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Information Technology Solutions to Expand and Sustain Community Oriented Policing

CAPSTONE REPORT

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Abstract

This annotated bibliography examines how law enforcement agencies are deploying technology solutions to expand and sustain community oriented policing. Articles published between 2000 and 2012 are reviewed to identify technologies that can be implemented to positively affect the ability to build community partnerships and solve community problems. Topics include law enforcement staffing trends: community oriented policing practices, and law enforcement technology solutions. The most effective solutions include social media, crime analytic software, and information sharing.

Keywords: crime analysis, community oriented policing, evidence based policing intelligence based policing, law enforcement budgets, law enforcement communication, law enforcement force multipliers, law enforcement information sharing, law enforcement technology, neighborhood policing, police staffing reports

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Introduction

Problem

Law enforcement agencies throughout the country rely on a concept known as *community oriented policing* as a way of doing business (Office of Justice Programs: Bureau of Justice Assistance, 1994). In its current form, community oriented policing contains two core components: (a) community partnerships, and (b) problem-solving (Kappeler & Gaines, 2012). These components require the community and the police organization to work together to identify, analyze, and solve problems using communication, conflict resolution, and resource identification (Community Policing Consortium, 1994). Successful community oriented policing practices take a significant amount of time and resources from both the community and the police organization, but can considerably impact crime in a community (Kappeler & Gaines, 2012). Bernard Melkian Director of the Office of Community Oriented Policing Services (2012) states, "community policing has taught us that the building of relationships and the solving of problems are more important, not less, in challenging times such as these" (Melekian, 2012, p. 19).

Nationally, law enforcement budgets have seen significant reductions since 2008 (Johnson, 2011). These reductions are changing how law enforcement agencies provide service to the communities they serve (Goode, 2012). A recent survey conducted by the Police Executive Research Forum (PERF), examined how the cutting of local police department budgets have impacted more than 700 agencies nationwide (Fischer, 2012). According to the survey, staffing levels and the training officers receive are both being reduced, resulting in lower quality of service to the citizens and increased safety risks for the officers (Fischer, 2012). Survey findings reveal a nearly 80% negative outcome due directly to budget reductions of the last two years

(Fischer, 2012). Reductions in police staffing also reduce the services they provide to their communities. As a result, 42% of the over 700 agencies surveyed are turning to technology solutions as a way to add back service capacity by (a) using telephone or Internet services to receive minor crime reports from the public, and (b) changing policies for responding to calls for service (Fischer, 2012). As noted by Los Angeles Police Chief William Bratton, "technology is truly the key to increasing the department's effectiveness as we continue to fight and reduce crime with limited resources" (Davis, 2007, p. 1).

As an example in California, the Sacramento Police Department currently employs 649 officers to police a city population of approximately 460,000 citizens (City of Sacramento, 2012). As noted by Goode (2012, p. A26), "the shrinking of Sacramento's police force has been extreme; the department has lost more than 300 *sworn officers* and *civilian* staff members and more than 30 percent of its budget since 2008." These reductions are having negative impacts on how law enforcement agencies provide service to the communities they serve (Johnson, 2011). In some cases, these impacts are only affecting the types of police services an agency is able to provide, further reducing the quality of service provided to a community and resulting in increased crime rates (Goode, 2012). In other areas, the budget hardships are so extreme that police agencies are forced to close down and are merge with other departments; such is the case for the Camden, New Jersey police department (Zernike, 2012).

Purpose

In 2012, the Sacramento Police Department faces pending new budget hardships while still trying to recover from previous cuts, just like many agencies across the nation (Goode, 2012). The community oriented policing concept currently in use in Sacramento and throughout the United States is struggling because it requires a significant percentage of law enforcement

agency resources for support (Johnson, 2011). The purpose of this annotated bibliography is to identify references that examine how law enforcement agencies are deploying technology solutions to expand and sustain community oriented policing. The goal is to collect, analyze, and present selected references in order to propose a set of five most effective technology solutions; the notion of *effective* is measured by (a) how these solutions work to increase partnerships between law enforcement and the public and (b) the impact they have on crime. The intent is to provide a set of references that can serve as the basis for guiding the development of technology solutions designed to expand and sustain community oriented policing practices within local law enforcement agencies.

Significance

As a part of this study, certain assumptions are made regarding police staffing, technology, and community policing. Based on the current economic trends projected for law enforcement, this researcher assumes that law enforcement staffing will not see a significant recovery and that most agencies will continue to see reductions in staffing due budget reductions (Johnson, 2011). According to the Community Policing Consortium, the main concepts of community oriented policing have been in existence since the 1800's and are used throughout the nation's law enforcement organizations (Community Policing Consortium, 1994). This researcher also assumes that the methods used in community oriented policing will continue to be used by the majority of law enforcement agencies in the county and that the use of community policing will not end anytime soon. In 1984, Jones and Cushman (1984) suggested that technology could be used to maintain and improve police services within a context of declining financial resources. Because the current economic climate in law enforcement today is reflective of the financial climate experienced in the 1980s, this researcher assumes that the use of law

enforcement technologies to mitigate losses in police staffing is a viable solution to support the practices of the community policing concept.

Audience

The primary audience for this study includes three distinct groups: (a) police chiefs, county sheriffs, and other upper level law enforcement managers responsible for guiding the tactical direction of the organization; (b) law enforcement IT managers responsible for directing technology projects and solution implementations; and (c) application developers responsible for developing the technology solutions deployed to support the organizational goals. A secondary audience is government agencies that are designed to direct how technologies are used and how law enforcement concepts are implemented. An example of a secondary audience is the Federal Bureau of Investigations Criminal Justice Information Services (CJIS) Division. CJIS is responsible for creating and maintaining information security requirements, guidelines, and agreements reflecting how law enforcement and criminal justice agencies will protect the sources, transmission, storage, and generation of criminal justice information (FBI Criminal Justice Information Services Division, 2011).

Research Questions

The core question for this study is: How can information technology solutions be used most effectively to expand and sustain community-oriented policing concepts? The sub-questions for this study address three related areas: (a) law enforcement staffing and budgeting trends (Davis, 2007; Fischer, 2012; Goode, 2012; Zernike, 2012), (b) the community oriented policing concepts and related components and practices (Bullock, 2012; Community Policing Consortium, 1994; Kappeler & Gaines, 2012), and (c) law enforcement technology solutions

(Alexander, 2011; Duggan, 1996; Geer, 2012; Norwood & Waugh, 2012; Schultz, 2008). Sub questions used to help guide the study include:

How are recent budget trends affecting law enforcement agencies in relation to staffing and technology?

What are the key components and practices of community oriented policing?

Which technologies are most effective to promote community policing practices?

Delimitations

Focus. References presented in this annotated bibliography are selected from three areas of law enforcement literature: (a) police staffing trends (Davis, 2007; Fischer, 2012; Goode, 2012; Zernike, 2012), (b) community oriented policing (Bullock, 2012; Community Policing Consortium, 1994; Kappeler & Gaines, 2012), and (c) law enforcement technology solutions (Alexander, 2011; Duggan, 1996; Geer, 2012; Norwood & Waugh, 2012; Schultz, 2008). Each area is related to the law enforcement industry but the three areas are seldom addressed simultaneously.

Timeframe. Because focus is on budgetary reductions, references selected for use in this study that address the resulting staffing and technology constraints are published between 2000 and 2012. In some cases, articles with publication dates prior to 2000 are referenced as they represent the original theories or research upon which the more recent literature is based. These references are used if the topic and content of an older study is determined to be applicable to the climate and conditions seen in a given subject area in law enforcement today.

Sources. Peer-reviewed sources are preferred when selecting references for use in this study (Bell & Frantz, 2012). Sources include research studies, government publications, vendor publications, and journal articles concerning the use of technology in community oriented

policing. References selected for inclusion in the annotated bibliography are relevant to one of the three main sub-topics of the paper: (a) police staffing trends (Davis, 2007; Fischer, 2012; Goode, 2012; Zernike, 2012), (b) community oriented policing (Bullock, 2012; Community Policing Consortium, 1994; Kappeler & Gaines, 2012), and (c) law enforcement technology solutions (Alexander, 2011; Duggan, 1996; Geer, 2012; Norwood & Waugh, 2012; Schultz, 2008). Each piece is evaluated as a credible source based on authority, objectivity, quality of work, coverage of work, and currency, as outlined by Bell and Frantz (2012).

Reading and Organization Plan Preview

In order to ensure that each reference is treated consistently and reviewed methodically in relation to the purpose and goals of this study, the following steps are followed in the reading and analysis process:

- Each article abstract is scanned to determine initial relevance to the main topic of examining how law enforcement agencies are deploying technology solutions to expand and sustain community oriented policing.
- The abstract and citation information are collected in a spreadsheet and initially sorted by preliminary comparison to the purpose of this study.
- The author(s) of each article are researched to determine expertise (based on the standards referenced in the selection criteria for this study) (Bell & Frantz, 2012).
- Resources that are determined to be relevant in relation to the main research question in this study are printed and read to ensure continuing relevance and evaluated using the extended evaluation criteria outlined in the research strategy section (Bell & Frantz, 2012).

- Key sections are highlighted through a conceptual analysis coding process (Busch, De Maret, Flynn, Kellum, Le, Meyers, Saunders, White, & Palmquist, 2012) and notated in the reference excel document based on relevance to the specific sub-questions in this study in a process similar to content analysis.

The organizational structure for the presentation of information identified during the reading and analysis process uses a thematic method (Colorado State University, 2012). References selected for inclusion in the Annotated Bibliography section of this paper are categorized based on relevance to one of three organizational themes, which equate to concepts reflected in the three sub-questions addressed in this study including (a) how are recent budget trends affecting law enforcement agencies in relation to staffing and technology, (b) what are the key components and practices of community oriented policing, (c) which technologies are most effective to promote community policing practices?

Definitions

The following definitions are intended to provide readers with an understanding of the terminology used throughout the annotated bibliography. The terms and concepts are selected from the literature and are based on the topic of community oriented policing concepts and practices. Definitions are selected so as to be meaningful within the areas of law enforcement, and information technology as described in the description of the Problem and Purpose of the study.

Civilian for the purposes of this study is defined as any person who works with a law enforcement organization in a non-sworn capacity and has no powers of arrest (Gaylord, 2008).

Community oriented policing is defined as a philosophy that promotes organizational strategies, which support the systematic use of partnerships and problem-solving techniques between the police and the community. These strategies proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime (United States Department of Justice Community Oriented Policing Services, 2012).

Compstat model of policing refers to the timely gathering of accurate crime information which is analyzed, mapped, and provided to commanders on a weekly, bi-weekly, or monthly basis. Using crime information, police personnel are directed to each beat and shift based on workload and need (City of Sacramento Police Department, 2012).

Force multiplier is defined as a factor that dramatically increases (hence "multiplies") the effectiveness of an item or group (Wikipedia, 2012).

Hot-spot policing is a policing strategy that uses past crime patterns to identify and deploy police resources to in order disrupt crime patterns and calls for service (Wells & Wu, 2011).

Intelligence-led policing is a business model and managerial philosophy where data analysis and criminal intelligence are pivotal to an objective decision-making framework that facilitates crime and problem reduction, disruption, and prevention through both strategic management and effective enforcement tactics that target prolific and serious offenders (Edwards, 2012).

Law enforcement is defined as the generic name for the activities of the agencies responsible for maintaining public order and enforcing the law, particularly the activities of prevention, detection, and investigation of crime and the apprehension of criminals (Office of Justice Programs, 2012). Synonyms for this term found throughout this study are *police* and *sheriff*.

Law enforcement technology solutions is defined as any technology solution that increases law enforcement's ability to diminish crime with limited resources while supporting the components of community policing (Davis, 2007).

Predictive policing is a policing model that uses data mining to analyze and examine past and present crime trends to predict where and when future crime is going to occur (Wells & Wu, 2011).

Sworn officer is a person(s) formally authorized to make arrests while acting within the scope of explicit legal authority (Office of Justice Programs, 2012).

Research Parameters

This section describes the methods used to design the annotated bibliography. The research parameters are organized around four main areas of content: (a) the search strategy (including key words and concepts used), which details the process used to locate references for inclusion in the annotated bibliography; (b) the evaluation criteria that describes the assessment process used to evaluate each article to determine their relevancy, authority, and validity; (c) the documentation approached used for reference collection; and (d) the reading and organization plans which explains the in-depth reading and coding process and the analysis process used to organize and present references in the annotated bibliography.

Search Strategy

References presented in this annotated bibliography are selected from three areas of law enforcement literature: (a) police staffing trends (Davis, 2007; Fischer, 2012; Goode, 2012; Zernike, 2012), (b) community oriented policing (Bullock, 2012; Community Policing Consortium, 1994; Kappeler & Gaines, 2012), and (c) law enforcement technology solutions (Alexander, 2011; Duggan, 1996; Geer, 2012; Norwood & Waugh, 2012; Schultz, 2008). Each area is related to the law enforcement industry but the three areas are seldom addressed simultaneously. Because focus is on *current* budgetary reductions and resulting staffing and technology constraints, references selected for use in this study are published between 2000 and 2012, unless the topic and content of an older study is determined to be applicable to the climate and conditions seen in a given subject area in law enforcement today. The initial focus of this research is tailored towards peer-reviewed research studies, government publications, vendor publications, journal articles concerning law enforcement technology and identifying their use in community oriented policing (Bell & Frantz, 2012).

Key words

The initial search for literature is conducted in the following areas: (a) police staffing trends, (b) community oriented policing, and (c) law enforcement technology solutions.

Literature selection is not intended to include all works, but to accentuate information that associates the three identified topic areas.

Key words used for searches in this study are derived from three sources; (a) terms located in peer-reviewed articles and journals, (b) online search sources such as Wikipedia, Yahoo, or Google, and (c) the researcher's professional knowledge and experience. The established key words for this study are:

- crime analysis
- community oriented policing
- evidence based policing
- intelligence based policing
- law enforcement budgets
- law enforcement communication
- law enforcement force multipliers
- law enforcement information sharing
- law enforcement technology
- neighborhood policing
- police staffing reports
- records management

After conducting preliminary literature searches, refined searches are applied to narrow time frame to 2000 and later for community policing and technology. Time limitations for police budget and staffing are also applied when possible for a time frame of 2007 thru 2011.

Reference Collection Procedures

References for this annotated bibliography are collected from sources found in the University of Oregon online libraries and on the Google Scholar online academic search site. Qualifying references are in the topic areas of community oriented policing, law enforcement budget, and law enforcement technologies. References cited in more than one study are also examined to locate original sources of information for the topic.

Evaluation Criteria

It is the researcher's intent to only select material directly related to the study, using the following criteria (Bell & Frantz, 2012):

- Keyword searches and the number of overall return results are recorded in a Microsoft Excel document so that search word variations can be identified.
- Research studies must be peer reviewed, and available in full text version. Once obtained, studies are reviewed for content to ensure that it is applicable.
- Journal and periodical articles are used if located in peer-reviewed sources.
- Corporate whitepapers and vendor manuals are used to describe technical applications.

Documentation Approach

Once a reference is collected, it is recorded using the following recording procedures (Bell & Frantz, 2012):

- Upon locating items, an APA 6th edition bibliographic entry is created using the Microsoft Word References tool so that it can easily be reviewed and retrieved.
- Literature is categorized and organized using a thematic approach related to one of the three identified themes: (a) police staffing trends, (b) community oriented policing, and (c) law enforcement technology solutions.
- Literature is reviewed and notes are captured in a excel document as a living journal to identify the type of literature, main focus points, and data points that can be related to the study. Also recorded in the journal is how literature was retrieved (online vs. hardcopy text).
- Once an item is identified as usable during the analysis process, it is annotated and logged for reference in the study.

Reading and Organization Plan

Reading plan. The reading plan describes the procedure used to conduct an in-depth reading of all references after the initial assessment is completed (Busch et al., 2012). Each reference is read and coded through a conceptual analysis process, using key words and phrases that reflect concepts described in the research sub-questions (Busch et al., 2012).

Phrases found in multiple references are evaluated to ensure that they have similar enough meanings to be categorized together, and words and phrases that are similar but not identical are similarly evaluated to determine if they can be grouped together (Busch et al., 2012). Predetermined key words and phrases are coded based on occurrence within each reference (Busch et al., 2012). Three key concepts are coded, including (a) police staffing trends; (b) community oriented policing practices, and (c) law enforcement technology solutions.

(See Table 1 for a listing of key phrases or words as they relate to one of the three research sub-questions).

The in-depth reading and coding is done with printed hard copies of each reference and notes taken directly on each reference, with an accompanying Excel document entry for further explanation if necessary. After the initial reading, the data recorded in hard copy is transferred to a excel document that is designed to easily sort references by theme to aid in the speed and efficiency that the data is examined (Busch et al., 2012). Manually coding first, and then transferring the information to an electronic document, provides an opportunity for increased reflection and analysis, therefore reducing the potential for errors (Busch et al., 2012). After completing the in-depth reading and coding, any data that is not relevant is disregarded and discarded for the purposes of the Annotated Bibliography (Busch et al., 2012).

Table 1

Coding Key

Question	Concept/Thematic Category	Key words and phrases
How are recent budget trends affecting law enforcement agencies in relation to staffing and technology?		
	Police staffing trends	law enforcement staffing, police department staffing, sheriff's department, budgets, staffing trends, community partnerships, law enforcement economic impacts, police staffing reports, organizational change
What are the key components and practices of community oriented policing?		
	Community oriented policing practices	community policing, community oriented policing, intelligence led policing, problem oriented policing, police and civilian partnerships, law enforcement concepts, crime enforcement methods, evidence based policing, neighborhood

		policing
Which technologies are most effective to promote community policing practices?		
	Law enforcement technology solutions.	Crime analysis, social media, law enforcement technology, investigative tools, police technology, sheriff technology, community oriented policing technology, law enforcement communication, law enforcement force multipliers, law enforcement information sharing, records management, knowledge management, intelligent analysis

Organization plan. After completing the reading process, the information is sorted thematically in relation to one of the three sub-questions that form the themes of the Annotated Bibliography. The main question examined is “How can information technology solutions be used most effectively to expand and sustain community-oriented policing concepts?” To answer this question, the Annotated Bibliography is divided into three sections, each of which is designed to answer one of the three sub-questions.

Theme one: Police staffing trends. This theme looks at how recent budget trends are affecting law enforcement agencies in relation to staffing and technology, such as the reductions in police sworn and civilian staffing due to budgetary reductions (Davis, 2007; Fischer, 2012; Goode, 2012; Zernike, 2012).

Theme two: Community oriented policing. This theme examines the key components and practices of community oriented policing, such as developing law enforcement and community partnerships through open communication (Bullock, 2012; Community Policing Consortium, 1994; Kappeler & Gaines, 2012).

Theme three: Law enforcement technology solutions. This theme addresses technologies that are most effective to promote community policing practices, such as crime analysis software to predict crime trends and identify suspects based on prior police contacts (Alexander, 2011; Duggan, 1996; Geer, 2012; Norwood & Waugh, 2012; Schultz, 2008).

Annotated Bibliography

The literature selected for this annotated bibliography includes materials which are considered to show the relevancy and authority in support of the research questions described in the Introduction section. The annotated bibliography includes 40 key references that are used to examine how information technology solutions can be used effectively to expand and sustain community-oriented policing concepts. Each annotation is divided into four parts: (a) bibliographic citation in APA format; (b) a brief abstract of the content, as provided in the reference; (c) a verification of the author(s) credibility, and (d) a summary of the reference and how it applies to this study.

This annotated bibliography has been divided into three themes that reflect the key concepts established by the study's subquestions. These themes are: (a) police staffing trends, which looks at how recent budget trends are affecting law enforcement agencies in relation to staffing and technology, such as the reductions in police sworn and civilian staffing due to budgetary reductions (Goode, 2012; Johnson, 2011; Jones & Cushman, 1984); (b) community oriented policing, which examines the key components and practices such as developing law enforcement and community partnerships through open communication (Kappeler & Gaines, 2012; Melkian, 2012); and (c) law enforcement technology solutions, which addresses technologies that are most effective to promote community policing practices, such as crime analysis software to predict crime trends and identify suspects based on prior police contacts (Chen, Zeng, Atabakhsh, Wyzga, & Schroeder, 2003; Geer, 2012; Koper, Taylor, & Kubu, 2009; Schultz, 2008).

Theme 1: Police Staffing Trends

Fischer, C. (2012, April 30). *Survey indicates easing of budget cuts in some local police*

departments, but most are still being cut. (C. Fischer, Editor) Retrieved May 05, 2012,

from Police Executive Research Forum:

<http://policeforum.org/library/economy/ImpactofeconomiccrisisonpolicingApril2012final.pdf>

Abstract. This article is the report back from a survey of local police departments conducted by the Police Executive Research Forum (PERF). It suggests that the economic crisis may be easing in a minority of cities, but most departments' budgets are still being cut. This report give a statistical break down of how police organizations are being impacted by the economy and a look at what some agencies are doing to mitigate losses.

Credibility. Craig Fischer joined Police Executive Research Forum (PERF) in January 2007. Fischer worked at Letter Publications, where he edited Criminal Justice Newsletters and other periodicals covering news and policy issues in law enforcement, corrections, juvenile justice, and related fields. He also has worked at the National Safety Council, and other organizations, where he wrote and edited publications on labor legislation, workplace safety and health, and other matters. Craig Fischer holds a bachelor's degree in journalism from the University of Illinois at Urbana-Champaign. The article was written in the Police Executive Research Forum (PERF). PERF was founded in 1976 as a police research organization and provider of management services, technical assistance and executive-level education to support law enforcement agencies. PERF is designed to help improve the delivery of police services through the exercise of strong national leadership; public debate of police and criminal justice issues; and

research and policy development. PERF has an extensive history of measuring all aspects of police agency performance, striving to find the best policing practices, and disseminating that knowledge to police agencies. PERF's research projects on community and problem-oriented policing, racial profiling, use-of-force issues, and crime reduction strategies have earned it a prominent position in the police community.

Summary. This article describes the impact that the economy is having on local law enforcement agency staffing. It is the summary of a survey that was completed of 461 U.S. police agencies. It describes how hundreds of police agencies still have to reduce their number of sworn personnel due to continued reductions in police budgets. The author posits that the survey results show staffing cuts are resulting in higher violent crime rates in three major U.S. cities; Detroit, MI, Oakland, CA and Camden, NJ. The article also finds that many agencies are still facing reductions and have to revise their organizational structures to reduce spending in order to continue to provide essential police services to their communities.

Goode, E. (2012, November 04). Crime increases in Sacramento after deep cuts to police force.

The New York Times, p. A26. Retrieved 2012 04, November, from

<http://www.nytimes.com/2012/11/04/us/after-deep-police-cuts-sacramento-sees-rise-in-crime.html?pagewanted=all>

Abstract. The shrinking of Sacramento's police force has been extreme; the department has lost more than 300 sworn officers and civilian staff members and more than 30 percent of its budget since 2008. But at a time when many cities are curtailing essential services like policing—the Los Angeles Police Department said that it could lay off 160 civilian employees by Jan. 1, 2012—Goode notes that criminal justice experts say the

cutbacks in this sprawling city of 472,000 offer a window on the potential consequences of such economizing measures.

Credibility. Since 2009, Erica Goode has been the Environment Editor at the New York Times. She has been writing for mass media since 1980 where she started with the San Francisco Chronicle. She served as a foreign correspondent in Baghdad, Iraq in 2008 and currently reports on national environment issues. Ms. Goode holds a Master's of Science degree in social psychology from the University of California, Santa Cruz. The article was written for the New York Times Magazine, which was established in 1851. The New York Times is seen in the news industry as a leading global, multimedia news and information company with a mission of enhancing society by creating, collecting and distributing high quality news and information.

Summary. This article examines the impact that deep budget cuts have had on the City of Sacramento Police Department, Sacramento Ca. The author identifies how these cuts have changed the way that the police department functions. It also shows how these changes have negatively impacted the community and its relationship with the police department, as services that were once provided to them are reduced or even eliminated. The article discusses how county crime rates are dropping over all, but violent crime rates in the city are beginning to rise due to the reduced staffing and elimination of specialized teams that once operated in the community. This article shows the difficulty one department faces while trying to operate effectively in a time when budgets are being reduced along with their staffing numbers.

Johnson, K. (2011, October 24). Weak economy forces cuts, squeezes police departments. *USA Today*, p. 02A. Retrieved May 16, 2012, from

<http://web.ebscohost.com.libproxy.uoregon.edu/ehost/detail?sid=f89bba0e-0359-47cf-be0b-1bd92db8a6d7%40sessionmgr110&vid=1&hid=113&bdata=JnNpdGU9ZWhvc3QtbGl2ZSZzY29wZT1zaXRl#db=aph&AN=J0E062351688511>

Abstract. This article discusses how the weak economy is forcing police agencies throughout the United States to cut positions. The article illustrates how these cuts are affecting both national and local crime a rate, suggesting that on the national level crime appears to be going down, but in many small local jurisdictions crime rates are increasing severely due to the law enforcement reductions.

Credibility. Kevin Johnson is a Journalist for USA Today. He covers justice and national law enforcement issues. Johnson covered the murder trial of O.J. Simpson in Los Angeles, the Oklahoma City bombing investigation, the trials of Timothy McVeigh and Terry Nichols, the execution of McVeigh, the Atlanta Olympic Park bombing, the Columbine massacre, the Independent Counsel investigation of President Clinton, the federal investigation into the attacks of September 11th and Hurricane Katrina. The article used for this study was published in the USA Today, which was established as a worldwide media outlet covering the daily news in 1982.

Summary. This article discusses impacts that the weak economy is having on law enforcement throughout the nation. It predicts that in 2011 nearly 12,000 law enforcement jobs would be cut with another 30,000 vacancies eliminated due to law enforcement budget reductions. The author quotes Vice President Joe Biden who said, “When the economy tanks, that causes a spiral. That drives down revenue available for cities and counties. They lay off cops. The more cops who are laid off, the more crime

that occurs” (p. 2). This article reports that although crime rates on a federal level show to be going down, in many individual communities crime rates are soaring because the reductions in police services are continuing.

Jones, L. R., & Cushman, E. H. (1984, May). Managing fiscal stress in law enforcement. *State & Local Government Review*, 16(2), 84-93. Retrieved May 18, 2012, from <http://www.jstor.org/stable/4354816>

Abstract. This study presents concepts and methods for improving productivity and reducing costs in the operation of local government law enforcement agencies. It provides information and insights intended to improve law enforcement management in response to general fiscal stress and revenue reductions that threaten service quality. The study is directed to all local government administrators concerned with achieving greater productivity and cost savings in law enforcement while minimizing the loss of service quality to citizens.

Credibility. L.R. Jones was an associate professor of public management in the department of planning, public policy and management at the University of Oregon, Eugene, Oregon. Dr. Jones taught budgeting and public financial management as well as a course in cutback management. He has consulted with numerous local and state governments on retrenchment strategy and procedures. Ellwood H. Cushman was a sergeant with the City of Eugene Police Department. Mr. Cushman completed a master’s degree in public affairs at the University of Oregon. He was involved in the productivity program testing for the City of Eugene, Oregon police department. The article was written in the *State & Local Government Review (SLGR)*, a research journal that provides a forum for the exchange of ideas among practitioners and academics that

contributes to the knowledge and practice of state and local government politics, policy, and management.

Summary. The study addresses increased revenue generation opportunities, techniques to improve organizational and individual employee productivity, productivity measurement issues, productiveness of new technology, cost reduction, and reduction in force options (p.84). Written in 1984 during time when the U.S. was in an economic downturn similar to the one occurring during the time of this study, the article presents concepts that can be deployed by law enforcement to help manage the fiscal stress. Although this article was not written for police administrators, it identifies key productivity concepts that can help agencies improve staffing efficiencies during times of fiscal reductions. It suggests that the implementation “appropriate computer and other technologies” (p.89) can improve officer productivity and reduce agency costs. The article identifies ways to increase police to community relationships during a time of financial decline to help control crime rates. It suggests that by engaging the community to help protect their own neighborhoods law enforcement will build relationships and support from the community. It is noteworthy that the authors conclude, nearly 30 years ago, that the “maintenance of strong citizen support is likely to be a key factor in avoiding deeper cuts” (p. 92).

Kocher, C. J., Cumberland, D., Raquet, T. M., & Stocker, D. K. (2012, March). Sustaining police operations at an efficient and effective level under difficult economic times. *Police Chief Magazine*, 79(3), 28-33. Retrieved November 19, 2012, from http://www.policchiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=2621&issue_id=32012

Abstract. The article reports challenges that law enforcement is facing in the 21st century. The authors examine the importance of professional services and law enforcement standards to identify what impact the economy is having on them. In doing so, they identify that the way for law enforcement to operate more efficiently is the regionalization of resources. The authors find that sustaining operations, ownership and empowerment components have never meant more to a police department than they do now. This mind-set applies to sustaining police services universally.

Credibility. Charles J. Kocher EdD was an Assistant Professor at Cumberland County College, Vineland, New Jersey; he also served as the Coordinator for Justice Studies. Dr. Kocher was a member of the Camden Police Department in New Jersey for thirty years and retired serving as provisional deputy police chief. Kocher holds a Doctorate Degree from Saint Joseph's University and Master's Degrees from Saint Joseph and Rowan University. The other authors were, at the time of publication, all associated with Cumberland County College. The Police Chief Magazine is a monthly publication that publishes articles contributed by law enforcement professionals regarding law enforcement management topics. The references cited by the article relate to the topic of police staffing and law enforcement partnership.

Summary. This article focuses on cost-effective policing through the regionalization of resources and using research findings in limiting police operations to those that have proven effective based on independent research. The authors find that for an agency to operate effectively today, they must have well-thought-out plans with benchmarks that are attainable and agreed upon in advance. Authors Kocher and Stocker point out that “over the next decade, police chiefs will be faced with the challenge of sustaining basic

services for the community at large while at the same time balancing professionalism through training and motivational programs” (p.3). They find that the conversion to shared services should not be impulsive. The article points out that root analysis is centered within individual motivations and leadership of each and every officer” (p.3).

Maguire, E. R., & King, W. R. (2004, May). Trends in the policing industry. *Annals of the American Academy of Political and Social Sciences*, 593, 15-41. Retrieved December 09, 2012, from <http://www.jstor.org.libproxy.uoregon.edu/stable/4127665>

Abstract. Fairness and Effectiveness in Policing: The Evidence does a terrific job of discussing the limited research on trends in the policing industry, but what it does not include is perhaps as informative. Large gaps in the body of research limit our ability to make definitive inferences about how the policing industry is changing. These gaps result in part from a lack of systematic, standardized, longitudinal data collection and analysis on the nature and outputs of police organizations in the United States. As a result, we know little about basic descriptive features of policing and how these features are changing over time. Lacking the ability to track even the most basic descriptive trends, the police research industry is at even more of a loss in developing careful empirical explanations of these trends.

Credibility. Ed Maguire is a Professor in the Department of Justice, Law, and Society at American University. Professor Maguire is a criminologist who does policy-relevant research that focuses primarily on police organizations and violent crime. William R. King is an associate professor of criminal justice at Bowling Green State University. His research areas include empirical examinations of police agencies and applying organizational theories to police organizations. The article is published in the *Annals of*

the American Academy of Political and Social Science, which contains in-depth research on contemporary political, economic, and social issues can help inform public policy as well as enlighten the intellectually curious.

Summary. This article discusses selected trends, summarizes what we know and what we do not know about them, and provides some recommendations for how the police research industry can do a better job of describing and explaining trends in the police industry. The authors identify three dimensions policing transformation; (a) goals; (b) boundaries; and (c) activity systems. Under *goals* the authors identify community oriented policing and problem solving as one of the most significant organizational transformations that has occurred in policing. Also found in this article are the three primary components of community policing, described as: “organizational adaption, “community interaction and engagement”, and “problem solving” (p. 23). The authors argue that more research is needed to determine the overall extent of transformation that community policing is having on police organizations and the communities they serve as they succeed in some areas but lag in others.

Tyler, T. (2004, May). Enhancing police legitimacy. *Annals of the American Academy of Political and Social Sciences*, 593, 84-99. Retrieved December 08, 2012, from <http://www.jstor.org.libproxy.uoregon.edu/stable/4127668>

Abstract. This article makes three points. First, the police need public support and cooperation to be effective in their order-maintenance role, and they particularly benefit when they have the voluntary support and cooperation of most members of the public, most of the time. Second, such voluntary support and cooperation is linked to judgments about the legitimacy of the police. A central reason people cooperate with the police is

that they view them as legitimate legal authorities, entitled to be obeyed. Third, a key antecedent of public judgments about the legitimacy of the police and of policing activities involves public assessments of the manner in which the police exercise their authority.

Credibility. Tom R. Tyler is a professor of psychology at New York University. His work is concerned with the dynamics of authority in groups and organizations. Tyler's research explores the motivations that lead people to cooperate when they are with groups. He has presented several lectures on the legitimacy in criminal justice system and focuses much of his work around the criminal justice profession. The article is published in the *Annals of the American Academy of Political and Social Science*, which contains in-depth research on contemporary political, economic, and social issues designed to help inform public policy as well as enlighten the intellectually curious.

Summary. The author of this article finds that procedural-justice judgments are central to public evaluations of the police and influence such evaluations separately from assessments of police effectiveness in fighting crime. He presents a legitimacy-based policing strategy that increases a community's cooperation with the police by drawing on people's feelings of responsibility and obligations (p.88). These findings suggest the importance of enhancing public views about the legitimacy of the police and suggest process-based strategies for achieving that objective. The author finds that when the police spend more time working with the community they are more likely to engage in community activities to combat crime problems (p.89).

Zernike, K. (2012, September 29). To fight crime, a poor city will trade in its police. *The New York Times*, p. A1. Retrieved November 05, 2012, from

<http://www.nytimes.com/2012/09/29/nyregion/overrun-by-crime-camden-trades-in-its-police-force.html?ref=us>

Abstract. This article examines how the Camden police department has all but ceded these streets to crime, with murders on track to break records this year. Now, in a desperate move to regain control, city officials are disbanding the Police Department. Officials say that generous union contracts have made it financially impossible to keep enough officers on the street. In November, 2012, Camden, which has already had substantial police layoffs, will begin terminating the remaining 273 officers and give control to a new county force. The move is expected to free up millions to hire a larger, nonunionized force of 400 officers to safeguard the city.

Credibility. Kate Zernike is a national correspondent for The New York Times and was a member of the team that shared the 2002 Pulitzer Prize for explanatory reporting. She is a graduate of the University of Toronto and Columbia University Graduate School of Journalism. The article was written for the New York Times Magazine, which was established in 1851. The New York Times is seen in the news industry as a leading global, multimedia news and information company with a mission of enhancing society by creating, collecting and distributing high quality news and information.

Summary. This article discusses the budgeting crisis that has caused the “most dangerous city in America”, the city of Camden, NJ, to reduce and soon disband its police force. The slumping economy has made it financially impossible for the City of Camden to pay its law enforcement employees, so they are being force to disband the organization and look for a regional solution. The author argues that a reduction in police service due to budget reductions and high cost union contracts has allowed crime rates

and drug use to greatly increase in the city of Camden. She points out that the community at large is concerned that the change in policing services from local to a regional based police service will cause an even greater decline in service and a greater spike in crime. The article examines the size difference between the city and county of Camden; the city is only 9 square miles of the 220 square mile county. According to Zernike, residents of the city are concerned that the change will not bring them results they are hoping for.

Theme 2: Community Oriented Policing

Community Policing Consortium. (1994, August). *Understanding community policing*. Retrieved May 05, 2012, from US Department of Justice:

<https://www.ncjrs.gov/pdffiles/commp.pdf>

Abstract. Community policing is, in essence, collaboration between the police and the community that identifies and solves community problems. With the police no longer the sole guardians of law and order, all members of the community become active allies in the effort to enhance the safety and quality of neighborhoods. Community policing has far-reaching implications. The expanded outlook on crime control and prevention, the new emphasis on making community members active participants in the process of problem solving, and the patrol officers' pivotal role in community policing require profound changes within the police organization. The neighborhood patrol officer backed by the police organization helps community members mobilize, support, and devote resources to solve problems and enhance their quality of life. Community members voice their concerns, contribute advice, and take action to address these

concerns. Creating a constructive partnership will require the energy, creativity, understanding, and patience of all involved.

Credibility. The Community Policing Consortium is a partnership of the International Association of Chiefs of Police, the National Sheriffs' Association, the Police Executive Research Forum, and the Police Foundation. Considered leading law enforcement organizations in the United States, together these organizations play a principle role in the development of community policing research, training and technical assistance and each is firmly committed to the advancement of the community policing philosophy.

Summary. This document reflects the consortium's perspective on community policing. It describes the historical evolution of community policing and its potential for the future. The document provides the basis for the Consortium's work with demonstration sites and law enforcement organizations as they implement community policing nationwide. The goal of this work is to share practical information with the law enforcement profession throughout the country that will help them plan and implement community policing based upon the experiences of other departments. The authors of this document also use case studies from local law enforcement agencies to identify applications of community policing to help improve local crime control and prevention initiatives.

Deukmedjian, J. E. (2006, July). From community to intelligence: Executive realignment of RCMP mission. *Canadian Journal of Criminology and Criminal Justice*, 48(4), 523-542. Retrieved December 8, 2012, from <http://muse.jhu.edu/journals/ccj/summary/v048/48.4deukmedjian.html>

Abstract. Royal Canadian Mounted Police (RCMP) executive problematizations of community-policing misalignments during the 1990s created the conditions for adopting

intelligence-led policing since late 2000. As such, this article proposes that new model adoptions and subsequent organizational restructuring initiatives form part of broader cyclical alignment. This paper also discusses the broader implications of this study in terms of possible relocations of expertise and knowledge production at the agency-network level.

Credibility. Dr. John Edward Deukmedjian is an associate professor at the University of Windsor. He has published academically in the areas of public safety interoperability, intelligence, community policing, police management, and restorative justice. Dr. Deukmedjian is presently investigating the formation of knowledge and security networks between public safety agencies in Canada and the United Kingdom. The *Canadian Journal of Criminology and Criminal Justice* has been published since 1958. The journal is a peer-reviewed scientific journal containing in-depth articles based on research and experimentation focused on law enforcement practices around the world.

Summary. This article provides a genealogy of the Royal Canadian Mounted Police (RCMP) intelligence-led policing practices. The author covers the successes and failures of two key law enforcement concepts: (a) community-policing and (b) problem-oriented policing at RCMP. Executives identified three areas as acute problems with implementing community policing concept: front-line acceptance, training, and mid-level management. These problems are caused by what the author identifies as the way that “executives tout the community policing philosophy” based on “community” and “empowerment.” The author believes that failure is imminent when little consideration is given to how much training and staffing is required to support the concept of community policing. He further discusses how the RCMP has resolved many of its issues by shifting

the responsibility for adoption of new policing models from the executive level to the frontline officers.

Gaylord, A. A. (2008, April). *Multiplier, community involvement: the ultimate force*. Retrieved June 2, 2012, from CBS Interactive Business Network Resource Library:
http://findarticles.com/p/articles/mi_m2194/is_4_77/ai_n25353909/

Abstract. The article focuses on the inclusion of community in the battle of law enforcement against the threat of terrorism in the U.S. Building law enforcement-community partnerships can constitute the ultimate force multiplier as well as a foundation in investigative and preventative counterterrorism efforts. Highlighted is the training program for the citizens by the Federal Bureau of Investigation in San Diego, California, which teaches community members to help protect the district.

Credibility. At the time the article was published, Arlene A. Gaylord served as an intelligence analyst in the FBI's San Diego field office. The article is published in the FBI's Law Enforcement Bulletin, which is a monthly publication that features articles on a broad array of scientific, technological, and strategic advances that would prove to have a dramatic effect on law enforcement. The mission of the Bulletin is to inform, educate and broaden the criminal justice community's understanding of current issues facing law enforcement.

Summary. This is a brief article that examines the use of community involvement as a *force multiplier* for law enforcement. After the events of September 11, 2001, law enforcement across the nation realized that there was a greater need to understand and share information with their communities. In this article, Gaylord describes community education as a core component of community oriented policing. To help garner

information sharing, she details the need to provide citizens with the information they need to identify and report suspicious activity to law enforcement. This article focuses on the FBI's partnership with the city of San Diego, CA. It describes how the FBI developed a partnership with the community by offering them training on how to identify *pre-incident indicators* and *suspicious activity* (p.16). The article also suggests 4 core components of the training that can be used by other law enforcement agencies to effectively encourage get the community involved terrorism awareness programs.

Kappeler, V. E., & Gaines, L. K. (2012). *Community policing: A contemporary perspective* (6th ed.). (G. Chalson, Ed.) Waltham, MA: Anderson Publishing an imprint of Elsevier.

Abstract. Community policing is a philosophy and organizational strategy that expands the traditional police mandate of fighting crime to include forming partnerships with citizenry that endorse mutual support and participation. The first textbook of its kind, *Community Policing: A Contemporary Perspective* delineates this progressive approach, combining the accrued wisdom and experience of its established authors with the latest research based insights to help students apply what is on the page to the world beyond. 'Spotlight on Community Policing Practice' sections feature real-life community policing programs in various cities, and problem-solving case studies cover special topics.

Credibility. Victor Kappeler is chair and foundation professor of Criminal Justice at Eastern Kentucky University in Richmond, Kentucky. He received his PhD from Sam Houston State University. Kappeler has published a number of books and articles in the areas of police liability, police deviance and ethics, the media and crime, community policing and police and society. Larry Gaines is chair and professor of Criminal Justice at

California State University San Bernardino. He too received his PhD from Sam Houston State University. Gaines has published a number of books and articles in the areas of police operations, police administration, criminal justice, drugs, and gangs. Kappeler and Gaines both share a current interest of the implementation of community policing practices.

Summary. This book covers the history, philosophy, structural facets of community oriented policing, and discusses how to successfully implement community policing practices. It identifies the impact that the community policing philosophy has on crime rates, and how it can build long lasting partnerships between law enforcement and the community they serve. This edition of the text has been revised to include the most current developments in the field such as how the climate of suspicion associated with terrorism threats affects the trust so necessary for community policing, and how the newest technologies can be harnessed to facilitate police interactions with citizens. Additionally, the book explores the fragmentation of authority and emphasizes the importance of partnerships among the numerous law enforcement agencies, government agencies, and private social service agencies.

Lanier, C. L. (2012, March). Policing our nation's capital using 21st century principles. *Police Chief Magazine*, 79(3), 20-24. Retrieved November 19, 2012, from http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=2620&issue_id=32012

Abstract. This article was written as a success story by Washington D.C. Metropolitan Police Chief Cathy Lanier. It's an informative piece on the policing philosophy that has been used in D.C. to reduce violent crime. Captured in just four basic principles, this

D.C. policing philosophy has resulted in historic low levels of violent crime and homicide in a city with an extremely violent past. Chief Lanier's four basic principles are: (a) reduce crime by bettering community ties; (b) developing sources, not community policing; (c) maximize the use of modern technology; (d) ensure strict accountability at all levels for information sharing.

Credibility. Appointed in 2007, Chief Cathy Lanier is the first female police chief for the city of Washington D.C. She has both Bachelor of Science and Master of Science degrees in management from Johns Hopkins University and holds a Master of Arts in national security studies from the Naval Postgraduate School in Monterey, California. Her article is published in *The Police Chief Magazine*, a monthly publication in which original articles are submitted by practitioners in law enforcement or related fields to provide information and strategy to peers in the field of law enforcement.

Summary. The purpose of this article is to discuss the policing philosophy that has proven effective for reducing violent crime in the Washington District of Columbia (D.C.). Author and Police Chief Cathy Lanier discusses the 4 principles she developed to reduce crime in her city. The first principle is to "reduce crime by bettering community ties" (p.1); this principle focuses on building trust with the community by allowing officers to be more discretionary with their duties and arrest. The second principle is to "develop sources, not community police". This principle is about defining what community policing was to be in Washington D.C., i.e., not just to follow what has been done in the past but to design a community policing program that worked for Washington D.C. The third principle is to "maximize the use of modern technology." This principle is not about developing or deploying high cost technology but about streamlining and

increasing the efficiencies of the technology the department already had. Automating processes is a major advancement brought forward through this principle according to Cathy. The fourth principle is to “ensure strict accountability for information sharing”. With new partnerships being formed the increased amount information coming into the department was astronomical; however the internal communication had not changed. The fourth principle is constructed around changing internal communication to make it more efficient, effective and increasing individual accountability for sharing the information with others in the department. In conclusion the implementation of these four principles redefined community policing for the Washington D.C. police department and reduced violent crime in the city by 48 percent in three years.

Melkian, B. K. (2012, January). Policing in the new economy: A new report on the emerging trends from the office of Community Oriented Policing Services. *Police Chief Magazine*, 79(1), 16-19. Retrieved November 19, 2012, from http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=2576&issue_id=12012

Abstract. To say that municipal, county, state, and tribal law enforcement agencies across the United States have been adversely affected by the economic downturn of the past several years is a dramatic understatement. Local economies have been devastated by both decreasing tax revenues and reduced levels of support from federal and state funding sources. In this fiscal environment, local government executives and legislative bodies have been looking closely at their public safety expenditures and making difficult budget decisions. These decisions not only impact the level and quality of service but also, in some cases, will determine the very existence of a local agency. This article

examines the methods that law enforcement executives in the United States are using to overcome the massive cutbacks they have suffered over the past several years.

Credibility. Bernard Melekian is the Director of the Office of Community Oriented Policing (COPS). Prior to being named to this position in 2009 he spent 13 years as the Chief of Police in Pasadena, California. Director Melekian holds a Bachelor's degree in American History and a Master's degree in Public Administration, both from California State University at Northridge. He is currently a doctoral candidate in Public Policy at the University of Southern California, and a graduate of the FBI National Academy and the California Command College. Melekian has received many awards is recognized as a leader whose commitment to the advancement of community policing is built on years of patrol experience and a strong record of incorporating the needs of the community into police operations. In April, 2010 he was awarded the National Public Service Award by the American Society for Public Administration and the National Academy of Public Administration.

Summary. This article identifies how agencies are operating in today's economic climate with reduced staffing levels. It highlights the increased need for agencies to collaborate with their communities to find solutions to bring down crime rates. In this article Melekian emphasizes that "police must rely on residents and business purveyors to share information about crime and disorder in order to engage in effective problem solving to maintain public order and curtail crime" (p.4) The article further discusses how community policing has taught us that the building of relationships and the solving of problems are more important, not less, in challenging times such as these.

Oliver, W. M. (2000, December). The third generation of community policing: Moving through innovation, diffusion, and institutionalization. *Police Quarterly*, 3(4), 367-388.

doi:10.1177/109861110000300402

Abstract. Community policing has become the paradigm of contemporary policing, evolving significantly over the past 20 years. That which was called community policing in the late 1970s and early 1980s only somewhat resembles community policing as it is practiced today. This article presents a conceptual framework characterizing community policing as having moved through three generations, which can be labeled appropriately as innovation, diffusion, and institutionalization. Conceptualizing community policing as having evolved through three generations can alleviate some of the confusion over the term, and knowing where we have been can assist us in knowing where community policing is going in the future.

Credibility. Willard M. Oliver is an assistant professor of criminal justice at Radford University. He holds a PhD in political science from West Virginia University. He is the author of *Community-Oriented Policing: A Systemic Approach to Policing* (2nd ed., Prentice Hall, 2001) and is the editor of *Community Policing: Classical Readings* (Prentice Hall, 2000). He has published numerous scholarly articles on community policing in a number of academic journals. He is the past research director of the West Virginia Regional Community Policing Institute and is a former police officer. This article is published in *Police Quarterly* (PQ) a peer-reviewed scholarly journal that is published quarterly and features theoretical contributions, empirical studies, essays, comparative analyses, critiques, innovative program descriptions, debates, and book reviews on issues related to policing. The only such journal published in North America,

PQ seeks to publish both qualitative and quantitative police-related research that emphasizes policy-oriented research of interest to both practitioners and academics.

Summary. This article discusses the evolution of community policing practices from the 1970's to the end of the 20th century. The purpose of this article is to discuss the changes that have been made during the era of community policing and categorize them into three distinct generations of innovation, diffusion, and institutionalization. The article also discusses the use of past information to comprehend current trends to speculate on future patterns of change in policing. The article examines how community policing is organized within law enforcement agencies and identifies the types of community environments that community policing is being practiced in. The author also speculates that the form of community policing in place at the time the article was written would likely morph into another generation of community policing in the years to come based on the evolution of past police practices and the expansion of technology.

Parlow, M. J. (2012). The great recession and its implicatons for community policing. *Marquette University Law School*, 28(4, 12-12). Retrieved November 12, 2012, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2083754##

Abstract. During the last twenty years, community policing has been the dominant approach to local law enforcement. Community policing is based, in part, on the broken windows theory of public safety. The broken windows theory suggests a link between low-level crime and violent crime; that is, if minor offenses are allowed to pervade a community, they will lead to a proliferation of crime and, ultimately, a community plagued by violent crime. To maintain a perception of community orderliness, many local governments adopted “order maintenance” laws such as panhandling ordinances and anti-

homeless statutes. This emphasis on cracking down on such low-level offenses brought with it an increase in the needs and costs of policing, prosecutions, jails, social services, and other related resources.

When the economy was flourishing, local governments were able to pay for the time and resource intensive broken windows approach to community policing. The Great Recession, however, has forced localities to think critically about whether they can sustain these practices given budget cuts. In particular, this article assesses and evaluates evidence-based decision-making (an emerging trend in some criminal justice systems) as part of an evolving trend driven by the effects of the Great Recession, but also stemming out of community policing.

Credibility. Matthew Parlow is the associate dean for academic affairs and associate professor of law at Marquette University Law School. He received his JD from Yale Law School and his BA, Loyola Marymount University. Prior to his academic career, Professor Parlow was an associate with the Los Angeles firm of Manatt, Phelps & Phillips, LLP, specializing in real estate, land use, environmental, and local/state government law. Parlow's articles have appeared in the University of Colorado Law Review, Denver University Law Review, Santa Clara Law Review, Virginia Journal of Social Policy and the Law, and Boston College Environmental Affairs Law Review, among other journals.

Summary. This article analyzes the effects that the downturn in the economy has had on public safety budgets and the changes that many local governments have made, and are continuing to make, to adjust to decreasing revenue and resources. This article also explores proposed changes to the current criminal justice and social service systems that

seek cost-effective approaches to deliver the same level of public safety to which communities are accustomed. Finally, this Article uses Milwaukee County, Wisconsin, as an example of an evidence-based decision-making approach and explains how it can fulfill the public safety goals of the broken windows theory of community policing while creating a framework that provides for *smart* decision-making that accounts for the financial realities that most cities face (p.1225).

Rosenbaum, D., Graziano, L., Stephens, C., & Schuck, A. (2011). Understanding community policing and legitimacy-seeking behavior in virtual reality: A national study of municipal police websites. *Police Quarterly*, 14(1), 25-47.

Abstract. Using a national probability sample of municipal police departments, this study provides the first systematic look at the prevalence, predictors, and content of municipal police websites in the United States. A content analysis revealed that police agencies with websites (42% of all police agencies nationwide in 2008) were more inclined to use websites to "push out" information rather than "pull in" information from the community. The results support the hypothesis that departments with a greater emphasis on community policing (defined by Law Enforcement Management and Administrative Statistics [LEMAS] data) would be more likely to have a website, exhibit greater transparency in the display of data and provide more opportunities for citizen input. Crime rate and population size were also important determinants of website creation and content, respectively. This study concludes that websites are underutilized by both the police and research communities.

Credibility. Dennis P. Rosenbaum is a PhD scholar in psychology, and a professor of criminology, law and justice and director of the Center for Research in Law and Justice at

the University of Illinois at Chicago. His research interests include the measurement of organizational and individual police behavior, community policing, community crime prevention, drug education, and interagency partnerships. He is the principal investigator for the National Police Research Platform, a project designed to advance the state of measurement, knowledge, and practice in American policing. Lisa M. Graziano is a PhD scholar in criminal justice and an assistant professor in the School of Criminal Justice and Criminalistics at California State University, Los Angeles. Her areas of research interest include community policing, police–community interactions and information technology in public safety. Cody D. Stephens is a coordinator of research programs for the Center for Prevention Research and Development in the Institute of Government and Public Affairs (IGPA) at the University of Illinois. At the time this article was written, she was working towards her PhD in criminology, law and justice from the University of Illinois at Chicago. Her research interests are qualitative research, program evaluation research, applied research methodologies, and police organizations. Amie M. Schuck is a PhD scholar in criminal justice. She is the department head and associate professor in the Department of Criminology, Law and Justice at University of Illinois at Chicago. Her areas of research interest include community capacity and mobilization, youth attitudes toward the police, and quantitative methodology. This article was published in *Police Quarterly* (PQ). PQ is a peer-reviewed and published quarterly. It is a scholarly journal that publishes theoretical contributions, empirical studies, essays, comparative analyses, critiques, innovative program descriptions, debates, and book reviews on issues related to policing. The only such journal published in North America, PQ seeks to publish both

qualitative and quantitative police-related research that emphasizes policy-oriented research of interest to both practitioners and academics.

Summary. This article discusses the importance of law enforcement websites as a communication tool to educate residents about crime in their community, provide information about police programs, activities, and decisions, and engage residents in a two-way dialogue about solutions to public safety problems (p.26). The authors evaluate the use and effectiveness of police websites by surveying 666 randomly selected agencies. The authors find that less than half (42.5%) of the agencies evaluated maintain agency websites as of 2008 (p39). In conclusion they found that the internet is “the principal electronic public gateway into government organizations” (p.40) and that departments with a greater emphasis on community policing (as defined by LEMAS data) would (a) be more likely to have a website, (b) provide more opportunities for community input on their website, and (c) have more website elements related to organizational transparency than departments that give less attention to community policing (p.40).

Skogan, W. G., & Alderden, M. (2011, February). Police and the community. *National Criminal Justice Reference Service*, 1-7. Retrieved December 08, 2012, from <http://www.nationalpoliceresearch.org/storage/updated-papers/Police%20and%20the%20Community.pdf>

Abstract. This report outlines a survey that gauges police-officer support for community policing, capturing not only the officers' personal views, but also their perceptions of management support and the support of their peers for policing approach. The survey is described and key findings are presented. In addition, the paper documents substantial

variations between and within agencies that can be useful for measuring organizational excellence in the realm of community policing.

Credibility. Wesley Skogan is a professor of Political Science Faculty Fellow at the Institute for Policy Research, Northwestern University. In 1971 Skogan received his PhD in political science from Northwestern University. He is a fellow of the American Society of Criminology, a member of the Scientific Committee of the International Society of Criminology, and a senior fellow of the Open Society Institute. Skogan has written numerous journal articles, monographs, chapters, and books on crime-related subjects.

Megan A. Alderden is an Assistant Professor of Criminal Justice at Saint Xavier University in Chicago. Dr. Alderden recently completed her PhD in Criminal Justice with a concentration in Gender and Women's Studies at the University of Illinois at Chicago. Her research focuses on detective and prosecutorial decision-making in regard to the processing of sexual assault cases through the criminal justice system. Her research interests include women in the criminal justice system, policing, victim- police interactions, and case decision making. The National Police Research Platform is a long-term project designed to collect systematic data about individual police officers, supervisors, and organizations over time and to help document excellence in policing. Funded by the National Institute of Justice, the Platform is expected to advance scientific knowledge and lead to improvements in police organizations that will directly benefit law enforcement personnel and the communities they serve.

Summary. This article evaluates the results of an officer perspective survey on the effectiveness of community policing. The authors conducted a survey of 1230 officers from 11 different cities in the United States. The survey resulted in five key findings: (a)

agencies vary considerably in the support they appear to give community policing from the top (p.2); (b) a great deal of variation from place to place in whether officers think their peers support community policing (p.3); (c) what officers themselves think is influenced by their perception of what their agency is trying to do and by what they think their peers will support (p.3); (d) officers representing the department were supportive of community policing, and reported that positive things happen when they meet with the public. (p.5); and (e) Officers in most cities feel they have the support of the public, and the more support they see the more positive they are about their department's community policing program (p.6). The overall findings of the survey conclude that administrative and peer support for community policing is influenced by individual officers who adopt this model, although repeated measurement over time within the National Research Platform will help to clarify cause and affect relationships.

Thacher, D. (2001). Conflicting values in community policing. *Law & Society Review*, 35(4), 765-798. Retrived October 29, 2012 from: HYPERLINK
"http://onsearch.uoregon.edu/metasearch/record?group=2012-10-30-001229&resultSet=007713&startRecord=2"

Abstract. Police reformers in the early 21st century place great importance on the development of police-community partnerships, but they have not recognized the deep obstacles that these relationships face. The author draws on several case studies to describe how these conflicts surface and potentially undermine partnerships, and analyzes the strategies that police agencies have developed to respond to them. This analysis reveals that community policing has fundamental (and probably desirable) implications

for police practice because it forces police to attend to many neglected dimensions of their mandate.

Credibility. David Thacher is an associate professor of public policy at Gerald R. Ford School of Public Policy and associate professor of urban planning at A. Alfred Taubman College of Architecture and Urban Planning. Thacher received his PhD in public policy from Massachusetts Institute of Technology. He carries out his research primarily in the areas of criminal justice policy, where he has undertaken studies of order maintenance policing, the local police role in homeland security, community policing reform, the distribution of safety and security, and prisoner re-entry. Outside of criminal justice, he has also conducted research on urban planning and on adoption policy. His research interest includes criminal justice, ethics and public management. *The Law and Society Review* is a peer-reviewed publication for work bearing on the relationship between society and the legal process, including articles or notes of interest to the research community in general, new theoretical developments, results of empirical studies, and reviews and comments on the field or its methods of inquiry.

Summary. This study argues that the central problems of working in partnership involve conflict over values: different organizations advance different social values, and when the partners who cling to them try to collaborate, conflict flares up at the point of contact. The study uses case studies from multiple departments to identify solutions for resolving community policing conflicts. The author identifies that communication and set boundaries between the agency and the community can help sustain boundaries of “fairness and respect” (p.769). He offers a new interpretation of community policing practice and a new interpretation of its value as a reform movement.

Wehrman, M. M., & DeAngelis, J. (2011, March 01). Citizen willingness to participate in police-community partnerships: Exploring the influence of race and neighborhood context. *Police Quarterly*, 14(1), 48-69. Retrieved December 08, 2012, from <http://pqx.sagepub.com.libproxy.uoregon.edu/content/14/1/48>

Abstract. Since community policing emerged in the 1970s and 1980s, it has been common for police departments to use police--community partnerships as a strategy for improving public satisfaction with the police. Yet very little is known about what predicts citizen willingness to participate in these types of community policing initiatives. In this study, the authors examine the results of an anonymous mailed survey (16,193) conducted in a large unnamed western United States city to examine individual and community-level relationships between race/ethnicity and willingness to work with the police in a community anticrime initiative. The discussion considers the theoretical, methodological, and policy implications of these observed differences.

Credibility. Michael M. Wehrman is an assistant professor in the Department of Sociology and Criminology at Cabrini College. His research examines issues of race, sex, and neighborhood inequality in the criminal justice system, particularly in the areas of recidivism/reentry and relationships between police and citizens. His recent work is published in the *Journal of Criminal Justice*. Joseph De Angelis is an assistant professor in the Department of Sociology and Anthropology at Ohio University. His research explores issues relating to legitimacy and criminal justice, police misconduct, and citizen oversight of police. His recent work has been published in the *Journal of Criminal Justice*, *Criminal Justice Review*, *Teaching Sociology*, *Police Quarterly*, and *Policing: An International Journal of Police Strategies and Management*. *Police Quarterly* (PQ) is a

peer-reviewed and published quarterly. It is a scholarly journal that publishes theoretical contributions, empirical studies, essays, comparative analyses, critiques, innovative program descriptions, debates, and book reviews on issues related to policing. The only such journal published in North America, PQ seeks to publish both qualitative and quantitative police-related research that emphasizes policy-oriented research of interest to both practitioners and academics.

Summary. This article examines the public's willingness to work with law enforcement to implement community policing practices. It examines three different community factors; race, neighborhood context, and attitudes toward the police that impact how the public interacts with law enforcement. In their study, the authors find that blacks are more willing to work with the police than whites because minority groups are more likely to benefit from the police involvement in their communities. They also find that respondents who know their neighborhood police officer were are more willing to work with the police and this initial interaction with the community helps law enforcement with the implementation of the community policing programs (p.62).

Wiesburd, D., & Eck, J. E. (2004, May). What can police do to reduce crime, disorder, and fear? *Annals of the American Academy of Political and Social Science*, 593, 42-65. Retrieved May 16, 2012, from <http://www.jstor.org/stable/4127666>

Abstract. The authors review research on police effectiveness in reducing crime, disorder, and fear in the context of a typology of innovation in police practices. That typology emphasizes two dimensions: one concerning the diversity of approaches, and the other, the level of focus. The authors find that little evidence supports the standard model of policing-low on both of these dimensions. In contrast, research evidence does

support continued investment in police innovations that call for greater focus and tailoring of police efforts, combined with an expansion of the tool box of policing beyond simple law enforcement. The strongest evidence of police effectiveness in reducing crime and disorder is found in the case of geographically focused police practices, such as hot-spots policing. Community policing practices are found to reduce fear of crime, but the authors do not find consistent evidence that community policing (when it is implemented without models of problem-oriented policing) affects either crime or disorder.

Developing a body of evidence points to the effectiveness of problem-oriented policing in reducing crime, disorder, and fear. More generally, the authors find that many policing practices applied broadly throughout the United States either have not been the subject of systematic research or have been examined in the context of research designs that do not allow practitioners or policy makers to draw very strong conclusions.

Credibility. David Weisburd holds a joint appointment as a Distinguished Professor in the Department of Criminology, Law and Society at George Mason University and also as the Walter E. Meyer Professor of Law and Criminal Justice at the Hebrew University Law School in Jerusalem. He is also a Senior Fellow at the Police Foundation in Washington, DC, and Chair of their Research Advisory Committee. He is the 2010 recipient of the Stockholm Prize in Criminology. In addition to his experimental and evaluation work on criminal justice interventions, Dr. Weisburd's key research interests include the criminology of places, policing, statistical methodology, and white collar crime. He is an elected Fellow of the American Society of Criminology and of the Academy of Experimental Criminology. Weisburd is a member of the National Research Council Committee on Crime Law and Justice, the Campbell Collaboration Crime and

Justice Group, the Science Advisory Board (OJP) and of the National Institute of Justice/Harvard University Executive Session in Policing. John E. Eck is a professor in the Division of Criminal Justice at the University of Cincinnati. He has a PhD in criminology from the University of Maryland. He has conducted research into police operations since 1977, and served as the Research Director for the Police Executive Research Forum (PERF). At PERF, he spearheaded the development of problem-oriented policing throughout the U.S. Eck has written on criminal investigations, drug markets and control, crime mapping, and crime places. Research interests are the concentration of crime at places and prevention, crime displacement, criminal investigations, and the investigation of police misconduct. He is a member of the National Academy of Science panel assessing police research and policy. He teaches police effectiveness, research methods, and policy analysis.

Summary. This article explores the effectiveness of four traditional policing concepts used in law enforcement today; (a) community policing; (b) problem oriented policing; (c) hot-spot policing; and (d) broken windows policing or standard model. This article seeks to identify which of these practices is most effective to police crime, disorder and fear of crime. This article analyzes how these policing models are impacted by common police factors such as staffing levels, and crime rates. The authors find several significant factors that suggest that each of the four concepts has some advantages to its use, and then when applied separately, none of them is effective in overall treatment of policing crime, disorder and fear. The authors also find that community policing strategies are implemented without problem-oriented policing they lack consistent evidence that community policing has any effect crime or disorder. However, the existing research

suggests that when the police partner more generally with the public, levels of citizen fear will decline (p.59). They also conclude that what is known about the effects of problem-oriented policing suggest its promise for reducing crime, disorder and fear.

Wells, W., & Wu, L. (2011, September). Proactive policing effects on repeat and near-repeat shootings in Houston. *Police Quarterly*, 14(3), 298-319. Retrieved October 29, 2012, from <http://pqx.sagepub.com/content/14/3/298>

Abstract. The spatial analysis of crime and community problems can inform police operations by revealing where resources can be most effectively deployed. Advances in understanding the spatial concentrations of crime show that some locations are repeatedly victimized and that some nearby locations are at an elevated risk for a subsequent crime during a relatively short period of time. These are known as repeat and near-repeat phenomena. Police may be able to have a strong preventive impact on crime if these risk patterns can be identified and disrupted. This analysis reports on whether a specialized, proactive patrol unit deployed to high-crime areas was effective in disrupting repeat and near-repeat patterns of shootings. Results suggest the proactive unit did not disrupt concentrations of shootings in a meaningful way. To improve effectiveness, police practitioners and researchers should seek to understand the factors driving these patterns and then design specific interventions to address them.

Credibility. William Wells is an associate professor in the College of Criminal Justice at Sam Houston State University and director of research in the Law Enforcement Management Institute of Texas. He is currently working on a National Institute of Justice funded project that examines the way police agencies utilize ballistic imaging technology. Ling Wu is a doctoral candidate in the College of Criminal Justice at Sam Houston State

University. Her research interests include space-time analysis of crime, policing strategies, gun violence, and police legal liability. This article is published in *Police Quarterly (PQ)*. This is a peer-reviewed scholarly journal that is published quarterly and features articles that discuss theoretical contributions, empirical studies, essays, comparative analyses, critiques, innovative program descriptions, debates, and book reviews on issues related to policing. The only such journal published in North America, *PQ* seeks to publish both qualitative and quantitative police-related research that emphasizes policy-oriented research of interest to both practitioners and academics.

Summary. This article discusses the use of predictive analytics to assess community issues and deploy resources in Houston, Texas. The article examines how the Houston Police Department (HPD) deployed their resources to support the hot-spot policing strategy. The article finds that although not an exact science crime patterns and elevated areas of risk can be used to build law enforcement, community partnership to combat violent crime in the city of Houston. They also find that within the first 10 months of its operation, the HPD's Crime Reduction Unit (CRU) tasked to test this strategy returned to its use of traditional police tactics, including proactive patrols, vehicle and pedestrian stops, and arrests, to generate deterrence across a variety of crime problems and contexts within the city (p.315). Wels and Wu find that the one-size-fits-all tactics that were being used and this approach to implementing hot spots policing may be fundamentally limited because the conditions that are primarily responsible for generating relatively dense clusters of crime problems may remain unchanged.

Wolf, R. V. (2012). The overlap between public health and law enforcement: Sharing tools and data to foster healthier communities. *International Review of Law, Computers &*

Technology, 26(1), 97-107. Retrieved December 08, 2012, from

<http://www.tandfonline.com/doi/pdf/10.1080/13600869.2012.646802>

Abstract. Law enforcement and public health agencies have much in common. Both seek to improve their communities' health and safety. Both analyze data to identify problems and measure results. Both share an interest in eradicating certain social ills, such as violence. And law enforcement has increasingly begun to adopt strategies long associated with public health, such as collaboration and community engagement. Recognizing a common interest in innovation, the US Department of Justice Office of Community Oriented Policing Services (COPS Office), The California Endowment, and the Center for Court Innovation have started bringing together law enforcement and public health officials to share ideas. The initiative began with an executive session in March 2011 to examine how public health principles, practices, and resources can support law enforcement, including crime prevention. Participants made a number of suggestions to promote collaboration and identified several programs that have the potential to serve as models. In providing a summary of the March discussion, this article also includes an overview of the public health approach, a description of shared challenges, and ways in which both fields can learn from each other's strengths.

Credibility. Robert Wolf is the director of communications, Center for Court Innovation. He is a graduate of Columbia University. Wolf's work has appeared in anthologies and numerous publications, including the New York Times, The Justice System Journal, National Black Law Journal, Crime & Justice International, Judicature, The Judges' Journal, International Review of Law Computers & Technology, New York State Bar

Association Journal, and Texas Journal of Corrections. Before joining the Center in 1999, he worked as a reporter, columnist, and editor for the Staten Island Advance.

Summary. This article examines the relationship between the tools and concepts used in public health and those used in law enforcement with the goal of identifying how they can work together to reduce violence and create healthier communities. The author finds that many of the tools used to collect and analyze data for law enforcement are also used to detect patterns of disease in the medical field. The author examines the relationship between drug use and crime rates and finds that crime rates are not the only thing impacted when drugs take over a community. He also identifies that the quickest way to address the issue is by partnering with law enforcement to identify where the cause of the problem is greatest. Through tools like crime mapping software they are able to pin-point problem areas and address them more effectively by working together. The author identifies key issues to better coordinate the law enforcement and public health partnership. The article establishes the following keys to building tools for this partnership: (a) *prevention*, figuring out what are the comprehensive, coordinated, place-based interventions that will actually get at the root of some of these problems (p. 99); (b) *information*, dissemination of information such as death statistics and emergency department data, and results from self-reported injury (p.100); (c) *data analysis*, using the complete problem-solving method known as the SARA model, which stands for scan, analyze, respond, and assess (p.100); (d) *accountability*, public health agencies and law enforcement agencies are held to different levels of accountability (p. 101); (e) *cost*, identifying the relationship between expenditures and outcomes (p.101); and (f) *victim*, sharing victim injury data with police ultimately inspire effective prevention strategies

for identifying how and why the injury was caused (p.103). The author concludes the article by emphasizing *shared values and interests provide a strong foundation on which to build productive partnerships (p.106).*

Theme 3: Law Enforcement Technology Solutions

Alexander, D. (2011, July). Using technology to take community policing to the next level.

Police Chief Magazine, 78(7), 64-65. Retrieved November 19, 2012, from

http://www.policchiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=2425&issue_id=72011

Abstract. This article examines the use of social media solutions by the Boca Raton, Florida, Police Services Department (BRPD). BRPD began embracing the use of social media in 2007 to better communicate with its population of 89,000 residents. The department turned to one of the only widespread social networking sites at the time, MySpace, to post information and ask for anonymous leads in a highly publicized double homicide case. This was considered a unique way for a law enforcement organization to investigate a crime and look for leads. In 2011, the BRPD is still on the cutting edge of social media. With Facebook, Twitter, YouTube, and blogs, the agency uses all means available via technology, including the introduction of Quick Response (QR) codes as one of the latest electronic tools.

Credibility. Chief Dan Alexander earned a Master of Arts degree in Public Administration from the University of Florida in 1995, where he received his Bachelor of Arts degree in Criminal Justice in 1989. He is a graduate of the FBI National Academy.

Alexander was sworn in as Boca Raton's Police Chief on July 17, 2006. He became a Commission on Accreditation for Law Enforcement Agencies (CALEA) Assessor in 2002 and has been a Team Leader since 2004. Chief Alexander's professional affiliations include the Police Executive Research Forum, the International Association of Chiefs of Police, the Florida Police Chiefs Association and the FBI National Academy Associates. The Police Chief Magazine is a monthly publication that publishes articles contributed by law enforcement professionals regarding law enforcement management topics. The references cited by the article relate to the topic of police staffing and law enforcement partnership.

Summary. This article examines how the Boca Raton Police Services Department (BRPD) is using social media to take community policing to the next level. The BRPD has found that the use of social media to communicate with the community allows the department to connect with a much greater population than just using traditional media resources. The author also discusses the benefits of social media and identifies five key obstacles that the BRPD has overcome to implement social media at their organization. He found that three major obstacles were: (a) the speed of information and their ability to keep up with the volume of communication; (b) invasion of privacy and community trust; (c) awareness of what is being said, speaking publicly verses speaking openly. In the end the BRPD has found that the benefits of social media outweigh the costs and that it is allowing them to build a stronger partnership with the community they serve.

Bullock, K. (2012, March 22). Community, intelligence-led policing and crime control. *Policing*

and Society, 1-20. Retrieved December 09, 2012, from

<http://www.tandfonline.com/doi/abs/10.1080/10439463.2012.671822>

Abstract. This article examines the relationship between community policing, intelligence-led policing and crime control. Whilst community and intelligence-led policing have developed as distinctive reform movements within contemporary UK policing there have been calls for the two to interact in practice. In particular, aspects of community policing are operationalized through the frameworks of intelligence-led policing. This article unpicks the structures and processes of (community) intelligence processes in detail.

Credibility. Karen Bullock graduated from the London School of Economics in 1998 with BSc in Social Policy and Sociology. Her PhD is from the Jill Dando Institute of Crime Science at University College London. Karen joined the University of Surrey as a lecturer in 2007. She primarily conducts research in the fields of policing and crime reduction and her teaching reflects these areas of expertise.

Summary. This article focuses on the nature of information generated from community policing: how analytical products are constructed; and the nature of the officer tasking and briefing process. It argues that community policing was conceived, at least in part, as an alternative to traditional reactive policing styles which coalesce around patrol, rapid response to incidents and enforcement of the criminal law. The article discusses how community policing has evolved in practice and has become firmly embedded in conventional police-centric notions of 'efficiency', law enforcement and crime control.

Chen, H., Zeng, D., Atabakhsh, H., Wyzga, W., & Schroeder, J. (2003, January 01). COPLINK: Managing law enforcement data and knowledge. *Communications of the ACM*, 46(1), 28-34. Retrieved May 24, 2012, from http://delivery.acm.org.libproxy.uoregon.edu/10.1145/610000/602441/p28-chen.pdf?ip=128.223.86.31&acc=ACTIVE%20SERVICE&CFID=85887234&CFTOKEN=87170732&__acm__=1338666693_beebd5d8fbffa82fb893322f25c10cd7

Abstract. In response to the September 11 terrorist attacks, major government efforts to modernize federal law enforcement authorities' intelligence collection and processing capabilities have been initiated. At the state and local levels, crime and police report data is rapidly migrating from paper records to automated records management systems in recent years, making them increasingly accessible.

Credibility. Dr. Hsinchun Chen is McClelland Endowed Professor of MIS at The University of Arizona and Andersen Consulting Professor of the Year . He is also the director of the Artificial Intelligence Lab and Founding Director of The University of Arizona Mark and Susan Hoffman eCommerce Lab. He received the PhD degree in Information Systems from New York University in 1989, MBA in Finance from SUNY-Buffalo in 1985, and BS in Management Science from the National Chiao-Tung University in Taiwan. He is author of more than 90 articles covering medical informatics, semantic retrieval, search algorithms, knowledge discovery, and collaborative computing in leading information technology publications. He serves on the editorial board of Journal of the American Society for Information Science. He is an expert in medical informatics, digital library, knowledge management research, and his work has been featured in various scientific and information technologies publications including

Science, New York Times, Business Week, NCSA Access Magazine, WEBster, and HPCWire. Daniel Zeng is an assistant professor in the MIS department at the University of Arizona, Tucson. Homa Atabakhsh is a principal research specialist in the MIS department at the University of Arizona, Tucson. At the time this article was written, Wojciech Wyzga was the Vice President, Engineering at the Knowledge Computing Corporation, Tucson, AZ. Wyzaga is currently the Vice President of Engineering at i2 Group an IBM company. Jenny Schroeder is a lieutenant at the Tucson Police Department, AZ. All of the authors worked on the initial development of the COPLINK analytics solution for law enforcement at the University of Arizona Artificial Intelligence lab in partnership with the Tucson Police Department.

Summary. This article discusses the purpose and functionality of the COPLINK information sharing solution. COPLINK was developed at the University of Arizona and the Tucson Police Department to facilitate federal, state, and local law enforcement information sharing and knowledge management. The authors express that one of the key functions of COPLINK is to provide a one-stop access point for data to alleviate police officers' information and cognitive overload (p.30). The article examines all of the attributes that COPLINK offers and how each advances an officers ability to solve crime. The authors conclude "COPLINK serves as a model for the next generation information systems aimed at improving the government's crime fighting capabilities and facilitating its homeland security effort" (p.34).

Cotton, B. (2012). *Beyond borders: Tracing the impacts of smarter public safety [White paper]*.

Frost and Sullivan. Retrieved January 23, 2013, from

https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=swg-NA_ISDP_Standard-Reg&S_PKG=102HV04W&S_CMP=ile

Abstract. Smarter Cities are employing innovative solutions to create safer and more secure cities, protecting citizens as well as the city's economic value. This paper presents a context to discuss the value and impacts of Smarter Public Safety across the spectrum of stakeholders involved.

Credibility. Brian Cotton is the Vice President of Information and Communications Technologies for Frost & Sullivan. He has a PhD in Social Psychology from the University of Southern California. He is a market strategist with a concentration on finding adjacent market opportunities for information communications technology. His other research interests include transportation, government, and financial services technologies. Frost & Sullivan is a growth partnership company that partners with clients to accelerate their growth. Frost & Sullivan employs over 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from more than 40 offices on six continents.

Summary. This document is a white paper that identifies IBM's approach to *smarter public safety*. It essentially identifies where public safety can improve the technology they use to capture, process, analyze, and share data to enhance their efficiency and create a safer community. The article discusses five key competencies to agencies are acquiring as they move toward a smarter public safety: (a) *having access to relevant data*; (b) *integrating the data into a trusted information base*; (c) *delivering insight from the data to front-line officers and responders*; (d) *improving strategic and tactical decision making by anticipating problems and deploying appropriate resources to prevent them*;

and (e) *sharing information and resources to improve interagency coordination and facilitating unified threat assessment and response* (p. 4). The article further discusses how each of these key competencies can be addressed using IBM public safety technology solutions. It also provides two case studies as examples of how the smarter public safety plans work-in a major United States city and a city in Northern Ireland. In conclusion, the author explains that smart public safety is not just about increasing operational efficiency but that it also encompasses cost savings and creating a unified system to address multiple threats to create a safer community environment.

Davis, P. (2007, June 15). *Technology serves as a force multiplier*. Retrieved May 24, 2012, from Officer.com: <http://www.officer.com/article/10249729/technology-serves-as-a-force-multiplier>

Abstract. Technology is a force multiplier, according to Chief Bratton, who has implemented a range of technology programs within the LAPD, reducing crime and increasing citizen safety. The first technology project implemented under Chief Bratton was the CCTV program in MacArthur Park, a family park that had fallen prey to rampant crime and disorder. Following the CCTV initiative, there was a 46 percent reduction in crimes. Eventually, facial recognition and automatic license plate readers were introduced, which has increased the productivity of individual officers and the LAPD as a whole. Under Chief Bratton's leadership, the LAPD has been green-lighted to develop police vehicle technology, known as the "Smart Car" that will include automatic license plate readers and facial and fingerprint recognition technology. The next phase of the LAPD's technology implementation plan includes COPLINK, an analysis and decision support tool for rapidly identifying criminal suspects, crime relationships, and crime

patterns. COPLINK will enable officers to use a powerful combination of analytical, visualization, and decision support tools to speed the connection between suspects and their crimes. The plan is to connect COPLINK to other jurisdictions as well, including Orange County, San Diego, Phoenix, and Tucson, to name a few. With too few police officers serving communities around the country, technology will continue to play an increasing role in law enforcement and crime prevention and detection.

Credibility. Paul Davis is a writer who covers crime for newspapers, magazines and Internet publications. He has written extensively about violent street crime, gangs, drugs, organized crime, cyber-crime, white collar scams, espionage and terrorism. Officer.com is an online magazine that delivers new products, technology and trends to the law enforcement industry. Officer.com exists as the industry's leading online portal for the most up-to-the-minute industry news, product introductions, special content sections, forums, and more, for all levels of law enforcement, including line officers, mid and upper management officers, security personnel, and other non-sworn officers. Officer.com provides access to the most critical law enforcement information.

Summary. This article discusses the use of technology at the Los Angeles Police Department from the use of Smart cars to information sharing software. The article discusses one software solution in particular called "COPLINK" (p.2). The software allows law enforcement agencies to openly their share department records information with other law enforcement organizations. The article discusses how this technology is being used to increase officer efficiency and allow them to do more with less human resources. The article concludes with a quote from Chief Bratton who states, "Let's face it, with too few cops, we need cutting-edge technology to give us an edge on the

criminals so one day we will achieve our goal of making Los Angeles the safest city in America" (p.3)

Duggan, P. (1996). Technology: Supporting the officer in the community. *Technology for Community Policing* (pp. 60-63). National Institute of Justice Office of Community *-Oriented Policing Services. Retrieved May 10, 2012, from <https://www.justnet.org/pdf/conf rpt.pdf>

Abstract. This article examines what is needed successfully implement a community policing model. Law enforcement agencies must rethink and restructure all information systems to support the work of officers in the community. Problem solving in policing requires that officers have the ability to identify neighborhood problems and recognize recurring incidents as symptoms of a bigger problem. The article discusses the principles that Edmonton Police Department used to make their neighborhood problem-solving project successful. Duggan concludes that community policing requires a much broader information path that moves law enforcement beyond its preoccupation with calls for service, dispatch, response, and incident reports and toward an understanding of community problems and the resources to solve them.

Credibility. PJ Duggan retired from the Edmonton Police Service, Canada in 2007. He spent 10 years with the police service and reached the rank of Superintendent prior to retirement. He also spent five years as a consultant with the Canadian National Centers for Law Enforcement Technology. This article was published as a part of Technology for Community Policing Conference hosted by the National Institute of Justice Office of Community Oriented Policing Services (COPS). The COPS Office provides essential information in the form of best practices for law enforcement, Problem-Oriented Policing

Guides addressing crime-related problems, and publications composed by subject matter experts within the federal government, academics, and law enforcement leaders.

Summary. This article examines the role of computer aided dispatching and electronic reporting systems in the community oriented policing model at the Edmonton Police Service. The author discusses how older information systems were no longer meeting the needs of the police of the community. By increasing the efficiency of their computer aided dispatch (CAD) system the police were able to identify high call volume areas and repeat service areas that allow them to better deploy their resources to address community problems. The article also discusses the change in department philosophy that has led the police to take a proactive role in community problems rather than a reactive role. The author also notes that the Edmonton Police Service has realized that in law enforcement, time and information are an officer's most precious resources; the use of technology is giving the officers more of both to keep the community safer (p.63).

Edwards, J. B. (2012, June). Police Practice. *FBI Law Enforcement Bulletin*, 81(6), 19-24.

Retrieved October 29, 2012, from

<http://web.ebscohost.com.libproxy.uoregon.edu/ehost/detail?sid=64d9220e-6c69-4913-95f0-1cfe2af8c1d3%40sessionmgr111&vid=1&hid=105&bdata=JnNpdGU9ZWhvc3QtbG12ZSZzY29wZT1zaXRI#db=aph&AN=77869841>

Abstract. The article discusses law enforcement information and communication. It identifies how youth offenders communicate, network, socialize, boast, and reveal their conduct on the Web via e-mail and by smart phones. It investigates why law enforcement should use the same platforms to communicate and share intelligence and information

with one another. The article identifies that regionalization and resource sharing can address barriers, such as budget issues and priorities. It also discusses the differences that exist between urban and rural policing agencies in the U.S. due to gaps in law enforcement operations.

Credibility. John B. Edwards currently serves as chief deputy in Evans County Sheriff's Office, Georgia managing the intelligence-led policing operation center. He began his career in 1977 as a uniformed deputy sheriff at the Sheriff's Office. Edwards joined the Georgia Bureau of Investigation (GBI) in 1978. His assignments were GBI's Local Violator Squad and the Major Violator Squad in Atlanta, where he worked statewide and the Special Coastal area Smuggling Unit in Savannah. In 1983, Edwards transferred to the GBI Field Office at Statesboro where he was responsible for major criminal investigations. In June of 2004, he served with FBI and Secret Service as co-chair of the crisis management team during the Sea Island G-8 Summit. Edwards retired from the GBI in 2008 after 30 years of service. He has taught for various local, state and federal agencies nationwide. Edwards has published numerous articles regarding procedures for the management of criminal investigations and consults for agencies internationally.

Summary. This article studies the use of intelligence-led policing to increase information and intelligence sharing in law enforcement. The author finds that just like criminals use social media to share and coordinate their crimes, law enforcement can use it similarly to share information in real time about current crime or suspects they are investigating openly with other law enforcement agencies. It examines the use of smart phones as a current form of technology platform that can act as conduit to facilitate this information sharing concept as most officers currently have access to them. The author uses a table

format in the article to identify several daily police activities that can be pushed out electronically in real time such as patrol bulletins, alerts, and hazards to increase efficiency and the effectiveness of law enforcement operations and information sharing.

Garicano, L., & Heaton, P. (2010, January 01). Information technology, organization, and productivity in the private sector: Evidence from police departments. *Journal of Labor Economics*, 28(1), 167-202. doi:10.1086/649844

Abstract. We examine the relationship between information technology (IT), productivity, and organization using a new panel data set of police departments that covers 1987–2003. When considered alone, increases in IT are not associated with reductions in crime rates, increases in clearance rates, or other productivity measures, and computing technology that increases reported crime actually generates the appearance of lower productivity. These results persist across various samples, specifications, and IT measures. IT investments are, however, linked to improved productivity when they are complemented with particular organizational and management practices, such as those associated with the Compstat program.

Credibility. Professor Luis Garicano is head of the Managerial Economics and Strategy Group within the Department and Program Director for the MSc Economics and Management program. He earned two bachelor's degrees, one in economics in 1990 and one in law in 1991, both from Universidad de Valladolid in Spain. He earned a master's degree in European economic studies from the College of Europe in Belgium in 1992. Upon moving to the United States, he earned a master's degree in economics and a PhD in economics, from the University of Chicago. He then joined the faculty of the University of Chicago, Booth School of Business succeeding to Professor in 2006.

Garicano has also instructed courses for the Sloan School of Management at the Massachusetts Institute of Technology (MIT), as well as London Business School. Paul Heaton is the director of the RAND Institute for Civil Justice and a professor at the Pardee RAND Graduate School. His areas of expertise include law and economics, applied microeconomics, and criminal justice policy. Heaton received his PhD in economics from the University of Chicago. Recent research projects examine how court funding affects litigation patterns, the determinants of military enlistments, and the relationship between alcohol policy and crime rates. His prior research examines issues in political economy and crime policy and has been published in the *Journal of Economic Perspectives* and *Journal of Law and Economics*. His current research focus areas are: civil law, criminal justice, economics, insurance, labor markets.

Summary. This article discusses the increased administrative and organizational complexity that is associated with IT adoption. This study examines the evolution of information technology, skill usage, and organizational change. The authors find that agencies with increased IT adoption tend to have increased training requirements and introduce college requirements for employees. They also find that the adoption of IT decreases the number of assaults on officer and officer involved fatalities due to access to offender information. Although this study finds the effects of general IT on crime fighting and deterrence are statistically insignificant, the effect becomes relatively large when IT adoption is undertaken as part of a whole package of organizational changes (p. 25). The study concludes that police departments are likely to enjoy the benefits of computerization only when they identify the specific ways the new information and data availabilities interact with existing organizational practices (p.25).

Geer, O. J. (2012). No cause of action: Video surveillance in New York City. *Michigan*

Telecommunication & Technology Law Review, 18(2), 589-626. Retrieved December 09, 2012, from

<http://www.heinonline.org.libproxy.uoregon.edu/HOL/Page?page=589&handle=hein.journals%2Fmttl18&collection=journals>

Abstract. The article presents information on the establishment of the network of video surveillance by the police department of the New York City, New York State for the purpose of preventing future terrorist attacks and terrorist activities in the city. The terrorist attacks on September 11, 2001 in the U.S. and the enactment of the Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (PATRIOT Act) by the Congress of the U.S. played an important role in this establishment.

Information on the installation and the monitoring of the video cameras by the New York City Police Department and the private business owners is also presented.

Credibility. Olivia Geer practices law at the firm of Weil, Gotshal and Manges, New York City, New York. She holds a Juris Doctorate from Benjamin N. Cardozo School of Law, Yeshiva University, and a Masters in performance art from New York University. During the time the article was written she served as a research assistant for Professor Susan Crawford and Professor Myriam Gilles, at the Cardozo Intellectual Property and Information Law Program.

Summary. This article discusses the use of New York City Police Department's (NYPD) Video Interactive Patrol Enhancement Response (VIPER) program and their use of public and private video surveillance cameras to reduce crime in New York City. The author notes that there have been thousands of cameras installed in New York City after

9-11-2001. According to the article, the cameras are being use by the police to *aid in the detection of preparations to conduct terrorist attacks, to deter terrorist attacks, and to reduce incident response times.* The article discusses the effectiveness, policies, and privacy concerns that the camera system raises and compares the use of system in New York to the one found in London, England where there is one camera for every 14 citizens. It finds that in some cases the cameras are effective in reducing or deterring crime. However, the lack of enforceable policies raises concerns over misuse and privacy. The article concludes recognizing that there are legitimate and compelling uses for the video surveillance system to ensure public safety, but proper policies need to be established to ensure against system misuse.

Hauck, R. V., Chau, M., & Chen, H. (2002). *COPLINK: Arming law enforcement with new knowledge management technologies.* Tuscon, Arizona: William McIver and Ahmed Elmagarmid (Eds), *Advances in Digital Government: Technology, Human Factors, and Policy*, Kluwer Academic Publishers. Retrieved November 15, 2012, from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.20.5576>

Abstract. Information and knowledge management in the knowledge intensive and time critical environment of law enforcement has posed interesting challenges for information technology professionals in the field. Coupled with this challenging environment are issues relating to the ingegration of multiple systems, each having different functionalities resulting in difficulty for the end-user. The COPLINK project ties together the law enforcement domain expertise of Tucson Police Department with the research and technical background of the University of Arizona's Artificial Intelligence Lab. Working closely together as a user-involved project, we have collaborated at all levels of

development (designing, testing, and implementation) and the result of our efforts are the COPLINK Connect database, Detect criminal intelligence and Collaboration applications. COPLINK offers a cost-efficient way of web enabling stovepipe law enforcement information sharing systems by employing a model for allowing different police departments to more easily share data sources.

Credibility. Roslin V. Hauck has a doctorate in Management Information Systems from the University of Arizona. She received her Bachelor's degree in Communication Studies from Northwestern University (1995) and her Master's degree in Communication at the University of Arizona (1997). Her research interests include technology adoption and organizational behavior, human-computer interaction, information visualization, usability and software design. Michael Chau has his doctorate from the University of Arizona in Management Information Systems. He received his bachelor degree in Computer Science and Information Systems from the University of Hong Kong in 1998. His research interests include information retrieval, natural language processing, digital government, multi-agent technology and Web mining. Dr. Hsinchun Chen is McClelland Endowed Professor of MIS at The University of Arizona and Andersen Consulting Professor of the Year . He is also the director of the Artificial Intelligence Lab and Founding Director of The University of Arizona Mark and Susan Hoffman eCommerce Lab. He received the PhD degree in Information Systems from New York University, MBA in Finance from SUNY-Buffalo in , and BS in Management Science from the National Chiao-Tung University in Taiwan. He is author of more than 90 articles covering medical informatics, semantic retrieval, search algorithms, knowledge discovery, and collaborative computing in leading information technology publications. He serves on the editorial board of

Journal of the American Society for Information Science. He is an expert in medical informatics, digital library, knowledge management research, and his work has been featured in various scientific and information technologies publications including Science, New York Times, Business Week, NCSA Access Magazine, WEBster, and HPCWire.

Summary. This article discusses the highlights of the COPINK solution technologies created as a result of the collaboration between the University of Arizona Artificial Intelligence Lab and the City of Tucson Police Department (TPD). It examines the need for increased knowledge management in law enforcement. The authors findings show that federal, state and local law enforcement agencies possess vast repositories of information, but the explosive growth of digital records has increased the difficulty of searching and analyzing multiple data sources identifying information overload as a significant problem. They find that developing a technology that analyzes the information and consolidates multiple data sources increases an officer's ability to function in a digital environment. Using TPD as a case study, the article discusses knowledge management issues found at TPD, how the COPLINK solution has resulted in TPD's ability to obtain, analyze multiple data sources, and how COPLINK has offered TPD the ability efficiently share information both internally and externally.

Koper, C., Taylor, B., & Kubu, B. (2009). *Law enforcement technology needs assessment*.

Washington D.C: Police Executive Research Forum and Lockheed Martin Corporation.

Retrieved January 17, 2013, from

<http://www.policeforum.org/library/technology/Lockheed%20Martin%20Report%20Final%203-16-2009.pdf>

Abstract. The effects of technology can be seen in almost all aspects of modern life, and law enforcement is no exception. The field of law enforcement has been altered by technology in many important ways. One need only consider that the primary police strategy of the latter part of the 20th century, i.e., motorized preventive patrol and rapid response to calls for service, was developed in response to the invention of the automobile and two-way radio communications. More recent technological developments have also had far-reaching effects on police agencies. Information technology, DNA testing, and bullet-resistant vests, for instance, are now common and critical tools in law enforcement. Contemporary concerns over homeland security and counterterrorism have also created new technological problems and demands for police agencies, as has the growth of computer-related crime.

Credibility. Christopher S. Koper is Professor of Criminology, Law and Society at George Mason University, and a senior fellow and co-director of the evidence-based policing program in the Center for Evidence-Based Crime Policy. He holds a PhD in criminology and criminal justice from the University of Maryland and has over 25 years of experience conducting criminological research at PERF, the University of Pennsylvania, the Urban Institute, the RAND Corporation, the Police Foundation, and other organizations, where he has written and published extensively on issues relating to firearms, policing, research methods, federal crime prevention efforts, and juvenile delinquency. Bruce Taylor is a Principal Research Scientist at the University of Chicago. He holds a PhD in Criminal Justice and Criminology from Rutgers University. Taylor conducts research in the Substance Abuse, Mental Health, and Criminal Justice Studies (SAMHCJ) department. He manages research projects, analyzes data, writes reports and

papers for publication, presents results at conferences, and leads business development in the areas of criminal justice. Bruce Kubu has been with PERF since August 1999. Mr. Kubu received his Masters in criminology from the University of Maryland in May 1995. He is responsible for directing PERF's Law Enforcement Center for Survey Research (LECSR) and managing several research projects. Kubu was also responsible for managing data collection, data analysis and report generation for the project. The Police Executive Research Forum (PERF) is a membership organization of police chiefs and sheriffs, has been actively exploring ways to harness technology to help advance the field of law enforcement. PERF has been working with hundreds of law enforcement agencies across the nation for more than three decades and has expertise in the full range of substantive and operational aspects of law enforcement.

Summary. This report seeks to recognize technologies that afford the greatest promise in improving the ability of law enforcement to fulfill the security needs of the public in the most efficient manner available. The report also identifies key stakeholders and supporters within the decision chains of law enforcement, their requirements derivation and acquisition strategies for technology, and the opportunities that may emerge from identified gaps between what police need to reduce crime and technologies that might fill those needs. In conclusion this report identifies key factors for furthering the use of technology in law enforcement as: (a) identifying future partnership opportunities to advance capabilities for law enforcement; (b) recognizing that solutions exist in nontraditional venues; (c) developing standards for police technology; (d) disseminating best practices in technology implementation and use; and (e) helping agencies find funding and assistance for technology acquisition.

Lewis, S., & Lewis, D. (2012). Examining technology that supports community policing.

SIGCHI Conference on Human Factors in Computing Systems (pp. 1371-1380). New York: ACM. doi:10.1145/2207676.2208595

Abstract. This paper investigates how citizens use technology to support community policing efforts. To explore the types of conversations that are shared on the community web forum, we conducted a qualitative study. We analyzed 865 forum posts from a community crime web forum from April 2004 to June 2011. We found that residents use the forum to: (a) build relationships by strengthening social ties, (b) discuss ways to take collective action, (c) share information and advice, and (d) regulate the social norms of the neighborhood and the web forum. Results suggest that technologies intended for crime prevention should be designed to support communication and problem-solving discussions amongst residents, as opposed to simply providing information to citizens.

Credibility. Sheena Lewis is a PhD candidate in the Technology and Social Behavior program at Northwestern University. She holds a Masters in Computer Science focusing on Human Computer Interaction from the College of Computing at Georgia Institute of Technology. Prior to returning for her PhD, she was a user experience engineer at IBM. S. Lewis's current research interests are to explore how technologies can be embedded in particular socio-cultural environments to encourage collaborative pro-social behavior and how various Chicago communities use technologies to address violent crime in their neighborhoods. She is also interested in designing technologies that increase collaboration amongst groups, teams, and communities to solve social issues by considering social, cultural, and economic contexts as well as socio-technical infrastructures. Dan Lewis has a PhD from the University of California at Santa Cruz. He

is currently a professor at Northwestern University, School of Education and Social Policy. He also heads a large-scale university consortium to study welfare reform efforts in Illinois. In another current project he is developing a new Suburban Action Research Project that will deliver technical assistance to suburbs struggling with social problems. His current research interests also include communities and families, health and welfare policy, community effects, violence and aggression, welfare reform and school reform.

Summary. This article discusses the current role of technology in supporting citizens' efforts to address crime in a middle-class, racially-diverse community in Chicago, IL. To understand how technology is used by the citizens, this study analyzes two criminology theories (a) *victimization theory: crime prevention from the police perspective*, and (b) *social control theory: crime prevention from the community perspective* (p. 1372). By analyzing the community web forum discussion, the researchers found four major themes emerge. Residents use the forum to (a) build relationships and strengthen social ties, (b) discuss ways that they can engage in collective action, (c) share information and advice, and (d) reinforce offline and online community norms (p. 1375). The findings show that for technology to successfully support community policing, it needs to be designed to adhere to and support communication that allows for residents to engage in collective problem-solving discussions and to informally regulate social norms.

McCue, C. (2011, March). Proactive policing: Using geographic analysis to fight crime.

Geography and Public Safety, 2(4), p. 3 to 5. Retrieved November 09, 2012, from <http://www.nij.gov/topics/technology/maps/gps-bulletin-v2i4.pdf>

Abstract. This article uses research conducted by the Medical College of Virginia to discuss the benefits of using geospatial statistical analysis in policing. The research

involved the use of statistical modeling to characterize violent crime and support information-based approaches to prevention. Members of the research team began to work with the law enforcement community in an effort to use the research findings to support police operations and responses. Models were developed for use in addressing crime patterns and developing proactive deployment strategies, and to influence public safety outcomes in the community. A statistical model was tested to determine its ability to successfully map crime patterns. Results of the test are discussed. Using another case study, the article describes how geospatial statistical analysis works. Geospatial statistical analysis provides law enforcement with the ability to identify and characterize threats and anticipate crime, thereby allowing the police to proactively prevent and disrupt crime.

Credibility. Colleen McCue has her PhD in Psychology from Dartmouth College. She completed a five-year postdoctoral fellowship in the Department of Pharmacology & Toxicology at the Medical College of Virginia where she received additional training in pharmacology and molecular biology. Her areas of expertise include the application of data mining and predictive analytics to the analysis of crime and intelligence data, with particular emphasis on deployment strategies, surveillance detection, threat and vulnerability assessment, fraud detection and the behavioral analysis of violent crime. The article is published in *Geography & Public Safety*, described as a quarterly bulletin of applied geography for the study of crime and public safety.

Summary. This article examines the use of geographic analysis to display and predict crime patterns. The article suggests that the use of geographic analysis allows police managers to more efficiently deploy resources to areas that show a history of high volumes of violent crime. The author tested the use of this strategy with an agency, where

resources were deployed to an area that the maps indicated were plagued by a high volume of random gunfire incidents. The results showed a significant decrease in criminal activity and an increase in weapons seized by officers. The author concludes by suggesting that using geospatial mapping is a more accurate and effective way for law enforcement to deploy resources to increase their ability to identify and characterize threats and anticipate crime.

Miller, C. M. (2011, July 5). *Is social media a force multiplier?* Retrieved November 16, 2012, from Officer.com: <http://www.officer.com/article/10290350/is-social-media-a-force-multiplier>

Abstract. This article explores the use of social media for use in law enforcement as a force multiplier. The author examines effective use of social media in law enforcement, and discusses the advantages and disadvantages that it presents to officers in the field. The article illustrates that by getting specific and focusing on the people who can help solve the problem, police departments can do a lot more than simply multiply their force - they'll create partners who take an equal share of responsibility for public safety. That should be the true goal of any social effort.

Credibility. Christa M. Miller is a freelance writer based in Greenville, South Carolina. She holds a degree in public relations and communication from the Whittemore School of Business and Economics at the University of New Hampshire. She specializes in law enforcement and digital forensics. Officer.com is an online magazine that delivers new products, technology and trends to the law enforcement industry. Officer.com exists as the industry's leading online portal for the most up-to-the-minute industry news, product introductions, special content sections, forums, and more, for all levels of law

enforcement, including line officers, mid and upper management officers, security personnel, and other non-sworn officers. Officer.com provides access to the most critical law enforcement information.

Summary. This article discusses how the use of social media technology can act as a *force-multiplier* for law enforcement. The author discuss the use of Twitter or blogs by officers to relay information to the public and to other officers in real-time. She recognizes that these social media platforms also allow for the citizen to communicate information back or report problems to the officer without having to call in, as they are not restricted to just law enforcement users. The article identifies social media as the door to open another level of communication and training for both officer and civilians. The author also discusses the training needed to properly use social media and that it can offer an opportunity for officers to go out in the community to train citizens on how they are planning to use the technology to communicate with them. She concludes that if used properly social media could allow officers to increase their ability to communicate openly with the public they serve and therefore, “police departments can do a lot more than simply multiply their force, they’ll create partners who take an equal share of responsibility for public safety” (p.3).

Norwood, B. T., & Waugh, D. (2012, June). Telling a story through social media. *Police Chief Magazine*, 79(6), 30-34. Retrieved November 19, 2012, from http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=2693&issue_id=62012

Abstract. Imagine if everyone opened up their morning newspaper every day and first read a short, positive story about an officer making a successful arrest. Then they turn the

page and see photos and charges from a successful citywide prostitution operation. Next to that article is a prominently placed surveillance image from a recent robbery requesting information to help find and identify the offender. Below those stories is a single, stand-alone photo of mounted unit officers laughing and talking with citizen's downtown.

Further, imagine that throughout the paper, there are comments from people congratulating officers for their good work, thanking the department for sharing such positive information with them, and asking for even more information. This is exactly what social media sites are: Online newspapers and television stations that allow for the dissemination of information in the manner you want your community to receive it. People are reading their morning newspaper on their smartphones or computers, and an agency can respond to inquiries in real time. An agency's responses shape the conversation in ways that benefit the community and reflect well on the police department. Social media gives law enforcement agencies the ability and the power to tell their own stories. Agencies do not have to hope or ask a reporter to publish a positive news story. Rather, agencies can write, record, or photograph an incident and post this content online for immediate viewing of and discussion among the community and the department. This is how the Richmond, Virginia, Police Department uses social media. It tells its own story.

Credibility. Bryan T. Norwood became the 16th police chief of Richmond, Virginia in 2008. Chief Norwood's law enforcement experience includes work with the police departments of New Haven and Bridgeport, Conn., in community patrol and narcotics, homicide, robbery and burglary investigations. He also served as a liaison to the FBI and

Connecticut Homeland Security. He was also a U.S. Drug Enforcement Administration special agent in New York. Since his arrival in Richmond, Chief Norwood has established several programs and initiatives the Department uses to maintain and enhance outreach in the community, including monthly community walk-throughs with his Command Staff and the Department's leadership team, deployment of alternative patrols utilizing bikes and walking beats and enhancing relationships with community partners – from Richmond's Mayor Dwight C. Jones to members of City Council to the residents and the local business owners. Dionne Waugh is the marketing and public relations specialist for the Richmond, Virginia Police Department. Waugh graduated from Virginia Commonwealth University in Richmond, Virginia, with a degree in mass communications. As a member of the Department's Public Affairs Unit, she created and developed the agency's successful use of social media and continues to try and find new ways to improve the way Richmond Police communicate online. Waugh is a former newspaper reporter who wrote about crime, police, and the court system for six years. That experience and an ingrained curiosity for what makes people tick has fueled her desire to improve communication between people. The Police Chief Magazine is a monthly publication that publishes articles contributed by law enforcement professionals regarding law enforcement management topics. The references cited by the article relate to the topic of police staffing and law enforcement partnership.

Summary. This article discusses the use of social media technology at the Richmond, Virginia Police Department (RPD). The authors report that the need to use social media came to light when the local media market environment in Richmond shifted and they only had enough time to discuss the homicide and robberies that were occurring in the

area. This painted a poor picture of the good things that the police department was doing in the Richmond community. RPD's solution was to deploy social media as a tool to communicate to the citizens that everything they were seeing on television was not the entire story. The article covers the implementation of the department's social media policy which dictates who can post information on these sites, what information is to be posted, and how to monitor and handle inappropriate comments. The authors discuss the development strategy used to decide how the department was going to use social media to rebuild its relationship with the community and to ensure that the information on these platforms is used to promote positive stories not just the negative crime stories shown on the local newscasts. The authors state that the use of social media has greatly improved RPD's relationship with the community and is showing the community the many things its officers are doing in city neighborhoods through the social media tools that they use on a daily basis.

Schultz, P. D. (2008, June). The future is here: Technology in police departments. *The Police Chief*, 75(6). Retrieved November 17, 2012, from http://www.policechiefmagazine.org/magazine/index.cfm?article_id=1527&fuseaction=display&issue_id=62008

Abstract. The technologies listed in this article are but a few of the current generation of technologies with which today's executives should be familiar. Because these technologies are changing the way police operate, many chiefs are changing their purchasing priorities as well, dedicating funds either from grants or from their operating budgets to keep their agencies technologically up to date. All police chiefs are

encouraged to stay current in the field of emerging technology, because these technologies are not for the next generation—they are for this one. The future is here.

Credibility. Paul D. Schultz is a retired chief of police from Lafayette, Colorado. After his retirement he was appointed as the Director of Colorado Peace Officer Standards and Training. He has 33 years of law enforcement experience, holds a master's degree in criminal justice administration from the University of Colorado at Denver, and is a lead trainer in the IACP's Technology Technical Assistance Program (TTAP). He also serves as chairman of the Regional Advisory Committee of the 10-state Rocky Mountain Region of the NLECTC. The Police Chief Magazine is a monthly publication that publishes articles contributed by law enforcement professionals regarding law enforcement management topics. The references cited by the article relate to the topic of police staffing and law enforcement partnership.

Summary. This article briefly examines multiple law enforcement technology system that can be used to improve efficiency, effectiveness and officer safety. The author also identifies four key factors to consider when purchasing technology: (a) cost-effectiveness; (b) training; (c) service and maintenance requirements; and (d) operational needs. This article contains brief discussion on what the author considers to be the *top technologies* that every department should consider investing in. Of the technologies identified in this article several apply the topic of this study, language translators, crime mapping, criminal investigation records systems, graffiti cameras, and in-car camera systems to name a few. These technologies directly relate to how law enforcement can create a more efficient partnership with the community. The author recognizes that

technology changes very quickly so he also provides several resources for police executives to use to keep current with technology trends.

Willis, J. J., Mastrofski, S. D., & Weisburd. (2007, March). Making sense of COMPSTAT: A theory-based analysis of organizational change in three police departments. *Law & Society Review*, 41(1), 147-188. Retrieved January 22, 2013, from <http://www.jstor.org.libproxy.uoregon.edu/stable/4623368>

Abstract. COMPSTAT, the latest innovation in American policing, has been widely heralded as a management and technological system whose elements work together to transform police organizations radically. Skeptical observers suggest that COMPSTAT merely reinforces existing structures and practices. However, in trying to assess how much COMPSTAT has altered police organizations, research has failed to provide a broader theoretical basis for explaining how COMPSTAT operates and for understanding the implications of this reform. Based on fieldwork, our analysis suggests that relative to technical considerations for changing each organization to improve its effectiveness, all three sites adopted COMPSTAT in response to strong institutional pressures to appear progressive and successful. Furthermore, institutional theory better explained the nature of the changes we observed under COMPSTAT than the technical/rational model. COMPSTAT was found to be less successful when trying to provide a basis for rigorously assessing organizational performance, and when trying to change those structures and routines widely accepted as being "appropriate." We posit that it will take profound changes in the technical and institutional environments of American police agencies for police departments to restructure in the ways anticipated by a technically efficient COMPSTAT.

Credibility. James Willis is an Associate Professor in the Department of Criminology, Law and Society at George Mason University. He earned his BA in Administration of Justice from The Pennsylvania State University and PhD in sociology from Yale University. At Yale he was a Jacob K. Javits fellow and the recipient of a Henry Hart Rice Fellowship. Willis has published work on COMPSTAT, community policing, and punishment and has received research grants from the Office of Community-Oriented Policing Services (COPS), National Science Foundation, and National Endowment for the Humanities. He is currently the principal investigator on a project examining the relationship between COMPSTAT and community policing. Stephen Mastrofski is a professor in the Department of Criminology, Law and Society and Director of the Center for Justice Leadership and Management at George Mason University. His research interests include police discretion, police organizations and their reform, and systematic field observation methods in criminology. He has published extensively on the application of systematic observation methods to street-level police work. For several years, Professor Mastrofski has led a team of researchers supporting and evaluating the transformation of the Trinidad and Tobago Police Service. He is also engaged in research projects on measuring the quality of street-level policing, assessing the role of first-line police supervisors, and measuring police organization development and change. He has served on the editorial boards of seven criminology and criminal justice journals, currently serving on the boards of two international policing journals. He has been a Visiting Fellow at the National Institute of Justice and the Office of Community Oriented Policing and has consulted for a variety of public and private organizations. David Weisburd holds a joint appointment as a Distinguished Professor in the Department of

Criminology, Law and Society at George Mason University and also as the Walter E. Meyer Professor of Law and Criminal Justice at the Hebrew University Law School in Jerusalem. He is also a Senior Fellow at the Police Foundation in Washington, DC, and Chair of their Research Advisory Committee. He is the 2010 recipient of the Stockholm Prize in Criminology. In addition to his experimental and evaluation work on criminal justice interventions, Dr. Weisburd's key research interests include the criminology of places, policing, statistical methodology, and white collar crime. He is an elected Fellow of the American Society of Criminology and of the Academy of Experimental Criminology. Weisburd is a member of the National Research Council Committee on Crime Law and Justice, the Campbell Collaboration Crime and Justice Group, the Science Advisory Board (OJP) and of the National Institute of Justice/Harvard University Executive Session in Policing. In 2008 these authors, received the Law and Society Association's article prize for this paper they published on COMPSTAT.

Summary. This article compares two different perspectives on organizations-technical/rational and institutional-to COMPSTAT's adoption and operation in three municipal police departments: Lowell, Massachusetts (LPD); Minneapolis, Minnesota (MPD); and Newark, New Jersey (NPD). The article identifies and discusses the four basic principles of COPMSTAT that originated at the New York Police Department in the mid 1990's: *(a) accurate, timely information made available at all levels in the organization; (b) the most effective tactics for specific problems; (c) rapid, focused deployment of resources to implement those tactics; and (d) relentless follow-up and assessment to learn what happened and make adjustments* (p. 148). The authors placed great collective emphasis on the COMPSTAT elements that were most likely to confer

legitimacy, and on implementing them in ways that would minimize disruption to existing organizational routines. The article identifies that all three of the departments analyzed in this study support the deployment of community policing models at their organization (p. 163). The authors examine factors of implementation and the structural reform finding that using COMPSTAT can bring both technical and institutional tension to the organization due to increased expectation of management accountability. However, they also find that all three agencies have a high acceptance rate from their department managers, because they see the value in the results. They find that their research on COMPSTAT in three police departments suggests that trends in policing emphasizing institutional responses remain ascendant, however understanding theory and research, using data and statistics, conducting evaluations, and mobilizing and coordinating resources outside the police agency needs to become central concerns in the recruitment, training, and socialization of police (p.182).

Conclusion

This scholarly annotated bibliography presents and summarizes 40 references including peer-reviewed articles, reports, white papers, and dissertations. These references examine three particular facets of the community oriented policing concept: (a) economic impacts, (b) policing practices, and (c) law enforcement technology. The purpose of this annotated bibliography is to provide upper level law enforcement managers and law enforcement IT managers a set of references that can serve as the basis for guiding the development of technology solutions designed to expand and sustain community oriented policing practices within local law enforcement agencies.

Specifically, this annotated bibliography identifies and describes how law enforcement technology solutions can be used to support community policing practices. According to Kappeler and Gaines (2012) community oriented policing encompasses two core components: (a) community partnerships, and (b) problem-solving. The implementation of community oriented policing takes a significant amount of time and resources from both the community and the police organization (Johnson, 2011).

The selected references in this study are categorized into three thematic areas of community oriented policing: (a) law enforcement staffing and budgeting trends (Davis, 2007; Fischer, 2012; Goode, 2012; Zernike, 2012), (b) the community oriented policing concept and related components and practices (Bullock, 2012; Community Policing Consortium, 1994; Kappeler & Gaines, 2012; Schultz, 2008), and (c) law enforcement technology solutions (Alexander, 2011; Duggan, 1996; Geer, 2012; Norwood & Waugh, 2012). The goal is to collect, analyze, and present selected references in order to propose a set of five most *effective* technology solutions; the notion of effective is measured as (a) how these solutions work to

increase partnerships between law enforcement and the public, and (b) the impact they have on crime.

Staffing trends. As noted by Tyler (2004) the practice of the community oriented policing takes a significant amount of police resources to have a positive impact on crime. Law enforcement agencies nationwide have seen significant budget reductions since 2008 due to the downturn in the nation's economy. According to the 2012 PERF survey findings law enforcement staffing levels and the training officers receive have both been reduced, resulting in lower quality of service to the citizens and increased safety risks for the officers (Fischer, 2012). These reductions in police staffing have resulted in reductions of the services agencies are capable of providing to their communities. As a result, 42% of the over 700 agencies surveyed are turning to technology solutions as a way to add back service capacity (Fischer, 2012). Davis (2007) states many agencies are turning to technology as a resource to enhance their abilities to engage their community in support of policing effort. In this economic climate police organizations have found that they must rely on residents and business owners to share information about crime and disorder in order to engage in effective problem solving to sustain public order and reduce crime (Melekian, 2012).

Community partnerships. Community oriented policing has become the paradigm of contemporary policing, evolving significantly over the years (Oliver, 2000). According to Parlow (2012), community oriented policing has been the dominant local law enforcement approach for the last twenty years. Some of the research cited in this study argues that community oriented policing practices have very little impact on crime rates and prove to be ineffective unless used with another policing concept (Wiesburd & Eck, 2004). This perspective leads some agencies to adapt the original community policing concept to form other methods of policing such as

intelligence-led policing, predictive policing, and problem oriented policing (Bullock, 2012). Each of these methods is rooted in the community oriented policing concept and takes a significant amount of time and resources from both the community and the police organization, but can considerably impact crime in a community.

Today there is a significant increase in the willingness of law enforcement agencies and communities to work together to bring down crime. Some agencies have found that partnering with other public departments such as public health allows both agencies to benefit from a community partnership (Wolf, 2012). According to Robert Wolfe's article *The overlap between public health and law enforcement: Sharing tools and data to foster healthier communities*, both agencies operate similarly in the community to foster increased safety and health; by working together they could possibly create a greater level of trust in the community (2012). Wehrman and DeAngelis (2011) finds that citizens who know their neighborhood police officer are more willing to work with the police to help solve neighborhood crime problems (p. 62). Similarly, a survey conducted by Skogan and Alderden (2011) of law enforcement officers finds that law enforcement officers are supportive of community oriented policing practices, and reports that positive things happen when they meet with the public.

Electronic communications. This increased willingness to collaborate has led to a need for more efficient ways to communicate. Many agencies are turning to technology to increase their communication efficiency; for example, the Boca Raton Police department uses social media to increase their ability to push information out to their community more effectively (Alexander, 2011). Other agencies are establishing police organization websites and blogs to further their efforts in communicating with their communities (Rosenbaum, Graziano, Stephens, & Schuck, 2011). Technology solutions that create an increased online presence are proving to

be an effective way for police to build strong partnership with their communities, which is building stronger community-oriented policing programs (Lanier, 2012).

Factors for Law Enforcement to Consider when Deploying Technology

According to Schultz (2008) there are four key factors to consider when deploying technology: (a) cost-effectiveness; (b) training; (c) service and maintenance requirements; and (d) operational needs (2008). Each factor is described in detail below.

Cost. Budgets in law enforcement today are extremely tight. Local economies have been devastated by both decreasing tax revenues and reduced levels of support from federal and state funding sources (Melekian, 2012). The practice of community oriented policing is not cheap. Departments must devote vast amounts of time and resources to make their programs successful (Melekian, 2012). Law enforcement agencies across the country are cutting back spending to protect their human resources (Fischer, 2012). However these agencies are seeing a greater need to continue the practice of community policing using technological resources instead of human resources (Kocher, Cumberland, Raquet, & Stocker, 2012). The first thought with the mention of increased use of technology is, how much will it cost? According to Chief Cathy Lanier of the Washington D.C. Metropolitan Police Department (2012), increasing the use of technology does not need to be about developing or deploying high cost technology but about streamlining and increasing the efficiency of the technology already owned. In addition, law enforcement organizations can access online law enforcement grant writing resources to help find funding and assistance for technology acquisitions specifically for community policing purposes (Kocher, Cumberland, Raquet, & Stocker, 2012). According Kocher and Stocker (2012) the regionalization of technology resources can also prove to be a cost effective way for law enforcement agencies to sustain basic services for the community.

Training. The deployment of new technology solutions generates an increased need for training (Garicano & Heaton, 2010). According to Fischer (2012), agencies impacted by budget cuts are using training opportunities as a way to reward and motivate officers. The community oriented policing concept on its own requires a significant amount of training for both the law enforcement officers but also for the civilians who participate in the effort. Deukmedjian (2006) explains that failure is imminent when little consideration is given to how much training and staffing is required to support the concept of community policing.

Gaylord (2008) describes community education as a core component of community oriented policing. Citizens need training from law enforcement on how to identify suspicious behavior and understand what information law enforcement needs them to provide in order to create a successful partnership. Officers need to be educated in two key areas; (a) how to effectively communicate with the public, and (b) how to break down cultural barriers as it relates to the use of technology both sides need similar training (Gaylord, 2008). According to Miller (2011) when technology platforms such as social media are introduced agencies need to identify when, how, and who will use the technology and provide training to both the community and officers to ensure the adoption of the technology is successful.

Service and maintenance. This factor tends to refer to the maintenance and service of particular technology solutions. It is well known that technology evolves quickly and therefore requires ongoing support to understand systems changes and improvements. The maintenance factor also applies to policing methods as well; police practices have to be evaluated from time to time to ensure the practice is still achieving positive results for the organization and the community (Wolf, 2012). In his article, Wolf (2012) compares the methods of policing to those used in public health and recognizes that just like medical procedures and treatments, policing

concept and practices need to be evaluated and updated to resolve problems effectively and efficiently.

Today several new policing methods have begun to emerge including predictive policing, intelligence-led policing, and problem oriented policing to name a few (Bullock, 2012; McCue, 2011; Willis, Mastrofski, & Weisburd, 2007). Each is rooted in the traditional community oriented policing methods, but with the increased use of technology organizations are morphing the community policing concept to include new models to meet their community's needs (Kappeler & Gaines, 2012; Oliver, 2000). Some organizations have added an accountability process called COMPSTAT to increase transparency to the public and ensure that their policing methods and practices are frequently maintained. COMPSTAT holds managers accountable for information that is being disseminated throughout the organization and the community (Willis, Mastrofski, & Weisburd, 2007). COMPSTAT also ensures that the relationships between the department and the community are being maintained and supported at all levels (Willis, Mastrofski, & Weisburd, 2007). The COMPSTAT process also provides law enforcement managers an opportunity to frequently evaluate their methods of policing to determine if past practices are still effective for the organization and the community (Willis, Mastrofski, & Weisburd, 2007).

Operational needs. Technology is changing the way police organizations operate. According to the article *Trends in the policing industry* written by Ed Maguire and William King (2004) there are three primary components of community policing: “organizational adoption, community interaction and engagement and problem solving” (p. 23). Technology solutions can increase an organization's ability to respond, react and resolve crime (Schultz, 2008). Traditionally, law enforcement has taken a reactive role to crime, however the increased use of

technology has allowed for the better deployment of resources and is allowing law enforcement to build a proactive partnership between the community and law enforcement to solve neighborhood crime problems (Schultz, 2008). As noted by Schultz (2012), it is good to ensure that the technology solutions like policing concepts support an organizations goals and mission. Deploying a technology solution into an environment that is unfeasible can be expensive and cause poor adoption rates by both the organization and the public; however organizations will enjoy the benefits of computerization when they identify the specific ways the new information and data availabilities interact with existing organizational practices (Garicano & Heaton, 2010).

Community Oriented Policing Technology Solutions

Law enforcement agencies throughout the nation are using various forms of the community oriented policing methods to increase public safety for their communities. Although law enforcement agencies choose to apply the community oriented policing methods differently, there are two core concepts that do not change; building partnerships between the community and law enforcement, and solving community problems. The following technologies are currently available to law enforcement as technology solutions that will support and expand the core practices of community oriented policing concept.

Social media platforms. In law enforcement, the ability to communicate is an integral part of the job. The ability to efficiently communicate both to the internal organization and with the public you serve is imperative to building trust and effective partnerships.

Social media has become a valuable tool for law enforcement both to solve crime and communicate with the community served. It began with the website MySpace and has evolved over time to websites including Facebook and Twitter (Alexander, 2011). Embracing social media as an effective form of communication has now become a valuable tool in fighting crime.

Agencies like the Boca Raton, Florida Police Department (BRPD) and Richmond, Virginia Police Department (RPD) are using social media to keep citizens informed of crime that is occurring in their neighborhood (Norwood & Waugh, 2012). They are also giving their officers the ability to broadcast suspect descriptions from mobile devices. This is putting up to the minute information into the hands of the citizen and creating a new level of transparency for the organization (Alexander, 2011). Social media tools are allowing agencies like RPD to tell their own story to the media before they are able to put their negative spin on it (Norwood & Waugh, 2012). These social media solutions also allow citizens to communicate back to the organization without having to call in creating an open avenue for them to communicate directly with law enforcement. According to Lewis and Lewis (2012), residents feel that social media platforms strengthen social ties by facilitating their engagement in collective problem solving actions and the sharing of information and advice with law enforcement.

According to Norwood and Waugh (2012), the use of these social media platforms needs to be controlled by firm department policies that indicate who can use them and what information can and cannot be released to the public. Miller (2011) indicates that training is also needed for both officer and citizens so that there is an understanding of what is being put out and why. This helps to ensure that the tools are not misused and that the information being shared is valid and puts the organization in a positive light.

The tight economy brings technology cost concerns for organizations; however there is no extra cost associated with social media tools since they are free and publicly available to all citizens, making the use of social media platforms one of the most cost effective tools for both the law enforcement organization and the community (Schultz, 2008). According to Miller (2011) these social media platforms act as a force-multiplier for law enforcement, by allowing

officers to put out and receive information back in real time to their network of community followers. The use of social networking platforms is also helping organizations create vast networks of citizens who are willing to take an equal share in the responsibility of keeping their community safe (Miller, 2011).

Crime analytic software. Over the past two decades law enforcement has become more and more data driven (Koper, Taylor, & Kubu, 2009). Law enforcement documents have moved away from handwritten paper copies and they are deploying solutions to capture, process, and share critical data within and across agencies (Cotton, 2012). Law enforcement agencies are now looking for ways to find meaning in all the data they have collected (Koper, Taylor, & Kubu, 2009). Records management systems and computer aided dispatch systems are capable of electronically capturing every detail of a crime report and call for service. According to Wells and Wu (2011), crime analysis software can assist law enforcement in understanding when and where crime occurs in their jurisdiction, allowing them to more efficiently deploy resources to address the problem. The exploration for answers has led law enforcement to combine the concept of community oriented policing with a new concepts hot-spot policing and intelligence-led policing which use software solutions to mine electronic data and pinpoint high crime areas on maps, giving law enforcement managers that ability to direct and deploy resources more effectively to high crime areas. These tools are playing a vital role in law enforcement accountability programs like COMPSTAT, where managers can display crime maps and discuss current crime trends weekly to evaluate how effective their resource deployments are in the community and what their next course of action is going to be (Wiesburd & Eck, 2004; Willis, Mastrofski, & Weisburd, 2007). Outcomes of these meetings are then shared with public forums so they are aware of the problem and what the law enforcement's plan is to solve the problem.

Some law enforcement agencies are now turning to online solutions that can be used by citizens with access to the internet to track crime in their neighborhood. These solutions offered by companies like Bair Analytics and Crime Reports.com are free for citizens to use but do bring implementation costs for the agency to have their data mapped to the site. These publicly accessible solutions offer access to crime data from anywhere by anyone (Bair Analytics, 2013; Crime Reports, 2013). Implementing a public facing website that allows the public to run and obtain crime statistics allows law enforcement agencies to become more accountable and transparent to the community they serve. This level of transparency has proven to increase the public's trust and willingness to work with their local law enforcement officers.

Information sharing solutions. A decade ago law enforcement agencies did not believe in sharing concepts or information with one another. As Thacher (2001) explains in his article *Conflicting values in community policing* “different organizations advance different social values,” implying that, organization leaders don't like to follow in the footsteps of one another. After September 11th, 2001 agencies began to realize that they needed to work together to make communities safer (Chen, Zeng, Atabakhsh, Wyzga, & Schroeder, 2003). A National Institute of Justice (2010) report recognizes that one of the highest technological needs in law enforcement is the ability to effectively perform real-time, accurate identity checks across multiple jurisdictions and data systems (p. 25). Criminals are not bound by jurisdictional borders, law enforcement agencies are, so law enforcement organizations began looking for a way to openly share law enforcement data with one another (Chen, Zeng, Atabakhsh, Wyzga, & Schroeder, 2003). The University of Arizona Artificial Intelligence Lab in cooperation with the Tucson, Arizona Police Department (TPD) developed one solution called COPLINK which allows law enforcement agencies to browse, query, and analyze data from multiple data sources eventually creating a one

stop shop for law enforcement data (Hauck, Chau, & Chen, 2002). According to a study conducted at the TPD the COPLINK solution enabled officers to solve cases 14% faster (Lisaius, 2010). Due to advanced analytic features found in the solution officers were able to locate and identify suspects based off vague description (i2 Group, 2010). The solution currently links together over 400 law enforcement agencies throughout the United States. With a security clearance and a password, officers can now search criminal offender records outside of their jurisdiction without having to pick up the phone or spend hours searching through paper records. Other companies such as Palantir allow for both public data and law enforcement records to be ingested mapped and searched from any public or private data source (Palantir, 2013). These information sharing tools are permitting law enforcement officers to now collaborate with one another to solve crimes faster and more efficiently than in the past. When a crime series occurs officers can now respond to identify potential suspects in minutes instead of days, creating safer communities by giving the officers the tools to identify crime trends and solve cases faster (Chen, Zeng, Atabakhsh, Wyzga, & Schroeder, 2003; Hauck, Chau, & Chen, 2002).

Video surveillance. In America today it is nearly impossible to walk into a store or down the street without being recorded by video surveillance cameras (Geer, 2012). While in the past only businesses had surveillance cameras to protect merchandise from thieves, today cameras are ubiquitous; they are being used by private businesses, citizens, government agencies, and law enforcement. The city of London utilizes cameras at a ratio of one camera for every 14 people; in New York City the police department has a 24 hour real time crime center that is staffed with officers monitoring thousands of video surveillance feeds from both public and private entities (Geer, 2012).

Video surveillance systems are not cheap but cost less than people do over time (Geer, 2012). Dwindling budgets have forced law enforcement officials to lay-off officers and reevaluate policing practices in order to boost resources and keep the community safe (Kocher, Cumberland, Raquet, & Stocker, 2012). Community oriented policing practices are expensive because they take a lot of human resources and time to function successfully (Kappeler & Gaines, 2012). In 2009, the City of Sacramento spent \$600,000 in federal grant monies for their video surveillance system allowing them to purchase 13 fixed cameras, server space for 60 shared regional transit cameras and 3 mobile video trailers. They used their system to capture video evidence, monitor crowds during large events, and deter criminal activity in high crime areas (Locke, 2011). In cities like Chicago, IL live video surveillance feeds are providing organizations the ability to monitor multiple areas of the city at one time and direct resources to problem areas quickly and safely (Isackson, 2009). Video surveillance technology is not meant to replace traditional community policing practices.

Mobility. As noted by Kappeler and Gaines (2012), building community partnerships is a core component of community oriented policing; it starts with the officers on the street not with management in the office. This is why it is important for law enforcement officers to have the tools they need at their fingertips. To operate effectively in the field officers must have access to information and crime trends occurring in the community (Kappeler & Gaines, 2012). They must be able to function from the field in order to build effective relationships and trust with the public.

Law enforcement technology today is all about mobility; having technology available only in the office is ineffective for officers who work in a patrol car out in the community (Koper, Taylor, & Kubu, 2009). In many departments across the nation in-car computer systems

are installed that run communications system, computer aided dispatch programs, criminal history information, electronic report writing software, but limit the ability to access and analyze data (Koper, Taylor, & Kubu, 2009). Solutions like Bair Analytics and COPLINK are changing the in-car environment, giving officer access to vast amounts of data whenever they need it using mobile versions of their applications (Bair Analytics, 2013; Chen, Zeng, Atabakhsh, Wyzga, & Schroeder, 2003). COPLINK mobile is built to expand the capabilities of law enforcement personnel to increase their situational awareness and the speed of their response by giving them access to regional criminal offender records on mobile devices (Cotton, 2012). Some agencies like Lowell, Massachusetts and Redlands California police departments are issuing officers Apple iPads to run an application called PolicePad that allows users to access multiple databases for warrants, driver license information, and crime maps (Andrews, 2012). The Los Angeles Police department has developed and deployed a vehicle that is equipped with license plate readers, mobile finger print scanners, and facial recognition software to increase the productivity of their officers in the field (Davis, 2007). All of these mobile tools are meant to give the officer in the field the tools needed to build community partnerships and be an immediate problem solver.

In Summary

Many law enforcement agencies throughout the country have sought to deploy technology solutions to reduce staffing costs while still promoting community oriented police practices and reducing community crime problems. Organizations are beginning to open their doors to the public to increase their transparency and availability. They are now:

1. Increasing their on-line presence and communication through the use of social media and websites (Alexander, 2011; Crump, 2012; Edwards, 2012; Miller, 2011; Norwood & Waugh, 2012);
2. Using advanced crime analytic software to identify high crime areas (Bullock, 2012; McCue, 2011);
3. Using mobile computers in patrol vehicles and hand-held mobile devices to increase efficiencies in the field (Andrews, 2012; Davis, 2007; Duggan, 1996);
4. Increasing their department accountability through the use of video technology (Custers, 2012; Geer, 2012; Isackson, 2009; Schultz, 2008); and
5. Increasing internal and external crime information sharing efforts with other law enforcement agencies around the country (Bair Analytics, 2013; Chen, Zeng, Atabakhsh, Wyzga, & Schroeder, 2003; Palantir, 2013; Willis, Mastrofski, & Weisburd, 2007)

In principle, many forms of technology have the potential to expand and sustain community oriented policing practices. There is a great deal of evidence to show how technology has improved the outcomes and efficiency of community oriented policing practices. Understanding which technologies provide value to both the community and law enforcement is the key. Isackson (2009) put it best in his article *Can cameras replace cops*: “There is no evidence that technology alone makes a difference in the crime rate. You use the tools that work under the circumstances. You need a big toolbox to be effective (p. 4).”

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