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The University of Southern Mississippi

AN EXAMINATION OF FACTORS AFFECTING INFORMATION SHARING
AMONG LAW ENFORCEMENT AGENCIES

by

Scott Driskill Bransford

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2012

ABSTRACT

AN EXAMINATION OF FACTORS AFFECTING INFORMATION SHARING AMONG LAW ENFORCEMENT AGENCIES

By Scott Driskill Bransford

May 2012

The purpose of the present study was to investigate using survey data to find factors or barriers which contributed to local law enforcement participation and support of intelligence information sharing. Following the September 11, 2001, attacks in New York City and Arlington, Virginia, new homeland security initiatives and directives were created from the legislative and executive branches of the federal government. Several new initiatives and directives provided new communication opportunities for partnerships between all levels of law enforcement to combat the future threat of domestic terrorism.

The evaluation literature indicated that a majority of post-9/11, initiatives, including the creation of the Department of Homeland Security, were strategically implemented using a top-down, reactive approach to terrorism-related intelligence gathering. Technological, organizational, or cultural breakdowns between the federated jurisdictions of law enforcement contributed to the vulnerability of United States defense capabilities. Disparate pieces of intelligence information were available to several federal, state, and local terror investigation agencies, but the agencies were not able to piece together the information in a timely manner.

The study examined implementation issues from a bottom-up perspective with participant local law enforcement departments in four separate states, across four geographic areas of the country. In order to examine these issues, responses of participants in the study were analyzed through the administration of a survey instrument. Participants also were provided an optional opportunity to provide qualitative data on the last page of the survey instrument. One of the goals of the study was to identify barriers so a more proactive approach with more partnerships can be implemented through the development of a seamless communicative network where terror information can be shared interoperable across all levels of law enforcement.

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Approved:

Director

Dean of the Graduate School

May 2012

DEDICATION

This dissertation is dedicated to the 2,977 victims of the September 11, 2001 terrorist attack, with special recognition given to the 366 police, firefighters, and paramedics who gave their lives to save others.

ACKNOWLEDGMENTS

I would like to thank my committee chairman, Dr. Tom Payne, for all of his guidance, support, and prayers throughout this process. I wish Dr. Payne all the best in his future endeavors with USM, but more importantly more quality time with his grandson. I would also like to thank Dr. Kelly Cheeseman for staying on my committee until its conclusion, and wish her the best of luck and success with her new job in Pennsylvania.

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The combination of these talented and invaluable people enabled me to overcome all obstacles which ultimately brought this seemingly never-ending odyssey to a merciful and successful conclusion.

TABLE OF CONTENTS

ABSTRACT	ii
DEDICATION	iv
ACKNOWLEDGMENTS	v
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	x
I. INTRODUCTION.....	1
Background of the Study	
Statement of the Problem	
Purpose of the Study	
Justification of the Study	
Limitations of the Study	
Issues Concerning Internal Validity	
Threats to External Validity	
Assumptions of the Study	
Summary	
II. REVIEW OF RELATED LITERATURE	22
Documentation	
Classical Organizational Theory	
Study of Bureaucratic Organizations	
Classical Organizational Theory and Scientific Management	
Classical Organizational Theory and Traditional Policing	
Management	
Bureaucratic Models and Traditional Policing	
Traditional Policing and Reactivity	
Modern Structural Organization Theory-Proactive Police	
Communication	
Environmental Characteristics	
Bureaucracy of Individual and Organizational Social Interaction	
External Influence: Incentives	
Trust	
Organizational Culture Theory	
Line Officer Support	
Internal Pressure	
Technological Barriers	
Information Technology and Worker Attitudes	

	Organizational Complexity Research Question and Hypotheses Summary	
III.	METHODOLOGY.....	75
	Research Method and Design Appropriateness Quantitative Research Participants Instrumentation Procedures Chain of Custody of Survey Instrument Survey Responses and Sample Population Informed Consent Confidentiality Data Analysis Summary	
IV.	ANALYSIS OF DATA.....	97
	Instrument Evaluation Discussion	
V.	SUMMARY.....	106
	Implications Limitations of the Study Recommendations for Future Research	
	APPENDIXES.....	133
	REFERENCES.....	140

LIST OF TABLES

Table

1.	Respondent Demographics—Region.....	78
2.	Respondent Demographics—Gender	79
3.	Respondent Demographics—Ethnicity	79
4.	Respondent Demographics—Age	80
5.	Respondent Demographics—Education	81
6.	Respondent Demographics—Experience	81
7.	Respondent Demographics—Military.....	82
8.	Respondent Demographics—Training	82
9.	Respondent Demographics—Rank	83
10.	Respondent Demographics—Department Size	83
11.	Information Sharing Survey Meta-Analysis	88
12.	Equamax Rotated Component Matrix, N = 408	97
13.	Zero-Order Intercorrelation Matrix for Demographic Variables and Support for Information Sharing (N = 408)	99
14.	Zero-Order Intercorrelation Matrix for All Subscale Items and the Support for Information Sharing Subscale (N = 408).....	99
15.	OLS Regression Solutions Predicting Support for Information Sharing (N = 408).....	101

LIST OF ABBREVIATIONS

Bureau of Alcohol Tobacco and Firearms (ATF)

Central Intelligence Agency (CIA)

Concept of National Operations Plan (CONPLAN)

Department of Defense (DOD)

Department of Homeland Security (DHS)

Environmental Protection Agency (EPA)

Federal Bureau of Investigation (FBI)

Food and Drug Administration (FDA)

Government Accounting Report (GAO)

Homeland Security Act (HSA)

Homeland Security Information Sharing Act (HSIA)

Immigration and Naturalization Service (INS)

Information Analysis and Information Protection (IAIP)

Information Technology (IT)

International Association of Police Officers (IAPO)

Joint Task Force (JTTF)

Office of Emergency Planning (OEP)

Office of Homeland Security (OHS)

National Homeland Security Agency (NHSA)

National Incident Management System (NIMS)

National Office for Combating Terrorism (NOCT)

National Security Agency (NSA)

Police Executive Research Forum (PERF)

CHAPTER I

INTRODUCTION

Background of the Study

In the aftermath of the September 11, 2001 (9/11), terrorist attacks on the World Trade Center and the Pentagon, the term *homeland security* became a common reference for American citizens with regard to efforts to combat terrorism (Lansford, Pauley, & Covarrubias, 2006). After 9/11, agents from the Immigration and Naturalization Service (IANS), the Federal Bureau of Investigation (FBI), and the Central Intelligence Agency (CIA) worked in conjunction with local municipalities to track potential suspects. Federal, state, and local agencies quickly gathered information regarding the localities and activities of the alleged 9/11 terrorists, but failed to fully and completely discriminate critical intelligence information contained within each agency (Sullivan, 2005).

Following 9/11, the Bush Administration undertook an extensive reorganization of governmental organizational structures. On October 8, 2001, President George W. Bush established the Office of Homeland Security (OHS) within the Executive Office of the President as well as a Homeland Security Council (HCS). Both the OHS and HCS were established to coordinate efforts relating to all aspects of terrorism. With the creation of the OHS and HCS, information sharing efforts among federal, state, and local law enforcement agencies have become a possibility (Relyea, 2004).

On November 19, 2002, President Bush signed the Homeland Security Act of 2002 (Office of Homeland Security, 2002) for the purpose of creating the Department of Homeland Security. The overall mission of the Department of Homeland Security was to successfully merge 22 separate agencies with separate missions into one agency that incorporates all aspects of counterterrorism. The Homeland Security Information Sharing Act (HSIA, 2002) represented a more detailed strategic plan in an effort to clearly define the roles and responsibilities of each government agency. The primary goal was to expand the sharing of homeland security information among federal intelligence and law enforcement agencies with state and local law enforcement agencies. Provisions contained within the HSIA state the following:

- The federal government is mandated by the United States Constitution to protect every state from invasion, which includes terrorist attacks.
- State and local law enforcement personnel should have access to homeland security information. The information shared should be balanced with the need to preserve the classified status of each document, as well as to protect the sources and methods used to acquire the information.
- Security clearances should be granted to certain state and local personnel in order to facilitate the sharing of information regarding specific terrorist threats among federal, state, and local levels of government.

- State and local law enforcement personnel should possess the capability to gather information on suspicious activities and terrorist threats not possessed by federal intelligence agencies.
- Information systems, including the National Law Enforcement Telecommunications System and the Terrorist Threat Warning System, should continue to be developed in order to achieve rapid sharing of sensitive and unclassified information among federal, state, and local entities.
- A singular, national terrorism database between federal, state, and local law enforcement should be established to avoid duplication of existing information systems (HSIA, 2002).

The HSIA (2002) overwhelmingly passed in the House of Representatives by a vote of 422 to 2. Congresswoman Jane Harman (D-CA), who coauthored the bill with Saxby Chambliss (R-GA), believed the bill almost unanimously passed because it offered a systematic approach to information sharing, which, if implemented before 9/11, may have prevented the attacks. Harman states,

It is my sincere belief that proper information sharing might have prevented 9/11. Without such systems, dots that could be connected to save American lives are left scattered across various intelligence agencies. This bill helps solve two critical problems: information sharing between the FBI and CIA, and sharing between the federal government and local first responders like mayors, police and firefighters. (The Virtual Office of Congresswoman Jane Harman, 2002, para. 3)

Although most intelligence concerning suspected terrorists is accumulated at the federal level, state and local law enforcement are the agencies most likely to encounter domestic terrorists. During a congressional hearing that preceded the creation of the HSIA (2002), Congresswoman Harman (The Virtual Office of Congresswoman Jane Harman, 2002) noted one example of a missed opportunity. Two days prior to the 9/11 attacks, one of the hijackers was stopped for speeding by a Maryland State Trooper. The officer did not detain the suspect because he was not aware the individual was listed on the CIA watch list of suspected terrorists (The Virtual Office of Congresswoman Jane Harman, 2002).

The inquiry conducted by the 9/11 commission raised new issues involving the lack of cooperation and information sharing on all levels of law enforcement. Specifically in question was the investigation strategy concerning the activities of two 9/11 hijackers, Khalid Almihdar and Nawaf Alhazmi. Both suspects lived in San Diego, California, and rented a room from a man who was reportedly an undercover FBI informant. The National Security Agency (NSA) first learned the identities of the two terrorist suspects and their connections to Al-Qaeda in 1999 through intercepted communications in the Middle East. The CIA detained the men in 2000, after both suspects attended a meeting of Al-Qaeda operatives in Malaysia, and learned of Alhazmi traveling to Los Angeles, California in March 2000. However, intelligence information involving the case was scattered among several different government agencies, and was not linked until after the 9/11 attack. In August 2001, both suspects were added to a watch

list in order to prevent entry into the United States. However, by this date both were residing in the United States in preparation for the 9/11 attacks (Emerson, 2002).

On December 16, 2006, the Executive Office of the President released Guideline 2, a Memorandum to Heads of Executive Departments and Agencies for the purpose of the prevention of domestic terrorism. The directive initiated a common strategic framework which assigned roles and communication responsibilities to federal, state, and local law enforcement agencies. The memorandum called for interoperable sharing of terrorism information, homeland security information, and law enforcement information between and among federal, state, and local law enforcement, with the addition of participating community entities (Office of Homeland Security, 2007).

The President's memorandum recognized the importance of state and local law enforcement as crucial to United States counterterrorism efforts, as local law enforcement comprises many of the first responders to a domestic attack. The 9/11 attack demonstrated the possibility that foreign terrorists already could reside in local communities as future domestic targets are identified. The federal government expressed concern regarding the rising threat posed by individual homegrown terrorists drawing inspiration from established global terrorist organizations, such as Al-Qaida. Whether a plan for a terrorist attack originates in the United States or overseas, critical intelligence information is obtained by local police officers during the course of routine law enforcement activities (Office of Homeland Security, 2007).

The memorandum further directed state and local police departments to deliver counterterrorism responsibilities in addition to core missions, including the protection of public health and safety, as well as to provide emergency and non-emergency services. While state and local law enforcement work to prevent future terrorist attacks, the performance of routine duties must continue, including response to service calls and confronting all types of public health and safety issues. Counterterrorism success is dependent upon the development of strong partnerships with the public. This relationship needs to be constructed based upon a fundamental level of communication and trust between local police and members of the community (Adams, Rohe, & Accury, 2002; Chappell, 2009). New partnerships could be created and utilized in conjunction with ongoing policing activities in order to protect communities with the additional involvement of key community representatives (Office of Homeland Security, 2007).

The memorandum acknowledged the needs of state and local agencies in an attempt to comprehensively incorporate counterterrorism and homeland security activities with federal law enforcement agencies. Specifically, it required local law enforcement access to timely, credible, and actionable intelligence disseminated among all levels of law enforcement. The memorandum recommended an organizational culture change in law enforcement which recognized the importance of fusing information regarding all crimes with national security implications. The organizational change included the development of training, task forces, and law enforcement strategy designed to address terrorist

strategies and capabilities through improvement of improved information sharing processes (Office of Homeland Security, 2007).

One of the findings of the 9/11 Commission was the recommendation of a federally mandated approach to information sharing originating from the federal to the local level. Guideline 2 disagreed with the 9/11 Commission's findings, and instead recognized the criticality of local law enforcement support and participation in any proposed counterterrorism strategy. Guideline 2 recognized the prevention of attack strategies similar to 9/11 would have to be initiated from the local level to the federal level, using a bottom-to-top approach when necessary. The participation of law enforcement agencies on all levels is essential to the development of an interoperable network which would allow for seamless communication. The strategic development of an interoperable communication system would be mandatory, and local law enforcement's participation would need to be compulsory for the development of such a system (National Commission on Terrorist Attacks, 2004; Office of Homeland Security, 2007).

Statement of the Problem

There are several problems that are barriers to intelligence information sharing among the federal, state, and local levels of law enforcement. First, the organizational structure of local law enforcement must be overhauled from traditional, militaristic policing agencies, which have historically operated as a closed organization, to a more open organization capable of operating in a problem-solving capacity (Goldstein, 1979). Doherty (2006) stated local law

enforcement must integrate homeland security initiatives into a proactive, community-style approach. Counterterrorism initiatives need to be seamlessly integrated into everyday policing activities, while simultaneously changing the traditional organizational police structure for the purpose of better communication protocol. The outdated militaristic style of policing must be replaced by community-oriented policing initiatives, implemented with the strategic goal of better communication strategies among all levels of law enforcement. Chappell (2009) referred to the implementation of new proactive policing initiatives as uneven, at best, specifically during the initial and implementation stages of the process.

Second, from a federal perspective, the United States employs a federated governmental structure which organizes law enforcement agencies and departments into separate layers (federal, state, and local) according to invisible jurisdictional boundaries (Relyea, 2004). The federated structure contains bureaucratic fiefdoms and secrecy that promote politics over substance. Prior to 9/11, each layer of law enforcement operated in relative isolation (Lansford et al., 2006). The majority of intelligence investigations are conducted with minimal communication and assistance from other agencies (Riley & Hoffman, 1995).

The concept of change requires a new set of directives for every police officer in the agency, as well as an overall organizational transformation of police culture. A shift from traditional to a community policing paradigm within police organizations may affect the morale and productivity of individual officers. New

training programs must be developed to guide local line officers through the process of sharing intelligence information with state and federal law enforcement agencies, and to become proficient at new responsibilities. Line officers must be prepared to handle the investigative, technical, and analytical aspects of information sharing. The future of law enforcement and, specifically, the rapid advancement of technology demands line officers possess the analytical skills necessary to successfully conduct domestic terrorism investigations.

Roberts (2006) stated technological change must accompany organizational change if comprehensive intelligence information sharing is to occur. The U.S. Government Accountability Office (GAO, 2006) stated prior to the 9/11 attacks, a standardized communication system was not operational, which resulted in an inferior and disjointed information sharing process. Traditionally, public safety agencies developed and acquired communication systems solely for individual agency usage, with no strategic planning for wider compatibility. Communication failures, resulting in non-existent situational awareness among first responders, increased the magnitude of the disaster of 9/11 and greatly restricted relief efforts. Rapid, effectual response to a catastrophic event is predicated on a reliable communication system capable of maintaining situational awareness and command-and-control functions between responding agencies. Currently, such a technological system that can seamlessly connect all levels of law enforcement does not exist (GAO, 2006). Modern investigative tools such as cellular phones, e-mails, the Internet, and other

wireless devices all are critical components of a successful interoperable information sharing system that must be incorporated into a single network.

The 9/11 Commission stated a single database needs to be implemented including a vertical, bottom-up approach that encompasses all levels of law enforcement. Information sharing initiatives cannot be successful without the full support of rank and file police officers, officers on daily patrol who work with the community to obtain the most accurate assessment of criminal enterprises.

Goldstein (1990) stated rank and file police officers are an invaluable resource in helping to solve community problems as well as large social problems. Goldstein (1990) believed solicitation of rank and file police officers is an excellent way to begin to solve any policing or societal problem. Rank and file officers offer opinions based on their experience of hundreds to thousands of individual cases, and offer a mix of hard facts, rich insights, and strong opinions. Goldstein (1990) believed that as scholars, there exists an ethical obligation to assess all police opinions through careful examination, and to never underestimate the enormity of their contributions.

As in the case of 9/11, even though the Constitution states the federal government is responsible for the protection of the United States, police officers at the local levels are most likely to confront a domestic terrorist. The reality of police work is even the most ambitious and well planned initiatives cannot be achieved if police officers entrusted with the delivery of new initiatives believe their time could be better utilized in other areas of enforcement. Therefore, local

police officers provide the most critical link to an information system capable of vertical and horizontal communication between agencies.

Purpose of the Study

The purpose of the study is to examine through survey data the organizational, political, and technical barriers that contribute to local law enforcement sharing relevant terrorist information with other law enforcement agencies. Following 9/11, new homeland security initiatives were created by the executive and legislative branches of the United States government. These initiatives provided new communication opportunities for partnerships between local and federal law enforcement, with the explicit purpose of the protection of the United States homeland.

The results of this study provide further insight for police chiefs and personnel of local agencies regarding the perceptions of both law enforcement officers and technology personnel as to whether information sharing initiatives are viewed as a priority. If the level of interest is high, the probability of the future achievement of a comprehensive information sharing network becomes a serious possibility.

In addition, this study focused on the level of interest among rank and file law enforcement officers that are entrusted with performing the majority of work in the field. The reality of police work is even the most ambitious and well-planned initiatives will not be achieved if the officers entrusted with delivery of police services believe their time could be better utilized in other areas of enforcement. This study identified potential barriers as well as determined

indicators for successful information sharing. If significant barriers to information can be overcome with the input and support of workers critical to the achievement of these goals, it follows that participation and growth of future intelligence information sharing programs will be advanced by this study, as well as future studies.

Justification of the Study

The reality of early 21st century terrorism has propelled the future of American policing into a new era, characterized by an emphasis on homeland security (Oliver, 2007). International terrorists thousands of miles from American soil have proven with the attack of 9/11 that the most pervasive and evil acts are now possible with the utilization of modern technology. Paradoxically, the attacks of 9/11 have accelerated the technological advancement possibilities concerning the mobilization of American police forces. The future of policing in the United States demands the proactivity, not reactivity, of all levels of law enforcement working together within the framework of an interoperable communication system. This study is justified by its emphasis on the future course of modern American policing, specifically the identification of barriers that prohibit the free flow of intelligence information across all levels of United States law enforcement. This study advocates and encourages the discussion critical to the implementation of proactive, futuristic police techniques, such as information sharing, crime analysis, and community problem-solving, all critical policing tools for the prevention of future domestic terrorist attacks.

Limitations of the Study

There were several limitations to this study. First, the study was completed with the utilization of a convenience sample as opposed to a random sample. Piquero and Hickman (1999) stated the use of convenience samples in criminological studies has been the subject of debate among practitioners (Hagan & McCarthy, 1997; Jenson, Erikson, & Gibbs, 1978). The primary issue to samples of convenience has been the issue of representativeness. Piquero and Hickman stated a limited sample assessment should be eligible for utilization, provided the sample directly relates to police officers speaking to the policing profession. According to Piquero and Hickman, police officers can be easily conceptualized in a convenience sample because this study was directly related to police officers and attitudes and perceptions of their own work. Piquero and Hickman state as long as the data is collected with questions geared toward such as sample, the resulting information gleaned from the study should be able to meet at least a minimum threshold resulting in preliminary scientific evidence regarding local law enforcement officers and their perceived support of information sharing initiatives.

Piquero and Hickman (1999) added the most vital need in any evaluation of a new area of study is the systematic collection of data. The use of a convenience sample in an experimental study presents a unique opportunity for subsequent researchers to build on the results of this study with future research, which may affirmatively influence the direction of research in subsequent years.

Issues Concerning Internal Validity

With regard to internal and external validity, Campbell and Stanley (1966) published the first scientific explanation of internal validity in modern research. Internal validity is critical to the integrity of this study because low internal validity represents plausible alternative explanations for the real factors underlying support of intelligence information sharing initiatives. Campbell's and Stanley's original research involved the educational field and specifically addressed the issue of how new educational programs could be infused into school environments. They stated the tenants of interval validity, and provided recommendations for solving internal validity problems with the aid of appropriate research techniques. Campbell and Stanley also categorized internal validity into categories of threats, which they identified as time related threats, selection threats, and threats of subject reactivity.

Campbell's and Stanley's (1966) concept of history is applicable to the possible threats to internal validity in this study. History refers to events which occur outside the control of the research setting, which may affect participants' responses in regard to their support of information sharing. Law enforcement's opinion of intelligence information sharing is shaped, in part, by the catastrophic events of 9/11 (National Commission on Terrorist Attacks, 2004). The 9/11 attack is widely recognized as the largest assault to the homeland in the history of the United States. If another major attack were to occur during the formulation of this study, this would represent a serious threat to internal validity of the proposed

study. According to Campbell and Stanley, there is no available research technique that could be employed to overcome this situation.

Another time threat to internal validity is what Cook and Campbell (1979) refer to as the concept of *maturation*. Maturation refers to natural changes that occur in the participants of studies over a period of time. As time passes from the tragic events of 9/11, law enforcements' support of intelligence information sharing could decrease based on the fact a major attack has not taken place in the United States since 2001. This researcher acknowledges there is a possibility that law enforcement personnel could believe other programs are more important to their communities based on the rationalization that no major terror attack has occurred domestically in over a decade.

Cook and Campbell (1979) additionally warned selection bias could occur when participants are not randomly selected, and instead are allowed to volunteer. These procedures can result in threats to internal validity because there may be substantial differences between those participants who decide to complete the survey and those who do not. Subjects who volunteer also can differ concerning a number of personal characteristics from those subjects who did not volunteer. For example, a study conducted by Rosenthal and Rosnow (1991) revealed subjects who tend to volunteer for studies (among other attributes) tend to be better educated, possess a higher I.Q., be more self-disclosing, and be more sociable.

Another threat to internal validity is found in the concept of reactivity. Whitley (1996) stated reactivity is a danger to internal validity because subjects

may change their behavior and react to the social situation surrounding the study rather than to the study itself. Subjects may adopt and change responses to the survey based on what they believe the researcher wants to report. In this study, the potential for reactivity was addressed by giving subjects a paper-pencil test, thus removing participants from an artificial, laboratory setting. In addition, subjects were given adequate time to respond to the survey questions. Finally, no face-to-face contact occurred between the subject and this researcher, thus minimizing the opportunity for reactivity.

Threats to External Validity

Cook and Campbell (1979) state that the concept of external validity can be expressed by answering the question of how broadly the findings in a study apply, while being simultaneously conducted under a wide-ranging set of conditions. Cook and Campbell refer to this term as simply the “generalizability of findings” (p. 42). Vidmar (1979) was more specific with the definition of external validity, dividing the concept into three distinct subgroups he called structural, functional, and conceptual components.

Vidmar (1979) described the structural component of external validity as the component which focuses on the methodology of a study. In this study, an effort was made to expand the generalizability of the study by increasing the number of police departments in the study to four, and also by increasing the scope of the study to include police departments in four distinct areas of the country. Regional police departments around the United States have different standard operating procedures and cultural norms that potentially may influence

whether the results of this study are relevant in the presence of these individual departmental differences.

Whitley (1996) stated external validity can be strengthened by increasing the overall generalizability, meaning the results can be compared from one department to another. It is an advantage of this study to be able to collect and analyze data from both *across* and *between* sites. By collecting data across sites, this researcher collected and analyzed the data as one set, across all four sites. By also collecting the data between the respective law enforcement departments, this researcher collected and analyzed the research individually for each department, and then the individual departments allowed for comparisons to be drawn from one department to another. By taking this approach, threats to external validity were minimized but not entirely eliminated. However, even after increasing the number and scope of the study, this researcher acknowledges generalizability issues remain, which never can be completely controlled. There may be differences within the departments, even with a significant increase in the number of departments participating in the survey.

The functional element of external validity refers to the degree to which the psychological processes that operate in a study are similar to the psychological processes at work in a particular natural setting. Because this study occurred in a non-laboratory field setting, the threat to external validity was minimized in relation to the functional aspect. However, this researcher acknowledges a survey contains its own set of limitations as a research technique. It is possible that subjects failed to respond honestly when completing

pen-paper tests. Law enforcement personnel may have injected their own beliefs as to the manner of which they are expected to think and behave in an artificially constructed research setting. This researcher attempted to minimize this type of behavior by ensuring confidentiality for all participants who volunteered to participate in the survey. By ensuring confidentiality, participants felt more comfortable to report truthfully.

An example of this type of threat to external validity is commonly referred to as the *Hawthorne Effect*. Adair (1984) defined the Hawthorne Effect as a problem in research experiments where human subjects' behavior is modified because the subjects in the study possess the knowledge that they are in experiment. Gottfredson (1996) theorized that criminal justice studies are more vulnerable to the Hawthorne Effect because law enforcement personnel generally seek to improve performance and solicit supervisory feedback if it will advance their careers. Also, Gottfredson stated law enforcement tends to offer promotion reviews for organizational personnel at a much slower pace than other professions. Gottfredson believed frequent reviews and job feedback are crucial to controlling for the Hawthorne Effect in all types of action research. The rationale is if law enforcement personnel are satisfied with their supervision, they are significantly less likely to alter their behavior in a research setting.

Whitley (1996) described the conceptual component of external validity as the degree to which the problem statement corresponds to problems considered important in a natural setting. Threats to external validity are minimized conceptually, in part, because the research presented in this study is of practical

relevance to law enforcement and the tasks police officers perform. The focus of this study on intelligence information sharing is directly related to the law enforcement profession and is a crucial component to the additional responsibility required of law enforcement in the 21st century. The results of this study are of direct benefit to law enforcement in the future delivery of their job duties.

Assumptions of the Study

The process of conducting social research required this researcher to make basic assumptions. It is important that this researcher recognize the assumptions made, which may or may not mitigate the research findings. In developing the conceptual and methodological framework for this study, the following assumptions were made:

- The participants in the study answered the survey questions as honesty as possible.
- The individual, organizational, and technological barriers identified in the study can be inferred to represent other settings and or other forms of organizational change.
- This researcher, through the implementation of the applied research methodology, was able to accurately identify the most important issues to local line law enforcement officers as it relates to sharing intelligence information.

- The survey instrument utilized in the study represented an accurate and reliable means to access local law enforcement attitudes, opinions, and experiences.
- The data collection procedures outlined in the Methods section of this study were able to be carried out as planned.

Summary

Chapter I introduced the importance of the study. The background, purpose statement, and significance of the problem created a roadmap for the study. The research questions and hypotheses provide grounding for the direction of the study. Finally, issues concerning internal and external validity, as well as assumptions and limitations of the study provide an additional foundation for comprehending the research.

The problem presented in this study is the identification of organizational, environmental, and technical barriers to the implementation of intelligence information sharing initiatives. Specifically, this study examined the effect these barriers have on local police officers as a determination is made to support proactive techniques needed to join federal, state, and local law enforcement together for the purpose of domestic terrorism prevention. The quantitative study examined the relationship between barriers to information sharing (Akbulut, 2003) and local police support of intelligence information sharing initiatives (Lyons, 2002).

Chapter I contained an introduction of the basic concepts of this study. Chapter II presents a review of literature related to the research questions and

hypotheses of this study. The literature review included an examination of the background surrounding the transformation from reactive to proactive policing strategy needed to prevent future terrorist attacks. In addition, police subculture is discussed to determine why the sharing of information both between and among agencies has been historically limited. Finally, technical barriers are examined to explain the difficulty in the establishment of an interoperable network, which would connect all levels of law enforcement together to aid in both investigative and emergency first responder situations.

CHAPTER II

REVIEW OF RELATED LITERATURE

Chapter I presented an overview of the problem: the barriers to the development of a comprehensive intelligence information sharing initiative across all levels of law enforcement. The purpose of this experimental study was to understand the lived experiences of local law enforcement officers as it relates to skills and strategies needed to implement information sharing initiatives. The conclusions derived from the current research study provide law enforcement leaders on all levels of government an understanding of the motivating factors of line officers in performance of their daily job assignments. Specifically, this study examined the local law enforcement officers' willingness to share investigative information with other law enforcement agencies.

The literature review presented in Chapter II summarizes theoretical and empirical studies that provide the background necessary for understanding important aspects of information sharing. A clearer understanding of the barriers law enforcement agencies confront in the establishment of improved communication is necessary to develop comprehensive counterterrorism strategy. These barriers need to be overcome to advance the efficient and accurate facilitation of intelligence information across all levels of law enforcement.

Classical organizational theory and modern structural organization theory are discussed with the goal of demonstrating how the application of the tenants of these theories can help overcome information sharing barriers. The

organizational section articulates how government bureaucracies were created and, specifically, how operational strategies evolved as a barrier to information sharing. Goldstein (1990) stated that enforcement agencies need to reevaluate organizational structure and engage in proactive policing styles, which would encourage communication and contribute to the solution of serious societal problems. Lansford et al. (2006) stated to date there is not a comprehensive, proactive information sharing strategy for the development of accurate and efficient sharing of information across all levels of law enforcement.

Documentation

The following literature represents extensive research of peer-reviewed journals, books, and dissertations authored by scholars in the fields of criminal justice, sociology, and public administration. Electronic database search engines were utilized to identify studies that increased awareness of the barriers involved in the implementation of information sharing initiatives. Electronic database search topics include the key words police, terrorism, homeland security, administrative theory, organization structure, and barriers to organizational communication. Research studies included sources determined by the author to be most applicable to increasing the knowledge of intelligence information sharing.

Classical Organizational Theory

The tenets and assumptions of classical organizational theory are rooted in the British Industrial Revolution of the 1700s (Shafritz & Ott, 2001). Classical organizational theory is comprised of three distinct aspects identified as

bureaucratic, scientific, management. The examination of bureaucratic aspects embedded within public government agencies reveals barriers that must be addressed in order to deliver efficient communicative interoperability between and among all levels of law enforcement. These tenants evolved and expanded over three centuries to provide insight into the philosophy of government agency management, as well as to explain the philosophical tenants that govern communicative strategy. Classical organizational theory described the manner in which organizations maximize efficiency and productivity in all aspects of service delivery, including communication networks.

The classical organizational model is connected to aspects implicit in all types of organizations, including police organizations (Radalet & Carter, 1994). Organizational theorists believed productive service methods could be determined via scientific inquiry, which studied specific work processes in order to systematically streamline tasks to maximize effectiveness (Shafritz & Ott, 2001). Organizational theory could be utilized to determine the most efficient way to deliver services in an organizational environment (Gulick, 1937; March & Simon, 1958; Simon, 2000; F. Taylor, 1911; Weber, 1978).

Study of Bureaucratic Organizations

Weber's (1978) work on bureaucracy defined the manner in which future public agencies communicate and organize resources. Stark (2004) defined bureaucracy as "the existence of a specialized administrative staff" (p. 38). Weber stated bureaucracy involved a particular type of administrative structure developed through legitimized authority and supported by strict discipline. The

goal of a bureaucratic organization was to increase organizational efficiency, which allowed for the expansion of organizational services. Weber's bureaucratic model advanced traditional organizational structures, and Weber believed jurisdictional areas should be clearly specified, with specific instructions assigned from superiors. Each task is perfected through the repetition of process, which, over time, maximizes efficiency. Communication within the organization followed hierarchal principles in which subordinates were required to follow orders explicitly from their immediate supervisor, which created a narrow unity of command. Bureaucracy linked formal and informal communication networks that connected organizational actors to one another through information flows. Internal rules govern all decisions within the organization, and all decisions are recorded in permanent files to form a communicative framework (Weber, 1978).

Historically, bureaucracy has been synonymous with large government agencies (Goodsell, 1983). Efficiency of communication in government agencies depends upon the efficient utilization of bureaucracy. The presence of bureaucracy creates both opportunities for sharing information and barriers to the implementation of new networks between federal and local agencies. Just as improved federal and local relations underlie an improved counterterrorism effort, information sharing is predicated on the improved construction and utilization of bureaucratic structures. The process of managing and controlling bureaucracy is an important first step in the implementation of any new government initiatives (Goodsell, 1983).

Daniels (2009) stated bureaucracy has evolved to represent the collectivity of government offices (called *bureaus* by officials) which comprised the permanent governance of the state. The term *bureaucracy* encompasses all public positions in public administration. Included are federal, state, and local members of both supervisory and line status, including officials who are both elected and appointed. The creation of improved interagency information sharing practices for the purpose of preventing domestic terrorist attacks is one of the critical aspects of current public policy initiatives involving the application of bureaucracy. Weber's (1978) bureaucratic theory contained practical organizational element, applicable to addressing serious social problems, such as domestic terrorism. However, scholars have historically viewed bureaucracy as a barrier to implementation and not as a blueprint for efficient public organizations (Benson & Rosenberg, 1960; Hummel, 1977; Merton, 1990; G. Peters, 2001).

Classical Organizational Theory and Scientific Management

Frederick Winslow Taylor (1911) provided a significant amount of literature regarding the scientific component of classical organizational theory. Taylor theorized the application of scientific management could produce an efficient organization through dedication to a one best way approach. The process inherently demanded the meticulous assessment of every detail in the delivery of service. Taylor believed strict adherence to scientific management theory served as a prerequisite to organizational efficiency from the standpoint of minimizing waste while maximizing productivity. Each step was refined until a preferred

method was acknowledged as organizational benchmark procedure. For these reasons, scientific management, specifically the one best way approach, was employed from a strategic perspective by a majority of private businesses and public agencies at the turn of the 20th century, including police organizations (Palmiotto, 2000, p. 111).

Scientific management also addresses communicative techniques, which can disseminate the most efficient, timely, and accurate information possible. Currently, no unified scientific management approach exists that allows law enforcement agencies to share information within a singular network. Moreover, an interoperable system, operating within the proscribed one best way approach, does not exist, which connects the federal, state, and law enforcement together for counterterrorism tasks of emergency response or for counterterrorism investigative purposes.

The 9/11 Commission determined the federal government in conjunction with state and local departments lacked a unified strategy for the sharing of intelligence information (National Commission on Terrorist Attacks, 2004). The result in the decade following 9/11 has been a fragmented, disjointed, process, where each state in conjunction with participating local law enforcement entered into separate agreements with the federal government. The federal government waited, whether by choice or by bureaucratic inaction, to determine which individual state and local plans possessed merit before attempting to commit to a comprehensive strategic plan on a national level.

Relyea (2004) labeled the government's approach to information sharing as a flawed strategy consisting of bureaucratic fiefdoms, a veritable patchwork of agencies from all levels. The lack of a unified strategy resulted in a hodgepodge of laws, regulations, and initiative strategies scattered among all levels of law enforcement. Principles of scientific management have not been applied to counterterrorism efforts, and the result is a disorganized approach fraught with widespread miscommunication.

Taylor's (1911) scientific management provided a potentially useful strategic blueprint from both continuity and efficiency standpoints involving information sharing practices. The 9/11 committee recommended a similar strategic approach, with a common set of standards applied to all levels of law enforcement. The 9/11 Commission recognized without a unified plan, the application of efficient modern technology would not be achieved, and government delivery of information sharing objectives would remain in serious jeopardy (National Commission on Terrorist Attacks, 2004, p. 23).

Gulick (1937) developed a system within classical organizational theory that expanded Taylor's (1911) scientific management theory while also contributing to the efficiency of overall police organizational work patterns. Gulick stated the efficiency of an organization lies within the division of labor of the members. The laborers are organized according to a unity of command structure where, as in the case of law enforcement, each officer reports up the chain of command to one designated supervisor. The consistent application of unity of

command results in more accurate and reliable information communication both between and among law enforcement agencies.

Simon's (2000) research on administration processes was considered by scholars to be a seminal work in the development of the administrative component of the classical organizational school of thought. Simon theorized administrative efficiency increased due to the specialization of group tasks. Group tasks arranged by supervisors comprised a strict hierarchy of authority model within the organization. Simon stated administrative efficiency increased by limiting the span of control at any point in the organizational hierarchy to a small number by grouping the workers, for purposes of control, purpose, place, and clientele (p. 39).

Simon's (2000) administrative efficiency concept was amplified by arranging the members of the group in a determinative structure of authority. Simon supported Gulick's concept of unity of command, but cautioned that when tasks become highly specialized, a supervisor may not possess the necessary expertise to oversee a subordinate's work. Simon concluded this principle could be utilized if presented in a truncated form. If two authoritative commands conflict, a single determinate person should be identified whom the subordinate is expected to obey (Simon, 2000, p. 43).

The application of administrative theories of Gulick's (1937) and Simon's (2000) system provides a dilemma for local police administrators attempting to implement intelligence information sharing initiatives. Police labor practices must be specialized where individual line officers are knowledgeable and possess

skills necessary to conduct information sharing responsibilities. Local police officers must be trained to analyze and identify which information is important, and report the information within a predetermined strategic communicative structure. However, police counterterrorism labor must also be organized within an open communicative system because all officers within the agency could be knowingly or unknowingly in possession of critical terrorism investigation information. The attacks of 9/11 proved disjointed pieces of information could become critical when investigated in totality with other pieces of intelligence (Oliver, 2007).

Classical Organizational Theory and Traditional Policing Management

Traditional policing model of policing advances classical scientific management in three critical administrative areas. All three areas have a profound effect on communication between and among law enforcement agencies. As previously stated, police agencies and the application of scientific management techniques are concerned with efficiency and accuracy involving the communicative work product of a given organizational structure. Second, the application of traditional policing incorporates principles of the scientific method by which its application and practice can operate within rapidly expanding government bureaucracies. Finally, bureaucratic principles and scientific management practices are inherently reactive in nature. Policing strategy is generally approached from a *micro* viewpoint concerned with specific processes of police activity, not a comprehensive approach that connects organizations

together in order to address information sharing and counterterrorism strategy from a unified standpoint (Goldstein, 1990).

Bureaucratic Models and Traditional Policing

Perrow (1967) believed the bureaucratic model was applicable to police organizations at the micro level because most large local metropolitan police forces were shaped like a hierarchical pyramid. The pyramid structure was prohibitive to efficient communication in large departments because bureaucratic layers separated police administrators from line officers. Police organizations shared with the bureaucratic model a rigid chain of command, standard operating procedures whose purpose is to dictate protocol, and adherence to a military structure, including military titles and discipline. The organizational hierarchy dictated the communication flow since information traveled from the top to the bottom in a typical police chain of command structure. In regard to local law enforcement, a significant amount of administrative delay occurs as intelligence information travels upward through authority levels. Information traditionally has been shared from the top-down; for example, from the CIA, to the FBI, and on to state and local authorities.

As noted in *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* (National Commission on Terrorist Attacks, 2004), prior to the Al Qaeda attacks, the intelligence information flow on all levels of law enforcement was inadequate. A top-down approach denigrates the value of information gathered by state and local authorities, which is imperative to counter-terrorist operations. The 9/11

Commission agreed improved information sharing practices can improve law enforcement communication by simultaneously managing bureaucracy while expediting decision-making processes. Therefore, it is critical for law enforcement agencies to distance themselves from the traditional hierarchal administration structure in favor of collaborative proactive processes, which includes seamless communication across all levels of law enforcement (Goldstein, 1987; Ratcliffe, 2003; Tilley, 2004).

Willis, Mastrofski, and Weisburd (2004) stated Weber's concept of authority was essential to the progression of police evolving from reactive to proactive organizations. Weber's (1978) authority was prevalent in police agencies on the subject of rank hierarchy, as well as police work accountability. The hierarchal structures were similar to legal-rational authority principles espoused by Weber. Police supervisors exhibit legal rational authority over subordinates, and orders are communicated directly down the chain of command hierarchy.

Police agencies have employed many of Weber's (1978) bureaucratic concepts, which has been a criticism for scholars questioning the outcomes of reactive styles of police service while simultaneously questioning the benefits bureaucracy can provide (Mastrofski, 1998). Bureaucracy has been scrutinized by scholars for the myriad of bureaucratic dysfunctions, the same type of criticism historically attributed to hierarchal public agencies. Goldstein (1979) stated, bureaucracy "places greater emphasis on their organization and operating methods within the organization, and less on the substantive outcome

of their work” (p. 236). Examples of bureaucratic dysfunction include the fixation on rules and regulations, and a pervasive clinical attitude unresponsive to societal problems (Eck & Newell, 1987; Mastrofski, 1998; Sparrow, Moore, & Kennedy, 1990; Trojanowicz & Bucqueroux, 1999).

Kim and Bretschneider (2004) found bureaucracies operated most efficiently based upon an established pre-determined protocol of handling a specific investigative situation, which is why the study of bureaucracy and scientific management has been historically linked. By performing the same task in a repetitious manner, the framework for more efficient communication networks is established. Kim and Bretschneider reported strict adherence to internal rules (also referred to as standard operating procedures) significantly helped local agencies coordinate information. The development of standard operating procedures helps to minimize organizational interference, which operates as a barrier to communication. Coordinated protocol also contributed to an increase in human and non-human communication across state and federally controlled networks. The study concluded local police organizations were open to new initiatives, so long as the local bureaucracy maintains input on the delivery of services to its citizens.

Traditional Policing and Reactivity

Goldstein (1990) explained the managerial strategy of traditional policing revolved around reactive activities. The traditional method of policing was comprised of a group of core duties, such as routine patrol, keeping the peace, and arrest and report writing (Stone & DeLuca, 1994). The traditional

organizational philosophy, as it related to communication with other agencies, was severely restrictive and limited by design (Payne & Trojanowicz, 1985).

These types of traditional police strategies developed as natural organizational barriers to the efficient flow of information sharing (Birzer & Tannehill, 2004).

Few transformational ideas were introduced during the time period traditional policing tactics gained popularity in the United States. Police officers working in the traditional organizational structure believed the quickest way to promotion was to make arrests and to limit response time for the next call of service. Police officers in this era understood efficient patrol and discipline practices lead to more arrests, which lead to promotional opportunities for all officers involved in the organization (Goldstein, 1990).

The traditional organizational relationship is opposite of the core management principles of law enforcement originally espoused by Sir Robert Peel, considered to be one of the most important contributors to the traditional method of policing (Radelet & Carter, 1994). Peel's policing philosophies (as cited in Radelet & Carter, 1994) agreed with classical organization theorists from the standpoint that successful policing was based on efficiency and strict discipline. However, Peel (as cited in Radelet & Carter, 1994) believed efficiency could be improved with the application of an inclusive police philosophy, on which encouraged all. In addition, Peel (as cited in Radelet & Carter, 1994) believed in the solicitation of public support and cooperation from community members, considered to be a radical idea for the time period.

The 9/11 Commission and scholars concluded critical information sharing barriers, which limited efficiency, could not be solved by the application of reactive police management (National Commission on Terrorist Attacks, 2004). The traditional model of police operations promoted a territorial organizational structure that facilitated communication gaps between and among the federated levels of law enforcement. Therefore, intelligence information could not be shared efficiently across all levels of federal, state, and local law enforcement. The traditional model was effective for core police activities, but lacked the comprehensive strategic procedures needed to evolve with additional opportunities provided by new technology (Ratcliffe, 2003).

Weisburd and Eck (2004) stated traditional police tactics were not only inefficient and non-beneficial in traditional core policing areas but were incompatible with the application of new initiatives and types of police services that required additional officers. The isolation of individual officers and agencies hindered the development of cooperative initiatives between and among levels of law enforcement. The study concluded this type of management procedure operated as a natural barrier to efficient police services.

Walker (1993) stated security incidents were treated as if occurred in a vacuum, an isolated occurrence never to be re-investigated. The lack of coordination and analytical opportunities for capability provided by the traditional method left police members and the community questioning whether police operations, as it existed in its traditional form, were capable of ensuring public safety. Tilley (2004) agreed with Walker who coined the traditional approach, "fire

brigade policing” (p. 165), warning of the dangers of single case investigation. The preferred communicative manner would be to link all pieces of information together in one large database, which could be used for primary and follow-up investigations. A comprehensive approach would increase communication with other agencies and allow police to operate in a manner which would strategically aid long term objectives.

Modern Structural Organization Theory-Proactive Police Communication

In an attempt to reconcile the differences between the traditional and proactive styles of police management, Burns and Stalker (1994) developed a majority of the tenants of Modern Structure Theory. Modern structure theory explored how the two organizational forms interrelated to form an efficient organizational environment. Burns and Stalker believed both reactive and proactive styles had a place in a given organizational structure, because each style had the potential to benefit an organization depending upon the goals and services provided.

Burns and Stalker (1994) framed the discussion as the mechanical organization structure versus the organic structure. This debate served as a template for the efficient management of all types of organizations, including the modernization of police services. The tenants of modern structural theory are similar to classical organizational theory, but also included neoclassical components of human relations with the inclusion of several additional assumptions.

Burns and Stalker (1994) stated the most efficient structure of an organization lies in its objective and natural environmental condition as dictated by its products and services. Most fundamental problems can be attributed to the organizational structure, and can be solved by changing the structure. The best structure of an organization should be determined, in part, by the technological process involved in the organizational delivery of goods and services (Shafritz & Ott, 2001).

Burns and Stalker (1994) believed the organic nature of management systems could be applied to modern business processes. The concept of organic organizations was synonymous with proactive police policy, making it compatible with government services operating in rapidly changing societal conditions. The organic system offered an organization less rigidity, which made the system adaptable and easily reconciled with the latest technological advancements. The process involved increased participation and reliance on the workers within the organizational structure. The organic structure was based upon information and the networking of information rather than merely following directives issued by superiors.

A precise definition of community policing has been stated vaguely in the literature and the subject of much debate among both scholars and practitioners. Leonard and More (1978) defined community policing as a vague term that encompassed a broad range of police activities and initiatives. Adams et al. (2002) and Skogan (2004) explained community policing consisted of an organizational formula of elements, including organizational decentralization,

problem-solving, and community involvement. Trojanowicz, Kappeler, Gaines, and Bucqueroux (1998) described the definition of community policing as a form of police service based on a strategic alliance of citizens and police to solve contemporary societal problems. These attributes were comprised of components necessary for the potential advancement of information sharing initiatives within the organizational parameters of community policing practices (e.g., Bayley, 1988; Cordner, 1978; Goldstein, 1990; Greene & Mastrofski, 1988; Rosenbaum & Lurigio, 1994; Skogan, 2004; Skogan & Hartnett, 1997; Skolnick & Bayley, 1986; Sparrow et al., 1990; Trojanowicz et al., 1998; Wilson, 2006).

Hickman and Reaves (2001) stated community policing gained acceptance from police professionals as both an innovative and efficient way to deliver police services. Beginning in 1984, over 150 agencies utilized a form of community policing strategy. In 1994, 42% used some aspect of community policing. In 2001, at the time of the 9/11 attack over 92% of police agencies used a form of community policing in an effort to inform the public and maintain public vigilance regarding domestic terrorist activities.

Gaffigan, Roth, and Buerger (2000) described the advantages of community policing strategy as a potential strategic organizational structure for information sharing initiatives. An additional benefit of the community policing strategy was the merger of law enforcement interagency and community cooperation to provide effective and efficient police services. The tenants of community oriented and proscribed consultation with community groups regarding local security needs and command reorganization. After consultation, a

determination could be made regarding how best to respond to the situation. Through collaborative process, law enforcement could increase connectivity with the community for the purpose of the reduction of crime through problem-solving tactics.

Wilson (2006) stated the natural relationship between the police and community made the two entities natural crime fighting partners. The police relied on the community to report crime and share information necessary to address community concerns and solve societal problems. In turn, the community relied on the police to assist in public emergencies and help curb disorder. Wilson believed the community was more receptive to the development of proactive practices because of the catastrophic nature of domestic terrorism. Since 9/11, most communities accepted the challenge and responsibility of working with police in this cause, but were reciprocally demanding more informational access and transparent police organizations.

Skogan and Frydl (1999) stated innovations in information technology allowed local police agencies to increase levels of communicative interactivity. These innovations provided police the opportunity to access different types of intelligence information more accurately and efficiently. Local police have been able to increase the coverage of assigned patrol grids, with real-time communication from agency response command centers, which increases intelligence capacity. This example of proactive practice allowed police more visibility and access within the community while simultaneously increasing patrol efficiency. The advancements in the physical and technological capacity enabled

law enforcement to make technological advancements in all types of electronic recordkeeping (Kelling, 1994).

Skogan and Hartnett (1997) added community policing allowed police agencies to decentralize services and reorganize patrol assignments to include a wider breadth of services. The community policing approach offered increased opportunities for sharing information and for increased police services to include domestic terrorism prevention. Cordner, Gaines, and Kappeler (1996) stated the goal of community policing was to change the process in which police services were delivered, and directly attack the barriers associated with federated law enforcement organizational structure. Community policing initiatives accelerated the transition of police services to a proactive, participative style that encouraged information sharing partnerships among all levels of law enforcement. The community policing strategy would, in effect, deputize all members of the community in the prevention of domestic terrorism, instead of the traditional models of policing where police operated without the cooperation of the community.

McPherson (2007) agreed community policing will be successful if operational strategies that facilitate proactive policing can be utilized. McPherson stated community policing has several philosophical applications to intelligence information sharing, which can be constituted by transforming both the organization as well as individual officers working in the organization. By taking this approach, police services would be expanded to include domestic terrorism prevention. Community policing also addressed problems not associated with

traditional police tasks. Most importantly, community policing contributed to an increase in the amount of information sharing partnerships above the local level.

Fridell (2004) stated in a study conducted by the Police Executive Research Forum (PERF) that community policing increased the amount of information sharing partnerships within the community and, additionally, facilitated partnerships between all levels of law enforcement. Kelling and Coles (1996) added the philosophy of community policing was an ideal complement to the implementation information sharing because of its shared proactive nature that enlisted the help of the community. Community policing programs originally were implemented for the purpose of helping local police organizations distance themselves from traditional, militaristic styles of police operation. The purpose was to facilitate a new era of proactive police operations where the public viewed local police departments as pro community and community friendly (Bayley, 1988; Chappell, 2009; Skogan & Frydl, 2004; Skogan & Hartnett, 1997).

Skogan, Hartnett, Du Bois, Comey, and Lovig (1999) believed traditional police activities combined with proactive policing techniques resulted in the growth of community policing initiatives. For example, the creation of police substations within local communities increased communication between the public and police. However, local police learned citizen involvement was not enough to ensure successful and consistent communicative interaction. Skogan (1994) stated police have learned community involvement in all programs must be constantly evaluated, and even with competent management, is difficult to maintain:

One of my conclusions drawn from the Chicago evaluation study is the difficult in sustaining autonomous citizen action, even with the support of local police. Organizations develop agendas that keep their energies focused, even when key leaders tire or turn their attention to other priorities. Local police agencies provide a focus for identification and commitment to the program initiatives they choose to pursue. Local police provide social benefits to participants which require constant attention. (p. 32)

McPherson (2007) stated one of the barriers of community and police relations was the organization and delegation of duties between police and the community. Organizational barriers remained, which made organizational transformation to a proactive strategy difficult to integrate. Not every community in the United States is willing to commit the resources necessary for additional policing initiatives. Participating individual community members have reciprocally demanded access to all types of police crime information. Community members, in turn, demanded more openness from law enforcement, which previously monopolized intelligence information.

Zhao, Thurman, and Reis (2008) suggested one of the unintended barriers of the proactive community policing style as it relates to information technology is it places more emphasis on communication within the agency and less within the community. Community policing tactics can rectify this situation by increasing contact with citizens. These contacts have contributed to an increase in both quality and amount of accruable intelligence. Gaines, Kappeler, and

Vaughn (1997) stated local police historically focused on the reduction of crime and local police interest in information technology traditionally revolved around this task. Information technology had assisted police with pursuing, monitoring, and arresting suspects. Traditional police procedure dictates the police receive information from interagency sources, and less from entities outside the agency.

Environmental Characteristics

Social Exchange Theory

Premkumar, Ramamurthy, and Nilakanta (1994) stated social exchange theory has provided the foundation for the study of relationships between organizations. Social exchange theory borrowed from several theory bases including, but not limited to, transaction cost theory, political economy theory, and power and politics organizational theories. The literature in this research area specifically explored the concepts of power and trust.

Social exchange theory has been utilized to explain why organizations choose to cooperate and participate with one another based upon non-economic benefits. Son, Narashiman, and Riggins (1999) stated organizations' collective behavior will be determined by the responses to other organizations throughout the business relationship cycle. Public agencies covet resources based upon a dichotomy of power and dependence. Each agency covets resources that could not be acquired without interagency cooperation.

Social exchange theory was originally developed by Homans (1950, 1974). Homans (1950, 1974) believed communication between two organizations was most likely to occur when both sides acknowledge the benefits of

exchanging resources. Homans (1974) stated an exchange of information is eminent if both organizations mutually recognize the benefits of the relationship. Social exchange theory was cited as one of the primary theories used by researchers to explain why public agencies choose to participate in new cooperative partnerships.

Social exchange theory analyzed strategic partnerships based on the possession (also referred to as power) and dependency of organizational resources. Aldrich (1976) defined power as a characteristic which offered agencies the opportunity for greater access to informational resources. Unlike power, dependency is perceived by the public sector as an undesirable organizational quality, which could result in downsizing or elimination. Public organizations that become dependent on other organizations for resources are perceived as inferior and are vulnerable to consolidation or elimination. The placement of these agencies within the overall organizational structure of the government affects the agency's ability to control scarce resources. In turn, the flow of resources from organization to organization allows each to expand, contract, dissolve, and reform as leaders deem necessary.

Benson (1975) defined relationships between organizations in terms of political economy. The term political economy is defined as the dispersal of scarce resources (information), which allows for a system of power relations (networks) to develop between individual organizations, which allow for the excursion of power (external influence) on one another. To that effect, a

significant amount of literature has focused on the power—dependence dichotomy of organizations.

The literature contains several seminal works involving organizational administration theory, which described the strategic advantages public agencies seek when engaged in cooperative initiatives with other organizations. Based on an empirical study of 22 voluntary and governmental health-related agencies, Levine and White (1961) defined exchange as a conceptual framework that offered more latitude to the narrow definition developed by Homans (1972) in his research involving small groups. Levine and White stated, “organizational exchange is any voluntary activity between two organizations which has consequences, actual or anticipated, for the realization of their respective goals or objectives” (p. 22). Although Levine and White defined exchange within the context of long range time frames and with unequally empowered organizations, the conclusion was that organizations aspired to maximize power within their organization while limiting dependency on other organizations.

Levine and White (1961) cited the necessity for interorganizational cooperation due to resource, labor, or client scarcity, and defined the degree of interdependence between such organizations as a function of its access outside the organizational structure. Levine and White framed the dimensions of exchange in terms of the parties involved, kinds and quantities of entities traded (i.e., resources, information), nature of the agreement underlying the cooperation, and the consistency of organizational definitions.

The second study is Litwak and Hylton's (1962) treatment of the role of coordinating agencies at the local level. Litwak and Hylton evaluated three factors that comprised a matrix of the type of mechanisms designed to achieve coordination between two or more agencies. The study relied on the assumption that political conflict exists between agencies in the public sector because organizations aspire to achieve a maximum level of autonomy. The three variables tested were partial interdependence, awareness of interdependence, and transactions capable of being defined in standardized units of action. Litwak and Hylton focused on the study of interorganizational relations within the context of unstructured authority, and later compared and contrasted unstructured authority in terms of international relations between two governments.

Guetzkow's (1962) study described three ways in which organizations interact with one another. The interactions were identified as interpenetration of partnerships, specialized roles of interaction across organizations, and interactions through supraorganizational processes. The study was relevant to criminal justice in that it involved the utilization of joint committees and task forces. Roberts (2006) stated task forces traditionally have been the preferred strategic method for sharing information across all levels of law enforcement. Guetzkow identified both power and dependency relationships in which coordination could be operationally accomplished through power and dependency models. Guetzkow believed interaction between agencies could be demonstrated through tacit coordination through consensus, domination by one organization over another, and the establishment of new organizational entities

through initiatives. Guetzkow agreed with Levine and White's (1961) exchange-based model from the standpoint each organization assists the other toward mutual goals in the course of service initiatives.

Bureaucracy of Individual and Organizational Social Interaction

A large section of bureaucratic literature involves the examination of the individual worker's interaction within the larger organizational structure. The individual relationships are found in the social exchanges between individuals in their own departments, relationships with other law enforcement agencies, as well as the relationship of workers within their overall organizational environment. Lipsky (1980) stated at its core the routines, simplifications, and environments of street-level workers are inherently political (p. 84). Work product often is altered by worker biases, which are determined by worker motivations of self-interest as well as the interest of clients they are entrusted to serve. Street-level workers, in effect, exchange the manner in which they perform their designated duties for personal benefit and career benefit as well as for benefit of others of which they are politically aligned.

Nonet and Selznick (2001) stated that bureaucratic organizations through examination of their hierarchical organizational structure tend to promote the institutionalization of individual work patterns found in a public bureaucracy. Selznick introduced a relevant definition of an institution, which is applicable to information sharing. Selznick's research defined institutionalization as "the emergence of orderly, stable, socially integrating patterns out of unstable, loosely organized, or narrowly technical activities" (Nonet & Selznick, 2001, p. 272).

Selznick stated the stabilization of individual patterns as well as the individual worker's dedication to following the rules and regulation contained within the proscribed work patterns will be contributing determinants to the outcome of any given public policy.

Merton (1990) introduced the concept of the "bureaucratic personality," in which officials follow "ritualistic or extremely rigid behavior that detracts from efficiency" (Merton, 1990, p. 141). The essential feature of this *personality* is "the displacement of goals whereby an instrumental value (e.g., efficiency or adherence to procedure) becomes a terminal value" (Merton, 1990, p. 141).

Downs (1967) offered a comprehensive review of the subject of bureaucracy as it relates to innovation with his presentation of the laws of increasing conservatism, imperfect control, counter control, and control duplication (Goodsell, 1983; Nachmias & Rosenbloom, 1980; Nigro, 1970). Levitan (2001) demonstrated how the institutional approach employed in bureaucracies may ultimately affect decisions made by individual workers. Goodsell (1983) agreed that an overly narrow emphasis on more narrow objectives, such as procedure or efficiency, might engender a lack of concern for broader agency goals.

Research by Warner (2007) and Kohn (1971) placed the correlation between bureaucracy and bureaucrats and behavioral traits, such as conservatism, goal displacement, and narrow-mindedness, into question. The findings from studies conducted by Warner and Kohn appeared to contradict Merton's (1990) notion of the bureaucratic personality. The bureaucrat of Kohn's

type values self-direction, open-mindedness, and flexibility. Kohn suggested that within the structure provided by a bureaucracy, administrators may find themselves more free to peruse new initiatives than their counterparts in non-bureaucratic organizations (Goodsell, 1983; Wilson, 2006). Peters (2001) also observed “tension . . . between the role of the bureaucracy as advocates of innovation in policies and their role as conservers of procedures” (p. 225). The dichotomy between these two objectives appears to gravitate back and forth as public servants interacting with bureaucracies adapt and respond to external pressures both from within their own organization politicians and constituents.

Lipsky (1980) offered several tenets applicable to understanding the manner in which bureaucracy functions within public sector agencies of the United States government. One of the similarities between street bureaucracy and homeland security policy is that both seek the implementation of a strategic framework (from an individual worker perspective), which operates from the bottom to the top of the bureaucratic hierarchy. Lipsky explained how the informal communication network between and among public agencies both evolves and operates within public bureaucratic layers. Lipsky unequivocally stated that power in American public bureaucracy continues to shift towards street-level workers who, among other tasks, are increasingly working in positions critical to public safety. Street-level workers, not group supervisors or upper-level administrators, are directly responsible for successful individual outcomes in all types of public agencies.

Lipsky (1980) stated police officers, on a macro level, learn to navigate between formal and informal policies set forth in their respective agencies, and the interpretation of both formal and informal policies becomes part of police culture. All aspects of job processes are analyzed, including the effect of street-level bureaucracy on communicative processes between and among agencies as well as the efficiency of which their particular bureaucracy operates. One of the integral ways individual public workers become powerful within a public bureaucracy is by their ability to ration public service resources in the probable event of scarcity. Information, particularly credible tips from informants, is perhaps the most valuable investigative tool police officers possess. Street-level police officers determine the flow of information up the chain of command by choosing to withhold or release privileged information. This situation allows street-level police the opportunity, if desired, to manipulate the system for individual benefit.

For example, Lipsky (1980) pointed out the suppression of information leads to lighter police officer caseloads and paperwork. Officers know that when information is sent up the chain of command, they will be responsible for providing follow-up investigations and reports. Therefore, street-level agents may choose to put up roadblocks, such as offering a confusing litany of regulations and guidelines as to how citizens can report terror information. This type of conduct would theoretically reduce the number of credible citizen tips over a period of time.

Lipsky (1980) stated communicative efficiency, like all types of efficiency, develops from an ongoing process that involves the simplification of routines. Lipsky was specifically interested in the structuring of routines as well as the copious examination of the contexts found within work routines. Lipsky believed that the determination of routines by street-level public servants would lead to the eventual formation of coherent and efficient public policy.

Lipsky (1980) also pointed out the evolvement of public policy is never predetermined. In terms of measuring departmental efficiency, it may lead to increased or decreased levels depending on the beliefs and biases of the individual workers involved. The worker will act autonomously to the policies already set forth by his or her employer and may choose a certain course of action regardless of individual positive or negative views of information sharing.

Maynard-Moody and Musheno (2000) added to the work of Lipsky (1980) by suggesting that although discretion is an interregal component of the job of the street-level worker, discretion can diverge into two distinct paths: as an agent for the individual citizen or as an agent for the state. Maynard-Moody and Musheno believe discretion, at its core, is the attempt of a public servant to reconcile their responsibility as both a state and citizen agent. Both narratives are not mutually exclusive, and experimentation continues until the public servant settles through their work experiences and determines the preferable course of action.

The individual narrative suggests public servants will base work decisions on what they believe to be the value of the clients they serve. According to

Maynard-Moody and Musheno (2000), this type of public service agent will respond exclusively to individuals and circumstances. The service agents do not describe themselves as public policy implementers or contributors. They do not describe their decisions and actions based on the views of correctness of the rules, wisdom of the policy, or accountability to any hierarchical authority or democratic principal (Maynard-Moody & Musheno, 2000, p. 329).

Contrary to the citizen-agent, the state-agent narrative suggests public servants will be influenced primarily by self-interest throughout the course of their duties. The street agent will be guided by the path of least resistance as well as the opportunity to make their work duties safer, easier, and more rewarding. The street-level narrative suggests these workers are potentially informal policy makers, yet many carry an honest concern over the impact their discretion has on the system as a whole (Maynard-Moody & Musheno, 2000, p. 329).

External Influence: Incentives

External influence can take the form of encouragement or pressure and can vary from recommendations, requests, or the imposition of penalties. In order to create a climate for successful information sharing, a reward or punishment system can be utilized. Markus and Keil (1994) believed if new government systems are not reinforced by monetary incentives, the initiatives are likely to fail. Similarly, Garfield (2000) agreed that without adequate financial support and oversight, federal systems were less likely to succeed.

Bingham (1976) explained that intergovernmental grants, transfers, and technical assistance contribute to the adoption of innovations by local

governments that are critical to the process of information sharing. Bingham agreed that government agencies providing the grants design them in a way that the other agency seeking the grant should take action in the desired fashion. Electronic information sharing requires the participation of several stakeholders, and such sharing can promote conflicts of interest within the overall organization.

Chess (2001) explained organizational entities that enter into business contracts with one another are habitually influenced by external forces. Likewise, external influences are a critical variable to the successful implementation of any information sharing program. The creation and development of information sharing programs is strategically assessed as a necessary survival mechanism. Chess (2001) and Chess, Salonlone, and Hence (1995) suggested that in order for organizations to enhance information sharing efforts, an evaluation is needed to assess both the process and the outcomes of potential initiatives. Researchers cited intergovernmental influence as a significant factor in the adoption of innovations by participating agencies (Chess, 2001; Leiss, 1996).

Trust

The research literature offers a variety of suggestions for overcoming the organizational barrier of trust. As a result, some common themes emerge which may overcome barriers and further assist in the development of information sharing initiatives. Interagency trust has been a perennial barrier and has been difficult to achieve and maintain in law enforcement because of political pressures, the presence of territoriality, and frequent jurisdictional disputes. The benefit of building trust in the public arena is viewed as a precursor for increased

communication as well as the improvement of communication protocols. Trust has gained importance for law enforcement agencies as new information sharing initiatives are formed. It is considered by both academics and practitioners to be a crucial first step for the delivery of public services (Leiss, 1996; Sjoberg, 2002).

Trust has been identified by scholars as a fundamental element for developing communicative networks between agencies. Research has suggested that trust is a precursor for communicative openness, facilitates commitment between agencies, and encourages cooperation. From a purely organizational standpoint, trust refers to the belief law enforcement agencies will engage in actions that will result in partnerships which lead to positive outcomes for all participating agencies. Peters, Covello, and McCallum (1997) identified variables closely correlated to trust as openness, concern, and a desire to increase knowledge.

Dawes (1996) stated trust is a fundamental precursor for sharing information. This statement especially is applicable to intelligence information available only through security clearance. The facilitation of trust provides members of public agencies with an optimistic anticipation of the interaction, and the belief information will be utilized for the benefit of all involved agencies. Dawes believed the absence of trust inherently limits government initiatives and increases bureaucratic red tape and administrative delay. Dawes stressed the importance of explaining the benefits of sharing information to agency supervisors prior to the attempted integration of new initiatives.

Landsbergen and Wolken (2001) stated a lack of trust among public agencies causes each agency to ultimately collect its own information, resulting in increased bureaucracy and duplication. Danzinger (1979) stated an information bias occurs for information acquired outside the scope of the originating agency. The national research council stated trust between agencies is directly correlated with the accuracy of information exchanged, legal standing between the government agencies involved, and the amount of information that needs to be verified with other government sources.

Organizational Culture Theory

Organizational culture theory is relevant to information sharing because an investigation of police subculture reveals inherent barriers to communication. Trice and Beyer (1993) stated all public and private organizations contain cultures resistant to change. Organizational change theory involved the examination of police subculture to determine which aspects of police subculture act as barriers to the implementation of information sharing networks. New initiatives can become future values to an organization if members of the organization can be persuaded to support the proposed change.

Trice and Bayer (1993) also stated the transformation of an organizational culture is universally problematic because dominant values in mature organizations are slow to change. Organizations that seek meaningful change must redefine their organizational culture, which includes written policies, protocols, and procedures. This must be accompanied by individual member change in the areas of values and belief systems. Organizational changes need

to be introduced slowly through a combination of voluntary retirement, employee turnover, and in-house training, which over time represents a generation of workers within an organization.

Morgan (1998) explained culture is derived from the word “cultivation,” which was attributed to “the process of tilling and developing land” (p. 112). The process of cultivation is obtained from the identification of patterns associated with different forms (Morgan, 1998). Morgan identifies the various forms as values, knowledge, and protocol, which over time are considered routine procedure. These routines are components of a larger social system found in mature organizations, such as law enforcement agencies.

Scholars utilized organizational culture theory, in part, because by examining the patterns of behavior passed down from groups of workers over a period of time, a baseline of behavior develops. Behavior can be compared to the proposed new ideas (communication of information through proactive police service) so that it can be measured in an organization. Shein (1996) defined organizational culture as “a pattern of shared basic assumptions that a group learns as it solves its problems of external adaptation and internal integration” (p. 34). These tenants operated efficiently enough to be considered valid, over time, and therefore taught to new members as the correct way to perceive, think, and feel in relation to organizational work problems (Shein, 1996, pp. 373-374).

The protocol and knowledge passed generationally from one group of workers to the next is passed through three tenants of organizational culture theory defined as artifacts, values, and basic assumptions. Shein (1996) defined

artifacts as “visible organizational structures and processes which are easy to depict, but difficult to decipher” (p. 17). An example of an artifact in a police organization is the side of a patrol car which reads, “to protect and to serve” (Shein, 1996, p. 14). This example is a symbol of police power and the image of police as the good guys. The artifact contains cultural significance for each member as accepted pursuit and practice of police organizational goals. Manning (1997) stated these images serve as a powerful force behind the establishment of a culture of a police agency and of the image of individual members working within the agency.

Rank and file officer values and belief systems comprise the backbone of police organizations (Trojanowicz et al., 1998; Walker, 1993). The values and assumptions developed by line officers through experience on the job is essential to information sharing, but also a potential barrier to planned organizational change. Line officers’ views and ultimately support of change is imperative because rank and file officers are entrusted with the delivery of all new strategic initiatives. Specifically, line officers are more likely to confront potential terrorists than any other position in a police organization (Crank, 1998). However, patrol officers are at the bottom of the power hierarchy in a traditional police organizational chart, and police strategy does not originate from the bottom, which tends to stifle innovation among members (Angell, 1976). New policing practices need to be implemented, which allow inclusion of line officer participation in a proactive organizational system.

Line Officer Support

Chappell (2009) suggested administrators can alter police subculture, and thus increase support of new programs through a combination of recruitment, education, and training. However, the rate of change in any organization is predicated based on positive worker perception of the changes before support can be given. The changes must be of career benefit to every member of the organization. The proscribed changes must involve new work activities that support perceived officer strengths, so officers know their skills can contribute to new procedures. Change needs to be executed in an expedient fashion so workers can see the positive effects of changes as they are implemented. Chappell stated the efficacy of change is an important consideration because of historical police organizational resistance to police innovations of any meaningful magnitude. The examination of police officer attitudes is important to proactive police practices, such as community information sharing initiatives, because prior research has indicated attitudes are strongly correlated to behavior (Engel & Worden, 2003).

The transition from a traditional to a community paradigm within an organization brings a new set of values and basic assumptions to the police job description. New initiatives must be developed to guide officers through the process of sharing information with other law enforcement agencies before officers will support new processes. Line officers must be trained to contribute to new initiatives with the investigative, analytical, and technical skills needed to efficiently share information with federal law enforcement agencies. For example,

leading a neighborhood meeting where intelligence information is gleaned, networking with police officers in other agencies, or providing analytical analysis of a terrorist threat and reporting the threat via computer, all are critical office activities towards the implementation of information sharing initiatives. This type of comprehensive change requires years of work in order to change the values and belief systems of individuals who are used to performing daily activities using fundamentally different police protocol (McPherson, 2007).

Sadd and Grinc (1994) described the recruitment of line officer support of new initiatives as a battle for the hearts and minds of all involved. A significant barrier exists to transform police employees selected, trained, and socialized to perform one task, and then instruct police officers to perform in a manner which fundamentally changes operation protocol. If information sharing initiatives are to succeed, supervisors must persuade line officers to believe that information sharing initiatives will benefit all levels of careers within the organization. Supervisors must sell new innovations that will enhance willingness to pursue goals associated within in a proactive manner consistent with implementing information sharing practices.

Internal Pressure

Schermerhorn, Hunt, and Osborn (1994) stated a barrier to organizational innovation is tension between line level employees and their supervisors. A benefit of proactive police strategy is the improvement of relationships due to an increased element of line level participation with supervisors in organizational decision-making. Reuss-Ianni (1983) stated a proactive approach bridges

potential divides within the two groups and increases overall organizational communication. McDonnell (2002) agreed, “communication between two groups in the same organization is a social affair involving the sharing of information. The emphasis of proactive management relations is in the sharing aspect of communication” (p. 406).

Crank (1998) stated many of the disagreements between line officer and supervisors could be eliminated by increasing the levels of communication within an agency. Blau (1963) stated a lack of aligned strategy as well as the traditional division of labor and management within the organization ultimately contributes to communication breakdown. Line officers often misinterpret the purpose behind supervisor decisions, and supervisors believe certain officers may not be following previously established police protocol.

The division between supervisors and line staff serve as a barrier to communication problems. One of the causes of communication breakdown inherent to the police subculture is secrecy. Westley (1953) stated secrecy is a dangerous value embraced by police subculture. However, secrecy generally is not considered by line officers to be a negative police subculture trait. Secrecy has evolved as an honorable trait for a police officer within the organization. Westley stated the police subculture equates secrecy or non-communication with solidarity, loyalty, and trust. Secrecy and silence are the first rules impressed on a new recruit. Thus, scholars focused on ethical over investigative considerations that have negatively impacted local departments in the last century, such as

corruption and use of force (Kappeler, Sluder, & Alpert 1998; Lersch, 2002; Skolnick, 1994; Stevens, 1999; Weisburd & Greenspan, 2000).

Westley (1953) stated police are encouraged by members of their own agency to keep investigations in house for both the benefit of the agency and for self-preservation. If line police elect to circumvent the established chain of command protocol, the action is considered disloyal. The irony is officers who leak information are punished by an informal future restriction of information regarding other investigations. The result is the individual officers' access to information within the department is severely restricted; hindering his or her ability to make cases, and decreasing the possibility of promotion within the department.

Manning (1997) stated the willingness to share information with unapproved entities either inside or outside the agency conflicts with what Weber described as "official secrets" (p. 227). Official secrets are defined as information and knowledge that accumulate over time and grow with experience of service. Police subculture dictates that information equates power, and police are reluctant to relinquish, including other police officers or members of the public (Weber, 1978).

Willis et al. (2004) observed in their case study involving officers in Lowell, Massachusetts that a limited amount of information sharing between officers in the same department was taking place, which is necessary to solve societal problems such as terrorism. Willis et al. believed information sharing was limited due to the expectation of supervisors, who possessed the most critical

information within the agency, and had the duty of protecting the information that would be closely guarded and not shared. This situation has prevented line officers from sharing information in that the practice of sharing information up the chain of command could be misconstrued by supervisors as criticism of job performance. Therefore, in the prevailing survival of the fittest mentality, most line officers do not speak at meetings, and follow what is generally referred in the police subculture as taking the path of least resistance and risk.

Technological Barriers

Barriers to technological aspects of information sharing also must be addressed in conjunction with new administrative and organizational initiatives (Akbulut, 2003). Barriers to implementation include the determination of classified and declassified documents in a rapidly expanding federal bureaucracy. All documents must be assigned a security clearance prior to transfer to state and local law enforcement agencies (Roberts, 2006). Second, the skill level and support of information technology workers on both the federal and local levels are critical to the expansion of information sharing initiatives (Garfield, 2000). Also, the barriers involved with the complexity and logistics of implementation of a comprehensive system must be addressed before information can occur across all levels of law enforcement (Damanpour, 1991).

Roberts (2006) stated the new applications for technology in government agencies has contributed to the dramatic increase in the volume of government documents. Classified and de-classified documents must be organized efficiently for information to flow from the federal to the local levels. The coordination of

information is complicated by the diversity of terrorist related documents.

Department archivists responsible for the organization and transmission of such documents are overwhelmed by the quantity of government documents available for interagency transmission. Patterson and Sprehe (2002) reported even though government leaders sought to reduce the amount of paperwork through paperless office applications, such as databases, spreadsheets, and email, the amount of data has increased to millions of unsorted, unclassified intelligence documents over the past decade.

The Government Accountability Office (GAO, 2006) stated The Homeland Security Department was created, in part, to implement the ambitious goal of sharing information fluidly between the federal, state, and local levels of government. Terrorism information is rendered useless if not shared in a timely and efficient manner. An interoperable communications system must be implemented to rapidly and accurately inform all relevant parties in the case of a terrorist attack. A comprehensive incident command and operations plan—detailing responsibilities and chains of command—also must be in place for emergency use. Such a plan allows officials to determine the most appropriate means of achieving interoperable communications (GAO, 2006). The proposed communication system must be inherently functional, allowing for the efficient access to information.

Technological advancements need to be introduced concurrently to any organizational changes so intelligence information may flow freely through all levels of law enforcement. To this end, the 9/11 Commission urged federal

agencies to develop a decentralized network, which included state and local law enforcement agencies. The National Strategy for Homeland Security recommended (and was subsequently endorsed by the 9/11 Commission) information sharing processes and techniques as one of the four pillars leading to improved national security. The 9/11 Commission (National Commission on Terrorist Attacks, 2004) recommended

a national environment that enables the sharing of essential homeland security information Information will be shared horizontally across each level of government and vertically among federal, state, and local governments' private industry and citizens. With the proper use of people, organizational processes, and technology, homeland security officials throughout the United States can possess complete and common awareness of threats and vulnerabilities as well as the knowledge of the personnel and resources available to address these threats. (para. 141)

Information Technology and Worker Attitudes

The collective talents displayed by government workers historically had been a predictor of information sharing success. Tornatzky and Fleisher (1990) as well as Perry and Danzinger (1999) observed the successful introduction of new technologies is determined by the skill level of its operators. Organizations that employ well-trained, experienced personnel tend to incur smaller training and equipment costs in the integration of new technology. When police officers' concerns of new initiatives are addressed directly, they are more likely to participate in new initiatives (Swanton, 1981; Tait & Vessey, 1988). Initially,

workers need to be convinced of the utility of new information systems. However, continued exposure and reinforcement to new technology resulted in increased user satisfaction and cultivated an environment conducive to further participation in innovative projects.

Marchand (2004) stated positive worker attitudes have facilitated the implementation of new information-sharing programs, particularly at the federal level in regard to information technology. Marchand stated management must stress the quality of interaction between users and information processing in the organization. To the extent information systems are a means for achieving organizational ends, information systems also must be responsive to the tasks of government workers.

The presence of network representatives in both leadership and support-roles is important to success. Garfield (2000) and Norris (1989) demonstrated the presence of a network representative is critical to the success and acceptance of computer-linked systems. Garfield stated both user and technical experts must be present within each organization. User experts guide the use and promotion of the system, and technical experts make certain the systems operate effectively.

Garfield (2000) introduced the term *agency championship*, referring to the function of an internal sponsor of a technology initiative. Research suggested individual sponsorship is important in the implementation of interagency information sharing systems. Garfield demonstrated how a system-wide champion is essential to attract interest and coordinate the implementation of an

information sharing program. The existence of project champions was found to be a significant element in the successful implementation of 83% of the information systems studied by Runge (1985). However, the existence of a single system-wide project champion is not always sufficient (Volkoff, Chan, & Newson, 1999). Garfield demonstrated the presence of a network of site champions was important for the implementation success of networked computer systems.

The benefit of employing workers with prior experience and expertise concerning technological initiatives is a significant factor that affects a public agency's ability to establish new organizational and technological systems. Organizations that have past innovation experience tend to be more inventive in other areas (Damanpour, 1991). Norris (1989) and Newcomer and Caudle (1991) found that previous agency information technology experience is a significant factor both in the adoption of new systems and the development of a positive organizational climate.

Information technology literature has repeatedly emphasized the importance of meticulous management to coordinate information sharing and homeland defense (Posner, 2003). For example, the U.S. Government Accountability Office [GAO] (GAO, 2003) cautioned the "introduction of newer, faster, cheaper technology is not a panacea for flawed management practices or poorly designed business processes" (p. 3). The Accounting and Information Management Division of the United States Government and Defense Information Systems observed the underlying problem with government information sharing is poor management (GAO, 2003).

Research by Public Technology (2000) reported effective information security is not related exclusively to technology, but instead requires strategic acumen on the part of management. Research by Berman and West (2002) concluded information technology workers need to combine technical expertise with management savvy to successfully work with other agencies in order to achieve strategic objectives. Moreover, the Institute for Information Infrastructure Protection (International Association of Chiefs of Police, 2002) determined a well-designed information security system “requires expertise in information management and security technologies, as well as an understanding of policy requirements, business models, and organizational processes” (p. 2).

The use of information technology speeds information flow and facilitates positive management values within an organization. However, the extent which information technology reinforces organizational values often depends on its implementation into the organization. Owen (1989) stated, “the creation of management values is useful for the reduction of administrative delay through information technology is to a larger extent a human and organizational problem and to a lesser extent a technological problem” (p. 2). In addition, middle and upper-managers should be accountable for their respective agencies regarding information security practices. Information technology managers must possess a unique understanding of information-related risk in order to make prudent decisions.

Organizational Complexity

Organizational complexity seeks to capture the overall scope of an agency's operations, specifically in the areas of specialization, functional differentiation, and attitudes of the implementing workforce (Damanpour, 1991). Complexity is an important consideration in any proposed information sharing initiative, because complexity is one of the most prevalent barriers to the implementation of information sharing. Rogers (1995) defined complexity as the degree to which an initiative is difficult to understand and implement. Social scientists searched for accurate units of measurement that will be able to analyze the degree of complexity involved, because the degree of complexity correlates positively to the rate of successful adoption of initiatives.

Social scientists often analyze proposed information sharing initiatives from the perspective of a complexity-simplicity continuum. This continuum allows each initiative to be analyzed using a common system of measurement. According to Zaltman, Duncan, and Holbek (1973), information sharing initiatives inherently involve a series of complex ideas. The intrinsic nature of electronic information sharing also involves a higher level of complexity in terms of logistics and the ability to implement an initiative, such as information sharing, across the entire organizational structure contained in both federal and local law enforcement.

Complexity as it relates to the topic of information sharing also can be analyzed from an individual perspective. Rogers (1995) stated the complexity of an initiative or innovation, as it is perceived by members of an organization, is

negatively related to its rate of adoption. When a communication network is complex to the point of non-comprehension, a natural human tendency exists to reject the initiative and withdraw from participation.

The proposed communication system must be usable, thereby enabling efficient, easy access to information. Taylor (1986) pointed out that usability of a system is related to the interface between the system and its human user. Factors such as design, standardization, and coordination between information systems, as well as the location of computing resources, are significant factors that determine the efficiency and usability of information systems. It follows that user-friendly systems are accessed more frequently and with greater success.

Watson, Houdeshel, and Rainer (1997) explained why traditional information systems have had a limited impact on the upper management: despite claims of usability, they are too complex to be used by a majority of government agencies. User-friendliness rather than purely technical optimization ultimately is a critical element of an information technology system.

One method for organizational planners to assess complexity is to analyze the complexity of networks operating within the confines of the overall network structure. This process can be accomplished by analyzing the extent to which a network is considered to be structured or unstructured. Communication structure helps analyze the speed and stability of a network, which are both important indicators of the complexity of the network. From an organizational standpoint, network innovations, which contain relatively simplistic ideas typically, are given more consideration by planners than complicated ideas.

Choi (1993) stated network structures can be measured to the extent that human decisions needed to run the systems are repetitive. Because the tasks involved in computer network systems are repetitive, the organization has previously developed a specific organizational process for handling problems. Conversely, when a request involves an unstructured action, it involves a decision that has not been previously handled, and thus likely to consume more time and resources to remedy the situation. Unstructured information results in an inefficient response, and is referred to by computer network experts as administrative delay.

Choi (1993) stated the scale of novelty of an organization also has a direct correlation to complexity. Typically, government organizations that share intelligence information as one of its missions fall on the large-scale end of the continuum. When the scale of novelty is large, an increased level of commitment, resources, and manpower is required. It also allows for larger systems than would be created in the private sector, with a greater percentage of unstructured network systems. As Kaufman (1977) pointed out, characteristics that would be considered unacceptable and dangerous to organizations in the private sector often are tolerated in the public sector, due to government agencies' unwavering commitment to equity, transparency, and oversight. Inefficient practices such as duplication and multiplicity in complex processes involved in the public sector often are justified in government organizations that lack a competitive economic environment.

The management of information systems and, specifically, the management of data streams are a critical component of information sharing. Intelligence data shared between agencies often arrives in an unstructured fashion. Unstructured data is by definition non-compatible with the current agency structure, and thus takes additional resources and manpower to conduct information searches. Roberts (2006) referred to unstructured data as “the beating heart of any government agency, the center of everything the agency seeks to accomplish” (p. 212).

Structured data provides a framework of which intelligence information can be processed programmatically. Downs (1967) warned that computer systems typically respond only to standard protocol previously programmed according to old standards. Lost and misreported information is inevitable under this type of system. Myers (1967) and Reif (1968) warned structured data codes contain a predetermined amount and type of information, and must be managed properly even if the information is converted from structured codes.

Many of the factors of compatibility and complexity contain a combination of network and organizational attributes. For example, a network innovation compatible with one organization might be completely incompatible with another. Similarly, supervisors in a governmental organization may favor one innovation over another and aspire to increase budgetary resources for their favored initiative at the expense of other initiatives. Therefore, compatibility is best viewed as a combination of information technology networks and organizations merging to establish new processes. Wise (2002) emphasized, “the search for

compatibility in implementation of an idea is impossible in the absence of agreement on priorities and goals” (p. 5). Therefore, the coordination of goals both between and among agencies is essential in order to achieve interoperability across all levels of law enforcement.

Research Question and Hypotheses

This study is designed to address the following research question: What factors influence intelligence information sharing between local and other law enforcement agencies? The following hypotheses were tested:

- H1: There is a significant linear relationship between the gender of a police officer and support for information sharing.
- H2: There is a significant relationship between race and police officer support of information sharing.
- H3: There is a significant linear relationship between the educational level of police officers and support for information sharing.
- H4: There is a significant linear relationship between the experience of police officers and support for information sharing.
- H5: There is a significant linear relationship between prior military service of police officers and support for information sharing.
- H6: There is a significant linear relationship between the type of training police officers receive and support for information sharing.
- H7: There is a significant relationship between the size of a police department and support for information sharing.

- H8: There is a significant linear relationship between support for community policing and support for information sharing.
- H9: There is a significant linear relationship between the complexity of communication tasks and support for information sharing.
- H10: There is a significant linear relationship between perceptions of external influence and support for information sharing.
- H11: There is a significant linear relationship between perceptions of internal influence and support for information sharing.
- H12: There is a significant linear relationship between perceptions of trust between federal and local police agencies and support for information sharing.

Summary

Chapter II presented a review of the literature related to the research questions of the study. The intent of the presented information was to ground the study upon current research on the topics and to lend support for an investigation into what correlations exist among the variables of the study. To fully explain the complexity of accurately and efficiently sharing intelligence information between all levels of law enforcement, the literature review included a detailed description of the police organizational movement from reactive to proactive police strategies. Other topics reviewed included organizational bureaucracy, community policing, and a description of information sharing strategies post 9/11 between federal and local agencies. Chapter III provides a detailed description of

the methodology to be employed to gather and analyze data in sufficient detail to suggest recommendations to answer the research questions.

CHAPTER III

METHODOLOGY

Chapter III presented the research methodology. This chapter described in detail the methods which were employed in the study. The methodology section included the sample, instrument development and testing, data collection, and analysis.

Research Method and Design Appropriateness

The research design of this study was an elaboration logically derived from the Statement of the Problem and Purpose of the Study sections from Chapter I (Simon & Francis, 2006). A need to describe and measure the degree of relationship between two or more variables resulted in the selection of a quantitative design (Creswell, 2005). A quantitative research method, specifically, correlation analysis, provided the group of statistical measures considered necessary to portray the relationships between the dependent and independent variables (Leedy & Ormrod, 2005).

Quantitative Research

The goal of quantitative research is to collect numerical data and construct statistical models in an attempt to explain observations (Creswell, 2005). Researchers use questionnaires, in part, to collect data, which is efficient in testing hypotheses (Leedy & Ormrod, 2005). Quantitative research is objective, and the research field describes it as *countable*. Quantitative research involves asking specific, narrow questions to obtain measurable variables (Creswell,

2005). The use of a survey instrument to collect data from preset questions lends itself well to a quantitative method of measuring the variables (Neuman, 2006).

Quantitative research differs from qualitative, as quantitative seeks to systematically, factually, and accurately describe the facts and characteristics of a given population or area of interest (Neuman, 2006). Quantitative research uses detailed questions to obtain measurable and observable numerical data on variables (Creswell, 2005). Qualitative data collection is subjective because the data collected is in words, pictures, or objects (Neuman, 2006).

The selection of a quantitative design is appropriate when variables of the study are clear (Creswell, 2005). When variables are unknown, a qualitative design may help identify what is important, determining, in part, what needs to be studied (Leedy & Ormrod, 2005). Qualitative research studies typically help describe, interpret, and validate certain assumptions or generalizations (Neuman, 2006). Because the variables for this study are clear, a quantitative design examined the relationship between the variables in order to address the research questions.

Quantitative research uses a language of variables and relationships among variables to investigate research questions. A variable, as opposed to a constant, can fluctuate or be expressed as more than one value (Simon & Francis, 2006). Quantitative designs have at least two types of variables: independent and dependent (Creswell, 2005).

Understanding variables is essential in analyzing the data collected. Distinguishing between dependent variables and independent variables is

imperative (Creswell, 2005). An independent variable stands alone and is not changed by the other variables measured. Dependent variables are contingent on other factors.

Quantitative descriptive research methodologies include correlations, observations, and surveys. Additional quantitative approaches include experimental and causal-comparative methodologies (Neuman, 2006). Each of these approaches yielded information which was summarized by statistical analysis.

Participants

Participants were selected from a total of 2,100 law enforcement personnel from police ranks in four geographical areas of the United States. The appropriate number of participants was determined by pairing the combined population size of the four police departments surveyed with the desired 95% confidence level selected by this researcher. Dillman (2007) determined the appropriate number of participants is a minimum of 322 survey respondents. (p. 207). The cities were selected as a convenient sample by this researcher and were divided into regions of the United States, with each region represented by one police department in four separate states. Two small police departments (less than 50 officers) as well as two large police departments (more than 200 officers) were selected so large and small department comparisons could be made. Federal law enforcement personnel were exempt from this study because the purpose of this study was to examine the level of support and participation of local personnel in information sharing initiatives from the local to the federal level.

The street- or line-level police officer is the type of officer most likely to encounter a domestic terrorist. Street-level officers also have the opportunity to take part in the administrative process by directly typing into their laptops the terrorism information to be shared with state and local law enforcement, thus patrol or line officers were preferred in this study.

In addition, police departments located in cities on or near a geographical border were preferred. Sarewitz, Pielke, and Keykhah (2003) stated even with the application of advanced statistical modeling, it is impossible to predict where a future catastrophic event will occur. However, extreme events often are predicated by context. The fact the 9/11 attack occurred in the largest United States metropolitan area demonstrated the potential vulnerability of large metropolitan coastal cities. Also, police departments were preferred that had experience with other types of first responder crises, such as hurricanes, tornados, or floods. Finally, police departments with prior information sharing experiences with federal and state agencies were desired in other areas of law enforcement such as drugs, fugitives, guns, and gangs. The following is a breakdown of respondent demographics.

Table 1

Respondent Demographics—Region

Region	Total	Percent
North	246	60.3
West	132	32.4

Table 1 (continued).

Region	Total	Percent
South	24	5.9
East	6	1.5
Total	408	100

Table 2

Respondent Demographics—Gender

Gender	Male	Female
North	230	16
West	114	18
South	23	1
East	6	0
Total	373	35

Table 3

Respondent Demographics—Ethnicity

Ethnicity	White	Black	Hispanic	Other
North	205	37	0	4

Table 3 (continued).

Ethnicity	White	Black	Hispanic	Other
West	124	4	0	4
South	23	1	0	0
East	6	0	0	0
Total	358	42	0	8

Table 4

Respondent Demographics—Age

Age	20–30	31–40	41–50	51–60	61+
North	82	72	48	34	10
West	2	10	11	2	0
South	3	9	9	1	2
East	0	3	1	1	1
Total	115	132	106	41	13

Table 5

Respondent Demographics—Education

Education	High school	Bachelors	Masters	Doctorate	Other
North	55	142	15	1	0
West	12	93	4	0	22
South	12	6	0	0	6
East	1	3	1	0	1
Total	80	244	20	1	62

Table 6

Respondent Demographics—Experience

Experience	0–5	6–10	11–15	16–20	21–25	26+
North	83	42	43	30	21	27
West	22	32	43	27	6	1
South	4	6	5	5	2	2
East	0	1	1	1	1	2
Total	109	81	92	63	30	32

Note. Experience is listed in years

Table 7

Respondent Demographics—Military

Military	Yes	No
North	60	186
West	37	192
South	8	16
East	1	5
Total	106	302

Table 8

Respondent Demographics—Training

Training	Trad	Com Pol
North	246	0
West	0	132
South	24	0
East	6	0
Total	276	132

Table 9

Respondent Demographics—Rank

Rank	Patrol	Corp	Sarg	Other
North	156	7	32	51
West	101	0	13	18
South	10	3	2	9
East	5	0	0	1
Total	269	11	49	79

Table 10

Respondent Demographics—Department Size

Department size	Large	Small
North-L	246	0
West-L	132	0
South-S	0	24
East-S	0	6
Total	378	30

Of those participants who completed the items which requested demographic information, 246 (60%) were identified from the North Region. The

West Region contained 132 (32%) percent of respondents surveyed. The South Region reported 24 (6%) of the total number of respondents surveyed. The East Region reported 13 (2%) of the total number of respondents surveyed.

Of those participants who completed the items which requested gender information, 373 (91%) were identified as male police officers, while 35 (9%) were identified as female police officers. Further, 358 (88%) respondents were identified as White or Caucasian. In addition, 42 (10%) respondents identified themselves as Black, and eight (2%) respondents identified themselves as other.

Of those participants who completed the items which requested education information, 80 (20%) respondents had earned a high school diploma, 244 (61%) respondents earned a college diploma, 20 (5%) respondents held a master's degree, and one (0.03%) respondent held a Ph.D. In addition, 62 (15%) respondents indicated their degree as other. The other as a category was identified by this researcher as police officers who have obtained an associate's degree.

Of those participants who completed the items which requested information on age, 115 (28%) respondents were between the ages of 20–30. Further, 132 (32%) respondents were between the ages of 31–40. In addition, 104 (26%) respondents were between the ages of 41–50. Further, 41 (10%) respondents indicated they were between the ages of 51–60. Finally, 13 (0.03%) respondents were over the age of 61.

Of those participants who completed the items that requested information concerning police work experience, 109 (27%) respondents indicated they had

0–5 years on the job experience, and 81 (20%) respondents indicated they had between 5–10 years of police work experience. Further, 92 (27%) participants indicated they had between 10–15 years of on the job experience. In addition, 63 (27%) participants indicated they had between 16–20 years of on the job experience. Further, 30 (7%) participants indicated they had between 21–25 years of on the job experience. Finally, 32 (8%) participants indicated they had over 26 years of experience as a police officer.

Of those participants who completed the items that requested information concerning their rank as a police officer, 269 (66%) respondents indicated they currently hold the rank of a patrol officer. In addition, 11 (2%) respondents indicated they currently hold the rank of corporal. Further, 49 (12%) participants indicated they currently hold the rank of Sergeant. Finally, 79 (19%) participants listed their rank as other. Other includes all other ranks not specifically referenced in the study, including ranks up to chief of police.

Of those participants who completed the items which requested information concerning whether they were a member of the military, 106 (26%) respondents stated that they served in the military, while, 302 (74%) respondents stated they have never served in the military

Of those participants who completed the items that requested information concerning whether respondents were trained using the traditional or community philosophy, 276 (68%) stated they were trained using traditional methods, while 132 (32%) respondents stated that they have been trained in some aspect of

community policing. Finally, 343 (91%) respondents were from large police departments, while 31 (9%) stated they were members of small departments.

Instrumentation

Quantitative data collection and data analysis required careful consideration of the survey instrument design. The primary goal was to ensure the survey, and the data collected with the survey, provide the intended measurement (Creswell, 2005). Meaningful conclusions were achieved through the survey and data collection process. An anonymous three-part survey which consisted of a series of questions pertaining to respondent demographics, information sharing survey, and an open-ended question comprise the survey instrument.

The demographic instrument collected the data necessary to provide a number of descriptive statistics pertaining to the respondents' project management experience, the scope and complexity of the project, and the project collaboration tools used to complete the project. Researchers use descriptive statistics to describe raw data. Descriptive statistics include measures of central tendency, such as the mean, median, and mode (Leedy & Ormrod, 2005).

The survey instrument provided a measurement of line officers' support of information sharing initiatives as well as views of police service delivery. One open-ended question was also included, and some survey respondents provided written opinions of barriers to information sharing implementation, which may or

may not have been different from barriers presented within the context of the survey instrument.

The survey was validated through consultation with experts in the fields of survey research, business administration, and law enforcement. Dr. Robert Adkins, Dean Emeritus, Liberty University; and Dr. Pedro Pellet, Professor of Business Administration, Nova Southeastern University, reviewed the survey to ensure the survey structure was constructed properly, with appropriate and understandable language to facilitate accurate responses.

In addition, law enforcement personnel were consulted by this researcher to ensure the questions reflect the current and future factors related to federal and local law enforcement information sharing partnerships. An effort was made by this researcher to structure the questions for the respondents in a manner that would facilitate maximum understanding and participation. The solicited law enforcement personnel included Dr. William Campbell, United States Customs Officer, Retired; Mr. Terry Milam, Chief, St. John Police Department, St. Louis County, Missouri; and Mr. John Burke, St. Louis City Police Officer, Retired.

After consultation with the panel, the following adjustments were made to the survey instrument. First, the panel recommended the survey be shortened to minimize the time needed to complete the survey. The panel also cited the large amount of paperwork as not to distract the officers as they perform their duties. As a result of this request, the survey was shortened so that it would take no longer than 10–15 minutes to complete.

Second, the panel stated some of the questions in the survey questionnaire may be difficult for police officers to understand. Therefore, a readability test was utilized by this researcher. Readability metrics were intended to identify the difficulty police officers might experience in understanding a question in a survey. Pretlow (2008) stated readability tests were first developed in the United States in the 1920s based on mathematical formulas designed to determine the suitability of course-specific textbooks for American students. Flesch (1948) originally calibrated the formulas based on the students' appropriate grade levels as well as age. The equation provided a readability score based on the number of words per sentence as well as the number of syllables per word.

Table 11

Information Sharing Survey Meta-Analysis

Question #	Survey question	Flesh-Kincaide grade level	Flesh-Kincaide read score	Words per sentence	Characters per word
General Questions / Community Policing					
1)	Information obtained from citizens is critical to good police work.	10.7	35.9	10	5.7
2)	Cooperation with other agencies is critical to good police work.	10.7	35.9	10	6.1
3)	I sometimes need access to information during the course of an investigation that I know other law enforcement agencies possess.	12	24.7	20	5.4
4)	I believe that preventing crime is just as important as solving crimes.	6.7	67.7	12	4.9

Table 11 (continued).

Question #	Survey question	Flesh-Kincade grade level	Flesh-Kincade read score	Words per sentence	Characters per word
5)	I believe solving problems in the community is an important part of police work.	9.1	56.2	15	4.6
Support					
1)	The attack of 9/11 has increased the need for better communication between all levels of law enforcement.	11.5	42.8	18	4.7
2)	If I were appointed the chief administrator of my agency, I would make information sharing a priority.	12	30.3	17	5.1
3)	If I were appointed the chief administrator of my agency, I would be willing to allocate agency resources for information sharing.	12	28.4	21	5.1
4)	I believe the overall benefits of sharing information with other agencies outweighs the negatives.	12	77.3	14	5.9
5)	If I were appointed the chief administrator of my agency, I would support information training with other law enforcement agencies.	12	21.5	20	5.5
External Influence					
1)	Federal agencies have had an influence on our department's decision to share information with other agencies.	12	26.6	16	5.8
2)	Federal agencies have suggested that our agency share intelligence information electronically.	12	27.7	11	5.8
3)	Our agency has previously accepted an invitation from a federal agency to participate in a joint training task force involving counterterrorism.	12	42.9	21	5.8

Table 11 (continued).

Question #	Survey question	Flesh-Kincaide grade level	Flesh-Kincaide read score	Words per sentence	Characters per word
4)	Our agency has been criticized by other law enforcement agencies for our handling of information during a joint investigation.	12	24.4	13	5.7
5)	Federal agencies keep our agency informed about the downside of not sharing information.	10.7	35.9	10	6.1
Complexity					
1)	It is difficult to learn computer skills necessary for sharing information with other law enforcement agencies.	12	16.1	16	5.9
2)	Electronic information sharing is a difficult concept to understand.	12	37.3	9	6.5
3)	I am willing to spend a large amount of time to learn a computer system format which has the potential to provide useful information.	12	51.1	24	4.6
4)	I have received periodic training associated with information sharing from other agencies.	12	48.5	12	4.5
5)	It is more difficult to share information with other law enforcement agencies which do not have the same standard operating procedures as our agency.	12	27.3	24	5.4
Trust					
1)	Federal agencies and our agency have a high level of mutual trust.	10.2	37.9	12	5.3

Table 11 (continued).

Question #	Survey question	Flesh-Kincaide grade level	Flesh-Kincaide read score	Words per sentence	Characters per word
2)	Federal agencies keep our departments' best interest in mind.	12	37.9	9	5.7
3)	If our agency shared intelligence information with a federal agency, I am confident that the information shared would not be compromised.	12	21.5	20	5.7
4)	Pertinent information and investigative assistance by outside agencies are encouraged by my agency.	12	30.2	13	5.3
5)	I would feel comfortable going outside my agency's chain of command if I believed I had information that was being ignored by my agency.	12	30.2	13	5.3
Internal Pressure					
1)	I would be more likely to support information sharing if my supervisor though it was important.	10.5	47.8	16	5
2)	I would be more likely to support information sharing if I were given greater flexibility by my supervisor to conduct and share information as the investigation dictates.	12	21	27	5.5
3)	I believe that learning and applying information sharing techniques is important for my career advancement.	12	28.2	15	6.1
4)	The time my supervisors make me spend on tasks associated with information sharing could be better spent in other areas of law enforcement.	12	40	23	5.1

Table 11 (continued).

Question #	Survey question	Flesh-Kincaide grade level	Flesh-Kincaide read score	Words per sentence	Characters per word
5)	My agency administrators make information sharing a priority in my department.	12	42.2	11	6.1
Totals		12	32.3	17.3	5.2

Procedures

The names and mailing addresses for department supervisors were obtained from the Chief of Police for all geographic areas. The survey was mailed to department supervisors, who were responsible for distributing the survey to individual participants.

A two-stage mailing procedure was used that included overnight mailings through the U.S. Postal Service. Surveys were sent with a cover letter explaining the study, and a self-addressed, stamped overnight envelope was included. Although surveys were completed anonymously to protect the identity of individual participants, a tracking system was used so that non-responders could be identified. After four weeks, the same surveys, cover letter, and self-addressed, stamped return envelope were sent to region representatives asking the potential respondents to complete the survey and return if they had not already done so. The second cover letter asked respondents to disregard the reminder letter if they already have completed and returned the survey within the first mailing period. Although the two-stage mailing process represents the

primary manner in which the study was conducted, other factors were present which need be added to the procedures described in the study. These factors included both the location and size of the police departments selected for the study. Both the location and size of the departments made it feasible in some instances for this researcher to follow-up in person in order to try and maximize the response rate.

Chain of Custody of Survey Instrument

The chain of custody in this study was from this researcher to previously selected police department representatives. The representatives were designated by the police chiefs to deliver the survey instrument to the respondents, typically at a patrol meeting or during work breaks. The surveys were returned upon completion to the representative who forwarded them to this researcher via overnight mail or, in some instances, by a face-to-face meeting with this researcher.

Survey Responses and Sample Population

Descriptive characteristics of respondents were presented in Tables 1–10. Surveys were distributed to 500 potential respondents in each of the large police departments and 25 surveys for the small police departments. The overall survey response rate for the study was 39%. The survey response percentages broken down by region and size of department were as follows: for the north region, of the 500 surveys distributed, 246 surveys were returned, for a percentage of 49%; for the west region, of the 500 surveys distributed, 132 were returned, for a

percentage of 26%. The overall percentage of surveys returned for large police departments was 36%.

The survey response percentage for small police departments were as follows: the South region had 24 surveys distributed, and 24 surveys were returned, for a percentage of 100%; the East Region had 13 surveys distributed, and 6 surveys were returned, for a percentage of 46%; and the overall percentage of surveys returned from small police departments was 94%.

Social scientists historically have disagreed on acceptable rates of return. For example, Fitzgerald and Cox (1987) stated a 50% survey return rate is considered average, but needed for valid results. Babbie (1989) suggested a 70% survey return rate can be achieved through application of enhanced survey techniques, but might not necessarily be needed depending on the accessibility to the target population. Babbie added future trends in research indicate a shift towards a lower acceptability of survey returns.

Colwell, Miller, Lyons, and Miller (2006) added response rates vary due to disparities in resources, time, and effort of the researcher, as well as differences in subject matter and the target population to be studied. Winfree, Guiterman, and Mays (1997) stated that, historically, police officer based studies have yielded relatively low response rates ranging from 30–50%. McKee (personal communication, December 20, 2008) speculated that increased paperwork and case load of police officers due to budget constraints have contributed to the comparatively low rate of survey return. McKee added as the field of criminal

justice increases in scope, competition for research access to key police departments also will increase.

Informed Consent

An informed consent form for each study participant was included with each questionnaire distributed. The informed consent form advised perspective participants that participation in the study was voluntary, and return of the questionnaire was considered for purposes of the study as consent to participate. Respondents were notified that all responses remained confidential throughout the entire research process, including the reporting of results. There was no risk to respondents that participated in the study, and no questions were asked which were related to specific or ongoing police investigations.

Confidentiality

Questionnaires were mailed directly to the designated department representatives whose police departments agreed to take part in the study. The questionnaires contained no specific respondent identification data of any type. Respondent representatives returned the anonymous questionnaire in an overnight package, which was used strictly for coding and analysis purposes by this researcher.

Data Analysis

Survey data was entered into a computer using the SPSS for Windows statistical package 18.0. Descriptive statistics (frequencies, range of scores, means, and standard deviations) were utilized to describe the respondents in terms of their demographic and background characteristics. T-tests were used to

analyze the differences in responses between groups based on demographic variables (e.g., sex, race/ethnicity, geographic location, level of education). Multiple regression analysis was used on the question portion of the survey instrument in order to determine which independent variables might be used to predict support for intelligence information sharing initiatives (e.g., trust, internal influence, external influence, complexity, and community policing).

Summary

Chapter III provided a detailed description of the methodology to be employed to gather and analyze data in sufficient detail to suggest recommendations to answer the research questions (Neuman, 2006). Chapter III also provided a rationale for the appropriateness of a quantitative approach using a multiple regression analysis (Creswell, 2005; Leedy & Ormand, 2005). A description of the target population, geographic location, and sampling frame provided some insight into the demographics of study participants. A review of the data collection and analysis process included details of survey instruments, obtaining informed consent, maintaining confidentiality, and ensuring validity and reliability in the study.

CHAPTER IV
ANALYSIS OF DATA
Instrument Evaluation

The structure of the *Information Sharing Survey* was examined using exploratory factor analytic techniques. It was predicted that five major factors would emerge: Trust, Internal Influence, Community Policing, External Influence, and Complexity. Questions that were loaded heavily on more than one factor as well as questions that failed to load heavily on any factor were considered invalid and eliminated from further analysis. The resulting scale was determined to be reliable (Cronbach's alpha = .664). Table 1 presents the rotated component matrix of the questions that were retained and thus used in the subsequent regression analyses.

Table 12

Equamax Rotated Component Matrix, N = 408

Item	Factor I	Factor II	Factor III	Factor IV	Factor V
Trust #1	.660				
Trust #2	.785				
Trust #3	.781				
Trust #4	.679				
Internal Influence #1		.735			
Internal Influence #2		.659			
Internal Influence #4		.414			
Internal Influence #5		.670			

Table 12 (continued).

Item	Factor I	Factor II	Factor III	Factor IV	Factor V
Community Policing #1			.610		
Community Policing #2			.464		
Community Policing #4			.648		
Community Policing #5			.711		
External Influence #1				.331	
External Influence #3				.696	
External Influence #5				.694	
Complexity #3					.691
Complexity #4					.687
Complexity #5					.383

Note. Loadings less than .35 are not displayed to facilitate factor identification.

As illustrated in Table 12, Question 5 on the trust subscale was eliminated, as was Question 3 from the Internal Influence subscale, Question 3 from the community policing subscale, Questions 2 and 4 from the external influence subscale, and Questions 1 and 2 from the complexity subscale.

Table 13 presents zero-order correlation coefficients for select demographic variables and support for information sharing. The variables, gender, education level, military service, and training type, were not significantly correlated with support for information sharing. Years of experience was, however, significantly correlated to support for information sharing. This suggests

that, on average, younger, less experienced officers are less likely to support information sharing than are older, more experienced officers.

Table 13

Zero-Order Intercorrelation Matrix for Demographic Variables and Support for Information Sharing (N = 408)

Variable	Gender	Education	Experience	Military	Training	Support
Gender	—	-.021	-.159**	.022	.067	-.079
Education		—	.107*	-.089	.071	-.010
Experience (years)			—	-.046	-.028	.215**
Military				—	-.032	-.022
Training					—	.067
Support						—

Note. Coding: Sex (0 = Female, 1 = Male); Education (0 = High School, 1 = B.A. / B.S., 2 = Master's, 3 = Doctorate); Experience (0 = 0 to 5, 1 = 6 to 10, 2 = 11 to 15, 3 = 16 to 20, 4 = 21 to 25, 5 = 26+); Military Service (0 = Yes, 1 = No); Training (0 = Traditional, 1 = Community Policing).
* $p < .05$. ** $p < .01$.

Table 14 presents the zero-order correlation coefficients between the five subscales of the *Information Sharing Survey* and the Support Scale.

Table 14

Zero-Order Intercorrelation Matrix for All Subscale Items and the Support for Information Sharing Subscale (N = 408)

Variable	Trust	Internal influence	Community policing	External influence	Complexity	Support
Trust	—	.078	.078	.237**	.018	.084
Internal influence		—	.163**	.108*	-.018	.144**

Table 14 (continued).

Variable	Trust	Internal influence	Community policing	External influence	Complexity	Support
Community policing			—	.114*	-.102*	.389**
External influence				—	.090	.187**
Complexity					—	.065
Support						—

* $p < .05$. ** $p < .01$.

An ordinary least squares (OLS) regression equation was derived in two steps using the support subscale as the dependent variables and gender, education level, years of experience, military service, and training type as the independent variables in the first step. This multimodel method allows for the statistical control of these demographic variables when evaluating the subscale scores. The trust, internal influence, community policing, external influence, and complexity subscales were entered in the second step. Initial collinearity diagnostics suggested that rank, age, and years of experience were collinear. The most cogent factor was the participants' overall years of experience. Thus, the final analysis includes years of experience, but does not include rank or age. Based on the strength of the correlations provided in Table 12 and Table 13 and examination of collinearity statistics, it was determined that no other serious collinearity issues existed within the data. The regression results are presented in Table 15.

Table 15

OLS Regression Solutions Predicting Support for Information Sharing (N = 408)

Variable	Model I			Model II		
	<i>b</i>	S.E.	β	<i>b</i>	S.E.	β
Constant	20.235	.263	—	9.697	1.187	—
Gender	-.408	.356	-.057	-.383	.325	-.053
Education level	-.066	.080	-.040	-.092	.073	-.056
Experience	.276	.064	.212**	.227	.059	.174**
Military service	-.048	.224	-.011	-.088	.205	-.019
Training type	.363	.211	.084	.319	.197	.074
Trust	—	—	—	.005	.028	.008
Internal influence	—	—	—	.065	.038	.080
Community policing	—	—	—	.451	.058	.358**
External influence	—	—	—	.105	.043	.113*
Complexity	—	—	—	.093	.047	.088*
R^2		.057			.227	
<i>Adjusted R</i> ²		.045			.207	
<i>F</i>		4.811			11.615	

$\Delta R^2 = .170$. * $p < .05$. ** $p < .01$.

The first model, which contained only the demographic characteristics of the participants, explained only 5.7% of the variance in support for information sharing. When controlling for these demographic characteristics, the Support for Information Sharing Scale accounted for an additional 17% of the variance, for a total of 22.7% of the variance explained.

Among the demographic variables, the only significant indicator of support for information sharing was the level of experience of the responding officer. As previously discussed, this measure was heavily collinear with the age of the responding officer as well as the officer's rank. For this reason, those particular variables were not included in the regression analysis. Of the five survey subscales, Trust and Internal Influence were not statistically significant. Community Policing, External Influence, and Complexity were all statistically significant. Thus, the best predictors of support for information sharing were the number of years of experience that an officer has, the officer's level of support for community policing, the officer's perception of external influences on departmental policy, and the complexity of how information is shared. Specifically, officers that supported the community policing philosophy were more likely to support information sharing. This was the single best predictor of support for information sharing ($\beta = .358$). Additionally, the more perceived influence that outside forces have on an officer's department, the more likely the officer is to support information sharing.

Discussion

Hypotheses

H1: There is a significant linear relationship between the gender of a police officer and support for information sharing.

Result: The null hypothesis is retained. The data does not support a relationship between gender and police officer support for information sharing.

H2: There is a significant relationship between race and police officer support of information sharing.

Result: The null hypothesis is retained. The data does not suggest a relationship between race and support for information sharing.

H3: There is a significant linear relationship between the educational level of police officers and support for information sharing.

Result: The null hypothesis is retained. The data does not support a relationship between the educational level of police officers and support for information sharing.

H4: There is a significant linear relationship between the experience of police officers and support for information sharing.

Result: The null hypothesis is rejected. The data supports a relationship between the experience level of a police officer and support for information sharing. That is, older, more experienced police officers tend to support information sharing.

H5: There is a significant linear relationship between prior military service of police officers and support for information sharing.

Result: The null hypothesis is retained. The data does not support a relationship between prior military service by a police officer and support for information sharing.

H6: There is a significant linear relationship between the type of training police officers receive and support for information sharing.

Result: The null hypothesis is retained. The data does not show a relationship between the type of training and support for information sharing.

H7: There is a significant relationship between the size of a police department and support for information sharing.

Result: The null hypothesis is retained. The data does not suggest a relationship between the size of a police department and support for information sharing.

H8: There is a significant linear relationship between support for community policing and support for information sharing.

Result: The null hypothesis is rejected. The regression analysis indicated that there is a linear relationship between support for community policing and information sharing. That is, police officers who tend to support community policing also tend to support information sharing.

H9: There is a significant linear relationship between the complexity of communication tasks and support for information sharing.

Result: The null hypothesis is rejected. The regression analysis indicated that there is a linear relationship between the perceived complexity of tasks and support for information sharing.

H10: There is a significant linear relationship between perceptions of external influence and support for information sharing.

Result: The null hypothesis is rejected. The more external influence is perceived to play a role by police officers, the more officers tend to support information sharing.

H11: There is a significant linear relationship between perceptions of internal influence and support for information sharing.

Result: The null hypothesis is retained. The data does not suggest that there is a relationship between perceptions of internal influence and support of information sharing.

H12: There is a significant linear relationship between perceptions of trust between federal and local police agencies and support for information sharing.

Result: The null hypothesis is retained. The data does not suggest that there is a relationship between perceptions of trust between federal and local law enforcement and support for information sharing.

CHAPTER V

SUMMARY

A review of the available literature suggests intelligence information sharing is a valuable tool for law enforcement to adequately protect the United States from a future domestic terrorist attack. A thorough examination on the topic of information sharing reveals successful communicative initiatives with intrinsic benefits for all department and agencies involved in the programs. Because homeland security was not considered a law enforcement priority before the 9/11 attacks, few studies existed on the topic of information sharing. The present study attempts to contribute to the literature by facilitating the discussion of a unified strategy to intelligence information sharing among all levels of law enforcement. The present study contributes to overcoming the substantial obstacles by revealing barriers to information sharing as well as identifying areas of support from local law enforcement.

Several respondent characteristics located in the demographic portion of the survey stood out as beneficial to the potential enhancement of comprehensive intelligence information sharing initiatives. First, the education level of police officers, as indicated by respondents in the study, is clearly rising. In the present study, 62% of the respondents possessed a college degree or higher, compared to the 45% average across the United States (U.S. Department of Labor, 2010). Select precincts within large city respondents reported 100% of the police officers surveyed possessed bachelor's degrees with an additional 5% also having graduated with a master's degree.

Secondly, an examination of all four departments revealed that law enforcement is clearly an occupation that is becoming more professionalized with a comprehensive list of minimal standards, which must be met before employment. Education (including training) is undoubtedly one of the core requirements emphasized across the country. The education statistics presented clearly have positive implications for modern 21st century police tactics, including the development and enhancement of future information sharing initiatives. Without the proper education and training, officers will not be able to keep pace with the technological as well as tactical expertise needed to implement comprehensive information sharing initiatives.

In the present study, a majority of the respondents believed operating a computer was a simple skill to master. This response was an indication that police officers are becoming more comfortable with the utilization of modern technology in their jobs. The fact all four of the respondent departments currently utilize laptop computers in their patrol cars represents the increasing familiarity of incorporating technology into modern police practices. The utilization of laptops by local patrolman is a critical first step in the process of sharing information, so the familiarity and comfort level, as well as the desire to learn new technologies as they become available, are critical to the advancement of information sharing moving forward.

The demographic portion of the survey also revealed older officers are more likely to support information sharing than younger officers. This was not a surprise when viewed in context with the final qualitative question of the survey.

Although it would make sense that younger police officers would embrace the more technological aspects of the information sharing process, several older officers, as referenced by their qualitative responses, clearly saw themselves as Maynard-Moody and Musheno coined, *citizen agents*. That is, in the final years of their careers as police, helping people tended to give more experienced police officers more job satisfaction than arresting people.

A north respondent with 27 years of experience wrote simply, "At this point in my career, I am on the job solely to help people and help solve community problems" (J. Webster, personal communication, February 10, 2010). The police chief of the south region stated,

I know this is a generalization, but the younger guys prefer to kick down doors and crack heads and make cases that involve excitement and help advance their careers. The older guys tend to prefer the camaraderie associated with working together on a case for a common purpose. I know the older guys enjoy attending the training seminars more than the younger guys. It's like a reunion for the older guys, they become reacquainted with officers from other departments from prior cases, they swap stories, and sometimes those prior working relationships lead to the making of future cases. (W. Payne, personal communication, November 14, 2009)

The community policing variable contained within the survey was the group of questions that had the greatest significance. While it cannot be scientifically concluded that support of community policing tenets will

automatically support information sharing initiatives, it does suggest that officers overwhelmingly support and are interested in the expansion and training of proactive police tactics, including technology, of which information sharing is a component.

There was no statistical significance between officers who learned a community policing curriculum in basic training and officers who were taught a traditional curriculum in basic training as it relates to the support of information sharing. However, officers of both training methods overwhelmingly placed their support in the proactive police practices that comprise information sharing. This survey result would indicate, as Lipsky (1980) stated in *Street-level Bureaucracy: Dilemmas of the Individual in Public Services*, that all service delivery by a public servant is provided intrinsically and is fundamentally both “immediate and personal” to the individual public servant providing the service (p. 8). Therefore, the establishment of comprehensive information sharing is literally a battle of the hearts and minds of all local police officers. Line-officers are the public service workers who are entrusted both at the beginning of the communication network and for follow-up investigation. Line officer support is imperative for efficient service delivery in this area of law enforcement.

The significance of the external pressure variable demonstrates both opportunities and barriers which confront local and federal agencies working together on joint task force cases or on the continued development of interoperable communication networks. Police administrative leadership on both sides will be needed if information sharing initiatives are to continue and expand.

The present study indicates both sides are influenced by each other and can benefit from each agency's resources and expertise in strategic joint investigative areas.

Local agencies clearly benefit from the budgetary resources that federal agencies possess. Local police departments working together with federal agencies can provide the resources and additional manpower that local departments often need to bring a complex case to a successful conclusion. Federal agencies need the informants and inherent knowledge of the area that local agencies possess. However, there remains the traditional territorial problems and trust issues, such as which agency gets the credit for a successful case, that has traditionally plagued police working within the federated system of law enforcement.

Police organizational leaders demonstrate to rank and file officers the importance in this specific area by the priority of enforcement placed on information sharing within the department. Akbulut (2003) labeled this leadership technique as providing agency championship within a department; that is, promoting an environment committed to the introduction and implementation of selected new initiatives. While agency championship does not necessarily have to be initiated by an organizational leader, it follows a police chief or supervisor will have the best chance of success in an organizational hierarchy which is flat compared to other professional organizations and also possesses a strict chain of command.

Implications

The implications of the research suggest law enforcement must be more inclusive, uniform, and at the same time open to creative solutions in order to meet the increased demands for security in the terrorist age. Local law enforcement respondents in all geographic regions are open to participation in future partnerships with state and federal agencies. Local police officers in all regions view information sharing as not only a valuable investigative tool but also as an additional opportunity to network with other police officers, which could lead to career advancement opportunities. Local officers view information sharing as an opportunity to make more money, gain experience, and an opportunity to break away from the mundane daily tasks that traditionally occupy the majority of their time.

Many local officers also view information and joint technology sharing as a cornerstone for proactive policing practices. This study suggests information sharing programs can be utilized both within current traditional police systems as well as within community policing organizational models. The local police officers' overwhelming support of proactive police tactics suggests the possibility of expansion of information sharing programs within the community policing model. The community policing model may prove to be preferable as programs could be implemented and expanded based on already established policing programs, which currently possess the support of the community.

The final question of the survey questionnaire asked respondents what they believe to be the most prominent barrier or barriers to information sharing.

The two most significant barriers were a lack of trust between local and federal officers as well as a lack of compatibility of protocols—procedures between local and federal law enforcement agencies. Respondents listed “egos” or “issues of delegating credit for successful investigations” as the next most prevalent barrier. Another barrier listed was a lack of cooperation and unresponsiveness of federal agencies. Also, another barrier listed was the failure of time-sensitive information to be shared in a manner that enabled officers to immediately investigate and follow-up on the information shared, including classified issues of which individuals were entitled to receive the information. Cost issues were also listed as a serious concern. The problem of interoperability, that is, the lack of one database which can be accessed and shared over all levels of law enforcement was an additional barrier. Bureaucracy or too much red tape was the next barrier listed by respondents. Finally, competition for funds, failure to embrace organizational change, and more important and better things to do were listed as barriers by at least one respondent of the survey.

The barriers listed by survey respondents fell into two categories. First, officers discussed the overall difficulty and complexity of the problem of sharing information on a national level and, from some respondents, from the local to local level. The process of organizing large amounts of police officers from different jurisdictions in all parts of the country to work together for a common purpose is difficult under the most favorable conditions. All four departments studied agreed the process itself is nearly impossible to operationalize. As one respondent from the south region stated, “the bad guys only have to be right

once, we (in our response effort) need to be right every time.” Local officers stated it is difficult enough to share information within their own region. One officer stated, “I barely know what is going on across the river in my own district, much less with the feds. I feel fortunate if I can get a timely response from a local all-points bulletin that is issued.”

One north respondent stated that the compatibility issues between federal and local police agencies are complicated because federal law enforcement agencies are formulated as large, transient agencies, which are almost exclusively organized to conduct large-scale investigations. By contrast, local police agencies are primarily concerned with efficiently managing calls for service and addressing the problems of their community based, in part, on complaints of the citizens residing within their district. A north respondent believes differences in agency missions ultimately cause federal and local law enforcement to be incompatible. However, the same north respondent wrote,

What will continue to draw the two sides together is the fact the leaders of local police agencies want the grant money and access to potentially unlimited resources the feds have to offer, while the feds want access to informants and information that local police officers inherently possess. For that reason, I believe the two levels of law enforcement officers will continue to work together, largely because they need each other in order to achieve their respective agency missions.

The second barrier to information sharing lies in the entrenched territorial nature, which has been pervasive in police culture over the last century. The

culture barrier presents a more difficult challenge because it involves a negative aspect of police culture that has become more pervasive over time. Respondents in all parts of the country repeat the barriers of territoriality and distrust as severe barriers to intelligence information sharing. A 30-year veteran of the north department stated,

There had to be a traumatic event such as 9/11, which unequivocally forces different jurisdictions and departments to work together for a common purpose. The government is largely a slow, reactive animal. The public outcry needs to be deafening on this issue, and the problem must also gain the support of the political administration in power, or it's never going to happen on a large enough scale to prevent another serious attack from taking place. (J. Webster, personal communication, February 10, 2010)

Another north respondent stated,

During my tenure as a police officer there has been a steady decline in our relations with federal government dating back to the war on drugs in the 1980s, when crack cocaine first appeared like a plague on our city streets. One problem was the agents on the federal level assigned to the task forces were from other parts of the country. The individual federal agents were not bad people, and the distrust was not personally directed, but we knew the feds would be transferred in a couple of years to a different city within the agency. For the feds, it worked as a rotational system similar to

the military. Each field agent would spend a three-year rotation and then would be transferred in a few years with a promotion.

In terms of the actual investigations, the feds depend heavily on our department for informants, which provided critical information on suspects and potential large buys, which was what the feds were primarily concerned with. However, the organizational structure was predicated on large, far-reaching investigations based on large buys which lead to multiple arrests were not possible without the information provided by our department. Local police officers are the primary brokers of information in their individual precincts. There is no exclusive federal territory per se; the feds operate in our territory. The local police officers have a monopoly on informants. The officers in my precinct knew all of the players in our city; we knew their tendencies, we even knew a lot of the time where and when the big deals would go down. Even so, it was difficult to coordinate with federal agents. (J. Burke, personal communication, December 22, 2010)

Respondents from all regions cited a lack of sharing credit for large busts helped create the distrust between the two levels of law enforcement.

The feds would swoop in at the last second, use our information gathered through months, sometimes years of investigative street work, use our manpower for support, and then take the credit for the arrest and receive a promotion. Our guys resented this situation, and the process was repeated over and over during my time at the department. The ego situation heightened the resentment from the local to the federal level. The

hostility grew to the point where we didn't want to work with the feds on any level, regardless of the type or political importance placed on the investigation.

We prided ourselves on doing a good job working together, even though we didn't always share information effectively within our own department, much less the feds, we didn't think we were above doing the dirty work.

Generally speaking, federal agents are not expected to make the amount of quality arrests local police officers do if they want to get promoted. I don't believe the feds possess the investigative skill as local officers simply because they do not handle a large volume of cases. When you handle a large amount of cases you learn to be efficient, including in your communication with other police officers. One of my favorite moments of my career was when the lead federal prosecutor called me into his office with the Attorney General and a couple of FBI men present to discuss an important case that we were working with the feds. The federal prosecutor turned to the attorney general and said, 'I want you to see what a real police officer who does real police work looks like.'

The south police chief agreed and wrote,

Our relationship with the feds has had a history of conflict, with the feds coming into our territory and promoting their agenda. Over a period of time, a climate of distrust has developed, which has been extremely difficult to undo. However, before we get into counterterrorism issues we need to solve some of the ego, territorial issues situations, such as which

federal agencies and local departments are going to run the investigations so credit can be shared. There are still tremendous ego problems over control of counterterrorism investigations and confusion over how the information should be shared.

The same south respondent explained the effect of power that political agendas can have on the priorities and direction of federal and local law enforcement.

On the federal level, the President dictates to law enforcement agencies the problems which need to be addressed and solved. Since 9/11, President George W. Bush has obviously made counterterrorism a priority. President Bush created a new federal agency devoted to counterterrorism at a great economic and political expense. I believe preceding presidents did not adequately address this issue because there was not a domestic attack on their watch.

When I was in the prime of my career the issue was drugs. President Carter had more pressing domestic concerns with an economic recession, inflation, and gas shortages. Then President Reagan was elected and declared war on drugs. After President Reagan's antidrug declaration, those were some of the busiest years on the force, and the time in which my colleagues and I had the heaviest caseload and contact with federal agencies. (J. Burke, personal communication, December 22, 2010)

Another complaint of local law enforcement was the unresponsiveness of federal agencies when local officers attempted to share information or requested information. An officer in the east region stated,

I don't think the lack of information sharing is as much about malfeasance with their agency as it is about nonfeasance. Our department reaches out from time to time but we don't get a response. I believe that the feds need some type of pressing personal interest in working with our department or it will never happen. (T. Goldberg, personal communication, March 9, 2011)

A north respondent stated,

I remember when we received a notice from the Homeland Security Department that they were going to make an inspection of some dangerous chemicals located on the corporate campus of a Fortune 500 company within our jurisdictional boundaries. Members of the company were founders of our local police charity, and our department supervisors were nervous about a surprise inspection by the feds, which could cause the company involved to lose millions of dollars for being shut down for even a half of a day. Even though the feds were the agency to originally contact our department, they failed to show up for the inspection for over thirteen months after they originally stated an inspection would take place. We spoke with three different teams of agents and two different supervisors throughout the ordeal and we never received a satisfactory

response from any of them. (J. Burke, personal communication, December 22, 2010)

Another north respondent wrote,

I remember a couple of years ago, I was assigned to a protective detail which involved the first ladies motorcade. I discovered through a routine check on the FBI's watch list that the motorcade was to travel directly in front of two houses that were currently occupied by suspected international terrorists. I called the FBI first, since it was their watch list to confirm the information, but never heard back from them. In the meantime (less than forty-eight hours later), I was called by the secret service telling me the route had been changed. I can only deduce that either the secret service found out that the suspected terrorists lived in the area and changed the route, and the FBI just sat on the information, or the FBI called the secret service, and left our department out of the loop entirely. Either way, this does not speak very highly of the FBI's ability or desire to share information with other need-to-know agencies.

Limitations of the Study

Additional studies are necessary in order to advance the body of research in an area vital to the future security of the United States. The opportunities to address the barriers associated with the potential development of comprehensive intelligence information sharing are limitless in scope. The present study is intended to serve as a beginning for future research using local police to examine some of the barriers to information sharing, but limitations within the present

study exist. Recommendations for future study are based upon research topics which were outside the parameters of this study but are integral to the advancement of future information sharing initiatives.

First, future effort to expand this research should be conducted with the inclusion of more cities, which would provide greater geographic representation, generalizability, and enhance the sample size of officers participating in the study. Although great effort was made by this researcher to include four distinct geographic regions of the United States, expansion of cities would drastically enhance the study. Modifications also should be made to the survey instrument in order to raise the response rate. The number of pages in the survey instrument should be reduced in order to attract more respondents by the visual appearance of a shorter survey.

Second, a thorough examination of the barriers to information sharing should include an examination of economic factors, which would affect the implementation of information sharing initiatives. However, in this study, the variable of cost was eliminated due to the fact that street-level police officers were the primary respondents of the study. Typically, street-level officers do not make budgetary decisions, and, therefore, it was not practical to include costs in a study comprised primarily of rank-and-file police officers. However, cost issues of all types may, in fact, be the most critical barrier to interoperable information sharing. Certainly, cost issues need to be included, if possible, in future studies.

Finally, federal law enforcement personnel were exempt from participation in this study because of a lack of access by this researcher to the sample

population. Federal agents would have been useful because counterterrorism mandates, including the creation of the Homeland Security Department, were initiated on the federal level. The 9/11 Commission stated the federal government and its law enforcement agents were the level of government ultimately responsible for the implementation of all counterterrorism programs. In light of these facts, future studies, including federal law enforcement, would provide valuable additions to the literature.

Recommendations for Future Research

Recommended topics for future researchers as it relates to the present study is to reconcile the discrepancy between the quantitative and qualitative results of the trust variable. The quantitative portion of the study revealed no significance between trust of officers in other departments and willingness to support intelligence information sharing initiatives. However, in the open-ended question at the conclusion of the survey, police officers listed a lack of trust of police officers in other departments as well as their own as a primary barrier to sharing information. The reconciliation of this discrepancy would provide a better understanding of the realities of everyday practice of law enforcement which serve as barriers to efficient information sharing.

Future studies in regard to the present study are needed, which focus on the specific factors as to why older officers are more likely to support information sharing initiatives than younger officers. Additional information would be useful to police chiefs as they select members for future joint task forces, not only in terror cases but in other areas of law enforcement where task forces are utilized, such

as guns, gangs, and drugs. In the past, task force investigations have been successful because of the ability to merge resources as well as to utilize the best investigative attributes each agency or department has to offer. Additional knowledge in this research area would potentially expand the utilization of task forces in law enforcement.

The 9/11 terrorist attack on New York City reinforced the need for review of all practical and strategic counterterrorism processes for the implementation of a unified enterprise architecture for the purpose of the creation of a single interoperable information sharing network. Government accountability reports continue to suggest that much work remains on the federal level to initiate and maintain the level of information communication needed to prevent future attacks (GAO, 2002a). Additional research would analyze the most effective proposal initiatives and examine whether the newly proposed initiatives could be realistically and uniformly adopted by federal, state, and local law enforcement agencies. Recommendations for future study are based upon research topics that fell outside the parameters of this study but are integral to the advancement of future information sharing initiatives. Recommendations were made in consultation with appropriate literature, the *9/11 Commission Report* (National Commission on Terrorist Attacks, 2004), the Heritage Foundation report (The Heritage Foundation, 2005), and the *Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina* (H.R. No. 109-377, 2006).

Future studies that examine the bureaucratic tendencies of federal state and local law enforcement are critical to accurately assessing the benefits and risks of all proposed initiatives. Studies that examine the impact of proposed federal government initiatives are recommended because the process of reorganization, even though originating a decade ago, remains fluid and complex. Scholarly studies that examine government bureaucracies are useful in determining the protocols of government operations. The results of future studies will indicate which proposals have the best opportunity for implementation and long-term success. Since 2001, federal government bureaucracies, including law enforcement, have evolved and reorganized on such large scales that further examination of methods and processes is needed.

Specifically, future studies are needed that examine aspects of the United States federated system of government, which encompasses law enforcement. The hierarchical nature of government bureaucracies presents a severe barrier in the development of comprehensive interoperable information sharing systems. The federated structure of the United States government has affected the efficiency and quality of participation of local law enforcement in regard to counterterrorism investigations. This approach has resulted in a lack of coordination from a communicative standpoint between all levels of law enforcement. Furthermore, organizational structure has created future barriers to implementation on the local law enforcement level regarding counterterrorism challenges. The challenges range from a lack of opportunity to take part and receive credit for participation in federally-dominated counterterrorism

investigations to a lack of resources or the lack of a local organizational structure, which could adequately support counterterrorism police services.

From an organizational standpoint, the federated structure impacts the flow of communication, because information generates from the top to the bottom in the chain of command bureaucracy. The typical government agency in the United States (including law enforcement agencies) have been organized through decentralized stove-pipe organizational structures created as a component of the 1940s post-World War II government. Vertical governmental departments were created to oversee every task and service of an agency with limited capacity for communicative collaboration. As noted in the *9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States* (National Commission on Terrorist Attacks, 2004), prior to 9/11, the intelligence information flow was woefully decentralized, with disparate pieces of intelligence scattered nationally throughout the United States. Therefore, it is critical that future studies are conducted which follow the information sharing process from the federal to the local levels and analyze the efficiency as well as administrative delay in the old systems as compared to the new systems.

Bardach (2001) noted that many proposals which outline future counter terrorism protocol lacked clarity and cohesion. Bardach stated past proposals were typically fundamentally incompatible with the Department of Homeland Security's emphasis on inter agency collaboration and networking. The potentially catastrophic and unpredictable nature of events involved in terrorist

attacks, combined with the bureaucratic barriers involved in government hierarchy make information sharing extremely difficult. These forces in interaction with traditional police culture are antithetical to the successes of future information sharing programs. Successful processes comprise the fundamental core of interpretative communication. The processes are found in the concepts of efficiency, equality and adaptability.

Additional studies should be examined with the goal of determining agency counterterrorism duties of all law enforcement agencies responsible (particularly on the federal level) for domestic counterterrorism operations. The roles and responsibilities for core federal agencies involved in counterterrorism efforts since 9/11 remain in the process of clarification. The Department of Homeland Security, Department of Defense, Central Intelligence Agency, and Federal Bureau of Investigation continue to reorganize their own agencies as well as prioritize operational duties in regard to key terrorism functions. The prior establishment of working relationships in regard to the reorganization of duties on the federal level is fundamental to the establishment of future information sharing initiatives with local law enforcement. Future studies, which examine the reorganization strategies of federal law enforcement, need to focus on the goals of organizational investigative efficiency while eliminating organizational and investigative specific redundancies (The Heritage Foundation, 2005).

Specifically, studies that examine the future role of the FBI in relation to its newly formed domestic terrorism partnership with the Department of Homeland Security are needed. The FBI was created to be a lead investigative

agency, structured to oversee all aspects of the investigate process, including the control and dissemination of sensitive information. Since 9/11, the FBI must fully integrate 28,000 employees and 56 field offices concerning the investigative responsibility on domestic terrorism with the Homeland Security Department and its merger of its 22 agencies. The FBI cannot effectively lead the domestic intelligence effort without other federal agencies, but the creation of the Department of Homeland Security could help achieve this goal if the two agencies could efficiently coordinate domestic terrorism functions and responsibilities (National Commission on Terrorist Attacks, 2004, p. 424).

The FBI does not possess the capacity to investigate cases at a state and local level with the responsibilities it now has at the federal level regarding homeland security. For example, state police organizations could be encouraged to coordinate resources on kidnapping cases, and full responsibility for enforcement of drug laws could be transferred to the bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) and to the Food and Drug Administration (FDA). This proposal would decrease the FBI's participation in state and local task forces cases, with a greater emphasis placed on domestic terrorism investigations (The Heritage Foundation, 2005). A comprehensive plan that assigns roles and missions to the relevant authorities must also be developed and adopted on all levels of law enforcement (Calfano, 2001, p. 16).

Without clearly defined roles, federal government agencies will have difficulty delegating investigative responsibilities while maintaining viable working relationships with state and local law enforcement. The confusion over federal

guidance mandates serves as a barrier to information sharing, because the mandates unilaterally prioritize which elements should be implemented. The result has been each state and local municipality has been left to develop their own counterterrorism strategy. This approach has resulted in a predictably confusing and redundant course of action. Scholars with the assistance of information technology experts, all levels of law enforcement, government planners, and local citizen groups can contribute to the process with the benefit of taking the best suggestions for implementation contained within each study. In this manner the most promising suggestions can be combined into a nationally integrated information sharing plan.

Scholarly studies that examine benchmark attributes of prior successful program development need to be analyzed by the Homeland Security Department going forward in a proactive attempt to improve counterterrorism strategy. For example, benchmarking of program development styles previously implemented by the Environmental Protection Agency or the Department of Health and Human Services regarding other terrorist strategies would be beneficial. Waugh and Strieb (2006) noted the reactive paradigm employed in emergency-management procedures: "Policies and programs have been instituted and implemented in the aftermath of a disaster, based almost solely on that disaster experience and with little investment in capacity building to deal with the next disaster" (p. 137). Waugh and Strieb's rethinking of emergency management protocols should become a research priority, specifically focusing

on a comprehensive plan including interoperable information sharing across all levels of law enforcement.

Coordination planning between the public and private sectors also is necessary in order to develop a comprehensive homeland security program. A triangular organizational structure of checks and balances must be developed among the government, the private-sector, and the public. The United States government must assure citizens and private industry alike that, while it recognizes the responsibility of managing homeland security, it still needs the help of its citizens in order to be successful. An example of an opportunity to merge the two agencies for the purposes of security could be found in the risk assessment process. Risk-assessment studies are designed to prioritize and protect the most vulnerable areas in a potential terrorist attack.

Risk benefit priorities should be determined through a cost-benefit analysis, which calculates potential positive outcomes against the risks involved in inadequately securing a target. Accurate assessments of the security of public infrastructure are an example of a cost-benefit analysis. Additional studies are recommended, in part because of the existence of budgetary constraints, and areas deemed the most vulnerable (large, coastal, metropolitan areas) need to be given priority. For example, urban areas in the vicinity of nuclear power plants; dams; electricity systems; and oil and gas delivery, storage, and refinement systems must be a top strategic priority (National Commission on Terrorist Attacks, 2004, p. 428; The Heritage Foundation, 2005).

Additional studies are needed to examine the direct and latent costs of implementing homeland security policy, particularly in the areas of grants and oversight at the federal level. Homeland security assistance should be delegated based solely on the assessment of risks and vulnerabilities, not on a general revenue-sharing model (National Commission on Terrorist Attacks, 2004, p. 396). Difficult choices have not been made involving the allocation of limited resources in an era of both decreasing public revenues and available law enforcement manpower. Scholars and government administrators need to analyze, identify, and rank critical national security assets to ensure the most important and vulnerable targets are protected. A comprehensive plan which assigns strategic missions to the relevant authorities must also be developed across all levels of government (National Commission on Terrorist Attacks, 2004, p. 391).

A scholarly assessment of grant programs and oversight are critical to the implementation of information sharing programs because grants are the preferred transfer method of government funds from the federal government to state and local law enforcement. First, studies which examine the lack of preparedness standards increase the difficulty for scholars to accurately measure gaps in first responder (including law enforcement) capabilities. The Department of Homeland Security has not developed sufficient benchmarks that could be utilized to determine whether preparedness standards are being met, to establish and examine future goals, or to determine whether the grants received by state and local police departments are being efficiently allocated. Additionally, federal research could determine whether state and local law enforcement, which

comprise the majority of first responders, have the funds available and are able to efficiently target priority areas for which the grants were intended.

No established process exists for collecting data on the amounts of first responder grants available assessed by each state and local agency. Accurate grant assessment plans would provide scholars and government officials with reliable data to determine future budgets and establish effective oversight, analyze gaps, and assess progress toward the achievement of future goals. The GAO (2002b) reported difficulty in determining the results and establishing baseline data to assess future strategic priorities. One GAO (2002c) study indicated a high percentage of grant money was spent on equipment, planning, and training, including all types of emergency exercises, such as biological terror and natural disasters. On a micro level, future studies that track data are needed in order to follow allocated government funds throughout the grant cycle. Many grants were unable to be studied and tracked because some grants were earmarked to state and local governments, while others were allocated directly to state and local law enforcements and first responders (GAO, 2002c).

The development of an effective interoperable communication system is a critical element of any new counterterrorism policy. Critical to the achievement of interoperability is the implementation of seamless communicative strategies that result in the most effective and efficient sharing of information between all levels of law enforcement. Interoperability allows first responders the ability to share information in real-time and on demand through wireless communication as needed and authorized. Interoperability allows the strategic opportunity for all

participating law enforcement agencies and first responders on all levels of government to communicate and work together. Current interagency communication systems make information sharing difficult. At the same time, changes in existing procedures must be universally adopted, or they will not be effective.

Kiernan (2003) stated communications interoperability was an acknowledged operational deficiency in counterterrorism strategy. First responder command and control practices were previously structured around providing tactical support for the incident commander with little or no coordination and collaboration outside the immediate area impacted by the immediate emergency area. Communication interoperability and common operating platforms can no longer be viewed as beneficial by-products; they must become fundamental requirements (J. Booth, personal communication, December 14, 2002 as cited in Kiernan, 2003).

There continues to be considerable scholarly interest in the exploration of how increased communicative efficiency can be used to promote future information sharing initiatives (including interoperability) among agencies in the common mission of protecting the United States. The benefits of sharing information have proven through prior scholarly research to be too strategically valuable to be ignored. Research has shown that increased interest among local law enforcement has the potential to increase the productivity and performance of all law enforcement agencies, as well as improve operational efficiency, and provide better police services to all citizens.

Because the barriers to efficient information sharing (including interoperability) are so numerous, the opportunities for future research in this area could realistically occupy and engage scholars for generations. Although this study focused on the barriers to implementation on the local levels, further research and analysis concerning the federal government's role in the implementation of new strategies and protocol needs to be explored. The implementation of future strategies remains fluid, and both original and replicate research concerning the development of such processes are both timely and necessary moving forward.

APPENDIX A

INFORMATION SHARING SURVEY

INFORMATION SHARING SURVEY

The purpose of this survey is to identify the barriers to intelligence information sharing perceived by local law enforcement and to develop strategies that can be used to overcome these barriers. This survey will help local law enforcement voice their concerns, issues, and expectations about participating in intelligence information sharing initiatives.

The survey will take approximately ten minutes to complete. All individual responses will remain strictly confidential; only summary statistics will be recorded. You are guaranteed anonymity. No one but the researchers will have access to these responses, and your identity will not be linked to this record. However, if for any reason you do not want to answer any or all of the items below, you can refrain from doing so. If you believe you cannot answer any of the questions honestly, please do not answer them at all. If you can answer all of the items, it will be very helpful. We are grateful for your cooperation.

Please return the completed survey to _____

_____ or Scott Bransford, conductor of the study, at the address below. If you have any questions about the survey, please do not hesitate to contact Scott Bransford at any of the numbers listed below.

Scott D. Bransford
Doctoral Student
University of Southern Mississippi

INFORMATION SHARING SURVEY – PART I

Please circle the appropriate background information which best describes you.

- A. Your gender: Male Female
- B. Your race/ethnicity: White Black Hispanic Other
- C. Your age group: 20-30 31-40 41-50 51-60 61+
- D. Highest level of education you have attained:
 High School Bachelor's Master's Doctorate Other
- E. Number of years experience as a law enforcement officer:
 0-5 6-10 11-15 16-20 21-25 26+
- F. Have you served in the military: YES NO
- G. Type of training curriculum: Traditional Community Policing
 Unknown
- H. Your rank: Patrol Officer Corporal Sergeant Other

INFORMATION SHARING SURVEY – PART II

Please rate the importance of achieving each of the following benefits of electronic information sharing in terms of your agency's decisions whether or not to participate in electronic information sharing with federal agencies. For each item below, please place a checkmark in the box that best describes your view.

STATEMENT	UNIMPORTANT	OF LITTLE IMPORTANCE	NEUTRAL	IMPORTANT	VERY IMPORTANT
If I were appointed the chief administrator of my agency, I would be willing to allocate additional resources to sharing information.					
If I were appointed the chief administrator of my agency, I would place a priority on information sharing training with other law enforcement agencies.					
If I were appointed the chief administrator of my agency, I would be willing to spend a large amount of time to learn a new computer system format, which has the potential to provide useful investigative information.					
Sharing information would be easier and more efficient if there was one database which could be accessed from all departments, across all levels of law enforcement.					

INFORMATION SHARING SURVEY – PART III

Please indicate your level of agreement or disagreement with each of the following statements.

For each statement below, please place a checkmark in the box that best describes your view.

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Information obtained from citizens is critical to good police work.					
Cooperation with other agencies is critical to good police work.					
I sometimes need access to information during the course of an investigation that I know other law enforcement agencies have.					
I believe preventing crimes is just as important as solving crimes.					
I believe that solving problems in the community is an important part of police work.					
The attack of 9/11 has increased the need for better communication between all levels of law enforcement.					
I believe the overall benefits of sharing information outweigh the negatives.					
Federal agencies have suggested that our agency share intelligence information electronically.					
Our agency has been criticized by other law enforcement agencies for our handling of information during a joint investigation.					
Federal agencies have had an influence on our department's decision to share information with other agencies.					
Our agency has previously accepted an invitation from a federal agency to participate in a joint training task force initiative.					

...Part III Continued

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Federal agencies keep our agency informed about the downside of not sharing information.					
It is difficult to learn computer skills necessary for sharing information with other law enforcement agencies.					
Electronic information sharing of intelligence information is a difficult concept to understand.					
It is more difficult to share information with other law enforcement agencies, which do not have the same standard operating procedures as my agency.					
Federal agencies and our agency have a high level of mutual trust.					
Federal agencies keep our agency's best interests in mind.					
If my agency shared intelligence information with a federal agency, I am confident that the information shared would not be compromised.					
Pertinent information and investigative assistance are encouraged by my agency.					
I would feel comfortable going outside of my agency's chain of command if I believed I had investigative information, which was being ignored.					
If I were appointed chief administrator of my agency, I would make information sharing a priority.					

INFORMATION SHARING SURVEY – PART IV

In your opinion, what are the major barriers to successful intelligence information sharing initiatives between local and federal agencies?

STATEMENT	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
I would be more likely to support information sharing practices if I were given greater flexibility by my supervisor to conduct and share information as the investigation dictates.					
I believe that learning and applying intelligence information sharing techniques is important for my career.					
The time my supervisors make me spend on tasks associated with information sharing could be better spent in other areas of law enforcement.					
My agency administrators make information sharing a priority in my department.					
I would be more likely to support increased information sharing if my supervisor believed it was important.					

INFORMATION SHARING SURVEY – PART V

In your opinion, what are the major barriers to the implementation of intelligence information sharing initiatives between local, state, and federal agencies?

Thank you for your cooperation in completing this survey. If you believe there are any points of particular interest to your agency concerning intelligence information sharing that this survey has failed to address, please feel free to elaborate below.

APPENDIX B
IRB APPROVAL



THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

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**HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **10020104**

PROJECT TITLE: **An Examination of Local Police Support for Implementation of Intelligence Information Sharing Initiatives**

PROPOSED PROJECT DATES: **01/02/10 to 12/31/10**

PROJECT TYPE: **Dissertation or Thesis**

PRINCIPAL INVESTIGATORS: **Scott D. Bransford**

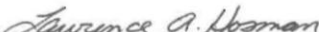
COLLEGE/DIVISION: **College of Science & Technology**

DEPARTMENT: **Administration of Justice**

FUNDING AGENCY: **N/A**

HSPRC COMMITTEE ACTION: **Expedited Review Approval**

PERIOD OF APPROVAL: **07/20/2010 to 07/19/2011**



Lawrence A. Hosman, Ph.D.
HSPRC Chair

7-22-2010

Date

REFERENCES

- Adair, J. G. (1984). The Hawthorne effect. *Journal of Applied Psychology, 69*(2), 334-345.
- Adams, R., Rohe, W. M., & Accury, T. A. (2002). Implemented community-oriented policing: Organizational change and street officer attitudes. *Crime & Delinquency, 48*, 399-430.
- Akbulut, A. (2003). *An investigation of the factors that influence electronic information sharing between state and local agencies* (Unpublished doctoral dissertation). Louisiana State University, Baton Rouge, LA.
- Aldrich, H. (1976). Resource dependence and interorganizational relations using local employment services offices and social service sector organizations. *Administration and Society, 7*, 419-476.
- Angell, J. E. (1976). Organizing police units for the future. An update on the Democratic model. *Criminology, 9*, 185-206.
- Babbie, E. (1989). *The practice of social research* (5th ed.). Belmont, CA: Wadsworth.
- Bardach, E. (2001). Development Dynamics: Interagency collaboration as an emergent phenomenon. *Journal of Public Administration Research and Theory, 11*, 149-164.
- Bayley, D. H. (1988). Community policing: A report from the devil's advocate. In J. R. Greene & S. D. Mastrofski (Eds.), *Community policing: Rhetoric or reality?* (pp. 225-238). New York, NY: Praeger.

- Benson, J. K. (1975). The interorganizational network as a political economy. *Administration Sciences Quarterly*, 20, 229-249.
- Berman, E., & West, J. (2002). Workplace relations: Friendship patterns and consequences according to managers. *Public Administration Review*, 62(2), 217-230.
- Bingham, R. D. (1976). *The adoption innovation by local government*. Lexington, MA: D.C. Heath and Company.
- Birzer, M. L., & Tannehill, R. (2004). A more effective training approach for contemporary policing. *Police Quarterly*, 4(2), 232-252.
- Blau, P. M. (1963). *The dynamics of bureaucracy: A study of interpersonal relations in two government agencies*. Chicago, IL: University of Chicago Press.
- Burns, T., & Stalker, T. (1994). *The management of innovation*. New York, NY: Oxford University Press.
- Calfano, B. R. (2001). *Terror in the air: Biological weapons, terrorism, and asymmetric threats to United States national security in the twenty-first century* (Unpublished thesis). Regent University, Virginia Beach, VA.
- Campbell, D., & Stanley, J. C. (1966). *Experimental and quasi experimental designs for research*. Chicago, IL: Rand McNally.
- Chappell, A. (2009). The philosophical versus actual adoption of community policing. *Criminal Justice Review*, 34(1), 5-28.
- Chess, C. (2001). Organizational theory and the stages of risk communication. *Risk Analysis*, 22(1), 179-188.

- Chess, C., Salonlone, K., & Hence, B. (1995). Improving risk communication in government: Research priorities. *Risk Analysis*, 15(2), 127-135.
- Choi, H. (1993). *Administrative delay in government: Can information technology help? With a focus on the United States local government* (Unpublished doctoral dissertation). Syracuse University, New York, NY.
- Colwell, L. H., Miller, H., Lyons, P., & Miller, R. (2006). The training of law enforcement. *Police Quarterly*, 9, 275-290.
- Cook, T. D., & Campbell, D. (1979). *Quasi experimentation: Design and analysis issues*. New York, NY: Houghton Mifflin.
- Cordner, G. W. (1978). Open and closed models in police organizations: Traditions dilemmas and practical consideration. *Journal of Police Science and Administration*, 6, 22-34.
- Cordner, G. W., Gaines, L. W., & Kappeler, V. E. (1996). *Police organizations: Analysis and evaluations*. Cincinnati, OH: Anderson.
- Crank, J. P. (1998). *Understanding police culture*. Cincinnati, OH: Anderson.
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 355-390.
- Daniels, R. (2009). *Evaluation of management and organizational theory: Administrative processes in government*. New York, NY: Harpers.

- Danzinger, J. N. (1979). Technology and productivity: A contingency analysis of computers in local governments. *Administrative and Society*, 11(2), 144-171.
- Dawes, S. (1996). Interagency information sharing: Expected benefits, manageable risks. *Journal of Policy Analysis and Management*, 15(3), 377-394.
- Dillman, D. (2007). *Mail and internet surveys: The tailored design method* (2nd ed.). New York, NY: John Wiley & Sons.
- Doherty, S. (2006, Fall). Community policing and homeland security. *Police Chief*, 73(2), 78-81.
- Downs, A. (1967). *Inside bureaucracy*. Boston, MA: Scott, Foresman and Company.
- Eck, T. E., & Newell, C. (1987). Who ya gonna call? The police as problem busters. *Crime and Delinquency*, 33, 31-52.
- Emerson, S. (2002). *American Jihad: The terrorists living among us*. New York, NY: Free Press.
- Engel, D. S., & Worden, R. (2003). Police attitudes, behavior and supervisory influences: An analysis of problem solving. *Criminology*, 41, 131-166.
- Fitzgerald, J. D., & Cox, S. M. (1987). *Research methods in criminal justice: An introduction*. Chicago, IL: Nelson-Hall.
- Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology*, 32, 221-233.

- Fridell, L. (2004). The results of three national surveys on community policing. In L. Fridell & M. A. Wycoff (Eds.), *Community policing, past, present, and future* (pp. 39-58). Washington, DC: Police Executive Research Forum.
- Gaffigan, S. J., Roth, J. A., & Buerger, M. E. (2000). *Origins and objectives of the COPS program – Title I of the 1994 Crime Act* (NCJ Report No. 183643). Washington, DC: National Institute of Justice.
- Gaines, L. K., Kappeler, V. E., & Vaughn, J. B. (1997). *Policing in America* (2nd ed.). Cincinnati, OH: Anderson.
- Garfield, M. (2000). Critical success factors for state telemedicine policy. *Proceedings of Americas Conference on Information Systems* (pp. 1573-1578). Long Beach, CA: Westgate.
- Goldstein, H. (1979). Improving policing: A problem-oriented approach. *Crime and Delinquency*, 25(2), 236-258.
- Goldstein, H. (1987). Toward community-oriented policing. Potential basic requirements and threshold questions. *Crime and Delinquency*, 33, 6-30.
- Goldstein, H. (1990). *Problem-oriented policing*. New York, NY: McGraw-Hill.
- Goodsell, C. (1983). *The case for bureaucracy: A public administration polemic*. Chatham, NJ: Chatham House Publishers.
- Gottfredson, G. D. (1996). The Hawthorne misunderstanding: How to get the Hawthorne effect in action research. *Journal of Research and Crime Delinquency*, 31(1), 28-48.
- Greene, J. R., & Mastrofski, S. D. (Eds.). (1988). *Community policing: Rhetoric or reality?* New York, NY: Praeger.

- Guetzkow, H. (1962). *Relations among organizations: A research symposium*. Athens, GA: University of Georgia Press.
- Gulick, L. (1937). *Papers on the science of administration*. New York, NY: Columbia University Publishers.
- Hagan, J., & McCarthy, B. (1997). Anomie, social capital and street criminology. In N. Passas & R. Agnew (Eds.), *The future of anomie theory* (pp. 118-132). Boston, MA: Northeastern University Press.
- Hickman, M. J., & Reaves, B. A. (2001). *Community policing in local police departments, 1997-1999, Bureau of Justice Statistics*. Washington DC: United States Department of Justice.
- Homans, G. C. (1950). *The human group*. New York, NY: Harcourt Brace.
- Homans, G. C. (1974). *Social behavior in its elementary forms*. New York, NY: Harcourt Brace.
- Homeland Security Information Sharing Act, H.R. 4598, 107th Cong., 2d Session (2002).
- H.R. Rep No. 109-377 (2006).
- Hummel, R. P. (1977). *The bureaucratic experience*: New York, NY: St. Martin's Press.
- International Association of Chiefs of Police. (2002). *Criminal intelligence sharing: A national plan for intelligence-led policing at the local, state and federal levels*. Alexandria, VA: COPS and International Association of Chiefs of Police.

- Jenson, G., Erikson, M., & Gibbs, J. P. (1978). Perceived risk of punishment and self-reported delinquency. *Social Forces*, 57, 57-78.
- Kappeler, V. E., Sluder, R., & Alpert, G. P. (1998). *Forces of defiance: Understanding the dark side of policing*. Prospect Heights, IL: Waveland Press.
- Kaufman, H. (1977). *Red tape: Its origins, uses, and abuses*. Washington, DC: Brookings.
- Kelling, G. L. (1994). Measuring what matters. A new way of thinking about crime and Disorder. *City Journal*, 2, 21-34.
- Kelling, G. L., & Coles, C. (1996). *Fixing broken windows: Restoring order and reducing crime in our communities*. New York, NY. Praeger.
- Kiernan, K. L. (2003). *Learning new traditions of partnership, coordination, and jurisdiction: A critical ethnographic investigation of the long-term effects of Homeland Security on national policy* (Unpublished doctoral dissertation). Northern Illinois University, De Kalb, IL.
- Kim, H. J., & Bretschneider, S. (2004). Local government information technology capacity: An exploratory theory. *Proceedings of the 34th Annual Hawaii International Conference on System Sciences* (p. 5021b). Honolulu, HI: Citeseer Publishers.
- Kohn, M. (1971). Bureaucratic man: A portrait and an interpretation. *Sociological Review*, 36(3), 461-474.

- Landsbergen, D., & Wolken, G. (2001). Realizing the promise: Government information systems and the fourth generation of information technology. *Public Administration Review*, 61(2), 206-218.
- Lansford, T., Pauley, R. J., & Covarrubias, J. (2006). *To protect and defend: U.S. security policy*. Burlington, VT: Ashgate.
- Leedy, P., & Ormrod, J. E. (2005). *Practical research: Planning and design* (8th ed.). Upper Saddle River, NJ: Prentice Hall.
- Leiss, W. (1996). Three phases in the evolution of risk communication practice. *The Annals of the American Academy of Political and Social Science*, 545(1), 85-89.
- Leonard, G., & More, H. W. (1978). *Police organization and management*. New York, NY: Fountain Press.
- Lersch, K. (2002). *Policing and misconduct*. Upper Saddle River, NJ: Prentice-Hall.
- Levine, S., & White, P. E. (1961). Exchange as a conceptual framework for the study of interorganizational relationships. *Administrative Science Quarterly*, 5, 588.
- Levitan, D. M. (2001). Political ends and administrative means. In C. Stivers (Ed.), *Democracy, bureaucracy, and the study of administration* (pp. 4-13). Boulder, CO: Westview Press.
- Lipsky, M. (1980). *Street-level bureaucracy: Dilemmas of the individual in public services*. New York, NY: Russell Sage Foundation.

- Litwak, E., & Hylton, L. F. (1962). Interorganizational analysis: A hypothesis on coordinating agencies. *Administrative Science Quarterly*, 395-420.
- Lyons, W. (2002). Partnerships, information, and public safety: Community policing in an age of terror. *International Journal of Police Strategies and Management*, 25(3), 530-542.
- Manning, P. K. (1997). *Police work: The social organization of policing*. Prospect Heights, IL: Waveland.
- March, J., & Simon, H. (1958). *Organizations*. New York, NY: John Wiley.
- Marchand, D. (2004, February). *Information strategy as a key success factor for enterprises and universities*. Poster session presented at the 7th International Bielefeld Conference, Bielefeld, Germany.
- Markus, M., & Keil, W. (1994). If we build it they will come: Designing information technology systems that people will want to use. *Sloan Management Review*, 11-25.
- Mastrofski, S. D. (1998). Community policing and police organizations structure. In J. P. Brodeur (Ed.), *How to recognize good policing: Problems and issues* (pp. 249-279). Thousand Oaks, CA: Sage.
- Maynard-Moody, S., & Musheno, M. (2000). State agent or citizen agent: Two narratives of discretion. *Public Administration Research and Theory*, 2, 329-358.
- McDonnell, D. (2002). The future of policing. *International Journal of Police Science Management*, 4(3), 283-284.

- McPherson, N. (2007). *Technology for community policing: Community oriented policing service*. Washington DC: National Institute of Justice.
- Merton, R. K. (1990). Bureaucratic theory and social structure. *Social Forces*, 18, 560-568.
- Morgan, G. (1998). *Images of organizations: The executive edition*. San Francisco, CA: Barrett-Foehlers.
- Myers, C. (1967). *The impact of computers on management*. Cambridge, MA: MIT Press.
- Nachmias, D., & Rosenbloom, D. H. (1980). *Bureaucratic government USA*. New York, NY: St. Martins Press.
- National Commission on Terrorist Attacks. (2004). *The 9/11 Commission report: Final report of the National Commission on terrorist attacks upon the United States*. New York, NY: W.W. Norton.
- Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Boston, MA: Pearson Education.
- Newcomer, K. E., & Caudle, S. L. (1991). Evaluating public sector information systems: More than meets the eye. *Public Administration Review*, 51(5), 377-384.
- Nigro, F. A. (1970). *Modern public administration* (2nd ed.). New York, NY: Harper and Row.
- Nonet, P., & Selznick, P. (2001). *Law and society in transition: Toward responsive law*. Berkeley, CA: The University of California Press.

- Norris, D. F. (1989). *Microcomputers and local government* (3rd ed.). Washington, DC: ICMA.
- Office of Homeland Security. (2002, July). *National strategy for homeland security*. Retrieved from http://www.dhs.gov/xlibrary/assets/nat_strat_hls.pdf
- Office of Homeland Security. (2007, October). *National strategy for information sharing: Success and challenges in improving terrorism-related information sharing*. Washington, DC: Morgan James.
- Oliver, W. M. (2007). *Homeland security for policing*. Upper Saddle River, NJ: Prentice Hall.
- Owen, D. E. (1989). RM concepts: Building blocks for the 1990s. *Information Management Review*, 5(2), 19-28.
- Palmiotto, R. (2000). *Community policing: A policy strategy for the 21st century*. Boston, MA: Jones and Bartlett.
- Patterson, G., & Sprehe, J. T. (2002). Principal challenges facing electronic records management in federal agencies today. *Government Information Quarterly*, 19(3), 307-315.
- Payne, D. M., & Trojanowicz, R. (1985). *Performance profiles of foot versus motor officers*. Retrieved from <http://www1.cj.msu.edu/~people/cp/perform.html>
- Perrow, C. (1967). A framework for the comparative analysis of organizations. *American Sociological Review*, 32, 194-208.

- Perry, J. L., & Danzinger, J. N. (1999). The adaptability of innovations: An empirical assessment of computer applications in local governments. *Administration and Society, 1*(4), 461-492.
- Peters, G. (2001). *The politics of bureaucracy* (5th ed.). London, England: Rutledge.
- Peters, R. G., Covello, V. T., & McCallum, D. B. (1997). The determinants of trust and credibility in environmental risk communication: An empirical study. *Risk Analysis, 17*(1), 43-54.
- Piquero, A., & Hickman, M. (1999). An empirical test of Title's control balance theory. *Criminology, 37*(2), 319-343.
- Posner, G. (2003). *Why America slept: The failure to prevent 9/11*. New York, NY: Random House.
- Premkumar, G., Ramamurthy, K., & Nilakanta, S. (1994). Implementation of electronic data interchange: An innovation diffusion perspective. *Journal of Management Information Systems, 11*(2), 157-168.
- Pretlow, C. (2008). Readability test at Juicy Studio. *Computers in Libraries, 28*(16), 17-18.
- Radalet, C. A., & Carter, D. L. (1994). *The police and the community* (5th ed.). New York, NY: MacMillan College Publishing.
- Ratcliffe, J. H. (2003). Intelligence-led policing. *Trends and Issues in Crime and Criminal Justice, 248*, 1-6.
- Reif, G. (1968). *A service architecture for mobile teamwork: Software and knowledge engineering*. New York, NY: ACM Publishers.

- Relyea, H. (2004). Homeland security and information sharing: Federal policy considerations. *Government Information Quarterly*, 21(14), 420-428.
- Reuss-Ianni, E. (1983). *Two cultures of policing*. New Brunswick, NJ: Transaction Books.
- Riley, K. J., & Hoffman, B. (1995). *Domestic terrorism: A national assessment of state and local preparedness*. Santa Monica, CA: Rand Corporation.
- Roberts, A. (2006). *Blacked out: Government secrecy in the information age*. New York, NY: Cambridge University Press.
- Rogers, E. M. (1995). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
- Rosenbaum, D. P., & Lurigio, A. J. (1994). An inside look at community policing reform: Definitions, organizational changes and evaluation findings. *Crime and Delinquency*, 40(2), 331-353.
- Rosenthal, R., & Rosnow, R. (1991). *Essentials of behavioral research* (2nd ed.). New York, NY: McGraw-Hill.
- Rubin, H. J. (1983). *Applied social research*. Columbus, OH: Chas. E. Merrill.
- Runge, D. A. (1985). *Using telecommunications for competitive advantage* (Unpublished doctoral dissertation). Oxford University, England.
- Sadd, S., & Grinc, R. M. (1994). *Innovated neighborhood oriented policing: Descriptions of programs in eight cities*. New York, NY: Vera Institute of Justice.

- Sarewitz, D., Pielke, R., & Keykhah, M. (2003). Vulnerability and risk: Some thoughts from a political and policy perspective. *Risk Analysis*, 23(4), 805-811.
- Schermerhorn, J. R., Jr., Hunt, J. G., & Osborn, R. N. (1994). *Managing organizational behavior* (5th ed.). New York, NY: John Wiley & Sons.
- Shafritz, J. M., & Ott, J. S. (2001). *Classics of organization theory* (5th ed.). Fort Worth, TX: Harcourt College Publishers.
- Shein, E. H. (1996). Three cultures of management: The key to organizational learning. *Sloan Management Review Journal*, 38(1), 22-33.
- Simon, H. A. (2000). The proverbs of administration. In C. Stivers (Ed.), *Democracy, bureaucracy, and the study of administration* (pp. 38-59). Boulder, CO: Westview Press. (Reprinted from The proverbs of administration, by H. A. Simon, 1946, *Public Administrative Review*, 6, pp. 53-67)
- Simon, M., & Francis, J. B. (2006). *The dissertation and research cookbook: From soup to nuts* (4th ed.). Dubuque, IA: Kendall and Hunt.
- Sjoberg, L. (2002). Limits of knowledge and the limited importance of trust. *Risk Analysis*, 21(1), 189-198.
- Skogan, W., & Frydl, K. (1999). *Fairness and effectiveness in policing. The evidence*. Washington, DC: The National Academies Press.
- Skogan, W., & Frydl, K. (Eds.). (2004). *Fairness and effectiveness in policing. The evidence*. Washington, DC: The National Academies Press.

- Skogan, W., Hartnett, J., Du Bois, J., Comey, M., & Lovig, J. (1999). *On the beat: Police and community problem solving*. Boulder, CO: Westview Press.
- Skogan, W., & Hartnett, S. M. (1997). *Community policing: Chicago style*. New York, NY: Oxford University Press.
- Skogan, W. G. (1994, August). The community's role in community policing. *National Institute of Justice Journal*, 231, 31-34.
- Skogan, W. G. (2004). Community policing: Common impediments to success. In L. Fridell & M. A. Wycoff (Eds.), *Community policing: Past present and future* (pp. 159-167). Washington, DC: Police Executive Research Forum.
- Skolnick, J. (1994). *Justice without trial: Law enforcement in a democratic society*. New York, NY: John Wiley & Sons.
- Skolnick, J. H., & Bailey, D. H. (1986). Theme and variation in community policing. *Crime and Justice*, 10, 1-37.
- Son, J. Y., Narashiman, S., & Riggins, F. J. (1999). Factors affecting the extent of electronic cooperation between firms: Economic and sociological perspectives. *Proceedings of the Twentieth International Conference on Information Systems* (pp. 556-560). Charlotte, NC: Association for Computing Machinery.
- Sparrow, M. K., Moore, M. H., & Kennedy, D. M. (1990). *Beyond 911: A new era for policing*. New York, NY: Basic Books.
- Stark, R. (2004). *The organizational age. Sociology* (3rd ed.). New York, NY: Prentice Hall.

- Stevens, D. (1999). Corruption among narcotics officers: A study of innocence and integrity. *Journal of Police and Criminal Psychology, 14*(2), 1-10.
- Stone, A. R., & De Luca, S. M. (1994). *Police administration: An introduction* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Sullivan, J. P. (2005). *Terrorism early warning and co-production of counterterrorism intelligence*. Montreal, Quebec, Canada: Canadian Association for Security and Intelligence Studies.
- Swanton, B. (1981). Social isolation of the police: Structural detriments and remedies. *Police Studies, 3*, 14-21.
- Tait, P., & Vessey, I. (1988). The effect of information sharing: A contingency approach. *MIS Quarterly, 12*(1), 91-108.
- Taylor, F. W. (1911). *Principles of scientific management*. New York, NY: Harper.
- Taylor, R. (1986). *Value added processes in information systems*. Norwood, NJ: Ablex Publishing Corporation.
- The Heritage Foundation. (2005). *Homeland Security and terrorism: The Heritage Foundation recommendations*. Available from <http://www.heritage.org>
- The Virtual Office of Congresswoman Jane Harman. (2002, June 26). *Harman's intelligence sharing legislation overwhelmingly passed by U.S. House* [Press release]. Retrieved from http://www.house.gov/harman/press/releases/2002/062602PR_InfoSharin g.html

- Tilley, N. (2004). Community policing and problem solving. In W. G. Skogan (Ed.), *Community policing (Can it work?)* (pp. 165-184). Belmont, CA: Wadsworth.
- Tornatzky, L., & Fleisher, M. (1990). *The process of technological innovation*, Lexington, MA: Smith.
- Trice, H. M., & Beyer, J. M. (1993). *The cultures of work organizations*. Englewood Cliffs, NJ: Prentice Hall.
- Trojanowicz, R. C., & Bucqueroux, B. (1999). *Community policing: A contemporary perspective*. Cincinnati, OH: Anderson.
- Trojanowicz, R. C., Kappeler, V. E., Gaines, L. K., & Bucqueroux, B. (1998). *Community policing: A contemporary perspective* (2nd ed.). Cincinnati, OH: Anderson.
- U.S. Department of Labor, Bureau of Labor Statistics. (2010). *Occupational outlook handbook*. Washington, DC: Author.
- U.S. Government Accountability Office. (2002a). *Homeland security: Efforts under way to develop enterprise architecture, but much work remains* (GAO Publication No. GAO-04-777). Washington, DC: Author.
- U.S. Government Accountability Office. (2002b). *Homeland security: Management challenges facing federal leadership* (GAO Publication No. GAO-03-260). Washington, DC: Author.
- U.S. Government Accountability Office. (2002c). *Homeland security: Management of First Responder Grant has improved, but challenges remain* (GAO Publication No. GAO-05-121). Washington, DC: Author.

- U.S. Government Accountability Office. (2003). *Homeland security: Information sharing responsibilities, challenges, and key management issues* (GAO Publication No. GAO-03-1165t). Washington, DC: Author.
- U.S. Government Accountability Office. (2005, February). *Management of first responder grant programs has improved, but challenges remain* (GAO Publication No. GAO-05-121). Washington, DC: Author.
- U.S. Government Accountability Office. (2006, March). *Information sharing: The Federal Government needs to establish policies and processes for sharing terrorism-related and sensitive but unclassified information* (GAO Publication No. GAO-06-385). Washington, DC: Author.
- Vidmar, N. (1979). The other issues in jury simulation research: A Commentary with particular reference to defendant character studies. *Law and Human Behavior*, 3, 95-106.
- Volkoff, O., Chan, Y. E., & Newson, E. (1999). Leading the development and implementation of collaborative interorganizational systems. *MIS Quarterly*, 35, 36-75.
- Walker, S. (1993). Does anyone remember team policing? Lessons of the team policing experience. *American Journal of Police*, 12(1), 33-55.
- Warner, M. (2007). Kafka, Weber and organizational theory. *Human Relations*, 60(7), 1019-1138.
- Watson, H. J., Houdeshel, G., & Rainer, K., Jr. (1997). *Building executive information systems and other decision support applications*. New York, NY: Wiley.

- Waugh, W. L., & Strieb, G. (2006). Collaboration and leadership for effective emergency [Special edition]. *Public Administrative Review*, 131-139.
- Weber, M. (1978). *Economy and society*. Berkeley, CA: University of California Press. (Original work published in 1922)
- Weisburd, D., & Eck, J. (2004). What can police do to reduce crime, disorder, and fear? *Annals of the American Academy of political and Social Science*, 553(1), 43-65.
- Weisburd, D., & Greenspan, R. (2000). *Police attitudes towards the abuse of authority: Findings from a national study*. Washington, DC: National Institute of Justice. Retrieved from <http://www.ncjrs.gov/pdffiles1/nij/181312.pdf>
- Westley, W. (1953). A sociological study of law, custom, and morality. *American Journal of Sociology*, 49, 34-41.
- Whitley, B. E. (1996). *Principles of research in behavioral science*. London, England: Mayfield.
- Willis, J. J., Mastrofski, S. D., & Weisburd, D. (2004). Compstat and bureaucracy: A case study of challenges and opportunities for change. *Justice Quarterly*, 21(3), 463-496.
- Wilson, J. M. (2006). *Community policing in America*. New York, NY: Routledge, Taylor & Francis.
- Winfrey, T., Guiterman, D., & Mays, L. (1997). Work assignments and police work: Exploring the work world of sworn officers in four New Mexico departments. *Policing*, 20(2), 419-441.

- Wise, C. R. (2002). Organizing for Homeland Security. *Public Administrative Review, 62*(2), 129-145.
- Zaltman, G., Duncan, R., & Holbek, J. (1973). *Innovations and organizations*. New York, NY: John Wiley.
- Zhao, J., Thurman Q. C., & Reis, L. (2008). An examination of strategic planning in American law enforcement: A national study. *Police Quarterly, 11*, 3-26.

