14

Evidence-Based Policing

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What Is Evidence-Based Policing?

Evidence-based policing is a law-enforcement perspective and philosophy that implicates the use of research, evaluation, analysis, and scientific processes in law-enforcement decision making. This research could cover a wide array of subject matters, from evaluations on interventions and tactics to analysis of police behavior, activities, and internal management. In his 1998 "Ideas in American Policing" lecture for the Police Foundation, Lawrence Sherman gave one of the most well-known articulation of evidence-based policing. He posited that "police practices should be based on scientific evidence about what works best" (p. 2). In particular, Sherman focused on two dimensions of a research orientation in policing: (1) using the results of scientifically rigorous evaluations of law-enforcement tactics and strategies to guide decisions, and (2) generating and applying analytic knowledge derived from an agency's analysis of its own internal issues and crime problems. Although using research and analysis was not a new concept in governance and social interventions when Sherman gave this lecture, what was innovative was his assertion that police should use research and analysis more frequently, substantively, and directly, discontinuing the use of tactics that were shown not to be effective.

The idea of using objective scientific information and criteria to inform public policy and agency decision making reflects a common value in modern liberal democracies: there must be evaluative and objective accountability for governmental actions and spending (Chalmers 2003; National Research Council 2004; Sherman et al. 2002; Sherman 2003). Sherman has argued that

this is especially important in policing, given the important mandate the police have to ensure the rule of law. In a lecture at the Royal Society for the Encouragement of Arts, Manufactures, and Commerce (RSA) in November 2011, Sherman emphasized this point when he said (quoting the text of the speech):[1]

> The competence we achieve today stems largely from the eighteenth century Enlightenment, when the Royal Society of Arts was founded. The unifying theme of the extraordinary competence produced by that Enlightenment is *objective* knowledge about technically complex matters. The debt we owe to that era is the great transition in so many professions from customs to science, from opinions to proofs. As the late US Senator Patrick Moynihan observed, "Everyone is entitled to his own opinion, but not to his own facts."
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> That Enlightenment idea of objective knowledge is also crucial to the success of our liberal democracy, in which the rule of the majority protects individual liberty under a rule of law. No institution is more important to that success than the police, whose competence at insuring the rule of law is constantly challenged by thousands of different opinions on how police should do their job. It is therefore essential that our society constantly improves the competence of its police not merely with our opinions, but primarily with facts derived from objective knowledge.

This notion that evidence-based approaches are implicated in the values and ethics of modern democratic governance—particularly of government accountability and reducing harm (Chalmers 2003)—is mirrored in many social arenas, but especially in public health and medical practices. There are many requirements (and laws) stipulating that medical treatments and remedies must be supported by believable and rigorous scientific testing and replication and that those treatments must provide the least amount of harm or negative side effects (or at least report those side effects). Our demand for evidence-based treatment is so strong that doctors spend a large proportion of their income insuring themselves against lawsuits if they commit malpractice. However, when the police carry out an intervention that does not work, or that increases crime or recidivism, or worsens police-community relations, it is much less likely that they will be held similarly responsible.

The ideology behind evidence-based policing, however, suggests nurturing similar expectations. Former National Institute of Justice Director Jeremy Travis went so far as to assert in his keynote address at the Sentencing Project's 25th anniversary celebration in 2011 that "[w]e need a professional ethic that views failure to adopt those proven policies and practices as a form of justice malpractice." While this type of legal accountability is not likely to be soon adopted in American criminal justice practice, the idea behind evidence-based policing emphasizes that law enforcement should at least be held accountable to the knowledge already known about policing interventions and also to crime analysis generated in their own jurisdictions. Police should be deploying patrol officers, specialized units, detectives, supervisors and commanders in ways that can be shown to achieve results, whatever results

are sought (i.e., crime or fear reduction; legitimate, fair, and respectful treatment; or responsiveness).

Adopting an evidence-based approach to police decision making may bring numerous benefits to the police. Most obvious are the rewards reaped from employing strategies and tactics that have been shown to reduce crime, increase legitimacy, reduce internal problems, address community concerns, or reduce fear (Lum 2009; National Research Council 2004; Sherman and Eck 2002). Policies deemed harmful or ineffective could be discarded (or at least critically questioned), potentially saving law enforcement agencies time, money, frustration, and blame. Using more objective judgments regarding deploying tactics also seems more ethically justifiable than other nonscientific methods such as best guessing or strategies based on anecdotes or personal preferences. This approach to policing may lead to greater transparency, legitimacy, and accountability in practice, which could improve police-citizen relations and trust.

There may be additional benefits of such an approach. Evidence-based policing requires agencies to access their information and data capabilities regularly to carry out outcome evaluations or analysis. This may lead to improvements in managerial accountability and efficiency, better data recording, collection and analysis, and a push to improve information technology systems to accommodate these needs. Other decision-making perspectives in policing, including community-oriented policing, problem-oriented policing, and professionalism, could be strengthened through the inclusion and use of scientific information and analysis. Problem-oriented policing, for example (see Braga, 2013; Eck and Spelman 1987; Goldstein 1979, 1990), demands analyzing crime problems, using interventions that have been shown to be effective, evaluating interventions against sought outcomes, and potentially discarding interventions that are not shown to be effective through rigorous evaluation. Community policing might also be strengthened from an evidence-based approach, given that many different types of community-based strategies have been developed and also evaluated, some which have not been shown to either reduce crime or improve legitimacy (see Sherman and Eck 2002; Gill, forthcoming). Research has also played—and can continue to play—an important role in developing professional policing, especially for police concerns such as the use of force, racial profiling, or internal corruption.

An evidence-based approach may also increase satisfaction in police work by providing creative ways to carry out the profession and also challenge the status quo. Many strategies shown to be effective run counter to professional mainstays, such as rapidly responding to 911 calls, randomly patrolling one's beat, or making arrests. Weiss and Bucuvalas (1980) found that challenging the status quo is one reason bureaucrats may be receptive to research in the first place. Related to this, applying critical, analytic, and proactive thinking in police work is also more akin to transformational, as opposed to transactional, leadership and deployment styles. Transformational approaches implicate more satisfaction among both supervisors and subordi-

nates because more creative and proactive thinking is involved (Bass 1985; Burns 1978; McCardle 2011). In this manner, evidence-based policing, as with problem-oriented policing, could influence organizational and cultural forces that can inhibit both growth and a dynamic learning environment in policing. If using certain strategies, tactics, and internal practices lead to more positive results, this may then lead to greater motivation and job satisfaction.

Yet, despite these potential benefits, laments continue about the prover-bial "gap" between research and practice (Bayley 1998; Lum 2009; Lum et al. 2012; Mastrofski 1999; National Research Council 2004; Weisburd 2008; Weiss and Bucuvalas 1980). Even in the field of medicine, where we might expect that practices are guided by the best scientific research, these gaps per-sist (Chalmers 2003; Sherman 2003). In policing, Weisburd (2008) points out that the best example of the disconnect between the evidence and its use in practice is the general failure of police agencies to regularly adopt hot spots, or place-targeted patrol, despite the strong evidence of the efficacy of this approach for crime and disorder reduction (National Research Council 2004) and the clear criminological support for the spatial concentration of crime (Weisburd 2008). Further, Koper (2008) found that while many agencies claim to be doing hot spot policing, much of the strategies agencies discussed appear to be consistent with more traditional beat- and neighborhood-based strategies. Other examples are the continued use of the DARE program (Drug Abuse Resistance Education), reactive arrests, rapid response to 911 calls, and gun buybacks—all strategies that have evidence showing ineffectiveness.

Reasons for the lack of evidence-based approaches in policing are many. Transforming more abstract and general research findings and experiences into tangible and specific law-enforcement tactics, practices, and strategies is a difficult and hard-to-measure venture, just as is applying one's education or training to any workplace task. Research knowledge often is not written in ways that make it straightforward for officers to receive or use in practice. Police chiefs often cite the lack of resources, political will, and the potential for police unions to object as challenges to adopting an evidence-based approach. There are also false expectations and beliefs about the role of researchers and research in policing. Despite what some have argued (see Sparrow 2011), researchers have rarely claimed that research or scientific pro-cesses can run a police department's daily operations or resolve law-enforce-ment concerns, just as problem-oriented policing, community-oriented policing, or professionalism cannot. However, incorrect beliefs and preju-dices about research and researchers may lead to a widening communication gap between researchers and practitioners.

Further, implementing evidence-based policing is a challenge because its principles of decision making compete with an organizational culture in which decisions are influenced by other philosophies and processes. These include hunches and best guesses; traditions and habits; anecdotes and sto-ries; emotions, feelings, whims, and stereotypes; political pressures or moral panics; opinions about best practices; or just the fad of the day (Lum 2009).

Granted, sometimes these processes and best practices can be influenced by knowledge, information, and analyses. However, they are also highly vulnerable to personal opinions, ideology, and stereotypes.

Thus, the difficulty of evidence-based policing lies not only in the transformation of research into practice but also in adjusting the culture to be more receptive to research and scientific processes. Some have also argued that evidence-based policing needs to acknowledge that crime control research sometimes focuses on outcomes that are not as practical as initially believed. For example, Mastrofski and Willis (2010) suggest that police visibility and responsiveness are how the public judges effectiveness of policing, not necessarily some abstract notion of crime reduction. In turn, this may explain why police have not fully adopted an approach that targets crime concentrations. Citizens may want to see police patrolling their own neighborhoods, irrespective of where crime is most prevalent. And they may focus on other performance measures when judging the police, such as quick response and fairness.

Whether there are valid reasons why police have been reluctant to move from a reactive to a more proactive patrol strategy should itself be subjected to study. Nonetheless, these are important debates about the utility of evidence-based policing and its focus. As Professor Mastrofski emphasized in personal correspondence to the authors, "for evidence-based policing to be useful in a democratic setting, it needs to measure success with sufficient sensitivity to the diversity of values that come to play in making choices about policy and practice. An evidence-based policing strategy that focuses on only a narrow range of values is more appropriately termed 'blinder-based policing.'"

Thus, while the notion of evidence-based policing may in theory seem reasonable, rational, and even democratic, using research in police daily practice is much more complex and nuanced in reality. Building on Sherman's discussion, therefore, Lum et al. (2012) add three further distinctions into the definition of evidence-based policing, which in turn highlight the difficulty in the fulfillment of its own definition:

> Evidence-based policing is a decision-making perspective, not a panacea.
>
> It is grounded in the idea that policies and practices should be supported by research evidence and analytics, not blindly determined by them.
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> It suggests that research is not ignored and that it at least becomes a part of the conversation on what to do about reducing crime, increasing legitimacy, or addressing internal problems.

The Research Supporting Evidence-Based Policing

Given that evidence-based policing requires the use of research in practice, what then is the research evidence that supports it? There have been decades of policing and criminal justice research that can benefit police decision making across multiple areas of police practices and activities, as most

recently reviewed by a special committee of the National Research Council (National Research Council 2004). Below, we focus on the research evidence regarding crime control and prevention of police interventions as only one example. We italicize "one example" because some critics view evidence-based policing as a "what works" movement, focused only on experimental evaluations of crime prevention interventions. However, we remind and caution the reader that there is much evidence in policing that is not about tactical interventions, which is also part of the research base in evidence-based policing, as Moore (2006) and Willis (2012) point out. Evidence-based policing is a general reform concept about the use of research in policing, not about the specific areas of research or the type of researcher that should be its focus.

But even though research can span the gamut of areas and types, it should also be mentioned that no matter what area of research is used to underpin law-enforcement decisions, a fundamental tenet of an evidence-based approach is that not all research in that area should be used. Research in policing uses a wide gamut of methods, including experiments, quasi-experiments, before-and-after designs with (and without) control groups, correlational research, case studies, ethnographies, and other qualitative studies. An evidence-based approach posits that agencies should make use of what Sherman (1998) calls the "best available" evidence—research that is of high quality, scientifically sound, believable, and therefore of high internal and external validity (Boruch et al. 2000; Campbell and Boruch 1975; Farrington 2003; MacKenzie 2008; Weisburd 2000). However, like the "what works" critique mentioned above, what constitutes high-quality research is also debated (Moore 2006). For example, with crime-control evaluation research, not all research evidence is created equal (Sherman et al. 2002). What is the threshold of methodological rigor by which an evaluation study should matter? Further, there are ranges of quality and fidelity in the implementation of research designs. Various sampling and measurement issues may also influence the validity of findings.

At the same time, we know there are many examples of criminal justice interventions that were deemed effective using scientifically weak assessments (or no assessment at all) and that were discovered to be ineffective or even harmful (DARE, boot camps, reactive arrests, some community policing strategies, intensive supervised probation). As Weisburd et al. (2001) discovered, evaluation studies of lower quality in criminal justice, which may be less valid and reliable, are also more likely to report positive findings. While there are specific debates regarding the utility and ability of experimentation to evaluate crime prevention interventions (see Berk 2005), there is general agreement that an evidence-based approach posits that the rigor of the science behind an evaluation is an important consideration in the believability (and utility) of any particular study.

Thus, many reviews of research attempting to synthesize crime prevention and control research for practical use have been sensitive to the methodological rigor of studies. One of the more influential and recent reviews was

conducted by Sherman as part of the University of Maryland Report to Congress on "What Works, What Doesn't, and What's Promising" in crime prevention (Sherman 1997), later updated by Sherman and Eck (2002) in Sherman and colleagues' (2002) study. Each policing evaluation was scored with regard to rigor of method used for evaluation, and then, based on evidence and the methodological rigor underpinning that evidence, a judgment was made about the effectiveness of policing interventions. Relying on the studies exhibiting strong internal validity, Sherman and Eck (2002) concluded in their update that directed patrols to hot spots, proactive arrests of serious repeat offenders and drunk drivers, arrest for employed suspects for domestic violence, and problem-oriented policing seemed to be evidence-based policing approaches. On the other hand, minor juvenile arrests, arrest for unemployed suspects of domestic violence, drug market arrests, some community policing approaches, or increasing police numbers did not seem evidence based.

In addition to—and prompted by—the Maryland Report were a number of subsequent reviews of the evidence of policing interventions promoted by the Campbell Collaboration, specifically its Crime and Justice Coordinating Group (see Farrington and Petrosino 2001). Similar to the Maryland Report, Campbell reviews emphasize that more weight should be given to research evidence with high levels of internal validity. In many reviews, only experiments and multi-subject quasi-experiments are considered in making final determinations about interventions in which multiple studies have been undertaken. Unlike the Maryland Report, Campbell reviews hone in on specific areas of policing and law enforcement. In policing and security, the most highly cited is likely the systematic reviews of the research evidence on hot spot policing (Braga 2007), which have shown place-based targeted patrol to be effective in reducing crime at places. The problem-oriented policing review (see Weisburd et al. 2010) indicates that specific and tailored approaches, in particular focusing on small places, can be effective. Bennett et al.'s (2008) neighborhood watch review found positive effects of neighborhood watch, although studies with lower internal validity were included in this review, and the conclusions of which counter Sherman and colleagues' (2002) more pessimistic findings. In their review of gun-carrying suppression, Koper and Mayo-Wilson (2006) found that police crackdowns on gun carrying are effective in reducing gun crime in crime hot spots.

Further, contrary to the Braga hot spots review, Mazerolle et al.'s (2007) systematic review of evaluations regarding street-level drug enforcement interventions found that problem- and community-oriented approaches were more effective in reducing drug calls and incidents than only focusing law enforcement at drug hot spots using standard tactics. In a review of second-responder programs for family abuse, Davis et al. (2008) found that such programs do not reduce the likelihood of future violence. Upcoming reviews include studies on pulling levers (Braga and Weisburd 2012) and community policing (Weisburd et al. in progress). These systematic reviews examine mul-

tiple studies on the same subject to draw conclusions and generalizations about the evidence, so that law-enforcement entities can better digest large amounts of research in an organized way.

Recently, a committee of policing scholars conducted a broader review of law-enforcement research for the National Research Council. Writing about the Fairness and Effectiveness in Policing (National Research Council 2004), the committee found that with regard to research on the "effectiveness of police activities in reducing crime, disorder and fear," the committee noted four key propositions about the state of research evidence in policing (summarized from National Research Council 2004: pp. 246–247, with parenthetical references added):

1. The standard model of policing that emphasizes random patrol, rapid response to calls for service, follow-up investigations by detectives, and unfocused enforcement efforts has not been effective in reducing crime (see also Sherman 1997; Sherman and Eck 2002).

2. Some of the strategies falling under the umbrella of community policing have been effective in reducing crime, disorder, or fear of crime, while others have not (also see Bennett et al. 2008; Sherman 1997; Sherman and Eck 2002).

3. Police strategies that are more focused and tailored to specific types of crimes, criminals, and places are more effective (also see Braga 2007; Koper and Mayo-Wilson 2006; Mazerolle et al. 2007; Weisburd et al. 2010).

4. Problem-oriented policing—a strategy involving systematic analysis of crime and disorder problems and the development of tailored solutions (Goldstein 1979)—is effective (also see Weisburd et al. 2010).

Supporting many of the findings from the Campbell reviews and Sherman (1997) and Sherman colleagues' (2002) reviews, place-focused, hot spot policing strategies—that is, patrol, problem-solving, and/or other interventions focused on small areas or specific places of crime concentration—have proven particularly effective in several rigorous outcome interventions (Braga 2007). In the judgment of NRC, the research on hot spot policing constitutes the "strongest collective evidence of police effectiveness that is now available" (National Research Council 2004, p. 250).

Finally, and most recently, Lum (2009) and Lum et al. (2011) have developed the Evidence-Based Policing Matrix (http://cebcp.org/evidence-based-policing/the-matrix/) an interactive web-based tool which houses and updates yearly all police crime-control intervention research of moderate to high methodological quality. As with other reviews, the Matrix's intentions are to provide easy ways for the evidence base to be accessed and used by decision makers (i.e., practitioners, policy makers, and researchers). However, the goal of the Matrix is not just to show but also to refine knowledge and to facilitate its translation and implementation through the application of

the online tool. The idea of evidence-based policing translation tools suggest that such tools can draw out generalizations of tactics that are effective by examining a range of studies and then transform and apply that knowledge to specific problems an agency faces.

The Matrix uses a classification system for police interventions based on three very common dimensions of crime prevention strategies: the nature and type of target, the degree to which the strategy is reactive or proactive, and the strategy's level of focus (the specificity of the prevention mechanism it used). Using this three-dimensional "matrix," Lum (2009) and Lum and colleagues (2011) map all moderately rigorous to highly rigorous research evidence on police crime-control interventions according to how they might be characterized on these three dimensions (see Fig. 1, from Lum et al. 2011, and at http://cebcp.org/evidence-based-policing/the-matrix/). By doing this, clusters of studies (and their findings) illustrate the distribution and concentration of evaluations and effective practices along intersections of dimensions. In other words, police might be able to better glean generalizations from a large body of research about what intersecting dimensions tend to characterize effective interventions.

In general, the Matrix indicates the following general principles of the evidence base of police crime-control interventions:

- A large majority (79% at the time of writing) of successful interventions studied occur at "micro-places" or "neighborhoods."
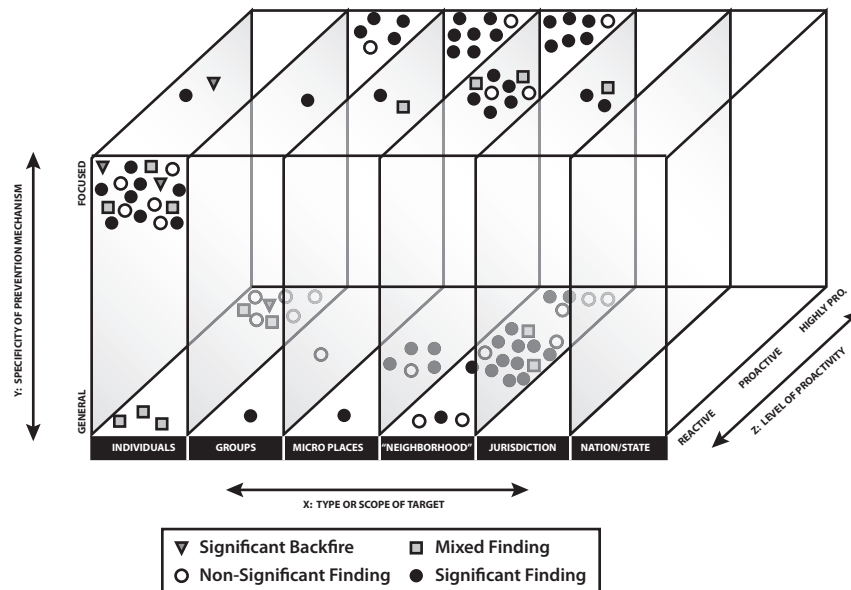

Figure 1   The Evidence-Based Policing Matrix

- 64% of successful interventions are "focused" or tailored strategies.
- 80% of successful interventions are either "proactive" or "highly proactive."
- 53% of interventions that show "no effect" or a "backfire effect" focus on targeting individual(s).

The evidence from the Matrix suggests that when police build strategies and tactics that are more proactive (or are based on using information-led and problem-solving approaches to reduce crime and related problems), when they target problems with greater specificity as to place and prevention mechanism, and when they shift from only a reactive/individual approach to incorporating more proactive place-based approaches, they will likely be more effective in reducing crime and disorder (see Lum et al. 2011). These findings are even more marked when only considering studies within the Matrix that are high-quality quasi-experimental and experimental research.

Although reviews of evaluation research by Campbell reviews, the Matrix, or the Maryland Report help to organize studies by rigor or type, there are other sources that could also be used to support an evidence-based approach in policing. For example, Crimesolutions.gov, an Office of Justice Programs web site, reviews a number of studies across multiple criminal justice arenas. The Center for Problem-Oriented Policing (http://www.popcenter.org/) houses a number of guides, which emphasize not only the application of research knowledge but also systematic problem-solving approaches using crime analysis. Numerous centers and universities also house information and research regarding faculty areas of expertise.

What Would an Evidence-Based Policing Agency "Look Like"?

Additional insights into defining "evidence-based policing" can be gleaned from a discussion of what an evidence-based law-enforcement agency might look like given this specific research base. Again, the examples used here focus on the crime-control research base reflected in the Matrix, but other research categories could also be similarly applied (e.g., research on what strengthens police legitimacy). Given the evidence, at the most basic level, an evidence-based policing agency requires an effort to at least balance traditional and reactive deployment approaches with other types of patrol and investigative techniques that are generally supported by research evidence. But what are these more evidence-based patrol and investigative techniques? From the knowledge gained from the last three decades of research, an agency would be more "evidence-based" if it shifted its deployment strategy from one primarily spent on rapid response and random patrol to more proactive, directed, and problem-oriented targeting of crime hot spots. The research also indicates in its totality that a shift from vague community-oriented approaches to more targeted, problem-solving approaches at specific

places involving multiple agencies may be more effective (Weisburd and Eck 2004; Weisburd et al. 2010). If agencies want to focus on individuals, focusing on repeat violent offenders and strengthening post-arrest case enhancement and the use of DNA analysis may be important. Further, research on other values and priorities, such as due process, respectfulness, and fairness, would also have to be considered in developing these different patrol approaches.

Another basic requirement for an agency to be more research-oriented is that it has to have some way of assessing tactics and strategies and gathering knowledge about crime, the community, and internal issues. This involves having personnel assigned and committed to data collection, analysis, and evaluation, as well as having regular systems and procedures for using research and analytic evidence for various organizational functions (e.g., in managerial meetings, promotions, and assessments). This can include strengthening crime analysis and research and planning units, as wells as establishing standard operating procedures that ensure that units apply this information.

Finally, at the most basic level, knowledge from research, whether it comes from evaluations of policing interventions, research on racial profiling or traffic stops, or research regarding different ways to interact with the community, must be incorporated into academy and in-service training. This is a basic requirement that seems the easiest (and most obvious) to implement yet is likely furthest from reality. As indicated by Bureau of Justice Statistics data on academies (see Reeves 2009), it would not be surprising to find that many police academies and in-service systems do not seriously incorporate the latest information on what are the most effective ways police can use to reduce crime, increase legitimacy in the community, or reduce problem behaviors within the agency. Academies traditionally teach reactive skills such as applying police procedures and the law, writing reports and submitting evidence, or using firearms and motor vehicles. All of these focus on police reactive response to crime. Yet, a large portion of an officer's time is not committed to reactive procedural response but is uncommitted, leaving room for high levels of officer discretion (see Famega et al. 2005). Given this, the proactive skills and knowledge base that are needed to carry out effective and legitimate crime prevention during this discretionary time are often not taught. Yet a large portion of an officer's time is not committed to reactive procedural response but is open to use at the officer's discretion (see Famega et al. 2005). Further, knowledge disseminated about respectful and fair policing may build a more respective and legitimate police force.

Such efforts only reflect what an evidence-based approach would be at the minimum. Agencies that want to be more advanced in using analytic and research knowledge may pursue these with greater intensity and innovation. For example, mid-level achievement in evidence-based policing might be reflected in an agency having an active crime analysis culture (and specifically allocated resources) that constantly generates information for proactive enforcement and assessment of activities. In even more intense versions of evidence-based policing, these analysts become criminologists, seeking to

find underlying reasons for crime problems and patterns and also assisting the agency in evaluating both its strategies and tactics to reduce crime and its approaches to addressing internal concerns.

More intensive evidence-based approaches might include not only incorporating research and analytic knowledge into academy and in-service training but also using it to rewrite standard operating procedures (SOPs) to conform more to research knowledge. An example might be the SOPs related to preventive patrol and noncommitted time. Currently, SOPs may not include guidance or directives on what officers should be doing when they are not answering calls or writing reports. By building research knowledge into SOPs, such knowledge also becomes part of the information base used for decisions about issues such as promotions and transfers. Further, when police receive research information through familiar agency sources, it increases their receptivity to the information—(Lum et al. 2012). In these agencies, commanders, first line supervisors, and officers ideally would develop a more sophisticated understanding of these issues which become part of their technical expertise (and a requirement for promotion).

Agencies well entrenched in an evidence-based approach work regularly with researchers inside and outside of their agencies and use that knowledge and those relationships to mold both officer and citizen expectations of the law-enforcement role and function in society. The sheriff or chief might even take an active role in reminding his or her political counterparts in the city council or state governments about outputs from research as justifications for activities and resource allocation. Agencies committed to evidence-based approaches would have a portion of their budget specifically devoted to research and analysis of the agency's activities and behaviors.

These are only just a few examples of how research might be incorporated into police practices. Institutionalizing the use of research in practice involves many adjustments to organizational, personnel, incentive, and policy structures in policing. (For more in-depth discussion and examples of these ideas, see the Matrix Demonstration Project (http://cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/) as well as Lum et al. 2012 and Weisburd and Neyroud 2011.) Further, achieving evidence-based policing cannot rely only on the will of police leaders or the merits and volume of the research base. Police must be receptive to such an approach; the research must be useful, and there needs to be a demand for such knowledge in policing. The logic and rationality of evidence-based policy more generally in medicine, governance, or social interventions can be overshadowed by stronger human tendencies of habit, tradition, and culture that can block receptivity toward research use in policing. The example of the continued use of DARE (Drug Awareness Resistance Education) comes to mind (Birkeland et al. 2005). Despite research evidence showing DARE's ineffectiveness, police, schools, and parents support the program for reasons other than meeting its intended outcome. Overcoming a culture of reactivity, low use of analysis, weak supervision and accountability, and a suspicion of researchers,

research, and scientific processes will be keys to successfully implement such an approach. This not only requires a sea change in law enforcement culture but also real changes in organizational infrastructure that allows for research to be better received and digested by members of the agency.

ENDNOTE

[1] In this reprint, the text of this passage is presented, which is a slight modification from the oral speech given by Professor Sherman in accepting the Benjamin Franklin Award from the Royal Society of Arts. Both the text and video recording of this speech can be downloaded at http://www.thersa.org/events/audio-and-past-events/2011/professional-policing-and-liberal-democracy.

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