

Intelligence Analysis within U.S. Law Enforcement Agencies: Empirical Insights from a National Sample¹

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Abstract

There is currently a lack of empirical insights which explore the activities related to state and local law enforcement's analytic function. This research is intended to remedy this shortcoming. Drawing on a national sample of 345 state and local law enforcement agencies, this research provides an empirical description of the types of analytic activities, sources of information, and analyst performance evaluation within police agencies in the United States. Results indicate that agencies are primarily engaged in crime analysis activities, access more information via databases than is received from outside agencies, and that few responding agencies have identified factors critical to the evaluation of intelligence analysts. Context for these findings and implications for practice are discussed.

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Purpose of the Research

There is currently a lack of empirical insight with regard to the function of intelligence analysis within state and local law enforcement organizations. The majority of research to date is either conceptual or qualitative and is usually a small focus of a broader reach focus – such as intelligence-led policing, counter-terrorism, or homeland security. This is not to infer that these conceptual or qualitative research contributions are of limited value as they are necessary to begin the process of building a knowledgebase related to intelligence analysis. Without efforts to develop a conceptual understanding of how intelligence analysis fits within law enforcement organizations (post-September 11th, 2001 especially) as well as qualitative insights of analytic practices, carrying out an empirical exploration would be, at the very least, difficult and likely misguided. Further guiding research efforts – as well as practitioners – on the evolving function of intelligence analysis are the reports and recommendations from government entities and professional associations. The research presented here is not intended to make the leap from concept to causation with empirical analysis. The present research is intended to provide an empirically-informed description of the type of analytic methods, sources of information, and performance evaluation activities engaged in by state and local law enforcement agencies in the United States. The present research utilizes data from a national sample of state and local law enforcement agencies. Policy implications and recommendations for enhanced practices are provided.

Literature Review

Intelligence Analysis and a Limited Knowledgebase

Research related to intelligence analysis in the context of state and local law enforcement has largely been relegated to a sub-area of a broader research focus – such as homeland security (Giblin, Schafer & Burrell, 2009; Oliver, 2006, 2009; Pelfrey, 2009), intelligence-led policing (Carter & Carter, 2009a; Darroch & Mazerolle, 2013; Ratcliffe, 2008; Schaible & Sheffield, 2013), fusion centers (Carter & Carter, 2009b; Carter & Chermak, 2012; Cooney, Roejk & Kaminski, 2011; Graphi-Joyal, 2010), and counter-terrorism (Innes, 2006; McGarrell, Freilich & Chermak, 2007, White, 2004). Of the sparse research available on intelligence analysis, the bulk of this information comes from assessments of analysis at the federal level as part of examining counter-terrorism strategies. Unfortunately, just as McGarrell *et al.*, (2007) point out, there is little empirical research that assesses the effectiveness of counterterrorism strategies involving local law enforcement organizations. Though his research was conducted prior to 9/11, Silke's (2001) review of counter-terrorism literature indicated that only three percent of articles in refereed terrorism journals used inferential analysis, compared to 86% in forensic psychology and 60% in criminology. Moreover, Lum, Kennedy and Shrley's (2006) Campbell systematic review of terrorism articles published between 1971 and 2003 similarly found the same percentage (3%) were empirical. Specific empirical research to law enforcement intelligence and counter-terrorism are even scarcer and were typically conducted prior to 9/11 (see Riley & Hoffman, 1995; Riley, Treverton, Wilson, & Davis, 2005) and are thus not considered in the current review of literature.

Though intelligence analysis is appropriate for consideration, and critical to, under these broader areas of research, the knowledgebase lacks a specific exploration of the types of analytic

activities and sources of information utilized among state and local law enforcement in the United States. This lack of research is not indicative of a lack of importance or commitment to the analytic function within state and local policing, rather a lack of specific focus on the organizational capability on its own. Furthermore, an analytic function should not be viewed as a capability of only larger agencies, but a necessary function of all public safety organizations. The National Criminal Intelligence Sharing Plan (Global Intelligence Working Group, 2003) stated that all agencies regardless of size must have a minimum intelligence capability – and thus an analytic component. Despite an emphasis on ubiquitous intelligence activity across state and local agencies, the limited research to date is mixed with regards to the impact of agency size and intelligence practices. Giblin *et al.* (2009) found that receiving information to integrate into the intelligence process was much more likely among large agencies (94.4%) versus small agencies (37.5%) while Carter (In Press) found size to have no influence on intelligence practices.

Analytic Activities

Put simply, crime analysis and intelligence analysis are different disciplines. Crime analysis “assesses the interactive effects and covariance of explicit variables of crimes that have occurred in order to determine a perpetrator’s methodologies with the intent to clear the crimes and prevent future incidents by apprehending the perpetrator” (Carter, 2009, p. 83). Such a technique is most effective when focusing on habitual offenders (Croisdale, 2007; Lemieux, 2008). Conversely, intelligence analysis “deals with threats, whether from terrorism, criminal extremism, or organized crime, through the analysis of information that suggests a threat, the identification of intelligence requirements, and the use of both target and vulnerability assessments, with the intent of preventing the threat from reaching fruition” (Carter, 2009, p. 83).

Though there are distinct differences between crime and intelligence analysis, the application of an analytic process to best fit the needs of individual agencies on a daily basis for most effective outcomes relies upon an integration of analytic methods across each of these disciplines. In reality, state and local law enforcement agencies are tasked with combatting crime the vast majority of the time and by utilizing methods and sources of information from both analytic disciplines, agencies can best position their resources to have the most direct impact on crime.

Ratcliffe (2011, p. 4) refers to this concept as “crime intelligence.” A relatively contemporary term, crime intelligence represents a mixture of crime analysis and criminal intelligence, arguing for collaboration between two strands of analysis that – in the US at least – are often kept separate. Crime analysis can tell a decision-maker what is going on, and criminal intelligence, rooted as it is in understanding and explaining patterns of criminal behavior, can tell a decision-maker why. Similarly, the International Association of Law Enforcement Intelligence Analysts (IALEIA, 2012, p. 28) states criminal Intelligence is referred to as information compiled, analyzed, and disseminated in an effort to anticipate, prevent, or monitor criminal activity. The primary benefit of integrating the two analytic disciplines is to ensure law enforcement is utilizing the most wide-ranging and comprehensive methods of identifying criminal activity and possible threats (whether a threat is considered to be crime or a terrorist event). These analytic processes rely upon a range of analytic activities that can be combined together to maximize daily tasks.

Further emphasizing the importance of the integration of these various analytic methods was the U.S. Department of Justice (2010) which published the *Common Competencies for State, Local, and Tribal Intelligence Analysts* to guide analytic capabilities at the state, local, and fusion center levels. Within this recommendation document it identifies a range of analytic

techniques, methods, and tools as competencies for analysts that go beyond traditional crime analysis – such as geospatial and social networking analysis. This guide refers to these techniques as a fusion between intelligence and law enforcement tradecraft in the homeland security environment. Although techniques such as GeoSpatial and mapping are often viewed as crime-centric, when combined with additional techniques (such as social network analysis or analyzing suspicious activity reports) these methods can yield insightful and actionable products that can impact both crime and terrorism.

Sources of Information

Though only anecdotal evidence has been available to this point, data quality has been found to affect the development of informative and actionable analyses (Cope, 2004). Analytic products that rely on information input to create a desired output are contingent on the quality of the data input. The analytic process is understood rather simply in the negative context; bad information in, bad information out. The quality of analytic methods could be superior, but when dealing with poor or limited information from the beginning, the output is going to suffer. Unfortunately, this process is not as simple when an analyst has good information, or a wide range of information readily available. While bad information input will always equate to bad information output, good information input will not always equate to good information output – as quality analytic products rely too heavily on the quality of the analytic process. The quality of the common analytic foundation within state and local law enforcement has been a continual focus for professionals within the field. Recently, IALEIA has drafted a revision of the *Law Enforcement Analytic Standards* to further professionalize and standardize the quality of intelligence analysis. Uniform quality is of critical importance as information collected from all

sources must be – at a minimum – “evaluated and designated for source reliability, content validity, and relevancy. The veracity of information is crucial, not only to the validity of the intelligence product, but also to officer safety, investigative effectiveness, and solidity of evidence in prosecutions” (IALEIA, 2012, p. 15).

However, the congruence of analytic quality is challenged as the number of information sources continues to grow exponentially in the digital era. Moreover, many emerging information sources are new to most law enforcement personnel and are not discussed during many traditional training programs. For example, the emergence of social networking websites has created a potential wealth of useful information for law enforcement while at the same time presenting its own unique challenges. As the Global Intelligence Working Group (2013) recently discussed in their publication of the *Developing a Policy on the Use of Social Media in Intelligence and Investigative Activities*:

“Social media sites can be valuable sources of information for law enforcement personnel as they fulfill their public safety mission – agency public information officers may use social media to interact with the public, detectives may access social media sites to assist in the identification and apprehension of criminal subjects, intelligence analysts may utilize social media resources as they develop intelligence products regarding emerging criminal activity, and fusion center analysts may use social media resources to assist in the development of analytic assessments. To successfully and lawfully harness the power and value of social media sites, while ensuring that individuals’ and groups’ privacy, civil rights, and civil liberties are protected, agency leadership should support the development of a policy within their agency regarding the use of social media sites in criminal intelligence and investigative activity (p. 6).”

Social networks are considered “open sources” of information. These sources of information – most commonly anything in public view on the Internet or news stories – do not require a warrant and/or are accessible without requiring user access. Open sources of information are becoming increasingly more prevalent and useful for law enforcement in gaining information to build investigations as well as de-conflict and confirm existing information.

While drawing upon emerging sources of information is challenging for U.S. law enforcement, it is not unprecedented and history suggests successes are likely to occur if intelligence analysis follows previous policing trends. The implementation of intelligence-led policing into many American law enforcement organizations has begun to lay the foundation for enhanced information sharing and analysis (Carter, In Press; Darroch & Mazerolle, 2013). This emerging policing paradigm has roots in previous philosophies – such as community and problem-oriented policing (Carter & Carter, 2009a; Schaible & Sheffield, 2013). Recently, Ratcliffe (2011, p. 5) noted problem-oriented policing (POP) has a “natural synergy” with intelligence-led policing as both seek amore long-term, strategic, risk focused and comprehensive solution to crime. Given its focus on more in-depth societal-level issues, problem-oriented policing requires law enforcement to delve deeper into the underlying problems that affect public safety and to do so requires police to be able to scan across a range of data and information sources to identify problems, analyze these problems and identify the underlying issue, prior to addressing the problem (Clarke 2004; Eck 2006; Goldstein 2003).

Though insights into intelligence analysts within state and local law enforcement are rare, same insights can be garnered from examinations of analysts at the federal level (caution must be taken here as the mission, operational focus, and even laws guiding analysis at the federal level differ greatly from those at the state and local level). In their qualitative study of intelligence

analysts working within the Intelligence Community, Gotz, Zhou and Wen (2006) found that all of the analysts they observed and interviewed expressed the need for more robust information sources. More specifically, analysts desired low-level event or factual information. During their study, analysts spent more time looking for low-level information as they gathered evidence to support or refute the already-developed process model or the crime/event that occurred or the illustration of a potential threat on the horizon. Moreover, their observations indicated that analysts tightly coupled their access to a variety of data sources. As analysts discovered potential evidence, they would immediately access other information sources to confirm or refute their understanding of what they had found. Though most analysts have been found to utilize different information sources to confirm or de-conflict information related to a crime incident (Chin Jr, Kuchar & Wolf, 2009) – which is typically considered crime analysis to aid an investigation – a variety of information sources is intended to enhance an intelligence analyst’s ability to depict a “threat picture” for decision makers; a difficult task to say the least. It should be noted that advanced education and training requirements are likely to enhance analysts’ ability to think analytically and process various sources of information (Cope, 2004) – thus easing the learning curve and facilitating effectiveness.

Training and Analyst Performance Evaluation

The profession of intelligence analysis has been on a progressive trajectory towards unified standards, minimum analyst capabilities, and appropriate evaluation to ensure quality products. As Marrin (2008) eloquently surmises:

“Intelligence analysis is viewed as both a craft and a profession. A craft “because it requires mastery of a skill set that can be acquired only through practical experience and

a profession because much of the substantive knowledge that practitioners require can be transferred to new practitioners through a structured personnel process that includes an educational component” (p.139).

The substantive knowledge Marrin refers to is achieved through training programs delivered by the appropriate personnel (e.g. senior analysts and subject matter experts). Training impacts processes within an organizational – such as the ability to perform tasks efficiently and effectively. Related to this issue, training can also influence the organization’s expectations of how an individual performs their job and as a result, how their job performance is evaluated. Relevant to the present research, agencies which require analysts to receive training on intelligence are likely to differ from those agencies which do not have training requirements.

In their recent study of intelligence training among 345 state and local law enforcement organizations, Carter, Carter, and Chermak (2013) found the most frequently attended training programs were the State and Local Anti-Terrorism Training (SLATT) (43%), Foundations of Intelligence Analysis Training (FIAT) (28%), and Bureau of Justice Assistance (BJA) 28 CFR Part 23 (28%) programs. The least commonly attended training programs among the sample studied were the Center for Intelligence Training (CIT) (6%), Regional Counter-Drug Training Academy (RCTA) (11%) and the Federal Law Enforcement Analyst Training (FLEAT) (10%) programs. This study also found that among the sampled law enforcement agencies there was an overall lack of participation in federally-funded intelligence training programs – the overall average attendance of these training programs was just 20 percent (Carter *et al.*, 2013). Moreover, the sampled agencies indicated an overall lack of training requirements with regard to critical components of the contemporary intelligence environment. Only 20 percent of state and

local agencies required training specifically on intelligence-led policing followed by limited improvements with respect to privacy policies (37%) and precursors to terrorism (40%).

Clearly tied to the effects of training is how well employees perform their tasks after the training. There is limited research on law enforcement intelligence and performance. That which does exist has been limited to intelligence analysts. Performance measurement has been cited as a central tenet to determine the effectiveness of law enforcement intelligence (Her Majesty's Inspectorate of Constabulary, 1997). Being able to accurately evaluate and measure performance within an organization plays a critical role in the organization's ability to assess efficiency, effectiveness and progress of outcomes and outputs. At the organizational-level, measurement allows administrators to make accurate decisions for resource allocation, daily operations, and the performance of individuals and the organization as a whole (de Lancer Julnes & Holzer, 2001; Radin, 2000). Fundamental to any organization is that what gets measured gets done (Osborne & Gaebler, 1992). At the tactical- and operational-levels, analytic products guide law enforcement's response to short- and long-term crimes and threats (Carter & Carter, 2009a; Ratcliffe, 2008).

Utilizing intelligence for law enforcement purposes is commonly referred to as the "business model" of policing (Ratcliffe, 2008) and as such relies on a quality analytic component to achieve optimal results. Intelligence analysts are the source of this analytic component so it is logical to assume that the quality of analysts' products will have an impact on the intelligence process. To put it simply, intelligence analysts should be evaluated based upon the quality of their products, not quantity. Quality intelligence products are reports and/or recommendations provided by analysts that influence the decision-making of persons within the organizations for purposes of resource allocation, investigations, and operations. The ability of analysts to achieve

this level of performance relies significantly on the evolving professionalism of the analyst position as well as the culture of police organizations (IALEIA, 2012). A lack of available training for analysts and coupled with a reluctance to recognize analysts as professionals within the law enforcement arena has inhibited the progress of analysts' ability to provide influential products (Osborne, 2006).

Training is provides a critical opportunity to communicate understanding of new policy and procedural changes. Chief executives often have a more comprehensive understanding of intelligence capacities as compared to line level officers (Cope, 2004; Carter, 2009). This lack of understanding among line level officers can be attributed to resistance to "new" policing methods (Ratcliffe, 2008) or poor perceptions of outputs on behalf of sworn officers and civilian analysts (Cope, 2004). Morabito (2010) found a positive relationship between training and community policing adoption while Schafer *et al.* (2009) found a positive relationship between training and local law enforcement agencies in Illinois that are adopting homeland security preparedness. Despite a recognized demand for training on intelligence issues (Bureau of Justice Assistance, 2009), there is little supply. While training focused on community policing is widely accepted, 99% of state and local police academies have courses designed for community policing operations, only 11% have courses designed to encompass issues most commonly associated with intelligence, such as terrorism and homeland security (Rojek, Kaminski, Smith & Scheer, 2007).

Organizational Commitment

Just as training has been found to facilitate the integration of new organizational functions (Yates & Pillai, 1996), institutionalization of the new concept – in the form of

organizational commitment – has also been found to facilitate adoption (Morabito, 2010). Organizational commitment can manifest itself in a variety of forms. Perhaps the most common measure of commitment is support from the executive of the organization (Bulut & Culha, 2010). A rather straightforward concept, if a new organizational function has the formal endorsement from the highest level of management, it is more likely to succeed and be effective. As this measurement of commitment can, at times, be vague and perhaps viewed as politically motivated or “window dressing” (Buchanan, 1981), another common assessment of organizational commitment is the extent to which an organization integrates a new function into its formal evaluation of personnel (Eaton, 2003). This approach is summarized by the old adage of “what gets measured gets done.” If an organization integrates a new function into employee evaluations, it increases the likelihood this function will be tangible at the operational level as well as an expected performance by upper management – thus committing to the new function.

Recent examples of such successes have been demonstrated in the process of implementing community policing and intelligence-led policing. Ford, Weissbein and Plamondon (2003) found commitment to be positively associated with community-policing operations, a tenet outlined as a philosophical “must have” for successful community policing implementation (Trojanowicz & Bucqueroux, 1994). Moore and Stephens (1991) refer to chiefs of policing agencies as “executives” in that they are aware of strategic management that will allow for the successful integration of necessary philosophies to meet the needs of their environment. The necessity of commitment from the chief executive for a successful intelligence function to be implemented has been acknowledged in research (Carter & Carter, 2009a; Carter & Phillips, 2014; Ratcliffe, 2008) and professional publications (Bureau of Justice Assistance, 2009; Global Intelligence Working Group, 2003).

Methodology

Data were gleaned from a larger project funded by the National Institute of Justice³ which conducted a national survey of law enforcement intelligence practices of different key personnel. The survey sample consisted of state and local law enforcement officers tasked with building an intelligence capacity for individual agencies. Given the evolving nature of the intelligence concept, it is critical to target key personnel working within the intelligence capability of a police department to increase the likelihood of valid responses. This approach has been utilized in police research focused on specialty personnel when examining issues such as informal policing the mentally ill (Borum *et al.*, 1998) and policing sex workers (Simic *et al.*, 2006).

Survey of Key Personnel

In order to obtain insights into intelligence practice of local law enforcement agencies, a web-designed survey was distributed to law enforcement personnel across the United States. More specifically, these persons were individuals who had attended a national law enforcement intelligence training program funded by the Department of Homeland Security. Individuals selected to attend this training program were typically selected by their agency to lead the efforts to develop or re-engineer their agency's intelligence capacity. Most had little previous experience in law enforcement intelligence and were seeking guidance, through the training, on how to develop their agency's intelligence capacity. This sampling strategy, which includes personnel from significantly different sized police agencies in all geographic regions of the

³ This research was sponsored by grant award number 2008-IJ-CX-0007 from the National Institute of Justice, US Department of Justice. Points of view or opinions expressed are those of the author and do not necessarily represent the official position of the National Institute of Justice or the US Department of Justice.

country, was chosen for three reasons. First, in attending this training, these officers were identified by their respective agency as a representative of the intelligence function within the agency. Second, as a result of their selection on behalf of their agency, this sample includes law enforcement personnel who have a working understanding of key issues related to intelligence, and thus will be able to address specifically the factors associated with the implementation process. Third, their awareness of the contemporary intelligence structures, requirements, and formal communication networks increases the likelihood that they will have direct knowledge about the extent to which their agency has adopted this new philosophy.

Data collection occurred from June 2009 – April 2010. After bad e-mail addresses were removed from the sampling frame, 2,025 email invitations were sent to the law enforcement sample and 414 replies were received (20.4% response rate). A portion of these responses were not included in the current analysis that follows because a respondent either left all survey cells blank or responded with not applicable. Moreover, certain organizations – such as fusion centers, regional information sharing system centers, and federal agencies – were removed from the current analysis as their roles in intelligence analysis clearly differ from those of state and local law enforcement. In order to learn why the response rates were not higher, the research team conducted follow-up telephone interviews with 100 randomly selected participants from the law enforcement sample. Among the key reasons that were consistently reported for not responding, job responsibility, survey length, and security appeared to be major obstacles for survey completion.

A number of individuals stated that they had been reassigned or promoted and no longer worked in the intelligence function. As a result they either felt the survey no longer applied to them or they were not familiar with current activities in the intelligence function. With respect

to survey length, in order to fully explore the nature of and challenges to law enforcement intelligence work, the survey asked respondents more than 100 questions. Feedback suggests individuals were uncomfortable committing to this task, especially when they were at work. Lastly, a number of individuals expressed concern regarding the security implications of sharing information about intelligence activities outside of the law enforcement community. Despite the low response rate, the present study provides unique value because there has been so little empirical research specifically on intelligence analysts, especially at the national-level. The construction of exact survey items included in this research are provided in Appendix A.

Table 1 displays descriptive information for the state, local, and tribal law enforcement agencies represented in the current study. The median agency size is 276 total sworn and non-sworn personnel while the majority of agencies were located in the Midwest region of the United States, followed closely by the Southeast and Northwest. Respondents are mostly investigators and administrators who have been employed by their agency for more than 15 years. To provide context for the type of intelligence capacities within the sample agencies, general descriptives of key intelligence capacity indicators are also included. As can be seen in Table 1, the majority of the agencies indicated their intelligence capacities are aligned with the recommendations of the *National Criminal Intelligence Sharing Plan* and have a specific policy guiding their intelligence function. Most agencies indicated having aligned their capacity with the *Department of Homeland Security's Targeted Capabilities List*. Though a little less than half of the agencies indicate they have adopted intelligence-led policing, this is not surprising as many agencies and intelligence personnel are unsure as to what constitutes an intelligence-led policing function.

[Table 1 approximately here]

Relationship Variable: Intelligence Training Requirement

As discussed earlier, previous research suggests training on specific aspects of police operations is likely to facilitate adoption of the desired operational component as well as improved and sustained effectiveness of the operations. Moreover, training specific to a more complex policing philosophy has been found to enhance the effectiveness of the desired operational outcome (Chappell, 2008). As such, it is believed that agencies which require their intelligence analysts to be trained specifically on intelligence-led policing (the driving concept behind the utilization of intelligence and information sharing), will differ from agencies that lack such a requirement. In short, agencies that require intelligence training are more likely to exhibit characteristics of active information sharing and analytic processes – likely resulting from exposure to analytic concepts and methods as well as gaining connectivity to information sharing resources such as secure portals and subscriptions to databases (not to mention informal networking with other analysts). The current study explores relationship differences across independent groups of agencies that require intelligence training and those that do not. To control for this difference, respondents were asked to indicate if their agency required analyst to receive training specifically on intelligence-led policing. Agencies responding in the affirmative are the reference group. The sample included 70 agencies (20.3%) responding they required analyst to receive intelligence training.

Relationship Variable: Organizational Commitment to Intelligence

Similar to training and as discussed previously, research also indicates commitment from the organization is likely to facilitate effectiveness of police operations. Additionally, as the

nature of the police operation becomes more complex and innovative, commitment has been found to be more salient for success – such as with community policing implementation (Ford *et al.*, 2003, Morabito, 2010). Commitment can be a somewhat vague concept that is difficult to capture with a single item. As such, the present study utilizes two items which demonstrates an agency’s commitment to intelligence. First, respondents were asked to indicate the extent to which they agreed the agency felt intelligence was a priority within their agency. Second, respondents were asked to indicate the extent to which they agreed the agency rewarded intelligence through the process of formal evaluations. Responses were re-coded into dichotomous “Yes/No” with respondents indicating “Strongly Agree” or “Agree” coded as the affirmative. The two items were then added together to create a commitment index with a range of zero to two. The extent to which agencies were committed to intelligence varied greatly as the mean commitment score was 1.04 with a standard deviation of .85.

Findings

Analytic Activities

Table 2 displays the frequencies for types of analytic activities in which agencies indicate analysts are engaged. Not surprisingly, respondents indicated the most frequent analytic activity in which their agency engaged was criminal investigation support (49.3% daily/weekly). This same activity was also the least frequent with regards to never occurring - though it is difficult to imagine an agency within the sample would never provide criminal investigation support. The second most frequently occurring analytic activity as indicated by respondents was alerts and notifications (41.2% daily/weekly), followed by case correlation (35.6 daily/weekly), crime pattern analysis (31.6% daily/weekly), and analyze suspicious activity reports (30.4%

daily/weekly). The analytic activities respondents' indicated their agencies engaged in the least were public health trend analysis (5.8% daily/weekly, 72.2% never), criminal commodity vulnerability (6.3% daily/weekly, 73.0% never), statewide or regional risk assessments (7.5% daily/weekly, 66.1% never), and traffic analysis (11.9% daily/weekly, 62.0% never).

[Table 2 approximately here]

Analytic activities extend beyond the tasks agency members engage in to the actual products and outputs these different analytic tasks yield when combined. Table 3 illustrates the frequency in which respondents indicated their agency produced varying analytic products. Respondents indicated risk assessments (51.9% daily/weekly) as the most frequently created analytic products followed by alerts (42.0% daily/weekly), and warnings (40.9% daily/weekly). Least common products, as indicated by respondents, were bulletins (29.2% daily/weekly, 21.7% never), briefings (34.2% daily/weekly, 35.7% never), and executive reports (38.6% daily/weekly, 43.5% never). It is worth noting that it appears briefings and bulletins could be driven by requests for these products as they are the only products above 10% in this category.

[Table 3 approximately here]

Sources of Information

The analytic process, and thus analytic activities and products, is fueled by information. Agencies and analysts utilize information from a variety of sources. This information reaches the analytic process within law enforcement organizations through a push or pull information

flow (Ratcliffe, 2008). Pushed information is information that is received by an agency without solicitation and is the result of proactive information sharing – a desired aspect of post-9/11 information sharing. Pulled information is information that is actively sought out by the agency or analyst and is received via a request for information or a search within a database system. The majority of information pushed to law enforcement agencies comes from the public via tips and leads, suspicious activity reports, or through community concerns (Bullock, 2013). Unfortunately, given the difficulty of measurement and variance associated with informal information sharing between the police and community, the present study cannot account for this activity. The present study provides a description of the information pushed to the current sample of respondents from other agencies outside of their own – perhaps the second most common type of information push within policing. The present study also captures descriptives regarding the most common method of information pull – the information which agencies have access to query.

Table 4 displays the frequency at which agencies indicated receiving various types of information from outside agencies. The type of information most frequently received by responding agencies was news reports (57.9% daily/weekly) followed by other open sources (53.9% daily/weekly). Most common sources of information received from other agencies that were not open source were suspicious activity reports (48.7% daily/weekly) and crime reports (50.4% daily/weekly). Respondents indicated the least frequent types of information received from outside agencies were interrogations from witnesses and suspects (22.3% daily/weekly, 51.3% never) and crime maps (24.2% daily/weekly, 44.1% never). Worth noting is the inability to draw conclusions regarding outside agency analytic capabilities based on the information they share with responding agencies. For example, respondents indicated receiving threat

assessments 28.7 percent of the time on a combined daily/weekly basis. Conclusions cannot be drawn that agencies sharing this information do not produce threat assessments within their own agency on a more frequent basis – they may simply share their threat assessment products with outside agencies on a less frequent basis.

[Table 4 approximately here]

Information pulled into the agency is most common through accessing databases and sharing systems. Table 5 provides descriptive information on the types of information to which agencies have access. Respondents indicated the most common types of information sources their agencies had access to were motor vehicle records (83.8%), driver's license information (83.8%), sex offender registries (80.9%), and the National Crime Information Center (78.0%). The least common sources of information agencies had access to were the Open Source Information System (9.3%) and the Regional and National Data Exchange (9.9%). The general trend presented in Table 5 is that agencies continue to maintain access to more traditional sources of information rather than contemporary or emerging sources – such as the Homeland Security Information Network or the Regional and National Data Exchange.

Performance Evaluation

The potential for intelligence analysts to impact an organization and its decision making can be directly tied to the quality of their performance evaluations. Though it seems rather intuitive to assume quality is better than quantity, this common knowledge does not always translate up and down the chain of command within law enforcement. Moreover, given a lack of

training, consistently agreed upon performance standards for analysts, and even a general understanding of the role of intelligence in many law enforcement organizations, it is increasingly difficult for agencies to properly evaluate their intelligence analysts. Table 6 presents information on the types of factors believed to be most critical for analyst performance evaluation as indicated by respondents. The raw numbers are promising, but also disappointing. Most disappointing of all is that just over a quarter of the agencies in the sample (28.1%) indicated they do not evaluate the performance of their analysts. Furthermore, the percentages across the different types of possible performance evaluation factors are all relatively low with the highest percentage of responding agencies indicating they relied upon the quality of strategic products as a critical factor for evaluation. The promising information is that it appears of the agencies that responded in the affirmative across the different factors, that the factors associated with quality were the most common. Quality analytic products rely upon a process of quality control – not the production and counting of widgets. Analysts that “copy and paste” information onto an agency template are not engaging in analysis, and thus are not effective to information decision makers.

Discussion and Conclusions

The present study focused on providing an empirical description of the types of analytic activities and sources of information utilized within a sample of 345 state and local law enforcement agencies in the United States. Generally, results indicate that law enforcement agencies predominantly engage in activities traditionally associated with crime analysis. Such a finding is not surprising as the vast majority of state and local law enforcement agencies are primarily tasked with combating street crime (i.e. robbery, burglary, rape, etc.) and not terrorism

or complex criminality (i.e. organized crime). As such, their analytic activities are likely to support this primary crime mission. Moreover, such a finding is reinforced with the sources of information presented in Table 5. The most common sources of information across the sample were the same sources of information that law enforcement primarily utilized prior to 9/11 to facilitate criminal investigations and crime analysis – such as sex offender registries and the National Crime Information Center.

Caution must be taken when assessing this information as the present research cannot control for relationships between agencies and their efforts to share information and be more information-savvy post-9/11. The findings presented here are from a cross-sectional research survey – thus a snapshot in time that merely paints a picture to help understand more about a phenomenon. Also worth mentioning is that despite a conceptual and operational difference between crime analysis and intelligence analysis and noted previously, the two do not operate independent of one another. Intelligence analysis routinely involves activities that are typically considered crime analysis – such as crime mapping. Since intelligence analysis is much broader and undefined as crime analysis, given the focus on an undefined threat, the types of analytic activities can be wide-ranging. Conversely, crime analysis is unlikely to integrate activities typically associated with intelligence-analysis as crime analysis is focused on defined events that happened in the past.

With respect to information flow within agencies, it appears information is pulled more than it is pushed. Such a finding is to be expected as many agencies conduct analysis for intra-agency use – such as “be on the lookouts” (BOLOs) and jurisdiction-specific crime trends. These products rely more on pulling information from local data systems and criminal records than on information proactively shared by other organizations. Agencies appear to receive open

source information most frequently from other agencies. This is not overly surprising as this type of information requires minimal, if any, analysis and is typically pushed to the sending agency in the first place from a separate originating source. For example, the Police Executive Research Forum pushes out their “Daily Clips” to all members on their list serve⁴ – which has many state and local police members. These Daily Clips are a collection of the most recent and law enforcement-relevant news stories. If an agency receives a Daily Clip that contains a news story related to a crime or issue with local relevance, the agency is likely to push this information along to other local agencies.

Generally, least common sources of information that analysts had access to were rather contemporary, intelligence-based sharing systems. With the exception of Law Enforcement Online (64.9% had access) and the Regional Information Sharing System (55.9% had access), the sources of information that can be considered “post-9/11 intelligence” systems were rather uncommon among the sample. Worth noting, and considering as a plausible explanation for less access being indicated by respondents, is that many agencies – especially at the local level – will only need to have access to one of these sharing systems, not multiple. It is the author’s experience that Law Enforcement Online and the Regional Information Sharing System represent the most common sharing systems among state and local law enforcement. In short, it is unexpected and unnecessary for the average law enforcement agency in the U.S. to have access to multiple sharing systems that are primarily counter-terrorism or homeland security focused. Inter-related to this issue of access to these sharing systems is a lack of certified intelligence and analytic training programs available to state and local law enforcement. It is through these training programs that state and local agencies gain knowledge of, and access to, these systems.

⁴ For more information visit <http://www.policeforum.org/perf-membership/>

Carter *et al.* (2013) discuss this lack of available training and the driving forces behind intelligence training among law enforcement and when determining why SLATT, FIAT and the BJA 28 CFR Part 23 training programs were the most commonly attended training programs, the authors noted the primary reason appeared to be availability. All of these training programs are offered throughout the U.S. - therefore making them easier and cheaper to attend. The FBI, RCTA and most FLEAT programs require potential attendees to travel to a centralized location for the training which can significantly increase the cost and inconvenience to the agency. The findings appeared to indicate that the actual course content is less relevant as compared to these resource factors. It also appeared there is a desire for intelligence training of any type, as long as it inexpensive and easily accessible (Carter *et al.*, 2013). Such limited training availability, especially given current downward financial trends within public safety-related efforts, has direct implications for the progression of quality and unified standards for intelligence analysis.

This lack of training is likely to be inter-related to the disappointing proportions associated with analyst performance evaluation. Law enforcement personnel learn what metrics are appropriate and effective for evaluation through training programs. Without adequate access to these programs (and the resources to attend them), agencies go without the necessary knowledge to implement evaluation strategies. Most discouraging is that 28.1 percent of agencies sampled indicate they do conduct analyst performance evaluations. Without formal evaluation processes in place, it is difficult for agencies to develop standards for analytic quality and analyst promotion as well as the importance of integrating intelligence into the organization. Moreover, the percentages of agencies identifying factors critical for analyst evaluation were generally low. The highest percentage of respondents identified quality of strategic products as a

critical factor for evaluation. Though this is promising, as quality should be the guiding principal for evaluation, the percentage is nonetheless lower than ideal.

To truly assess the effectiveness of any organizational function, especially innovative capabilities, an empirical outcome evaluation is needed. However, prior to conducting such an evaluation, a valid and reliable knowledgebase must exist by which comparisons can be made and conclusions drawn against; law enforcement intelligence and the integration of intelligence analysis within agencies are simply not at this juncture. To progress the understanding of what academics and practitioners know about the use of analysis – both intelligence and criminal – is to conceptualize and explore these functions within law enforcement organizations. The research presented here is a step in this direction. The difficulty of identifying persons with intimate knowledge of intelligence and analytic practices is a legitimate challenge in its own right. This, when coupled with the challenge of deriving a representative sample of agencies from the state and local level, makes conducting empirical research on intelligence-related phenomena all the more difficult. So while the present study may have limitations – such as a less-than-ideal response rate, lack of comparison agencies (those with no analytic capability), and an inability to draw statistical conclusions on the strength of relationship between organizational characteristics and analytic capability, it is nonetheless an empirical exploration of an arguably representative sample of state and local law enforcement agencies and their analytic function.

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Tables

Table 1. Law Enforcement Sample Descriptives ($n = 345$)

	Median (Mean)
<i>Agency Size</i>	276 (1341)
	Valid Percent (n)
<i>Agency Region</i>	
Northeast	22% (77)
Southeast	23% (80)
Midwest	27% (91)
Southwest	11% (37)
West	17% (60)
<i>Respondent's Position</i>	
Administrator	29% (100)
Supervisor	23% (81)
Investigator	32% (110)
Analyst	16% (54)
<i>Respondent Years at Agency</i>	
Less than 1 Year	.3% (1)
1-3 Years	6% (20)
4-9 Years	18% (64)
10-15 Years	21% (73)
More than 15 Years	55% (187)
<i>Agency Intelligence Capacity</i>	
Agency has adopted intelligence-led policing	43% (147)
Agency has specific intelligence policy	65% (225)
Intelligence capacity aligns with the National Criminal Intelligence Sharing Plan	79% (272)
Intelligence capacity aligns with the DHS Targeted Capabilities List	58% (200)

Table 2. Frequency of Analytic Activities within Agency (*n* = 345)

Analytic Activity	Frequency Valid Percent (<i>n</i>)					
	Daily	Weekly	Bi-Weekly	Monthly	Less than Monthly	Never
Crime Pattern Analysis	17.4% (60)	14.2% (49)	3.2% (11)	8.1% (28)	15.1% (52)	42.0% (145)
Crime Mapping	14.5% (50)	14.5% (51)	2.3% (8)	7.8% (27)	14.8% (51)	45.8% (158)
Geographic Profiling	8.7% (30)	10.1% (35)	2.3% (8)	6.1% (21)	16.8% (58)	55.9% (193)
Hot Spots Analysis	11.0% (38)	14.5% (50)	2.9% (10)	9.0% (31)	14.5% (50)	48.1% (166)
Traffic Analysis	5.8% (20)	6.1% (21)	1.4% (5)	9.9% (34)	14.8% (51)	62.0% (214)
Analyze Suspicious Activity Reports	20.3% (70)	10.1% (35)	2.6% (9)	7.0% (24)	11.3% (39)	48.7% (168)
Critical Infrastructure Risk Assessment	5.8% (20)	2.6% (9)	.3% (1)	6.7% (23)	26.7% (92)	58.0% (200)
Criminal Commodity Vulnerability	4.6% (16)	1.7% (6)	1.7% (6)	4.1% (14)	14.8% (51)	73.0% (252)
Statewide and/or Regional Risk	4.3% (15)	3.2% (11)	2.3% (8)	6.4% (22)	17.7% (61)	66.1% (228)
Identify Criminal Enterprises	10.7% (37)	11.3% (39)	3.5% (12)	10.7% (37)	17.1% (49)	46.7% (161)
Identify Threats to the Jurisdiction	17.7% (61)	10.7% (37)	3.8% (13)	8.4% (29)	15.4% (53)	44.1% (152)
Criminal Investigation Support	37.7% (130)	11.6% (40)	1.2% (4)	6.7% (23)	7.0% (24)	35.9% (124)
Proactive Strategic Analysis	11.9% (41)	9.6% (22)	6.1% (21)	4.9% (17)	14.8% (51)	52.8% (182)
Visual Investigative Analysis	13.3% (46)	9.9% (34)	3.5% (12)	4.9% (17)	10.1% (35)	58.3% (201)
Alerts and Notifications	23.2% (80)	18.0% (62)	5.5% (19)	3.2% (11)	5.8% (20)	44.3% (153)
De-confliction of Information	13.6% (47)	8.4% (29)	3.5% (12)	5.8% (20)	10.7% (37)	58% (200)
Public Health Trend Analysis	1.7% (6)	4.1% (14)	3.2% (11)	3.8% (13)	15.1% (52)	72.2% (249)
Case Correlation	21.7% (75)	13.9% (48)	3.8% (13)	3.5% (12)	10.1% (35)	47.0% (162)
Link Analysis	15.4% (53)	12.5% (43)	6.4% (22)	7.5% (26)	11.9% (41)	46.4% (160)
Social Network Analysis	11.6% (40)	8.7% (30)	4.1% (14)	6.4% (22)	12.2% (42)	57.1% (197)
Telephone Toll Analysis	9.0% (31)	5.8% (20)	5.5% (19)	5.5% (19)	18.6% (64)	55.7% (192)
Flowcharting	8.4% (29)	6.4% (22)	6.4% (22)	6.1% (21)	20.9% (72)	51.9% (179)

Table 3. Types and Frequency of Analytic Products Created within Agencies (*n* = 345)

Products Produced	Frequency Valid Percent (<i>n</i>)					
	Daily	Weekly	Bi-Weekly	Monthly	Upon Request	Never
Bulletins	7.2% (25)	22.0% (76)	20.0% (69)	17.7% (61)	11.7% (39)	21.7% (75)
Risk Assessments	12.5% (43)	39.4% (146)	4.3% (15)	4.3% (15)	5.5% (19)	33.9% (117)
Advisories	7.0% (24)	33.0% (114)	11.0% (38)	11.9% (41)	6.7% (23)	30.4% (105)
Alerts	6.1% (21)	35.9% (124)	12.8% (44)	12.2% (42)	7.0% (24)	26.1% (90)
Warnings	6.1% (21)	34.8% (120)	10.7% (37)	10.4% (36)	4.1% (14)	33.9% (117)
Executive Reports	8.1% (28)	30.5% (105)	4.1% (14)	6.4% (22)	7.5% (26)	43.5% (150)
Briefings	6.1% (21)	28.1% (97)	12.5% (43)	7.0% (24)	10.7% (37)	35.7% (123)

Table 4. Types and Frequency of Information Agencies Receive from Outside Agencies (*n* = 345)

Type of Information Received	Frequency Valid Percent (<i>n</i>)					
	Daily	Weekly	Bi-Weekly	Monthly	Less than Monthly	Never
Suspicious Activity Reports	28.7% (99)	20.0% (69)	4.9% (17)	7.8% (27)	10.4% (36)	28.1% (97)
Crime Reports	34.2% (118)	16.2% (56)	4.1% (14)	8.4% (29)	10.4% (36)	26.7% (92)
Crime Maps	11.9% (41)	13.3% (46)	4.1% (14)	7.5% (26)	19.1% (66)	44.1% (152)
Witness / Suspect Interrogations	11.9% (41)	10.4% (36)	3.5% (12)	9.6% (33)	13.3% (46)	51.3% (177)
Threat Assessments	14.8% (51)	13.9% (48)	3.5% (12)	13.9% (48)	19.4% (67)	34.5% (119)
News Reports	47.2% (163)	10.7% (37)	.9% (3)	3.5% (12)	6.1% (21)	31.6% (109)
Other Open Sources	41.7% (144)	12.2% (42)	2.9% (10)	3.5% (12)	6.4% (22)	33.3% (115)
Human Intelligence	25.8% (89)	17.1% (59)	3.8% (13)	7.5% (26)	10.1% (35)	35.7% (123)
TIPS-Line	21.4% (74)	11.0% (38)	2.9% (10)	7.0% (24)	13.0% (45)	44.6% (154)
9-1-1 Calls	31.3% (108)	4.9% (17)	2.0% (7)	4.6% (16)	8.4% (29)	48.7% (168)

Table 5. Agencies Access to Information Sources ($n = 345$)

Information Source	Yes Valid Percent (n)
Motor vehicle records	83.8% (289)
Driver's license information	83.8% (289)
Correctional databases	67.0% (231)
National Law Enforcement Telecommunications System	63.8% (220)
National Crime Information Center	78.0% (269)
Intelink	15.7% (54)
Infragard	15.9% (55)
Sex offender registries	80.9% (279)
Health-related information	19.1% (66)
Law Enforcement Information Network	16.2% (56)
Law Enforcement Intelligence Unit	15.7% (54)
Homeland Security Information Network	27.8% (96)
Regional Information Sharing System	55.9% (193)
Open Source Information System	9.3% (32)
Law Enforcement Online	64.9% (224)
Regional and National Data Exchange	9.9% (34)
FBI Net	17.7% (61)
High Intensity Drug Trafficking Areas	38.3% (132)
Homeland Secure Data Network	11.9% (41)

Table 6. Factors Critical for Analyst Performance Evaluation ($n = 345$)

Factors	Yes Valid Percent (n)
Agency does not assess intelligence analyst performance	28.1% (97)
Number of strategic products produced	13.6% (47)
Number of tactical products produced	11.6% (40)
Number of risk assessments completed	9.0% (31)
Quality of strategic products produced	21.2% (73)
Quality of tactical products produced	20.0% (69)
Quality of risk assessments completed	13.9% (48)
Number of actions that led to investigation being opened	14.2% (49)
Number of actions the led to an arrest	15.4% (53)
Number of actions that led to a conviction	7.5% (26)
Number of contacts had with personnel within the agency	15.4% (53)
Number of contacts with personnel from outside agencies	15.7% (54)

Appendix A. Survey Questions Organized by Table

Table 1. Law Enforcement Sample Descriptives

- Has your agency adopted ILP?
- Do you have a policy designed expressly to guide your intelligence function?
- Does your agency's intelligence function follow the NCISP recommendations?
- Does your agency's intelligence function align with the TCL?

Table 2. Frequency of Analytic Activities within Agency

- How frequently do the person(s) responsible for conducting intelligence-related analysis in your agency perform / are involved in the following tasks?
 - Crime Pattern Analysis
 - Crime Mapping
 - Geographic Profiling
 - Hot Spots Analysis
 - Traffic Analysis
 - Analyze Suspicious Activity Reports
 - Critical Infrastructure Risk Assessment
 - Criminal Commodity Vulnerability
 - Statewide and/or Regional Risk
 - Identify Criminal Enterprises
 - Identify Threats to the Jurisdiction
 - Criminal Investigation Support
 - Proactive Strategic Analysis
 - Visual Investigative Analysis
 - Alerts and Notifications
 - De-confliction of Information
 - Public Health Trend Analysis
 - Case Correlation
 - Link Analysis
 - Social Network Analysis
 - Telephone Toll Analysis
 - Flowcharting

Table 3. Types and Frequency of Analytic Products Created within Agencies

- How frequently does your agency create the following intelligence products?
 - Bulletins
 - Risk Assessments
 - Advisories
 - Alerts
 - Warnings
 - Executive Reports
 - Briefings

Table 4. Types and Frequency of Information Analysts Receive from Outside Agencies

- How frequently do the intelligence analysts in the agency receive the following information from outside agencies?
 - Suspicious Activity Reports
 - Crime Reports
 - Crime Maps
 - Witness / Suspect Interrogations
 - Threat Assessments
 - News Reports
 - Other Open Sources
 - Human Intelligence

- TIPS-Line
- 9-1-1 Calls

Table 5. Analyst Access to Information Sources

- Analysts have access to which of the following sources of information ?
 - Motor vehicle records
 - Driver's license information
 - Correctional databases
 - National Law Enforcement Telecommunications System
 - National Crime Information Center
 - Intelink
 - Infragard
 - Sex offender registries
 - Health-related information
 - Law Enforcement Information Network
 - Law Enforcement Intelligence Unit
 - Homeland Security Information Network
 - Regional Information Sharing System
 - Open Source Information System
 - Law Enforcement Online
 - Regional and National Data Exchange
 - FBI Net
 - High Intensity Drug Trafficking Areas
 - Homeland Secure Data Network

Table 6. Factors Critical for Analyst Performance Evaluation

- What factors are critical for assessing an analyst's (or personnel responsible for the intelligence function) performance in your agency?
 - Agency does not assess intelligence analyst performance
 - Number of strategic products produced
 - Number of tactical products produced
 - Number of risk assessments completed
 - Quality of strategic products produced
 - Quality of tactical products produced
 - Quality of risk assessments completed
 - Number of actions that led to investigation being opened
 - Number of actions the led to an arrest
 - Number of actions that led to a conviction
 - Number of contacts had with personnel within the agency
 - Number of contacts with personnel from outside agencies