing those problems.
- Developing broad goals.
- Confirming that the problems exist.
- Determining how frequently the problem occurs and how long it has been taking place.
- Selecting problems for closer examination.

Analysis:
- Identifying and understanding the events and conditions that precede and accompany the problem.
- Identifying relevant data to be collected.
- Researching what is known about the problem type.
- Taking inventory of how the problem is currently addressed and the strengths and limitations of the current response.
- Narrowing the scope of the problem as specifically as possible.
- Identifying a variety of resources that may be of assistance in developing a deeper understanding of the problem.
- Developing a working hypothesis about why the problem is occurring.

Response:
- Brainstorming for new interventions.
- Searching for what other communities with similar problems have done.
- Choosing among the alternative interventions.
- Outlining a response plan and identifying responsible parties.
- Stating the specific objectives for the response plan.
- Carrying out the planned activities.

Assessment:
- Determining whether the plan was implemented (a process evaluation).
- Collecting pre– and post–response qualitative and quantitative data.
- Determining whether broad goals and specific objectives were attained.
- Identifying any new strategies needed to augment the original plan.
- Conducting ongoing assessment to ensure continued effectiveness.

(Center for Problem Oriented Policing, 2012)

Problem oriented policing and the SARA methods also have strong theoretical foundations, especially in Cohen and Felson's (1979) Routine Activities Theory. The theory suggests that in order for crime to happen there needs to be a motivated offender and a suitable target that come together in space and time when there is no capable guardian around. The problem analysis triangle provides a visual to understand how these things interact to create opportunities for crime (Center for Problem Oriented Policing, 2012), and can be seen in Figure 1.

Figure 1. Problem Analysis Triangle (Center for Problem Oriented Policing, 2012)

Effective problem solving can happen when there is an understanding of how place, target, time, and offender all interact (Center for Problem Oriented Policing, 2012).

A great example of a problem oriented approach is Compstat. Becoming popular around 1994, Compstat was developed as a management tool, re-designing organizational structure to include managerial accountability (Silverman, 2006). It is a "strategic control system" (Weisburd, Mastrofski, Greenspan &Willis, 2004) made to gather and distribute information of local crime issues and to track the efforts made to deal with those problems. The computerized crime data, crime analysis, and crime mapping are a foundation for weekly meetings that are arranged to go over the crime problems being faced and to discuss future solutions (Silverman, 2006). Instead of only focusing on administrative issues, Compstat brought managers back to understanding and dealing with local crime problems.

Research. The first assessment of complete implementation of problem-oriented policing was on the Newport News, Virginia Police Department in the mid 1980s by the Police Executive Research Forum. Numerous other police agencies around the world now engage in problem oriented policing strategies (Center for Problem Oriented Policing, 2012).

Three important themes have emerged from research on police operations and problem oriented policing. Problem oriented policing has shown 1)"increased effectiveness" by going after the underlying issues that result in common incidents that officers deal with, has shown support for 2)"reliance on the expertise and creativity of line officers" to learn about the problems more in depth and create innovative resolutions, and ensured 3)"closer involvement with the community" to make sure that citizen needs are being appropriately addressed by the police. This strategy includes the SARA techniques (Stewart, 1987, p2).

Research of the late 1960's and early 1970's focused on burglary, robbery, and other street crimes. In the later 1970's and 1980's, research turned to other problems not earlier considered central to police work: domestic violence, drunk driving, mental illness, and the fear of crime, for example. Researchers and practitioners learned through these studies that they would have to collect more information to understand problems, and involve other organizations if responses were to be effective. Police needed to consider seriously many issues besides crime alone. (Stewart, 1987, p3)

Braga and Weisburd (2006) question whether police really implement problem oriented policing in the way it was originally intended. Their research finds that even though there is a division among ideals and application, some tactics being different for example, effective results are still being produced, namely from the SARA techniques. They note that steps might not be taken in the appropriate order, or may go back and forth (Braga & Weisburd, 2006). During the scan phase, officers might take on problems that are too big or too small. Braga and Weisburd (2006) argue that the analysis area has the biggest need for improvement. Here, officers need to go beyond the usual suspects and places to conduct comprehensive and exhaustive investigations. Responses are only as good as the analyses allow, and unfortunately officers will often revert to traditional policing practices. Assessments allow police to be held accountable for their work and to learn what's working and what isn't, but unfortunately assessments are not utilized that often and are limited when they are. One of the major examples of limited assessments is that police do not make use of controls when projecting positive results in a certain area. They suggest that one possibility of addressing this problem would be partnering with a university researcher to better understand and properly use control data.

Despite the disparity in implementation and theory, there is substantial evidence problem oriented policing is effective in reducing crime. "Perhaps simply focusing police resources on identifiable risks that come to the attention of problem-oriented policing projects, such as high-activity offenders, repeat victims, and crime hot spots, may be

enough to produce crime control gains" (Braga & Weisburd, 2006, p145). They thus argue that it is best to redefine and expand existing definitions of police efforts at crime prevention, including greater focus on places with high-crime and victim and offender based responses.

Clarke & Goldstein (2003) reviewed a problem oriented policing project in Charlotte, North Carolina. The project dealt with theft at a construction site, and findings were that the applied response was effective at reducing the thefts. Rana Sampson (2004) offered a problem-oriented report to the Department of Justice on automobile theft in Chula Vista, California. Her analysis showed that offenders make rational target selection choices and shield their crimes with routine activities that are legitimate. Findings also showed that parking lot interventions are more effective at reducing auto thefts than are interventions at border points, showing a significant effect of the problem oriented policing strategy used. Other problem oriented policing studies which led to successful crime reductions include Scott (2004a), Scott (2004b) Zanin, Shane, & Clarke (2004), Lamm Wiesel (2004a), and Lamm Weisel (2004b).

What should policing be about? Should it include only emergency services or crime fighting and crime prevention as well? According to Weisburd & Braga (2006), "when appropriately focused on specific crime problems" (p343) problem oriented policing is "effective in preventing crime" (p343). Problem oriented policing takes the angle that police *should* be involved in all the things mentioned above, that they *should* strive towards reducing the harmful issues of everyday community life. Problem oriented policing and other policing innovations should *complement* each other, not necessarily compete (Eck, 2006).

While problem oriented policing was being implemented in some areas, another group of theorists was bringing about their ideas about crime and disorder. These ideas

were also implemented into new policing strategies, known as broken window or order maintenance policing.

Broken Windows Policing

Broken Windows Theory. In 1982, Wilson and Kelling proposed their Broken Windows theory which postulates that continuous neighborhood disorder and decay indirectly escalate crime and fear by weakening neighborhood and community social controls. They suggest that physical disorder, such as broken windows and streetlights, garbage filled vacant lots, graffiti, and abandoned cars and buildings, leave the visual message of negligence and lack of concern for ones neighborhood, thus inviting in a plethora of criminal activity. One 'broken window' gone with no attention to fixing it leads to more broken windows and other decay and unruly behaviors. Social disorder, such as panhandling, prostitution, public intoxication, and other petty crimes are also said to disturb city life.

People living in neighborhoods with these types of conditions often feel unsafe and withdraw from social activities, the community, and sometimes even the neighborhood. They are less likely to intervene on behalf of their community, do not socialize as much with neighbors, and no longer participate in local organizations. This withdrawal from the community lowers the neighborhoods capacity for social control and regulation, inevitably continuing the cycle of disorder and criminal activity- drug markets flourish, prostitution grows, and muggings and other violent acts become more prevalent and visible (Reisig, 2010).

Policing Broken Windows. Broken windows theory guides order maintenance policing. Broken windows policing focuses on trivial offenses and disorderly behavior- offenses to the quality of life (Sousa & Kelling, 2006); by having police officers routinely address disorder issues, in hopes that the order maintenance will

deter future serious criminal behavior. Police officers use discretion of when to intervene in these situations, depending on the perceived seriousness of the transgression and amount of harm affected on the victim or community. Officers are supposed to attempt approaches other than arrest, such as ordering, counseling, and persuading, to diffuse the situations they come across. They may arrest if these approaches fail (Reisig, 2010).

Order maintenance is a proactive effort compared to the traditional policing regime of reacting, only after an actual incident occurred. Consequently, broken window policing has four major, positive impacts (Kelling & Coles, 1996). First, it informs the police. Specifically, working with disorder issues and dealing with minor offenders connects police with people who commit greater offenses as well as these lower level crimes. Next, with high police visibility, it protects the law abiding citizens and sends a message to those who do not abide by the law that even their minor offenses are not going to be taken lightly any more. These impacts alone and especially together enhance control and crime prevention abilities. Thus, the third impact is that it allows for greater citizen control and assertion for higher community standards. As the community gains participation in its order maintenance and crime prevention, the community links and networks allow for the last impact, problem solving (Kelling & Coles, 1996). "Broken windows policies are practical options. They can be implemented as part of a larger problem-solving agenda, can be employed in a timely fashion, and can offer the potential for timely results" (Sousa & Kelling, 2006, p.91).

Research. According to broken windows theory, disorderly environments and activities create and extenuate citizen fear and serious crime. Findings by Skogan (1990) support this notion with analysis results showing that perceptions and fear of crime are positively related to neighborhood social and physical disorder, more so than other

correlates of crime. He also found that in the neighborhoods he studied, disorder was followed by more severe crimes.

Most research supports the disorder-fear claim, and few criminologists dispute it. However, the disorder-crime claim is far less studied, and is more controversial (Sousa & Kelling, 2006; Reisig, 2010). Studies such as Harcourt (1998) and Sampson and Raudenbush (1999) contradict support for the disorder-crime link found by Skogan (1990), but have also been challenged themselves. As these and the following studies will show, there is an overall array of mixed results in this area (Sousa & Kelling, 2006).

Greene (1999) compared New York City with San Diego, a city that had similar crime drops in the early half of the 1990s, arguing that there are other approaches besides aggressive order maintenance that will produce significant crime reductions. In 1993, San Diego implemented a "neighborhood policing approach" (p183), where citizens and police worked together using problem solving to address disorder and crime problems. From 1993 to 1996, San Diego showed a reduction in arrests for misdemeanors and felonies, while New York City showed increases in both. In other words, aggressive order maintenance policing strategies in NYC contributed to rising arrest rates while less aggressive tactics in San Diego resulted in a decrease in arrests; "the sharp contrast in arrest patterns and citizen complaints between New York City and San Diego offers compelling evidence that cooperative police-community problem solving can provide effective crime control through more efficient and humane methods" (Greene, 1999, p185).

Kelling and Sousa (2001) observed New York City's broken windows policing to gauge how officers actually performed order maintenance tactics and to evaluate the morality of their actions. They found that officers engaged in order maintenance policing paid more "attention" to minor offenses and acted mainly with informal action,

but with official action when needed. They concluded that, contrary to critics' claims, "officers were mindful of the moral complexities behind their activities, considered the contexts and circumstances surrounding incivilities and minor offenses before taking action, and exercised careful discretion while performing order maintenance tasks" (Sousa & Kelling, 2006, p89).

There has been much research on broken windows policing and its effect on crime reduction in New York City, which experienced a remarkable drop in property and violent crime in the 1990s, inviting a lot of attention by researchers. Prior to this dramatic drop, police had recently implemented order maintenance policing, having a vast number of misdemeanor offense arrests (Reisig, 2010).

But was order maintenance policing to explain for this significant crime drop? Kelling and Sousa (2001) conducted an in-depth study to determine if it had an effect or not. Their multiple regression study proposed that order maintenance policing did contribute to the crime decline in New York City in the 1990s. Corman and Mocan (2005) came to analogous conclusions from their 25 year time-series study. Harcourt and Ludwig (2007), however, did not find misdemeanor arrests to have a significant effect on violent crime rate. But then Messner and colleagues (2007) found that misdemeanor arrests reduced gun-related homicide, overall homicide, and robbery. Rosenfeld, Fornango, and Rengifo (2007) were able to use more reliable data, methods, and controls than previous research. They found that strict order maintenance policing tactics did have small, but significant robbery and homicide reduction effects.

On the other side of the country, Katz, Webb, and Schaffer (2001) studied order maintenance policing in Chandler, AZ. They found that the order maintenance intervention had the strongest effects on physical disorder and public morale. They also observed displacement and diffusion of benefits to the surrounding areas. Their study

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shows little support for the broken windows theory and order maintenance policing strategies because of these displacement and diffusion effects, and because serious crime was not significantly affected by the policing strategy. However, overall, research shows a modest effect of order maintenance policing on decreasing certain kinds of crimes, specifically robbery and homicides entailing gun usage (Reisig, 2010).

Obviously not all disorder is going to create all kinds of crime. Even with mixed results over the disorder-crime link, evidence has been found for specific offenses versus an overall measure of crime, and future research on these specific components could prove interesting. For example, several studies have linked robbery, specifically, but not other serious crimes, to disorder (Sousa & Kelling, 2006; but see Taylor, 2001). Additionally, order maintenance interventions may have other effective results of at least ridding social and physical neighborhood disorder, even if crime isn't reduced, "Restoring order is key to revitalizing our cities, and to preventing the downward spiral into urban decay that threatens neighborhoods teetering on the brink of decline, regardless of whether a reduction in crime results" (Kelling & Coles, 1996, p243). As a part of revitalizing cities, rebuilding informal social controls is a goal of a broader policing strategy, community policing, which is discussed next.

Community Policing

In an effort to lessen police-citizen tensions and reconnect with the community, community policing became a widely popular strategy adopted by many police agencies across the country in the 1980s. Community policing set to redefine the role, structure, and nature of American police. Unlike traditional policing practices, it set to improve police citizen relations and enhance police accountability and legitimacy in part by changing the ways police interact with citizens (Greene, 2000).

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Community policing can be hard to define specifically because it can mean different things to different people, and can be implemented in different ways. The common aim of community policing is for the police and citizens to work together to solve underlying community issues, prevent crime, and reduce citizen fear of crime and the police. Citizens actually become co-producers of community safety. Community policing not only seeks to improve relationships between police and communities gaining higher public trust and support of the police, but it also seeks to activate the community's involvement in its own improvement, addressing quality of life issues and building community resiliency to crime (Greene, 2000). As the Department of Justice (2009) puts it, "community policing is a philosophy that promotes organizational strategies, which support the systematic use of partnerships and problem solving techniques, to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime."

Some of the elemental tactics of community policing include foot patrols, increased community organization, addition of sub-stations, and increased citizen contact including door to door contact during patrol (Eck, 1993). Citizens have a say in determining the goals and objectives of the police and thus, police are responsive to community needs. Police authority is therefore decentralized because first line supervisors and patrol officers need more discretion to deal with everyday situations and citizen contacts (Eck, 1993). Being assigned specific beats for long timeframes is also an important tactical element that allows officers to become familiar with citizens in their community and the issues they face. These stable assignments for officers allow them to build better relationships with familiar faces which increase public support and trust (Reisig, 2010). With more discretion and specific neighborhood assignments, police can become aware of the local problems in their specific beats (Skogan, 2006) and can

develop local resolutions to specific localized problems while providing more valuable and resourceful services to the public (Greene, 2000). Here it can be seen that community policing and problem-oriented policing strategies work together to produce the best results for each community.

Community policing was funded by the federal government in the 1990s and early 2000s. The passage of the Violent Crime Control and Law Enforcement Act of 1994 allowed the federal government to aid in this new police reform; $13 billion overall was given to police agencies under the Community Oriented Policing Services (COPS) program from 1995 to 2008 (Reisig, 2010).

Research. By 2000, community policing ideals had been incorporated into the mission statements of at least 80 percent of large and 60 percent of small police departments (Mastrofski, 2006). But does it work to reduce crime? Research on the effectiveness of COPS grants reducing crime remains mixed and therefore questionable, with some studies showing positive results and others showing no effects (Reisig, 2010).

Skogan & Steiner (2004) studied community policing in Chicago. Beat meetings offered by police gave community members a chance to voice their opinions and influence the priorities for police action, contribute to problem solving, and engage in discussion about and evaluate the quality of the current police services in their local neighborhoods. The research shows that the degree to which these activities are achieved varies greatly, but that the last decade has seen an increase in public involvement in these meetings. It was also found that citizens who are the most active in community policing efforts- attending meetings and committees, are "those who are better off" (Mastrofski, 2006). Those in more disadvantaged neighborhoods who do show up to the meetings seem to have difficulty engaging in collective self-help behaviors. There was also evidence that police services were allocated more to those who were active in the

community policing process. Thus, the disadvantaged neighborhoods were not necessarily receiving the services they needed. This research seems to show us that this type of partnership can be influential, but only to those who participate, leaving behind those who need the most help if they do not engage themselves in the process (Mastrofski, 2006). "The challenge is in finding how to infuse the disadvantaged with the will and resources to organize effectively, and how to develop a community will to make the necessary investments to make that happen" (Mastrofski, 2006, p60).

Mastrofski (2006) reviewed a sample of comprehensive case studies of community policing implementation, some of which assert success, but most of which record failures and unsuccessfulness. In review of the Chicago study, Mastrofski (2006) concluded that while community policing in Chicago does not work quite like a Swiss clock, "it is a worthy effort that seems to have rendered many significant improvements over what preceded it" (p61). The main problem with community policing seems to be that it has not been implemented well.

Several key strategies associated with community oriented policing have also been evaluated. Early research showed that with foot patrol comes reduced citizen fear, increased satisfaction with police, better police attitudes towards citizens, and higher police job satisfaction and morale (Kelling & Moore, 1988). The National Academy of Science reported that most efforts of community policing, i.e. foot patrol, community meetings, storefront offices, and newsletters "do not reduce crime, although some may influence perceptions of disorder," but that "one strategy, police officers making routine, door-to-door contact with residents, [does] reduce crime" (Mastrofski, 2006, p56). They also acknowledged that when greater procedural fairness occurs during police citizen interactions, the more citizen compliance with police requests and obeying the law will occur. A range of these interventions bringing police and citizens together, including foot

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patrol, mini-precincts, and door-to-door contacts were found by the Police Foundation in 1985 to increase satisfaction of the police, increase quality of life, and reduced fear (Forst, 2000).

There is evidence that community policing reduces fear of crime, but not crime itself (Mastrofski, 2006; Braga & Weisburd, 2006; Weisburd & Eck, 2004). "Broad-based community policing initiatives have been found to reduce fear of crime and improve the relationships between the police and the communities they serve" (Weisburd & Braga, 2006, p 344; but see Committee to Review Research 2004 and Weisburd & Eck 2004). Fear of crime in neighborhoods has been reduced by community policing strategies of police-citizen involvement, including citizen contact patrols, coordinated policing, and police community stations (Weisburd & Braga, 2006; but see Pate & Skogan, 1985, Wycoff & Skogan, 1986, and Brown & Wycoff, 1987 for more detail).

Police legitimacy has also been shown to improve because of community policing (Tyler, 2004). When the public views the police as legitimate powers of authority, they are more likely to comply with the law and with the officers. Minorities are most often found to have lower opinions of and less confidence in the police than whites (Tyler, 1990; 2004). Fortunately, Skogan and Steiner (2004) found improvements in Chicago residents' opinions of their police after an eight year community policing study. This study helps prove community policing has had an important impact on the police minority gap.

While problem oriented, broken windows, and community theories all focus on specific community problems, another recent approach to preventing crime, hot spots policing, deals with reducing crime highly saturated in specific areas.

Hot Spots Policing

Hot Spots Theory. Early theories of crime focused on the macro level, whereas Hot Spots theory is situational and focused on the micro level. As previously discussed, it was in 1979 that Cohen and Felson recognized failures in other theories to acknowledge the significance of suitable targets and the lack of a capable guardian, in addition to a motivated offender. Their Routine Activities Theory showed how these three things work together to greatly influence crime, and has been an area of much study. Clarke (1992) advocates that crime will be reduced or prevented when there is little effort required, greater perceived risk, and little rewards involved. Some environments seem to promote criminal activity more so than others, possibly because many offenders do not travel far to commit their crimes but tend to target areas close to their comfort zones. This is rationalized by Routine Activity theory.

Cornish and Clarke (1986) explored situational crime prevention concentrating on offense and location rather than the offender to reduce and prevent crime. They studied the context of crime and wanted to see if crime could be reduced by focusing on certain particular situations and reducing the opportunity for crime there. According to Ainsworth (2001), combining geographic information with temporal information is important to distinguish when and where crime is most frequently happening, and can lead to crime prevention.

The focus on places, although not relatively new, is new in its "micro" approach. "Places in this micro context are specific locations within the larger social environments of communities and neighborhoods. They are sometimes defined as buildings, or addresses, sometimes as block faces, or street segments, and sometimes as clusters of addresses, block faces, or street segments" (Weisburd & Braga, 2006, p229).

The crime hot spots perspective is the idea that crime does not happen uniformly over landscapes, but rather it clusters or concentrates in smaller distinct areas, leaving nearby areas relatively crime free (Braga, 2001). A crime hot spot is known as a small area or location which has an excess amount of crime concentrated within an identifiable boundary. Hot spots are also areas with a substantial growth in crime over time, with crime numbers not increasing in the nearby areas (Ainsworth, 2001).

Hot Spots Policing. It has been argued that if police focus on these hot spot areas, preventing offenders and victims from coming together at the same place and at the same time, then crime can be reduced. If they focus their attention and resources on the times, places, and people who create a greater threat to public safety, they will do more good than if their resources are evenly spread out (Braga, 2001). Studying location of offenses carefully can uncover trends and patterns of crime. Crime mapping has become easier with new tools such as Geographic Information Systems or GIS. Combining information produced from these tools in combination with theory can lead to a better understanding of why crime congregates in certain areas (Ainsworth, 2001). This risk focused concentration of law enforcement resources in crime concentrated places is called hot spots policing (Braga, 2001).

Policing hot spots has become a new model for police innovation: research and evidence before application. As it was "subjected to rigorous empirical investigation before it was widely diffused and adopted by American police agencies," hot spot policing shows that this type of evidence based policing "can form the basis for important police innovation" (Weisburd & Braga, 2006, p239).

Research. Rosenbaum (2006) suggested that hot spot policing is too narrowly defined in theory, research, and police practices. He said that it fails to represent the basic philosophy of community policing and problem oriented policing, top policing

strategies of this century. He advised of the short term impacts of hot spot policing- that crime can return shortly after crackdowns and might not be worth the extensive use of resources. He also noted problems with weak problem analysis and narrow response options, such as returning to predictable, traditional responses, issues similar to problem oriented policing. Additional problems include displacement, weakening of police-community relations, abusive policing, stigmas from labeling, and increased race and class issues (Rosenbaum, 2006).

There has also been criticism of hot spots policing for its possible "backfire" effects. Weisburd, Hinkle, Famega, and Ready (2011) conducted an "experimental assessment" to examine possible negative effects, and found that policing in hot spots did not significantly affect police legitimacy, fear of crime, perceptions of social disorder and crime, or collective efficacy. They suggest future replications to provide even stronger evidence.

There are however, multiple studies that support hot spots policing. Lawrence Sherman and colleagues (1989) did one of the most prominent studies of micro place crime. They studied crime at addresses in Minneapolis, and found that 50 percent of calls to the police came from only 3 percent of the addresses. Several other studies (see Pierce, Spaar, & Briggs, 1986; Weisburd, Maher, & Sherman, 1992; and Weisburd & Green, 1994) found similar results, all signifying "very high concentration of crime in micro places" (Weisburd & Braga, 2006, p229). In addition, Weisburd, Bushway, Lum, and Yang (2004) found that a high volume of crime in hot spots is rather stable over time. These studies reinforce the theories that focus on micro places as major factors in criminal activity (Weisburd & Braga, 2006).

Using the evidence for hot spots, Sherman and Weisburd (1995) advocated for its application as a new advance for policing. They thought that "if only 3 percent of the

addresses in a city produce more than half of all the requests for police response..then concentrating police in a few locations makes more sense than spreading them evenly through a beat" (p629). Their study included 110 randomized hot spots of city blocks with treatments and controls, with two to three times more preventative patrol on the treatment sites. They found significant reductions in observable disorder and calls to the police in the treatment areas (Weisburd & Braga, 2006).

Sherman and Weisburd's (1995) Minneapolis Hot Spots Experiment led to several more hot spots policing studies funded by the federal government (Weisburd & Braga, 2006). Those findings have become the most compelling evidence for the initiation of a new policing approach (see Committee to Review Research, 2004).

Braga (2001) did a systematic review of focused police enforcement hot spot interventions evidence, including nine case studies, five of which studied crime displacement. Displacement is when "efforts aimed at reducing specific crime at a place will simply cause criminal activity to move elsewhere, be committed in another way, or even be manifested as another type of crime, thus negating any crime control gains" (Braga, 2001, p107). Of those studies, none reported any significant direct displacement into nearby areas, and four reported possible diffusion or crime prevention benefits that were unintentionally associated with the targeted police actions. The evaluation showed that seven of the nine quasi-experimental and experimental studies showed significant disorder and crime reductions. This review supports the argument that concentrating police resources and efforts in places with high concentrations of crime can prevent crime. However, it cannot yet be seen which strategy is most effective or which strategies would be most appropriate under different circumstances. Braga (2001) also suggests that more needs to be learned about citizen responses to hot spot crackdowns, whether

they welcome the interventions or feel they are harassments. These community reactions and keeping up police legitimacy are key considerations for future hot spot research.

Weisburd and Eck (2004) reviewed research on police innovations and their ability to reduce disorder, crime, and fear. Criticisms of the standard policing model led to new policing innovations. They compared the standard model to new innovations of community policing, problem oriented policing, and hot spots policing by their level of focus and the diversity of the approaches used. The standard model is low on level of focus and has only mostly law enforcement approaches. Hot spots policing has a high level of focus, but also only mostly law enforcement approaches. Community policing has a wide array of approaches, but has a low level of focus, and Problem oriented policing is high on both aspects. They found that the standard model of policing has very little supportive evidence, that community policing alone does not really reduce disorder or crime, but does reduce fear, that there is an increasing amount of evidence for problem oriented policing reductions in all three areas, and that police practices that are geographically focused (hot spots) have the strongest evidence for reducing disorder and crime. They stress the importance of the continuous improvement of methods and data to improve validity of findings.

Research has also shown that targeted, attentive police interventions like proactive arrests, problem solving, and directed patrols, can reduce crime in hot spot areas (Weisburd & Braga, 2006). Additionally, Avdija (2008) made recommendations to police policy about the effectiveness of targeted (hot spots policing) based on his analysis of eight targeted or hot spots policing studies.

The Philadelphia Foot Patrol Experiment measured effects of deterrence of foot patrol in small scale hotspots. It showed reduced crime rates in target areas, but with measures of displacement (Ratcliffe, Taniguchi, Groff, & Wood, 2011). Sorg, Haberman,

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Ratcliffe, & Groff (2012) revisited the Philadelphia Foot Patrol Experiment with a longer timeframe to determine if the displacement went away after time. The displacement did lessen, but part of it returned to the initial target areas. They suggest that even though hot spot crackdowns only have positive short term effects, they should still be a tool for police to use, especially at certain times such as seasonal crime spikes.

Braga, Hureau, & Papachristos (2012) conducted an ex post facto assessment of the Safe Street Team program for policing hot spots in Boston's Police Department. Their quasi-experiment measured violent crime rates in target areas and compared them to control areas using propensity score matching. Results showed that there was a significant reduction of violent crime rates in target areas and not in control areas, and also that there were no displacement effects. They suggest that police practices need to be focused and tailored to the specific issues they are seeking to address in order for police advances to be the most effective. They also stress the importance of program evaluations, done best by partnering with external evaluators who are experts in evaluation research sciences. This evaluation was actually done under the Smart Policing Initiative.

The next section will describe the latest idea in current policing innovations. Like Hot Spots Policing, Predictive Policing also uses crime data as the source to direct police interventions, but in a new way.

Intelligence Led/Predictive Policing

Gathering data and analyzing it to properly allocate resources has been called intelligence- led policing or predictive policing. When police can take crime data and find patterns, they can draw specific conclusions and take the appropriate measures that should lead to crime prevention (Joyce, 2010):

> We define predictive policing as a multi-disciplinary, law enforcement-based
> strategy that brings together advanced technologies, criminological theory,

predictive analysis, and tactical operations that ultimately lead to results and outcomes -- crime reduction, management efficiency, and safer communities. Predictive policing builds on concepts from community policing and problem solving. It enhances and expands comprehensive computer statistics (Compstat) for accountability purposes and crime reduction. It also makes use of established and long-known "predictor variables" developed from criminological research. (Uchida, 2009)

Predictive policing uses research, best practices, and advanced technology- a combination of recent police innovations to achieve the goals of crime prevention and control. Taking from hot spots policing and evidence based policing of what works, a Compstat-like management program, advanced technological computer programs, problem analysis and solving of problem-oriented policing, predictive policing promises to create more in depth sharing of information and understanding of the nature of people, places, and crime.

The intelligence-led predictive policing model promotes criminal intelligence use for multijurisdictional, collaborative approaches to crime prevention. The role of analysis in strategic and tactical planning is key. It acknowledges the importance of keeping civil liberties and privacy intact. It incorporates the expansion of technology, like in the professional era, with the idea of community involvement of the recent community era (Beck & McCue, 2011).

The Los Angeles Police Department is the largest police department to implement predictive policing. The department uses crime statistics and determines where future crimes are most likely to take place and sends officers to those areas. Their agenda is to intervene and stop crimes before they happen ("Los Angeles News", 2012). "The goal is to transform policing from a reactive process to a proactive process" (Greengard, 2012). The LAPD uses a computer program, similar to crime mapping and Compstat, in which an algorithm predicts where and when future crimes will take place. Repeated victimizations and the fact that criminals often stay and act within a comfort

zone also factor in here (Risling, 2012). The Los Angeles program uses this behavioral

basis reasoning for crime clustering:

> Burglars return to the same, or neighboring, house in the days/weeks after a crime. 'I always go back [to the same places] because, once you been there, you know just about when you been there before and when you can go back. An every time I hit a house, it's always on the same day [of the week] I done been before cause I know there ain't nobody there.' (Mohler, Tita, Brantingham, Santa Cruz and Los Angeles Police Departments, 2011)

They use this information to forecast and direct patrols: "Each day [it] fit[s] the Hawkes

Process to past data to estimate risk level across the city" (Mohler et al. 2011) Patrols are

directed to the "highest risk areas and times of day," (Mohler et al. 2011), the next day

the model is recalibrated and the process repeated, and "as highest risk areas change, the

model and patrols adapt" (Mohler et al. 2011). The project goals include, "patrol

efficiency: quantitative approach to placing patrols where crime is located, reduction in

crime rate in flagged areas, [and] reduction in overall crime rate"(Mohler et al. 2011).

 This LA predictive policing program was initiated last year, and has already

shown double digit decrease in burglary and property crimes in the area ("Los Angeles

News," 2012; Risling, 2012). "It's not a replacement for police officer's knowledge and

skills and not designed to take the officer out of the equation," Jeff Brantingham,

anthropology professor at the University of California, Los Angeles said. "It's about

putting them in the right time and place for crime prevention" (Risling, 2012). Florida

Police departments have been looking into using predictive policing, and areas such as

Memphis, Chicago, and places in Europe have had success with it (Burdi, 2011). "The

process shouldn't change the way policing is done, it should make it more efficient"

(Greengard, 2012).

Summary

Efficiency in policing is what these innovations are all about. When one process

doesn't work, a new one needs to be developed. The political policing model was replaced

by the professional policing model once it was no longer effective. As can be seen by the research on traditional policing, the professional policing model served its purpose for a while but eventually wore out as well. New ideas have been brought about each time certain policing strategies got out of control. Problem oriented policing, broken windows policing, and community policing were the new innovations thought to restore policing to working order after the professional era. Support has been shown for problem oriented policing to reduce crime, while less support has been shown for broken windows policing, and only fear reducing support has been show for community policing. New ideas for place based strategies and data collection/analysis later surfaced, including hot spots policing and intelligence led/predictive policing. Research evidence has been shown for hot spots policing while research for intelligence led policing is still in its early stages.

From solving problems and decreasing street disorder, to working with the community and utilizing crime analysis, all these ideas are working towards making the world a better place to live by reducing and preventing crime. Police do their job the best they can with the resources available. It has already been discussed how working with partners, such as citizens and other city agencies can increase police problem solving productivity, so why don't they partner with those who are experts in the emerging crime fighting fields? Specifically, partnering with university researchers or other researchers who are experts in crime analysis would be an exceptionally bright idea, creating an atmosphere where the best solutions can be developed most efficiently. As the latest step in police innovation, the Smart Policing Initiative does just that. The next chapter describes the Smart Policing Initiative and offers the current study which evaluates the impact of a partnership between police agencies and university researchers working on specific law enforcement problems.

Chapter 3

CURRENT STUDY

Smart Policing Initiative Background

Law enforcement agencies throughout the United States have lately faced many financial burdens, with limited funding and major budget cuts resulting in major personnel layoffs and having to scramble to allocate funds and resources appropriately. In order to most efficiently allocate resources, they need to know what works best to prevent and reduce crime. The Smart Policing Initiative (SPI) is a program funded by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice to develop and measure the best programs, tactics, and strategies that do just that. It is about "building evidence-based, data-driven law enforcement tactics and strategies that are effective, efficient, and economical" (Smart Policing, 2010).

The Smart Policing Initiative encourages finding new and innovative solutions to criminogenic problems and public safety and encourages evidence-based replications focused on hot-spot, location targeted strategies. Successful policing involves concentration and collaboration, measureable approaches, detailed and valid analysis, and can invoke procedures and policies that encourage and allow accountability (Smart Policing, 2010). Specifically, they are encouraged to use the current policing innovations- hot spots policing, problem oriented policing, community policing, and data analysis- to find the beast approach to their specific criminogenic problem they are targeting. Research shows support for these strategies in different ways, and police agencies can use certain aspects of these strategies to find out *how* and *when* they work best. For example, an agency might use the SARA technique derived from problem oriented policing and develop a response that is place based and hot spot targeted.

The grant funding was allocated to over 30 different police agencies across the nation; a sample that represents diversity in agency size and different criminogenic circumstances targeted. These agencies were required to collaborate with a research partner, show their data collection and analysis capabilities, and assess their efforts through sound performance measures (Smart Policing, 2010). "Working with research partners, these cities will collect and analyze data and devise solutions to problems" (Smart Policing, 2010). The collaboration between police agency and research partner is essential to the current research study. These research partners are there to offer their expertise on research and analysis to help police agencies successfully implement and measure new innovations, "SPI purposefully requires rigorous, systematic research regarding the implementation and outcomes of the innovations under its name" (Smart Policing, 2010). Additionally, "along the way, the SPI community will document best practices and lessons learned to improve innovative, economic policing strategies nationwide" (Smart Policing, 2010). The current research study analyzes and evaluates the role of the research partner in the different agencies and offers the overall success level of their impact. It also measures the police agency research and crime analysis unit capacities as can be seen during this projected partnership.

Under the Smart Policing Initiative mission, each agency was to focus on "fundamental research and analysis questions based on the SARA model" (Smart Policing, 2010) in identifying, developing, responding to, and assessing their problem area. Table 2 offers some guidelines researchers and police agencies could use for evaluating their site progress using the SARA steps.

Table 2. *SPI Site Progress and Result Questions*

(Scanning) Problem Identification
- HOW did you identify the problem?
- WHO was involved in the problem identification process?
- HOW were they involved?
- WHAT did you plan to accomplish initially?

Analysis
- WHAT information did you collect to analyze the problem?
- HOW did you conduct analysis to learn more about the presenting problems/issues**?**
- WHAT are the primary causes or correlated factors relating to the problem?
- HOW long has it been a problem?
- HOW is the problem tied to people or places—or both?

Response
- HOW was the response developed? Where did the core ideas come from?
- HOW did you examine the evidence base to see how others have responded to this problem?
- WHO did you involve in your response planning efforts?
- HOW did you involve them?

Assessment
- DID you revise your response plans based on analysis?
- If so, HOW did your revise your plan and strategies/tactics?
- HOW did you assess the effectiveness of your strategies and tactics?
- WHAT did you learn from the assessment/evaluation?
- WHAT specific problem-solving results were attained?
- WHAT was not achieved that you had hoped to achieve?
- HOW did you involve community and internal stakeholders throughout your SPI project?
- WHAT are you most confident in publicizing regarding lessons learned to other law enforcement agencies and communities out of everything that your project accomplished?

(Retrieved from Smart Policing, 2010)

A table summarizing all of the police departments, their research partners, the specific targeted crime problems, and the innovative policing techniques used to address the problems can be found in Appendix A, with a few examples given here. For example, the Boston Police Department partnered with Harvard University to approach their local

issues of gun violence, homicide, drugs, and gangs using place-based and offender-based policing strategies. The Cincinnati Police Department partnered with the University of Cincinnati to combat robbery issues using place-based, offender-based, and intelligence-led policing strategies. The Frisco Police Department partnered with the University of Texas at Dallas to work on property crime issues, using community outreach, and place-based policing. The Phoenix Police Department is working with Arizona State University to approach neighborhood disorder using technology implementation. Additionally, the Winston-Salem Police Department in North Carolina partnered with Winston-Salem University to combat drug and crime prone neighborhood problems using place-based and intelligence-led policing (Smart Policing, 2010). Two projects are described below in more detail to illustrate the SPI in action.

The Glendale Police Department used a problem solving model in partnership with Arizona State University to attend to theft issues clustered disproportionately at Circle K convenience stores. Store-call activity was analyzed using a geographic information system (GIS), Circle K management was engaged, "Crime Prevention through Environmental Design (CPTED)" store surveys were completed, and surveillance was done at the most criminogenic locations. Management practices were found to contribute to the thefts, including poor staffing, not addressing active loitering and panhandling, poor product placement, and lighting issues (White & Bolkcom, 2012).

Multiple response actions were developed and implemented by the Glendale SPI team (White & Bolkcom, 2012). They engaged store management, recommended store design and operation improvements, offered attempts of suppression at specific locations, and targeted prevention efforts at youths. Half of the target stores found reduced thefts after specific responses were implemented. The results of this project

offer several lessons, including support for CPTED efforts and support for active

partnerships (White & Bolkcom, 2012).

The Los Angeles Police Department also used a SARA based problem solving

model in examining gun violence in partnership with Justice & Security Strategies

(Uchida, Swatt, Gamero, Lopez, Salazar, King, Maxey, Ong, Wagner, & White, 2012).

Using a geographic information system (GIS) analysis on gun crimes, they identified five

significant hot spots to use as intervention sites. After problem identification and

analysis, they developed a tailored response named the "Los Angeles Strategic Extraction

and Restoration Program (Operation LASER)" (Uchida et al., 2012). Here police heavily

target repeat violent criminals and gang members, using place-based and offender-based

policing strategies. Additionally, a Criminal Intelligence Division (CID) was created to

disseminate crime bulletins that "assist officers in identifying crime trends and solving

current investigations, and they give officers a tool for proactive police work" (Uchida et

al., 2012).

Their assessment showed that "part 1 violent crimes, homicide, and robbery"

(Uchida et al., 2012, p2) all decreased in the target area and did not decrease in other

surrounding areas, showing support for the effectiveness of the targeted response, as the

timeframe spanned over six years. Results from this initiative show strong support for

problem solving SARA based strategies, and the importance of crime analysis and

technology in analysis and decision making. It also suggests the significance of place-

based and offender-based intervention strategies (Uchida et al., 2012).

The Current Research Study

The Agency/Researcher partnership is a critical feature of the SPI that is

grounded in recognition of the importance of research and analysis capacity for police.

For example, the presidential commission report on *The Challenge of Crime in a Free*

Society reported that "[u]niversities, foundations, and other private groups should expand their efforts in the field of criminal research. Federal, State, and local governments should make increased funds available for the benefit of individuals or groups with promising research programs and the ability to execute them" (p619). It also reported that "[c]riminal justice agencies such as State court and correctional systems and large police departments should develop their own research units, staffed by specialists and drawing on the advice and assistance of leading scholars and experts in relevant fields" (p615). This type of network linking can channel influence and information and "police scholars have identified integration into communication networks as an important factor influencing the spread of innovations" (Willis & Mastrofski, 2011, p319). Innovations often require time and careful implementation, and can lose popularity if they don't have time to reach their full potential. Officers are sometimes reluctant to engage in new programs and thus, new innovation implementation has to be done just right (Willis & Mastrofski, 2011).

With the current trend of civilianization and data analysis, police agencies have increasingly been working with research professors at universities to engage in research, analysis, and problem solving partnerships to better figure out what is working in policing and what is not. Braga and Weisburd (2006) agree that:

> Successful applications of problem oriented policing usually involve larger-scale problems, *the involvement of academic researchers and crime analysis units*, and the solid support of the police command staff to implement alternative responses. (emphasis added, p149)

The focus of the current study is to assess how the university partnership under the Smart Policing Initiative has added to the research and analysis capacity of law enforcement agencies that have been funded by the Smart Policing Initiative. The current study surveys police agencies and research partners under the Smart Policing Initiative regarding the nature of this important relationship. The primary research

questions during the research are: What is the primary role of a research partner n the SPI sites? What is the overall effect of the research partner on the police agencies' crime analysis operations? Do the police agencies and the research partner feel that the partner had the same type or level of impact? In addition to understanding the effect of researchers on police research and crime analysis, the current study seeks to understand the current limitations of the agency units devoted to research and crime analysis, and to determine what enhancements are most needed. That way, if possible, police agencies can work towards making those improvements.

Chapter 4

METHODS

Participants and Materials

  The author asked each site under the Smart Policing Initiative to complete two surveys; one was completed by a sworn officer and the other was completed by the research partner. No individual-level or personally identifiable information was collected. Each of the approximately 30 SPI partnered sites was asked to fill out the surveys (one survey for 30 police agencies and a different survey for 30 research partners). Note that the number of sites is approximate because some agencies were funded twice and some research partners worked with multiple police agencies. Cover letters explaining the research and the two surveys were sent by email to each SPI grant manager and research partner. Sites could complete a web based version on the SPI website, or they could complete a word document and submit that via email. Two reminder emails were sent indicating a deadline to receive the completed surveys.

Design and Procedure

  This research study was approved by Arizona State University's Office of Research Integrity and Assurance Board (see Appendix B). Review by the Institutional Review Board ruled the study as exempt under "Federal law 45 CFR 46.101(b) section 7.2". This research falls into this category because it involves an online survey of Smart Policing agencies and their research partners, collects no personally identifiable information, and focuses generally on the research and analysis capacity of the law enforcement agency – as well as how the university research partnership has affected that capacity. Responses to the survey will not put any respondent at risk of criminal or civil liability, and will not be damaging in any way.

The survey for the research partner seeks information on SPI and research utilization and enhancing research, planning and crime analysis. The survey for the police agency seeks background information on the agency, agency information on research, planning and crime analysis, SPI and research utilization, and information on enhancing research, planning and crime analysis. Actual surveys are included in Appendix's C and D.

Research Partner Survey. Most of the questions ask the respondents to assess items on a Likert-based scale (0-10), though there are also open ended questions. The research partner survey had two parts. The first part of the researcher's survey asked questions about the Smart Policing Initiative and the research partner's involvement. It asked what agency the research partner was working with and for how long. It asked them to indicate their level of involvement in problem identification, analysis of the problem, development of the response, assessment of the response, feedback/reporting to the SPI team, and participation in any other SPI activities; (on a scale from 1 to 10, 0 being no involvement and 10 being complete involvement). It asked how often there is communication between the research partner and the staff of the research and analysis unit. It asked the researcher to characterize their impact on Research and Crime Analysis functions in the agency; (either no impact, minimal impact, or substantial impact, and to describe the impact in words); and to describe their impact on Police Department tactical operations in the same way. It asked them to indicate the degree to which they believe they have enhanced the capacity of the Research and Crime Analysis Unit, on a scale of 1-10, 0 being none and 10 being substantial. Finally it asked them to describe what they thought to be the optimal role of the research partner.

The second part of the researcher's survey asked questions about enhancing research and analysis capacities of the partner law enforcement agency. First it asked the

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respondents if the research and analysis capacity of the agency should be enhanced. If yes, it then asked them to indicate the areas they thought should be enhanced, including: more sworn personnel, more civilian personnel, bigger budget, more technology/ software/ hardware, more training for personnel, more centralized OR less centralized, and other. It also asked the researcher to describe the biggest limitation for research and analysis in their partner police agency, as well as the biggest asset or advantage for research and analysis in their partner agency. The last two questions asked the researcher to reflect on the SPI experience in an open-ended format: what advice would the respondent give to other researchers about how to work effectively with law enforcement agencies; and, whether they would engage in such a partnership again if the opportunity presented itself.

Agency Survey. The agency survey begins with characteristics of the police agency, including name, total geographical area served, total population served, number of sworn officers today and five years ago, number of civilian employees today and five years ago, number of staff devoted to crime analysis and research today and five years ago, and total numbers of UCR part I and part II crimes in 2011.

The next section of the police agency survey asks about the agency's research, planning, and crime analysis units, including: how many separate units are devoted to research, planning and crime analysis, and if those units are centralized in one location; the number of sworn officers and civilians assigned to each unit; what percentage of the total operating budget for the Department was devoted to research, planning and crime analysis for the last fiscal year. The survey also asked them to indicate what activities are assigned to the units.

The next section of the police agency survey replicates the same questions about the Smart Policing Initiative from the researcher survey, from the agency's perspective.

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The final section asks the same questions about enhancing the research and analysis capacities of the law enforcement agency. As a result, the author is able to assess and compare responses to these questions from both the agency and the research partner.

Analysis. The types of data collected were mostly qualitative in nature, but some descriptive analysis was conducted, including: how many respondents there were, the range of the population served by the police agencies, range of agency size, mean scores for the level of involvement of the researcher in the SPI project, percentages of contact between researchers and police agencies, level of impact of the researchers by category (no, minimal, substantial impact) percentage , and percentages of police agencies and research partners who think specific areas of the research and analysis units should be enhanced. Results are presented in the next chapter.

Chapter 5

RESULTS

Descriptive Statistics

Surveys were completed by 14 research partners and 14 police agencies (almost a 50% response rate). There were 10 "complete sites" (both surveys completed from the same site). All responses were included in the analysis (N=28). The total populations served from the responding agencies range from 12,000 to 9.8 million. The location ranges across the United States from Los Angeles, CA to Palm Beach, FL, to New Haven, CT. The agencies range in size from 12 sworn officers to 9,947 sworn officers. The number of personnel working in research and crime analysis units range from 1 to 260, with the mode being 1.

The major areas to be discussed include: the level of researcher involvement in SPI (descriptive analysis), the level of researcher impact (descriptive analysis and qualitative analysis), enhancement of Research and Crime Analysis (descriptive analysis and qualitative analysis), the optimal role of the research partner (qualitative analysis), and advice to others (qualitative analysis).

Level of Researcher Involvement in SPI project

Communication is a big part of working with others, especially under the Smart Policing Initiative. Findings from the study show that 36% of the partnerships reported (by agency and researcher) that they had weekly contact during the SPI project, while 25% had monthly contact (percentage reported by both agency and researcher). The following table (Table 3) includes the means of each site's opinion of the research partner's level of involvement in the SPI project from both sets of respondents, (scale 0-10; 0=none; 10=full).

Table 3. Research Partner's Level of Involvement in Different Areas of the SPI Process (Scale: 0=No involvement, 10=Full Involvement)

Level of Involvement in:	Police Agency (Means)	Research Partner (Means)
Problem identification	7.07	6.23
Analysis of the Problem	8.07	6.14
Development of the Response	5.71	6.31
Assessment of the Response	7.64	8.6
Feedback/reporting to the SPI team	8.79	9
Participation in any other SPI activities	8.43	7.77
Overall Involvement	6.79	5.86

The perceptions of the research partner's level of involvement are consistent between the police agencies and the research partners. Police agency and research partners alike agree that the research partners are active in all parts of the process, from problem identification and analysis, to development of the response, assessment, and reporting back to the agency. This is highly important, as researchers being actively involved in every step of the process is exactly what the SPI is all about. The researchers appear to have the most involvement in giving feedback and reporting to the SPI team (8.79-9.00 mean), 5.71-8.60 mean involvement in the SARA steps, and 7.77-8.43 mean involvement in any other SPI activities. Of the four SARA steps, police agencies felt that the research partners were involved most deeply in the analysis of the problem (8.07) and least involved in the development of the response (5.71), while the research partners thought that they had the most involvement in the assessment of the response (8.60) and the least involvement in the analysis of the problem (6.14). Interestingly, individual area ratings of level of involvement were much higher than overall ratings. For instance, the police agencies rated the research partners high on all areas, from 5.71-8.79 mean, but gave a 6.79 overall mean rating. Also, the research partners rated their level of involvement in each of the areas at a moderate to high level, from 6.14-9.00 mean, but

only gave themselves a 5.86 overall mean involvement rating. This could mean that researchers were involved more heavily in a few areas so their overall level of involvement was not as great as if they had been more evenly involved throughout the process.

Level of Researcher Impact

Table 3 demonstrates that research partners were actively involved in the SPI projects, but did they have any impact? The following table (Table 4) breaks down the level of impact the research partners had on research and crime analysis functions of the police agencies as well as their impact on the tactical operations of the police agencies. The research partners were rated on whether they had no impact, minimal impact, or substantial impact.

Table 4. Impact of Research Partners on Research and Crime Analysis and Tactical Operations of the Police Agencies

	Research Partner Impact on Police Agency Research and Crime Analysis Functions		
	No Impact	Minimal Impact	Substantial Impact
Police Agency	14%	43%	43%
Research Partner	14%	43%	43%
	Research Partner Impact on Police Agency Tactical Operations*		
	No Impact	Minimal Impact	Substantial Impact
Police Agency	14%	50%	36%
Research Partner	23%	57%	14%

*There is data missing from one agency on the impact on Tactical Operations.

The perceived level of impact on research and analysis is consistent between police agencies and research partners. Nearly half of the police agencies and research partners indicated that the research partner had a substantial impact on research and analysis functions (43%), with just 14% reporting no impact.

The greatest difference in perceived level of impact is in the tactical operations area. More than one-third of the police agencies indicated that the research partner had substantial impact on their tactical operations (36%), while just 14% of research partners

reported a substantial impact. Notably, the researchers do not see their impact as being as substantial on police tactical operations as the police agencies do. It is possible that researchers are unaware of how their efforts have impacted the way police operated.

Impact on Research and Crime Analysis Capacity. In addition to reporting numeric impact values, survey respondents were asked to offer qualitative statements regarding the research partner's impact on agency research and crime analysis capacity. These statements offer additional insights on this key aspect of the SPI. The qualitative responses demonstrated a wide range of impact. For example, some agency respondents indicated a minimal impact. The following perceptions indicate these agency views:

- "Our project was begun before the research partner was brought on board so the role has been one essentially of evaluation."

- "Our Crime Analysis Unit is robust, consisting of 22 staff performing various tasks from mapping to crime analysis. Thus, the impact of our Research Partner on crime analysis is minimal. The research partnership is more pivotal in research and survey data analysis."

- "Have not been in a position to fully utilize research partner's contributions yet."

- "Advisory relationship."

As previously mentioned, almost half of the research partners also viewed their impact on research and crime analysis as minimal:

- "My role in researching this grant is significant, but not in the agency in general."

- "Most of the technology being implemented is just being implemented now. There has not been much opportunity to analyze changes."

- "I have had discussions on the information that I need to get from the crime analysts to do evaluation."

- "XX has a very skilled crime analyst. He knows what he is doing, and we simply make requests."

It can be seen that there are various reasons why police agencies and researchers alike felt that the researchers were unable to have a greater than minimal impact. Some were only able to assist in later parts of the process while others were impeded by technology

or other resources. Nonetheless, it is important to understand the reasons why the

impact was in some cases limited.

While there were a few agencies that were not impacted and almost half that reported

only minimal impact, nearly half also reported substantial impacts. The statements

below highlight that several police agency respondents believed that their research

partner had substantial impact on their research and crime analysis capacity:

- "We provided raw data and our research partner analyzed it."

- "Our partner has brought in new ways to look at our existing data, ways to improve our future collection and new ways to look at our analysis."

- "The data provided by the RP has allowed the [department] to identify crime hot spots within our jurisdiction."

- "This project is helping [the department] build analytical capacity by training officers in crime analysis methods. Prior to this, few staff had knowledge of these methods. The partnership is having a great impact on those learning the methods, as well as the command staff and supervisors who are utilizing the analysis provided."

- "The impact on XX Area's gun related crimes was significant. The strategy was an effective tool credited for the decrease in gun related crimes. During the summer of 2012, XX Division adopted the XX strategy and implemented it in the 77th and XX Areas. It is anticipated that XX will be rolled out in other Areas."

Several research partners generally concurred with this assessment:

- "I have been a partner with [the department] for years and have been regularly involved in their activities."

- "We suggested changes to records coding, cooperated on records query design, and jointly analyzed output."

- "The workload for crime analysts has increased significantly and more analysts have been hired as a result."

- "I worked with the project crime analyst more than once a week to determine what information to review and which trending to observe."

- "I have increased their capacity to analyze data, create density maps, ask research questions."

- "The XX research team has trained four Analysis Coordinators in how to identify and analyze problems using a wide array of analysis techniques. They have demonstrated

they can perform these functions independently and are now in the process of developing 'real' problem analyses in conjunction with their command staff."

These responses strongly suggest that in many SPI sites the research partners have had a substantial impact in research and crime analysis. They have helped the police agencies identify crime trends and analyze data. They have taught them how to properly define research questions, how to improve future collection of data, and taught proper analysis techniques; all useful tools for the agencies to be able to do research and analysis themselves in the future.

Enhancement of Research and Crime Analysis

There was widespread consensus among both sets of respondents that the research and crime analysis units should be enhanced. 92% of the Research Partners and 100% of the Police Agencies indicated that the research and analysis capacity of the agency should be enhanced. The following table (Table 5) shows the areas where police agencies and research partners believe the crime analysis and research units should be enhanced.

Table 5. Percentages of Police Agencies and Research Partners who think the selected areas of the Research and Analysis Units should be enhanced.

	Police Agency	Research Partner
More sworn personnel	21.4%	21.4%
More civilian personnel	71.4%	57.1%
Bigger budget	64.3%	50%
More technology/software/hardware	71.4%	35.7%
More training for personnel	64.3%	57.1%
More centralized	14.3%	7.1%
Less centralized	7.1%	0%
Other	21.4%	7.1%

More civilian personnel, more technology, more training and budgets were the areas most commonly identified by police agencies and research partners in need of improvement.

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Limitations. The biggest limitations for research and analysis identified by more than half of the police agencies involved a lack of personnel. Other limitations that were mentioned include technology/software and data limitations, underutilization, funding limitations, and lack of a record management system. More than half of the research partners also agree that lack of personnel and budget cuts are the main limitations in their partner agencies. The lack of knowledge of empirical research, not having a specific research unit, and communication are also acknowledged as limitations of the partner police agencies' research and crime analysis units.

Assets. For the police agencies, the biggest assets of the research and crime analysis units appear to be the crime analysts, their analytical tools, and the university research partners, as demonstrated by the following responses:

- "Devoted analysts are our greatest asset. Research gives us a proven method in solving crime problems. Data Analysis, following the evidence where it leads us, developing strategies together, sharing the plan with our team, establishing objectives together and agreeing on assignments, tasks and timelines, and measuring the results. Where there is a need to consider alternative courses of actions, to respond in a timely manner so as to keep momentum and sustain effectiveness."

- "The two analysts we have do a great job. They are located so that they are readily available to department personnel."

- "Crime Analysis and research allows District Commanders to deploy resources and manpower more strategically by identifying "hotspot" areas and focusing interventions where it's needed."

- "[The department's] analytical capacity is taking a quantum leap as it has invested in a GIS environment that is allowing for faster access to better quality data. As the environment and staff grow, more analytical tools are being built into the environment. In addition, [the department's] leadership is supporting the growth of analytical capacity."

- "Bringing an independent 3rd party view to the table can provide the unbiased perspective necessary to see a different side of things helping break through the established police culture."

Research partners also believe their partnership is an asset to the unit, as are the personnel of the police agency. When asked what the greatest assets or advantages for

the research and analysis crime units, the research partner responses included the following:

- "I am able to assist the agency in moving beyond anecdotal evidence of programmatic impact."

- "Connections to the University, command support for data-driven policing strategies, and political support."

- "Support of agency."

- "The Sheriff is a strong proponent and supporter of intelligence led policing. Also, very capable crime analyst and investigator."

- "Dedicated personnel and grant writing team."

- "Willing to engage with researchers, officers, and develop collaborative relationships with other PDs."

- "They work strategically."

- "Openness to research process; skilled GIS specialists on staff of PD."

- "The crime analysts are skilled."

- "High ranking executives understand the importance of research findings."

Willingness to learn and accept support from outside sources such as university research partners is a great asset to police agencies, and will allow them to continue to improve and grow in the data analysis field. Having dedicated people with the willingness to engage and work with others will continue to improve the advancement of police agency research and crime analysis units.

Optimal Role of the Research Partner

In evaluating the Research Partner's impact in the Smart Policing Initiative, it is important to assess respondents' understanding of the optimal role of the research partner. Police agency respondents offered interesting perspectives on this question:

- "Highly involved in the development of appropriate, innovating solutions."

- "The optimal role would be expositional--bringing an objective, scientific view to guide an agency to more efficient practices."

- "The research partner should evaluate the success of the program on an ongoing basis, and make recommendations to the department."

- "Utilize police provided data and survey information to determine project impact; possibly include recommendations for future."

- "The optimal role of the Research Partner is to provide independent, objective assessment of the problem and strategic response, measure its effectiveness, and recommend adjustments based on the research findings."

- "Someone to bring in "out of the box" thinking into the process to give a different perspective, help us focus on results and provide the evidence we need to convince decision makers to change the culture of the Department."

- "The data provided by the RP has allowed the [department] to measure the effectiveness of enforcement activity thereby assisting us with future resource deployment and planning police problem solving efforts."

- "The role of the Research Partner… has evolved from evaluator to teacher. This is proving to be beneficial to all [department] members involved because it is bridging the gap between researcher and practitioner on a constant basis. [Department] staff are getting the knowledge of research methods that they would not be exposed to without higher education."

- "To support in the conceptualization and evaluation of our proposed initiatives."

- "A Catalyst. An agent of change. Positive changes are good when based on proven strategies. Our experience with this project has provided the department a "new way" of looking at old problems and finding sustainable ways of solving them. Research partners can challenge the department to "do better" with limited resources, use cutting edge technology, work with community partners who can be a part of the solution, and bring people to work together as a team."

The police agencies overall feel that the research partner is a key person in all aspects of crime analysis, from problem development and analysis, to program implementation and evaluation, to teaching these strategies and uses of analytical knowledge along the way. They are innovators, sharing their new ideas and techniques with those who need them the most- police agencies. The key here is that with the help of these researchers, police agencies can add to their own research and analysis capacity to be able to sustain

their own research and analysis in the future. The research partners also offered

interesting insight on this optimal role question:

- "Advise and help build capacity in research, analysis and problem-solving in general."

- "To assist with research design, data collection, and empirical determination of programmatic impact."

- "To provide data, analysis, and recommendations not available to the department from other sources."

- "An expert on the subject matter who can provide objective eyes and provide honest feedback."

- "Provide information to the police planning group so they can develop and implement strategies to change."

- "The research partner should guide problem identification, analysis and response. He should lead assessment."

- "To facilitate the research process. That is, to assist in understanding the usefulness of data, research questions, analysis."

- "The optimal role is to provide additional training regarding: 1) the types of analysis that are available to really understand a problem; 2) different ways of thinking about problems; and 3) responses that include other agencies, not just the police department."

It can be seen from these highlights that the research partners generally agree with the

police agencies on their role in the Smart Policing Initiative. They believe they are there

to offer their expert outside sources of data analysis, problem identification, research

areas, response, and assessment. They are there to teach the police agencies the best way

to use the data to properly conduct research.

Advice to Others. In line with continuing research partnerships and enhancement

of agencies, police agencies were asked what advice they would give to other police

departments about working with outside researchers. Their responses included:

- "Clarify the role that you expect the researcher to play at the beginning of the relationship."

- "Spend some time assessing possible options and making sure the research partner is a good fit."

- "Develop rapport with the researcher, maintain open lines of communication."

- "Work up front to develop positive working relationship; maintain regular communication."

- "The Research Partner has to be an integral member of the SPI Team and have a direct communication channel with Command Staff. The Research Partner should be local and accessible, thus allowing for more interaction with project staff and familiarization with law enforcement operations. Most importantly, the Research Partner should have an extensive research background in the specific crime problem or criminogenic circumstances to be addressed."

- "Definitely get involved with a local researcher. Get a relationship/partnership started long before you begin planning an operations grant proposal to help identify your problem, ask the right questions that need answering, and how to go about resolving it."

- "Utilize the resources available to you. Having a major university as a research partner is beneficial because they have resources to dedicate that are beyond what we can afford."

- "To find a research partner to help build analytical capacity. Having a partner to demonstrate value in the research side of policing is invaluable."

- "Make sure that the leadership has a full "buy in" to the grant project. Recruit your key people appropriately so that you can have your team of committed members who have a stake in the success of the project. This is key to the success of the project. Agree to follow the evidence, the data in identifying the problem, in setting the project goal and objectives, in development of strategies, in formulating the plan and in the measurement of results. Keep communication open and accessible. Keep the team motivated to keep everyone focused. Inspect what you expect. People will rise up to expectation with proper guidance. Share success stories. Recognize accomplishments. Progressively measure results and be open to changes should it be necessary to adjust to alternative courses of actions. Be willing to share lessons learned with other Areas and Agencies."

- "Utilize to the fullest. Make it routine."

- "Police Department's should be open to listening to the researcher's ideas. However, the researcher also needs to be open to listening to the department's views. The law enforcement environment is unique and before the researcher can really begin work, they need to get acclimated to the environment of the police department. The researcher should also be cautioned that each department is different; therefore, if they have worked with other departments, they cannot think that they are all the same. It's important to build a strong relationship with the researcher."

- "Form lasting partnerships to forge relationships that will provide improvements in operations and establish agency credibility."

Several common themes can be seen in these statements: Setting expectations up front and making sure everyone is on the same page is highlighted as an important starting point. Keeping open communication is of utmost importance, helping to keep a working relationship. Keeping a working relationship is very important to the successfulness of these kinds of projects. Therefore, integration as a team member is vital for the researcher to be valuable to the project. Once a rapport and open communication have been established, lasting relationships will lead to enhancement and improvements in police agency operations.

Additionally in the survey, research partners were asked what advice they would give to other researchers about how to work effectively with law enforcement agencies. Their responses included:

- "Have patience; listen more; engage in research that is practically relevant and timely; generate thick skin."

- "Be flexible. Schedules change and unanticipated events happen."

- "Work directly with command staff."

- "Take every opportunity to create positive and mutually beneficial interactions. Establish non-project relationships."

- "Be there often. Create an honest and straightforward relationship where everyone can speak their minds."

- "Have a plan and work the plan."

- "Be flexible and understand the culture of the agency."

- "It takes a great deal of time and commitment."

- "Work as partners; provide the information they need to plan and make change."

- "Communication of goals early and often; involve individuals across function b/c reassignment of duties happens; helps w/ buy in."

- "You have to get out of your office, do ride-alongs, demonstrate your commitment to the project and the officers."

- "Gain trust, legitimacy, and credibility by working with them. Integrate research and law enforcement agendas."

Several themes are apparent among the researchers' statements, some similar and some different to those of the police agencies. Communication is reported here as being important, as well as integration into the team/project/unit. Researchers also understand the importance of a working relationship. Being outsiders, some researchers recommend trying to fit into the police culture. They suggest that future researchers be prepared for a different work environment, to be flexible, develop thick skin, and be ready for unexpected events. All of these things being said, would police agencies and university researchers engage in this type of partnership again? The following section details this question.

Would they do it again? 100% of police agencies and 92% of the research partners said they would engage in such a partnership again if the opportunity presented itself. The statements below from the police agencies underscore this view:

- "Research can be helpful. In our case, the research partner was a mismatch with our agency."

- "One of the biggest pieces missing when we embark on a new strategy is to conduct an evaluation of the results which is important."

- "The input of an external research partner is extremely valuable to the department."

- "Our research partners have the capacity to do what we do not have the capacity to do."

- "Having a Research Partner is an invaluable asset to all law enforcement agencies because it allows for greater objectivity in analyzing problem areas and developing a more focused solution. Most importantly, it provides greater accountability for the agency and transparency to the communities we serve."

The police agencies overall can see the value research partners can give to their departments. They can see the opportunities that these partnerships create and would be

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willing to engage in them again. The research partners also would continue to work on similar projects:

- "It's what I do...action research with police agencies."

- "XX has been a joy to work with. All personnel I have interacted with are professional and responsive."

- "Produces important data. Keeps researcher grounded in police operations."

- "The symbiotic relationship between researchers and practitioners is of powerful benefit to both."

- "Program evaluation and making a difference in the community is why I decided to originally attend graduate school."

- "The agency was working on an excellent initiative to assist the community which is worthwhile research."

- "The only way to truly understand how effective or ineffective something works is to be integrally involved in all aspects."

- "The agency/researcher partnership is the best way to move the field of policing forward."

- "I enjoy working with the police and it is a positive experience to see that research can assist them."

- "Partnerships with practitioners enable researchers to test hypotheses in a 'real world laboratory'. There is just no substitute when conducting applied research. We enjoy assisting the local PD so that we can feel like we are making our community a little better."

This type of project allows university researchers to be hands on, working out in the field they are trying to enhance. This partnership allows research to improve policing in an applied way, and benefits police agencies, researchers, and even more importantly the community.

Chapter 6

DISCUSSION

Research questions examining the nature of the partnership between police agencies and research partners under the Smart Policing Initiative were successfully answered in the current study. Questions about the current limitations of police agencies' research and analysis units and the area's most in need of enhancement were also captured.

The results of this quantitative and qualitative study show an overall positive impact of the partnership between police agencies and university researchers, as seen by both sides. The key findings are that: (1) the research partners are involved in most areas of the Smart Policing Initiative projects (including all of the SARA steps, communication, and other activities), (2) they have influenced police agencies' research and crime analysis functions, and to a lesser extent, they have impacted police agencies' tactical operations, (3) lack of personnel and budget cuts were described as being the biggest limitations of the police agencies' research and analysis units, (4) personnel, technology, and training are areas of the research and analysis units that need the most enhancements, and (5) police agencies and university researchers have the same idea and understanding of the optimal role of a research partner. Additionally, 100% of the police agency respondents said they would engage in a similar partnership again.

One limitation of this study is the small sample size. This small sample size did not allow for much statistical analysis or comparison across different police agency characteristics. It did however, allow for a decent comparison of qualitative data. The qualitative statements of the police agencies were easily compared to those of the research partners with valuable conclusions. These derived conclusions will surely benefit policing capacities and overall public safety. Another limitation of the current

study is bias. The author does not know if the 50% who responded to the surveys are representative of all the SPI agencies, or if they are different. It is possible that the remaining SPI sites had a wide range of results, that could be the same or different than the results found here.

In review, being the latest in police innovation, the Smart Policing Initiative was designed to identify the most economical, efficient, and effective strategies, practices, and tactics that work best in policing. Under this initiative, police agencies were to partner with a researcher, collect and analyze data, replicate evidence based practices or develop new solutions to combating criminogenic or public safety issues, and develop assessments of their efforts. So what do the findings of the current study tell us about the degree to which the Smart Policing Initiative has achieved its goals?

First, all agencies did engage with a research partner. The research partners were overall, involved completely in the whole SPI process, with only a few exceptions. The research partners helped the agencies collect and analyze data, helped them develop appropriate responses to the specific issues they focused on, and assessed their efforts. The mean involvement reported by agencies and researchers for researcher involvement in problem identification was 6.65 (out of 10), their mean involvement in analysis of the problem was 7.11 (out of 10), their mean involvement in the development of the response was 6.01 (out of 10), and their mean involvement in the assessment of the response was 8.12 (out of 10).

Second, the partnership has had a positive influence on agency research and crime analysis functions, as well as on some tactical functions. As Ainsworth (2001) noted, "one of the most important purposes of crime analysis is to identify and generate the information needed to assist in decisions regarding the deployment of police resources to prevent and suppress criminal activity" (p88-89). While this study does not

give specifics on what specific police strategies are being found to work (other than SARA steps, which have been found to be positively influential here), the fact that there has been a positive impact by the researcher will enhance the support for future assessments of the SPI sites and their project results.

Third, the findings that lack of proper budgets, personnel, and training are the biggest limitations, and thus are the areas that need the most improvement reinforce the need to find or develop the best solutions with the resources available. Determining that partnerships between university researchers and police agencies have a positive effect on police agency research and crime analysis functions and tactical operations is a step towards enhancing police agency capacities. The implications from this study are that with enough training and networking, police agencies can gain enough knowledge of proper research and analysis techniques and procedures to effectively carry out their own problem analysis and program evaluation. The entire sample reported that they would engage in a similar partnership again if given the opportunity. The researchers offered their expertise, helping the police agencies learn how to effectively approach problem solving issues such as those under problem oriented policing, specifically through proper SARA techniques. If enough attention and funding are given for more projects like the Smart Policing Initiative, police departments across the country will be able to continue to enhance their research and analysis capacities and begin to effectively sustain proper research and analysis techniques under problem-oriented policing and other current innovative policing practices.

Additionally, the findings of this study have now expanded the literature on police research. Prior research on police innovation has shown crime reduction evidence for problem-oriented policing, modest support for reduction of certain crimes and disorder under broken window/order maintenance policing, support for community

65

policing in its ability to reduce fear of crime but not crime itself, support for hot spots policing, and even preliminary support for intelligence led/predictive policing. Braga, Hureau, & Papachristos (2012) acknowledge that researcher-police partnerships funded under the Smart Policing Initiative have contributed to the field of knowledge in policing by uncovering more effective crime control and reduction practices. The current study of the nature of these police agency and researcher partnerships adds to the research literature by showing support for the latest attempt under the Smart Policing Initiative to efficiently reduce crime. It has been demonstrated that a researcher exerts a positive impact on police agency's research and analysis capacities, and is an important advancement in policing practices. Utilizing the SARA concepts from problem oriented policing, researchers and police agencies now effectively work towards creating the best responses to fighting crime.

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APPENDIX A

IRB APPROVAL SHEET

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Michael White 411 N. Cen
From:	Mark Roosa, Chair Soc Beh IRB
Date:	10/01/2012
Committee Action:	**Exemption Granted**
IRB Action Date:	10/01/2012
IRB Protocol #:	1209008299
Study Title:	Enhancing Police Research and Analysis Capacity through Smart Policing

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX B

SPI SITE TARGET CRIME PROBLEMS

"This table demonstrates the primary and secondary crime problems targeted through the SPI in each site, as well as the innovative policing technique that will be employed to address the problem(s)" (Retrieved from Smart Policing, 2010)

City	Partner	Primary Crime	Secondary Crime	Types of Policing
Baltimore, MD	Johns Hopkins School of Public Health	Gun violence		Offender-based
Boston, MA – Phase I	Harvard University	Gun violence	Drugs, Gangs	Place-based, Offender-based, Pulling-levers
Boston, MA – Phase III	Harvard University	Homicides		Organizational Change; Offender-Based Policing
Cambridge, MA	Justice & Security Strategies	Gun violence		Predictive Policing (Involving Multiple Police Agencies)
Cincinnati, OH	University of Cincinnati	Robbery		Place-based, Offender-based, Intelligence-led
Evans County, GA	Georgia Southern University	Intelligence gathering		Technology Implementation; Organizational Change
Frisco, TX	University of Texas	Property crime		Community Outreach; Place-Based Policing
Glendale, AZ – Phase I	Arizona State University	Crime-prone neighborhoods	Drugs, Violence, Gangs	Place-based, Problem-oriented
Glendale, AZ – Phase III	Arizona State University	Violent crime		Offender-Based Policing; Organizational Change

City	Partner	Primary Crime	Secondary Crime	Types of Policing
Indio, CA	University of California-Riverside	Burglary		Place-based
Joliet, IL	Loyola University of Chicago	Gangs, gun violence, drugs		Place-based, Offender-based
Kansas City, MO		Crime/violent crime		Place-Based Policing; Community Outreach
Lansing, MI	Michigan State University	Drugs	Crime-prone neighborhoods Violence	Place-based, Offender-based
Las Vegas, NV	University of Nevada, Las Vegas	Violent crime		Place-Based Policing; Hot Spot Policing
Los Angeles, CA	Justice & Security Strategies	Gun violence	Violence	Place-based, Problem-oriented
Lowell, MA – Phase I	Suffolk University	Drugs		Problem-oriented, Place-based, Offender-based
Lowell, MA – Phase III	Suffolk University	Crime (gun and drug)		Problem-Oriented Policing; Hot Spot Policing; Organizational Change
Memphis, TN	University of Memphis	Robbery, Burglary	Drugs, Crime-prone neighborhoods Gangs	Place-based, Offender-based

City	Partner	Primary Crime	Secondary Crime	Types of Policing
Michigan State Police	Michigan State University	Violent crime		Evidence-Based Policing; Hot Spot Policing
New Haven, CT	University of New Haven	Violent crime		Predictive Policing; Hot Spot Policing
Palm Beach, FL	Lynn University	Robbery	Crime-prone neighborhoods	Place-based, Victim-based
Pharr, TX	University of PanAm	Domestic violence		Technology Implementation
Philadelphia, PA	Temple University	Violence	Organizational Change	Place-based, Offender-based
Phoenix, AZ	Arizona State University	Neighborhood disorder		Technology Implementation
Pullman, WA	Washington State University	Violent crime		Place-Based Policing; Offender-Based Policing; Problem-Oriented Policing; Technology
Reno, NV	University of Nevada-Reno	Drugs		Offender-based, Problem-oriented
San Diego, CA	San Diego Council of Governments	Gangs		Place-based, Offender-based, Intelligence-led
Savannah, GA	Savannah State University	Violence		Place-based, Offender-based, Problem-oriented

City	Partner	Primary Crime	Secondary Crime	Types of Policing
Shawnee, KS	Benedictine College	Violent crime		Place-Based Policing; Data-Driven Approaches to Crime and Traffic Safety
Winston-Salem, NC	Winston-Salem State University	Drugs	Crime-prone neighborhoods	Place-based, Intelligence-led
York, ME	York Community College	Burglary		Place-Based Policing; Data-Driven Approaches to Crime and Traffic Safety

APPENDIX C

RESEARCH PARTNER SURVEY

Research and Analysis Capacity in BJA Smart Policing Initiative Sites
I.   Smart Policing Initiative and Research and Crime Analysis Capacity

Please answer the following questions about your SPI project:

1. What law enforcement agency are you working with?:
_____

2. How long have you been working with the Smart Policing Initiative?:
_____ Years   _____ Months

3. Indicate your level of involvement in the following (scale of 1-10, 0 is no involvement, 10 is complete involvement):
        Problem identification:
        Analysis of the Problem:
        Development of the Response:
        Assessment of the Response:
        Feedback/reporting to the SPI team:
        Participation in any other SPI activities:

4. What role did the agency's Research, Planning and Crime Analysis play in problem identification? What role did the unit(s) play in problem analysis?
_____
_____
_____
_____

5. Indicate your level of involvement with the Research and Crime Analysis Unit in the police agency your work with (scale of 1-10, 0 is no involvement, 10 is complete involvement):

6. How often do staff engaged in research or crime analysis in the police agency communicate with you?
          Daily   Weekly   Bi-weekly   Monthly   Less than monthly

7. Please characterize your impact on Research and Crime Analysis functions in the agency:
          No impact   Minimal impact   Substantial impact

        Please describe this impact:
_____
_____
_____

8. Please characterize your impact on Police Department tactical operations:

        No impact   Minimal impact   Substantial impact

      Please describe this impact:

_____
_____
_____

9. What research or analysis-related products have been produced by the police department as part of the Smart Policing Initiative?

_____
_____
_____

10. Did you assist with the above mentioned products? NO YES

11. Indicate the degree to which you believe you have enhanced the capacity of the Research and Crime Analysis Unit (scale of 1-10, 0 is none, 10 substantial):

12. In your opinion, what is the optimal role of the Research Partner in the SPI?:

_____
_____
_____
_____
_____

II.   Enhancing Research and Analysis Capacity

Please answer the following questions about the enhancement of the partner law enforcement agency:

1.   Do you think the research and analysis capacity of the agency should be enhanced?

 NO   YES

If YES, how should it be enhanced? (check all that apply)

      More sworn personnel

      More civilian personnel

      Bigger budget

      More technology/software/hardware

More training for personnel

More centralized   OR   Less centralized

Other: (please list)

_____
_____

2. What is the biggest limitation for research and analysis in your partner police agency?

_____
_____
_____

3. What is the biggest asset or advantage for research and analysis in your partner agency?

_____
_____
_____

4. What advice would you give to other researchers about how to work effectively with law enforcement agencies?

_____
_____
_____
_____

6. Would you engage in such a partnership again if the opportunity presented itself?

NO   YES

Why or why not?

_____
_____
_____
_____
_____

APPENDIX D

POLICE AGENCY SURVEY

Research and Analysis Capacity in BJA Smart Policing Initiative Sites

III. Agency Characteristics: Please provide the following characteristics about your agency.

1. Agency Name:

_____

2. Total geographic area served by the agency (square miles)

,

3. Total population served by the agency: ,   ,

4. Total number of sworn officers in the agency, as of 7/1/12:

,

In 2008 (5 yrs ago):   ,

5. Total number of civilian employees in the agency, as of 7/1/12:

,

In 2008 (5 yrs ago):   ,

6. Total number of staff devoted to research and crime analysis (as of 7/1/12):

,

In 2008 (5 yrs ago):   ,

7. Total number of UCR Part I crimes in 2011:   ,   ,

8. Total number of UCR Part II crimes in 2011:   ,   ,

IV. Research, Planning and Crime Analysis Capacity

Please provide answers for the following questions about your Research, Planning, and Crime Analysis Unit(s)/Functions:

1. How many separate units in you agency are devoted to Research, Planning and Crime Analysis?

2. Are the Research, Planning and Crime Analysis unit(s) centralized in one location? NO YES

Are Research and Crime Analysis staff assigned to local precincts/ districts?

NO   YES

3. Complete the grid below to document the total number of sworn and civilian personnel assigned to Research, Planning, and Crime Analysis Units. [Note: if your department has a unit that performs more than one of these duties, indicate the number of personnel assigned to that unit(s) in the last box below]

	# assigned solely to Research	# assigned solely to Planning	# assigned solely to Crime Analysis	# assigned to blended Research, Analysis and/or Planning unit(s)
Total number of SWORN personnel assigned to:				
Total number of CIVILIAN personnel assigned to:				

4. Approximately what percentage of the total operating budget for the Department was devoted to Research, Planning and Crime Analysis for the last fiscal year?

Less than 5%   6-10%   11-15%   16-20%   More than 20%

5. Please complete the following table about the Director of the Units:

	Research Unit Director	Planning Unit Director	Crime Analysis Unit Director	Blended Unit Director
Sworn (S) or civilian (C)				
Highest level of educational attainment (high school, associate degree, 4 yr degree, graduate work)				
Years of experience with planning, research or analysis in policing				
Primary Duties (indicate yes or no)				
Policy writing				
Crime analysis/mapping				

Strategic/ business planning				
Project management				
Grant management				
Research methods				
Statistical analysis				
Other (please specify below)				

_____

_____

6. Please complete the following table about the <u>Staff in the Units:</u>

	Research Unit Staff	Planning Unit Staff	Crime Analysis Unit Staff	Blended Unit Staff
# sworn				
# civilian				
# with a college degree				
# with a graduate degree				
Years of experience with research, analysis or planning in policing (indicate # in each category)				
# with 2 yrs or less				
# with 3-5 yrs				
# with 6-10 yrs				
# with 11 yrs or more				
Primary Duties				
Policy writing				
Crime analysis/mapping				
Strategic/ business planning				
Project management				
Grant management				
Research methods				
Statistical analysis				
Other (please specify below)				

_____

_____

_____

7. Please complete the following table describing the activities of the Unit(s):

Note: [If there is a different unit not listed that performs a task for your agency, please indicate that unit in the column entitled "other"].

Activities	Research Unit Staff	Planning Unit Staff	Crime Analysis Unit Staff	Blended Unit Staff	Other
Analyze crime statistics	Yes No	Yes No	Yes No	Yes No	
Conduct crime mapping	Yes No	Yes No	Yes No	Yes No	
Write grants	Yes No	Yes No	Yes No	Yes No	
Assist in developing new policing strategies, programs, and innovations	Yes No	Yes No	Yes No	Yes No	
Assist officers with problem solving (e.g., SARA, POP, COP)	Yes No	Yes No	Yes No	Yes No	
Gather information on best practices used by other agencies	Yes No	Yes No	Yes No	Yes No	
Conduct needs assessments for potential programs or initiatives	Yes No	Yes No	Yes No	Yes No	
Conduct field research (e.g. community surveys, interviews, focus groups)	Yes No	Yes No	Yes No	Yes No	
Conduct internal research studies with agency staff (e.g. employee surveys, interviews, focus groups)	Yes No	Yes No	Yes No	Yes No	
Conduct evaluations of existing programs	Yes No	Yes No	Yes No	Yes No	
Assess technology needs of the agency	Yes No	Yes No	Yes No	Yes No	
Engage in agency planning activities (e.g. work on strategic plans, change management, performance measurement)	Yes No	Yes No	Yes No	Yes No	
Work on partnership development (e.g. engage partners for crime prevention)	Yes No	Yes No	Yes No	Yes No	
Coordinate your agency's accreditation requirements	Yes No	Yes No	Yes No	Yes No	

Develop agency policies	Yes No	Yes No	Yes No	Yes No	
Conduct process mapping, quality improvements, internal auditing, and/or systems analysis	Yes No	Yes No	Yes No	Yes No	

Other (please specify):

_____
_____
_____

V.   Smart Policing Initiative and Research and Crime Analysis Capacity

Please answer the following questions about your agency's SPI project:

1. Regarding your agency's Smart Policing project, what role did Research, Planning and Crime Analysis play in problem identification?:
_____
_____
_____

2. Indicate the level of involvement of the Research Partner in the following
   (scale of 1-10, 0 is no involvement, 10 is complete involvement):
        Problem identification:
        Analysis of the Problem:
        Development of the Response:
        Assessment of the Response:
        Feedback/reporting to the SPI team:
        Participation in any other SPI activities:

3. Indicate the level of involvement of the Research Partner with the Research and Crime Analysis Unit/functions (scale of 1-10, 0 is no involvement, 10 is complete involvement):

4. How would you describe your relationship with the Research Partner?
_____
_____
_____
_____

5. How often do staff from Research and/or Crime Analysis communicate with the Research Partner?

        Daily   Weekly   Bi-weekly   Monthly   Less than monthly

6. Please characterize the impact of the Research Partner on Research and Crime Analysis:

        No impact   Minimal impact   Substantial impact

        Please describe this impact:

_____
_____
_____
_____

7. Please characterize the impact of the Research Partner on Police Department operations:

        No impact   Minimal impact   Substantial impact

        Please describe this impact:

_____
_____
_____
_____
_____

8. What products have Research and Crime Analysis produced as part of the Smart Policing Initiative?

_____
_____
_____

9. Did the Research Partner assist with the above mentioned products?   NO YES

10. Indicate the degree to which the Research Partner has enhanced the research capacity of the Research and Crime Analysis Unit (scale of 1-10, 0 is none, 10 substantial):

11. In your opinion, what is the optimal role of the Research Partner in the SPI?:

_____
_____
_____
_____

VI.   Enhancing Research and Analysis Capacity

Please answer the following questions about the enhancement of your agency:

2. Do you think the research and analysis capacity of your agency should be enhanced?

  NO   YES

If YES, how should it be enhanced? (check all that apply)

   More sworn personnel

   More civilian personnel

   Bigger budget

   More technology/software/hardware

   More training for personnel

   More centralized   OR   Less centralized

   Other: (please list)
   _____
   _____
   _____

2. What is the biggest limitation for research and analysis in your department?

   _____
   _____
   _____

3. What is the biggest asset or advantage for research and analysis in your department?

   _____
   _____
   _____

4. How do you think your department's research and analysis capacity could be improved?

   _____
   _____
   _____
   _____

5. What advice would you give to other police departments about working with outside researchers?

_____
_____
_____
_____

6. Would you engage in such a researcher partnership again if the opportunity presented itself?

NO   YES

Why or why not?

_____
_____
_____
_____