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# IDEAS IN AMERICAN POLICING



### Translating Police Research into Practice

by Cynthia Lum

#### Introduction

Eleven years ago, in one of the first Ideas in American Policing lectures, Lawrence Sherman advocated for evidence-based policing, that is, ". . . police practices should be based on scientific evidence about what works best" (1998, 2). Like other police researchers and innovative police practitioners at the time, Sherman believed that information generated from systematic or scientific research, as well as rigorous in-house crime analysis, should be regularly used by the police to make both strategic and tactical decisions.

The idea of evidence-based policing seemed logical and advantageous. Why wouldn't police tactics be based on

what we know are effective strategies that reduce or prevent crime? A number of benefits could be reaped from such a rational approach. Strategies and tactics that are generated from information and based in scientific knowledge about effectiveness are more likely to reduce crime when they are employed. Similarly, if interventions have been

*Ideas in American Policing* presents commentary and insight from leading criminologists on issues of interest to scholars, practitioners, and policy makers. The papers published in this series are from the Police Foundation lecture series of the same name. Points of view in this document are those of the author and do not necessarily represent the official position of the Police Foundation. The full series is available online at http://www.policefoundation.org/docs/library.html.

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Cynthia Lum, PhD, is an assistant professor in the Administration of Justice Department at George Mason University and the deputy director of the Center for Evidence-Based Crime Policy. Her research areas include policing, evidence-based crime prevention, evaluation research and methods, democratization and justice systems, place-based criminology, and counterterrorism. Dr. Lum is a member of the Police Foundation's Research Advisory Committee.

shown to have harmful effects, police policies might explicitly discourage their deployment. Evidence-based policing also seems more justifiable in supporting police practices than other, much less scientific methods, such as best-guessing, emotional hunches, or anecdotal reflections on single cases. In turn, information-based decision making can provide legitimacy, transparency, and structure to police-citizen communications and interactions, all of which are important requirements for effective policing in modern democracies.

Perhaps less obvious but equally important benefits could include advancing police information and management systems that improve efficiency. Evidence-based approaches rely on the consistent and speedy collection, management, analysis, recording, and turnaround of crime data. This reliance can force improvements in police information technology systems, which, in turn, have the potential of strengthening and making more tangible accountability systems that facilitate managerial practices, of which information is a central component. These include innovations such as Compstat, problem-oriented policing, and intelligence-led policing (see Ratcliffe 2008). Such a system seems more promising than what police leaders have previously relied upon to establish accountabilityamorphous cultural norms of quasi-military hierarchy or adherence to a reactive standard operating procedures manual.

Evidence-based policing could also have a broader impact on transforming cultural forces that strongly influence a reactive approach to police operations, which oftentimes paralyzes crime prevention efforts and change. Although its conceptualization and implementation seem scientific or academic, evidencebased policing could increase the motivation of patrol officers and supervisors in their daily activities. Reducing crime by using strategies more likely to be effective can reduce workload and make efforts more rational. Information-based approaches can also be problem oriented and require a team effort, giving further meaning, logic, and motivation to everyday routines. Evidence-based policing requires police to look outward for information as well, opening officers and command staff to different ideas and worldviews, and providing new challenges, interactions, and relationships that could make any workplace more interesting. Police culture has generally resisted change and external influence (O'Neill, Marks, and Singh 2008), and an evidence-based paradigm might aid in mollifying this resistance.

Thus, at least in theory, evidence-based policing holds much promise. Indeed, by the time of Sherman's *Ideas* lecture,

a number of innovations that reflected its principles had already been implemented or were being considered (see generally, Weisburd and Braga 2006). Examples include the diffusion of crime analysis and computerized mapping in medium to larger police agencies (Weisburd and Lum 2005); the acceptance and use of some principles of Compstat by a number of agencies (Weisburd, Mastrofski, McNally, Greenspan, and Willis 2003; Willis, Mastrofski, and Weisburd 2003; Willis, Mastrofski, and Weisburd 2007); and at least an interest and sporadic efforts in conducting problem-oriented policing and hot-spot patrol. Additionally, by the time of Sherman's lecture, Sherman, Weisburd, Mazerolle, and others had already evaluated hot-spot patrol using randomized controlled experiments (see Sherman and Rogan 1995a, 1995b; Sherman and Weisburd 1995; Weisburd and Green 1995), showing its clear advantage over existing methods of random, preventive, beat-based, reactive patrol (a conclusion recently reached by a 2004 National Research Council report). More than policing paradigms of the past, evidencebased policing and its associated tactics and tools have shown the promise of both intuitive appeal and scientific credibility.

#### Pessimism Regarding Evidence-Based Policing

Despite its potential, however, evidence-based policing has not rapidly diffused into American policing. There is little indication that most American police leaders and their agencies systematically or regularly use tactics that are evidence based. Instead, they continue to rely on strategies and tactics that are widely known to be ineffective or not based on systematic assessment. Innovations in evidence-based policing and research are less the products of agency initiatives and more the result of special, esoteric, and isolated projects between researchers and agencies in funded grant situations, overtime schemes, and specialized unit operations. While there are exceptions to this generalization, those exceptions are neither agency-specific nor institutionalized and sustained.

Indeed, the best example of the absence of evidence-based approaches in policing continues to be, as David Weisburd pointed out in his *Ideas* monograph (2008), the almost complete absence of regular use of hotspot patrol. Although agencies have answered affirmatively to using hot-spot patrol in various surveys (see Koper 2008; Police Executive Research Forum 2008; Weisburd and Lum 2005), there is little real indication that hotspot policing is institutionalized in daily police work. The most commonly used patrol

strategies—beat-based patrol and rapid response to 911 calls—indicate that the police do the exact opposite: patrol officers continue to be assigned to random, reactive, preventative patrol within single police beats no matter the spatial distribution of crime.

Similar concerns about the disconnect between research and practice have already been voiced throughout the Ideas in American Policing series. When he gave the first Ideas lecture in 1997, David Bayley stated that ". . . research may not have made as significant, or at least as coherent, an impression on policing as scholars like to think. . . . Nor has research led to widespread operational changes even when it has been accepted as true" (1998, 4-5). Stephen Mastrofski in 1999 emphasized that the challenge was not only to generate more research about useful interventions but also ". . . to figure out how to get police to do them more often" (1999, 6).

From the perspective of a practitioner,<sup>1</sup> it is not surprising that the factors that go into the vast majority of police decisions on the street and at the level of high command are not evidence or science based The daily activities, strategies, and tactics of the police are driven not

by analytic intelligence, crime analysis and maps, systematically collected observations, or performance measures related to crime prevention outcomes but instead by a procedural reaction to 911 calls. Further, the context of that reaction is based not in preventative principles but more informally in idiosyncrasies of the incident, anecdotes and stories, officers' experiences, political and social crises, standard operating procedures, moral panics, political ideology, pressure-group interests, police organizational, strategic, and tactical culture, and other whims, hunches, feelings, and best guesses. More generally, decision making at the command and agency levels is often motivated by many other political and organizational considerations (Willis et al. 2007).

To break these non-evidencebased habits is a monumental undertaking involving the changing of organizational culture, structure, rules, and norms. There is also a mythology of policing that insulates and cloaks almost every aspect of the profession, distorting both officer and citizen expectations about what police can and should deliver. The principles of an evidence-based approach are not part of these expectations and beliefs about the functions and responsibilities of law enforcement. Thus, while logical, making greater use of evidence, information, and science in policing presents a major challenge.

<sup>&</sup>lt;sup>1</sup>The author was a patrol officer and later a detective in a large metropolitan area.

#### Optimism for Evidence-Based Policing: Existing Infrastructure

Despite this seemingly negative view about the current state of science in policing, there is room for optimism. Such hope lies in the infrastructure that currently exists that can support evidence-based policing. This infrastructure includes concrete mechanisms that facilitate bridges between science and policing, as well as avenues for effective generation and use of research and analysis in policing. The building blocks of this infrastructure include:

Early pioneers. An initial group of scholars, police chiefs, police research organizations, and other agencies worked to develop a culture of research partnerships and exchange that helped break down barriers and stereotypes between researchers and practitioners. Research pioneers too numerous to list here worked their way into police agencies to obtain data, study behavior, and evaluate practices, while innovative police practitioners took the risk of trying new interventions and working with these researchers. Funding support from the National Institute of Justice (NIJ), such as Locally Initiated Research Partnership programs (see McEwen 1999), often made these exchanges possible. The sponsor of this *Ideas* series—the Police Foundation—played a key role in some of these partnerships,

paving the way for future research-practitioner paradigms to emerge.

#### The research knowledge itself.

These partnerships resulted in a number of studies that make up the current empirical base of evidence on the impact of police interventions. In our development of the Matrix tool described below, Christopher Koper, Cody Telep, and I found ninety-two crime-related outcome evaluation studies of police interventions that employed at least moderately rigorous evaluation methods to determine if interventions work. The results of these studies provide an initial evidence base that can be used by police to develop their tactics and strategies. There have also been systematic reviews of this research that summarize findings across studies in more digestible forms (see e.g., Braga 2007; Mazerolle, Soole, and Rombouts 2007; National Research Council 2004; Weisburd, Telep, Hinkle, and Eck 2008).

#### Technological advancement.

Three areas of technological diffusion into policing provide the tools needed for evidence-based policing (although with many challenges, as Manning (2008) emphasizes). They are the use of integrated information technology and sharing systems; the adoption of computerized crime-mapping programs for hot-spot and problem-oriented policing; and the employment of crime analytic packages for long-

term strategic planning. Agencies are realizing that information is central to their effectiveness and those technological tools that facilitate the collection and management of data may help reduce crime.

#### Improved police-citizen relations.

Police and researchers also have the advantage of interacting at the more developed end of a difficult and disturbing history of police-citizen relations. The crises of rising crime and decreased police legitimacy in the latter half of the last century have since led the police to become more transparent, collect and distribute more information, and have greater concern about being effective and more legitimate. This is helpful to an evidence-based approach, as this environment creates opportunities and demands for more evaluative research. It also puts pressure on the police to be outcome focused, rather than solely procedurally focused, and to deliver on crime reduction, not just crime reaction.

Increased expectations of chief executives. Over the past two decades, job competitiveness and expectations for excellence in police leadership have both increased dramatically (Jurkanin, Hoover, Dowling, and Ahmad 2001). Law enforcement chief executives are now hired for their innovation and ability to be progressive and scientific, as well as their record of accomplishment in crime reduction, all of which

are factors aligned with evidencebased policing concepts.

The focus of police constituent and non-governmental organizations. Furthermore, police research groups and think tanks like the Police Foundation, Police Executive Research Forum, and International Association of Chiefs of Police have played a key role in building this infrastructure by organizing their constituents (usually police agencies and chief executives) around the idea of the importance of conducting and using research in practice. These organizations not only make research more accessible to the police but also help to shift policing discourse at the command level towards science.

Efforts by the U.S. Department of Justice. The U.S. Department of Justice, through the Office of Justice Programs and the Office of Community Oriented Policing Services (COPS), has funded evidence-based policing efforts that include Locally Initiated Research Partnerships, evaluations of interventions, and the development of informationbased technologies. More recently, there has also been a call for more highly rigorous evaluation research in NIJ grant solicitations, including using experimental designs.<sup>2</sup> Funding resources and leadership at the federal level play important roles in guiding both discourse and practice.

All of these factors contribute to the infrastructure and discourse that buttress evidencebased policing. Thus, despite pessimism about the current state of evidence-based policing, there are concrete systems in place that make such an approach a strong possibility. Given these pessimistic and optimistic views, where does this leave the cause of evidence-based policing? How might we as researchers better communicate our work to police, and how might police become more receptive to embedding research and science into their worldview, functions, mandates, accountability systems, and organizational culture?

This may be accomplished by a "phase two" of evidencebased policing: building upon the existing research-practice infrastructure by creating the mechanisms that institutionalize the use of research and systematic analysis in daily practice. Many tools and mechanisms are currently being used to leverage change, especially on the information-generating front. Crime analysis, Compstat, computerized mapping, and information-sharing technologies are but a few examples that facilitate evidence generation as envisioned by Liberman (2009). Weisburd and Neyroud (forthcoming) have also recently discussed embedding researchers within police agencies and finding ways for police to take ownership

of research and science. Rather than focus on these technological or personnel mechanisms, I examine the use of the existing research evidence itself—how to increase police awareness and use of that research and scientific knowledge. To do this, police agencies need translation tools that make research usable and meaningful.

#### An Evidence-Based Matrix

One such translation tool, initially developed by Lum and Koper for crime prevention more generally (in press) and then applied specifically to policing research (Lum, Koper, and Telep 2009), is the Evidence-Based Policing Matrix. The Matrix was inspired by Rosenberg and Knox (2005), who used a three-dimensional grid with axes specified for different aspects of child wellbeing. The intersection of those axes created sets of descriptions by which different prevention interventions for youth violence could be placed according to how they matched the intersecting characteristics related to child well-being.3 Similarly, we created a more general crime prevention Matrix (Figure 1) to determine if interventions could be mapped along common characteristics of crime prevention.

<sup>&</sup>lt;sup>2</sup>See, for example, NIJ's 2009 solicitation for Crime and Justice Research at http://www.ojp.usdoj.gov/nij/.

<sup>&</sup>lt;sup>3</sup>Developed by Rosenberg's Task Force for Child Survival and Development, Center for Child Well-Being, Decatur, Georgia (see http://www.taskforce.org).

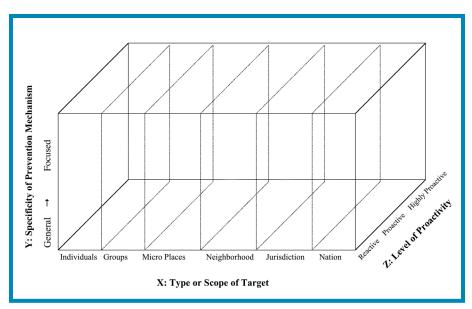


Figure 1. A Matrix for Crime Prevention Interventions

The three dimensions we chose, which are common in describing crime prevention interventions, are the type of target, the specificity of the prevention mechanism, and the level of proactivity a strategy exhibited. Although other dimensions could also be applied,4 we felt these three were the most frequently used in the discourse of both practitioners and researchers, and presented a common language between the two (given that this is a translation tool). For instance, the X-axis indicates the type or scope of the target of an intervention and is the dimension of crime prevention programs in which both researchers and

practitioners are most likely to frame their discussions. This can range from tactics that focus on specific types of individuals such as domestic violence offenders or burglars, to groups such as gangs and co-offenders, to small places like street blocks, to larger areas such as neighborhoods or police beats, or even bigger jurisdictions such as cities, states, and nations.

The Y-axis represents the level of specificity of an intervention and its goals, from general to focused. General tactics are most common and have broad deterrence goals, but do not target specific crimes, people, or mechanisms of crime. Hot-spot patrol in a small location, if using general deterrent patrols, may fall here. On the other hand, focused interventions, as Weisburd and Eck (2004) describe, might be much more specific, involving multiple agencies that are responsible for different aspects

of a particular problem-solving enterprise or addressing a specific crime type or modus operandi. For example, nuisance abatement at a specific address where drugs are being sold might apply.

The Z-axis represents the level of proactivity in an intervention, from reactive to highly proactive. Mostly reactive interventions either reinforced or strengthened the reaction of the police, often relying upon traditional deployment measures, such as rapid response to 911 calls or reactive arrests. Proactive programs, on the other hand, reflect those interventions that use analysis and/or patterns of previous incidents to predict future crimes for current prevention. Moderately proactive strategies are intended to reduce a recent crime flareup or to deter a crime likely to happen tomorrow (e.g., hotspot policing). Highly proactive interventions are geared toward more long-term effects by dealing with underlying causes of problems or early risk factors (e.g., early childhood drugresistance education).

We theorized that if scientifically evaluated interventions could be mapped into the Matrix according to how they are characterized along these dimensions of crime prevention, such mapping could create a translation tool by which generalizations from sets of studies could be derived. Specifically, such mapping might show where clusters of

<sup>&</sup>lt;sup>4</sup>For example, a "legitimacy" intervention might be considered, which measures the level of challenge an intervention might pose in democratic society, despite its effects on crime outcomes.

positive and methodologically strong evaluations exist, guiding practitioners toward more effective "bins" where sets of dimensional characteristics of effective programs intersect. In turn, such evidence-based generalizations (as opposed to anecdotally based generalizations) could be applied to tactical and strategic development, agency and command staff assessment, as well as training and promotions.

To populate this Matrix for evidence-based policing, we mapped the entire field of at least moderately rigorous police evaluation research into the Matrix according to how each could be described by the three dimensions. A detailed discussion of our methodology for inclusion and mapping, and descriptions of all included studies are forthcoming in article form, but are currently available in a free online tool.5 In summary, we identified ninety-two studies that satisfied at least a medium level of scientific rigor from the field of evaluation research in policing. Twenty-two of these studies were randomized experiments, and seventy were quasi-experiments using comparison group designs of moderate to rigorous quality.

To view our mapping, refer to the online interaction that shows a fly-in effect of groupings

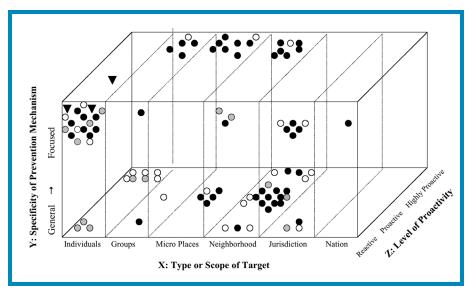


Figure 2. The Evidence-Based Policing Matrix Mapped with 92 Intervention Studies

of studies.<sup>6</sup> However, in Figure 2, we provide the entire mapped Matrix. The shape and shade of the dots indicate whether a specific study of an intervention showed statistically significant successes (black), mixed findings (gray), or no statistically significant effect (white/clear). Studies designated by an upsidedown triangle (**▼**) are "backfire" studies (see Weisburd, Lum, and Petrosino 2001), in which a study indicated that an intervention led to an increase in crime or criminality.

The Matrix now shows us what single studies do not.

For example, notice the first grouping of studies mapped into the Individuals slab of the Matrix. This grouping indicates that when police use strategies focused on individuals, the evidence reveals mixed and sometimes backfiring results (for a specific listing, summaries, and findings for each study in this area, please refer to the online tool). The Matrix also indicates that many of these individualbased strategies fall in the reactive portion of the Matrix, an approach that we generally know does not reduce crime. Even those individual approaches that are more proactive show mixed or ineffective results (DARE is one example). Indeed, there are some studies in this slab that point to beneficial results (when they are more specific in their activities). Overall, however, this particular region of the Matrix does not provide convincing

<sup>&</sup>lt;sup>5</sup>Cynthia Lum, Christopher Koper, and Cody Telep (2009). Evidence-Based Policing Matrix, Center for Evidence-Based Crime Policy, http://gemini.gmu.edu/cebcp/Matrix.html.

<sup>&</sup>lt;sup>6</sup>See http://gemini.gmu.edu/cebcp/Matrix/AnimatedMatrix.html.

It should be noted that, for visual ease, we did not place dots on top of each other but spaced them in general areas of the Matrix. Their precise placement does not make, for example, one more or less proactive or general than another; the dot placements are to be interpreted generally.

evidence that focusing only on individuals is a good idea. This region, however, is where the vast majority of police activity occurs (response to 911, reactive arrests, investigations, offender targeting).

Other patterns from the Matrix are also immediately noticeable. For example, the Groups slab tells us that we know much less about interventions for groups (like gangs and cooffenders) than individuals, even though police seem very much interested in co-offender strategies. The research that does exist seems to indicate that highly proactive and specific tactics, such as the "pulling levers" approach (see Braga, Pierce, McDevitt, Bond, and Cronin 2008), are promising. There is also much positive evidence of the effectiveness of tactics at the micro-place level, where they tend to be more proactive and specific/focused. At larger geographic units, interventions in the Neighborhood slab (i.e., neighborhoods, communities, police beats and sectors) are much more general in nature compared to studies at micro places, most likely due to the increase in the unit of analysis. While many neighborhood-based studies showed successful results, a cautionary note is in order: nearly all of these neighborhoodbased studies used only moderately rigorous methods. These studies almost completely disappear when looking at just the most rigorous studies, an

effect that does not occur with micro-level studies.

It is important to note that organizing policing research is not new and has already been undertaken by others (see Braga 2007; Mazerolle et al. 2007; Sherman 1997; Sherman and Eck 2002; Weisburd et al. 2008). In particular, Weisburd and Eck (2004) created a two-bytwo grid to organize studies by "Diversity of Approaches" and "Level of Focus." Our Matrix builds on this existing research infrastructure, both in the collection of studies (we updated the study collection through 2008) and in the creation of the Matrix itself. What we contribute is a three-dimensional tool specifically designed to translate a body of research into a usable form for tactical development as well as agency and officer assessment.

#### Using the Matrix to Translate Research into Police Practices

What begin to emerge with this mapping are clusters of studies that indicate target-proactivity-specificity characteristics that may be the most fruitful for building prevention programs. Thus, for the police, the best use of the Matrix is to use generalizations of effective intersection dimensions to develop operational tools and strategies from those generalizations that are specific to that agency. One common argument police may use to

resist research is that findings from a particular study of one jurisdiction (e.g., large, urban, East Coast city) cannot be generalized to another (e.g., smaller, suburban, Midwest town). The Matrix overcomes this resistance by providing police with more general intersections of dimensions that seem to indicate the most promise, given the totality of the evidence.

In Figure 3 we circle these realms of effectiveness (one can also see realms of ineffectiveness or areas with little generated evidence). For example, a promising realm of effectiveness is the intersection of focused, place-based, and highly proactive dimensions (top circles). These studies include hot-spot policing, problem-oriented approaches that are multi-agency and specific, and drug market enforcement that uses civil remedies. Realms that might be less effective or show mixed results seem to be individually based approaches that are reactive in nature (for example, increasing arrests for certain crimes). Later, when separating the most rigorous evaluations from moderately rigorous evaluations, one can see even fewer realms in which we have great certainty about the promise of policing interventions.

Using these realms, an example of a specific translation from this mapping might be as follows. A commander may be strategizing about how to reduce auto thefts in his district. He could use traditional methods,

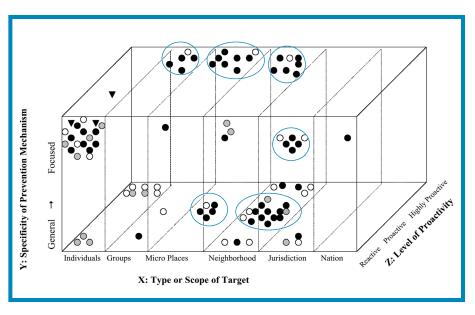


Figure 3. Realms of Effectiveness

such as giving his officers lookout lists of recently stolen vehicles; increasing general patrol and random license plate checking; investigating single cases of auto thefts that have already occurred; or deploying decoy vehicles to catch offenders in the act. But these approaches are all individual-based, reactive, and general, which the Matrix indicates may not be the most promising in terms of reducing crime. By using the Matrix, a commander might try the following, alternative strategy. The Matrix indicates place-based approaches are promising; thus, the commander may have the crime analysis unit determine hot spots (micro places) of stolen and recovered vehicles and hot portions of roadways where the probability of discovering a stolen vehicle is abnormally high. He might consider a reduction strategy that includes increasing

proactive traffic stops, using license plate reader technologies at those places, or providing visible presences on those hot roadways.

Research-organizing tools like the Matrix also have other functions that can help achieve the overall goals of evidencebased policing. For instance, the Matrix can be used as an agency assessment or accountability tool. During a Compstat meeting, the focus could be shifted from reciting monthly statistics and vague assertions of tactics to real-time mapping of intervention ideas and existing strategies directly into the Matrix. This mapping not only shows if a tactic is likely to be promising but also provides an opportunity for the chief to take a leadership role in guiding commanders to more effective realms that are based on evidence. A police commissioner may require her command staff

to understand how the Matrix is used so that they can develop their own evidence-based tactics.

Such assessments could also be carried out at the district, sector, or even squad level by varying levels of command. Commanders may provide first-line supervisors with tools like the Matrix and hold them accountable to evidence-based approaches by grading their tactical portfolios against the Matrix. This could motivate sergeants to take a more active approach in designing and implementing tactics with their patrol units that reflect the evidentiary and analytic base that is available to them. Along these same lines, training officers during academy and inservice courses in fundamental concepts of how to increase their effectiveness and legitimacy exposes them to tactics (or, more generally, realms of effectiveness) backed by scientific evidence, not by anecdotes, stories, or personal experiences of other officers.

In turn, the Matrix could also institutionalize evidence-based practices and philosophies by being used for promotions and advancement. Candidates, when tested on crime prevention scenarios (which is often common at the first and second level supervisor ranks), could be assessed on their ability to develop solutions that fall within effective realms. Or the tactical resumes of those in line for promotion could be scored using the Matrix to see if contenders

generally use approaches that are more evidence based or if they tend to rely on methods that are more traditional. Such practices support cultural shifts that are also necessary in building an infrastructure that is amenable to an evidence-based approach.

What should now become obvious is that by applying these general lessons about the realms of effectiveness from the Matrix to deployment choices, the police are engaging in evidence-based policing. They would be using research evidence about what works to guide deployment decisions. Perhaps it is also a step forward from metaanalyses and systematic reviews in that the Matrix provides a visualization of sets of common, generalizable prevention dimensions of effective strategies that may facilitate intervention development. These combinations are easy to use because they have direct meaning in police discourse and officer experiences. Further, the use of the Matrix can be combined with other ways evidence-based policing might be institutionalized into practice, including greater use of crime analysis and proactive problem solving of multiple incidents, less use of reactive beat patrol or reactive case-bycase investigations, incorporating criminologists into the service and employment of the police agency, and increased supervision at the rank-and-file level.

## Other Uses of the Matrix: Researchers and Funding Agencies

Efforts to promote evidencebased policing are not the responsibility of police alone. A coordinated and strategic effort is needed between the police and researchers, making the translation tool relevant to both (as well as to agencies funding such research). Aside from pointing to where research is needed, organizational tools like the Matrix can also be used as a common ground for conversations between researchers, police practitioners, and funding agencies when partnering to evaluate, study, and ultimately reduce crime. The Matrix can be used to elicit discussion and negotiation between the researcher and the police agency in a way that does not divorce the police researcher from the real needs of the police agency but also keeps the agency grounded in evidence-based regions.

For example, police researchers are in the business of supplying evidence. Therefore, our job is to generate more research using the strongest available methods that can be placed into translation tools like the Matrix. The Matrix shows researchers and funding agencies not only areas of police intervention that have not been researched but also areas that have not been researched well. To make this point, Figure 4

splits the Matrix into two groups of studies: Figure 4A represents fifty-eight studies (or 63 percent of the entire Matrix) that used moderately rigorous designs, while Figure 4B shows the thirty-four studies (37 percent) that used stronger methods.

This separation shows that there are much fewer high-quality evaluations available. However, as Weisburd, Lum, and Petrosino (2001) have shown, higher quality criminal justice evaluations are less likely to show positive effects. A few other things stand out in this division: higher-quality studies that show positive effects are most consistently found in the proactive, micro place-based region. Figure 4B shows, with high certainty, that individual strategies are much less promising and in some cases harmful. Finally, notice that neighborhoodand group-based studies almost completely disappear when looking at only the highest-quality studies. If we wish to continue using such strategies, then better information must be generated at these units of analysis.

Funding agencies, such as NIJ, the Bureau of Justice Assistance, and COPS, can use tools like the Matrix to accomplish "evidence-based funding," or funding research and interventions in strategic ways that facilitate evidence-based policing. For example, the Matrix can help NIJ decide whether research is low, medium, or high risk for achieving certain goals, and those goals

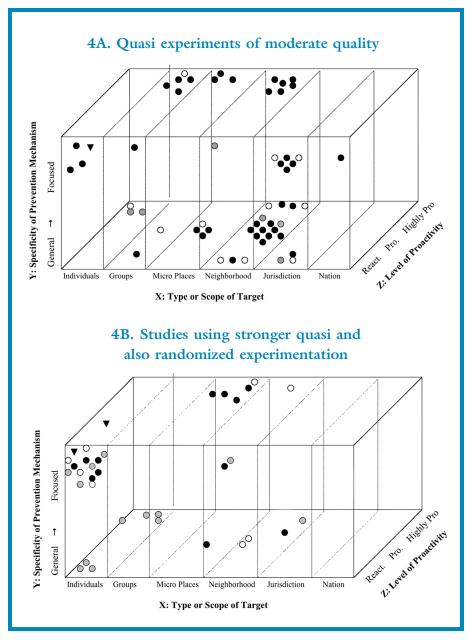


Figure 4. Comparison of Studies in the Matrix of Moderate and Strong Methods

would determine what "low risk" or "high risk" means. For example, low-risk funding could be the most cost beneficial and therefore a priority. This type of funding agenda would support increasing the quality of research in intersections and realms of the Matrix in which studies have already shown promising results.

Medium-risk funding might support research in areas of the Matrix in which little is known or there are no studies but that are closer to those realms that have already shown promise. For example, studies of focused group interventions that are only moderately proactive or that focus on known groups of offenders

may fit here. High-risk funding could be seen as bad ideas in that funding would support studies within domains in which results have shown little promise or even had backfire effects.

## Concluding Thoughts: Experience versus Evidence

This *Ideas* paper makes one assumption at the outset: evidence-based approaches are more logical, effective, and therefore better than other decision-making alternatives, such as best guesses, anecdotes, habits, individual experiences, or actions based on political or organizational whims and pressures. But is this too strong an assumption? Evidence-based approaches have been criticized as being overly scientific while disregarding officer experience and other organizational facets, institutional pressures, and rationales that seem to drive police action and decision making (Moore 2006). In particular, these critiques seem to suggest that experience (however defined) is just as, if not more, effective in reducing crime, and that evidence-based approaches and experience are mutually exclusive. As a social scientist, I would say that only science could test the validity of these two assumptions. But let me be more practical (and indulgent) on this topic by relying on my own experience as a police officer to close this Ideas paper.

With regard to the assumption that an evidencebased approach is the most logical, Sherman (1984) argued that scientific knowledge could provide better predictions about crime and criminality for preventative efforts than could single or even collective experiences. But the problem of convincing police agencies of this idea does not lie in its lack of logic. Evidence-based approaches, analysis, and the use of scientific knowledge for prevention are worldviews that are outside the purview and daily realities of officers and supervisors. Officers are entrenched in the everyday routines of the reactive response model, a reactivity that is constantly being reinforced by almost every aspect of organizational structure and culture. This culture has, as Sherman argued, few feedback mechanisms about the consequences of employing experience to make decisions. Thus, what emerges as experience is simply a collection of loose and non-systematic combinations of memories that emerge from those routines. As Sherman (1984, 62) stated, "[t]he problem with experience as a basis for exercising police discretion is that it provides incomplete information with respect to each series of encounters."

Take, for instance, an alternative world: if a police agency were to operate in an evidence-based way, experience would emerge as memories

from engagement in those types of activities. In such a world, a seasoned officer's experience would tell him or her that reacting one at a time to 911 calls will not reduce crime; only a directed patrol program based on clusters of crimes discovered from crime analysis could. That officer in that alternative world might also have the experience that working with multiple agencies to tackle drug problems in a community is a better idea than buy-and-bust operations on the street or a raid on a distribution house. In other words, experience emerges from whatever paradigm an organization chooses to use and therefore cannot be divorced from that choice. This also implies that experiences are malleable.

Police are not using evidence-based approaches not because they consciously believe experience is more worthwhile. They use their experience because the police organization does not provide them with any alternative worldview, strategies, or tools with which to think about and combat crime. The lack of alternatives has led them to believe that their individual experience is the only way for decisions to be made, a philosophy reinforced by other officers and organizational practices. Indeed, the term "experience" is a euphemism for other words in policing, including tradition, habit, and culture. There are few incentives to change this mentality and to

build officers' capacity to become crime prevention specialists.

Are evidence-based approaches and experience mutually exclusive? One would be hard pressed to find evidencebased policing advocates who suggest, with the same fervor as their counterparts, that experience should be disregarded for scientific evidence. Experience, after all, cannot be divorced from behavior. Indeed, experience is what provides the force behind the needs of many evidence-based tactics. Research may point police to certain areas of the Matrix that are more effective, but officers and commanders ultimately have to be creative about the short- and long-term tactics and strategies that they employ to reap the benefits of those general dimensions within the specific context of their respective jurisdictions.

The "experience excuse," from one who has this experience, is flippant and invalid. It is an easy rebuttal to what is indeed a difficult but necessary task of both leadership and operations. As Denis O'Connor, Her Majesty's Chief Inspector of Constabulary in the United Kingdom, recently emphasized, disregarding scientific evidence about policing is "professional ignorance."

<sup>&</sup>lt;sup>7</sup>Presentation at the 2nd International Conference on Evidence-Based Policing, sponsored by the National Police Improvement Agency and the University of Cambridge, 1–3 July 2009 (see (http://www.crim.cam.ac.uk/).

At the same time, however, to move forward a more evidencebased approach and to translate research into practice, researchers can no longer rely on the hope that science will stand on its own merit with the majority of police officers and commanders. Rather, tools that promote the regular and institutionalized use of research and analysis in everyday police activity are needed. This requires a strategic and creative effort by police leaders, researchers, funding agencies, and think tanks to centralize the importance of using research evidence and analytic thinking in

practice. In reference to evidence-based policing, Sherman (1998, 14) astutely noted that ". . . the influence of ideas may be far more glacial than volcanic." More than a decade later, we remain far from an eruption of change, but perhaps the glacial pace has picked up steadily.

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#### References

Bayley, David H. 1998. Policing in America: Assessments and Prospects. Ideas in American Policing Series. Washington, DC: Police Foundation.

Available online at http://www.policefoundation.org/pdf/Bayley.pdf.

Braga, Anthony A. 2007. The effects of hot spots policing on crime. Campbell Systematic Reviews 2007:1, DOI:10.4073/csr:2007.1. Available online at http://db.c2admin.org/doc-pdf/Braga\_HotSpots Policing\_review.pdf.

Braga, Anthony, Glenn Pierce, Jack McDevitt, Brenda Bond, and Shea Cronin. 2008. The strategic prevention of gun violence among gang-involved offenders. *Justice Quarterly* 25: 132–162. Jurkanin, Thomas J., Larry T.
Hoover, Jerry L. Dowling,
and Janice Ahmad. 2001.
Enduring, Surviving, and
Thriving as a Law
Enforcement Executive.
Springfield, IL: Charles C.
Thomas.

Koper, Christopher. 2008. The varieties and effectiveness of hot spots policing: Results from a national survey of police agencies and a reassessment of prior research. Paper presented at the 60th Annual Meeting of the American Society of Criminology, November 14, St. Louis, MO.

Liberman, Akiva. 2009.

Advocating evidencegenerating policies: A role for
the ASC. *The Criminologist*34 (1): 1, 3–5.

Lum, Cynthia, Christopher
Koper, and Cody Telep.
2009. Evidence-Based
Policing Matrix, Center for
Evidence-Based Crime Policy,
http://gunston.gmu.edu/
cebcp/Matrix.html.

Lum, Cynthia and Christopher
Koper. In press. Is crime
prevention relevant to
counterterrorism? In
Criminologists on Terrorism
and Homeland Security, eds.
Brian Forst, Jack Greene, and
James Lynch. New York:
Cambridge University Press.

Manning, Peter. 2008. The

Technology of Policing: Crime
Mapping, Information
Technology, and the
Rationality of Crime Control.
New York: New York
University Press.

Mastrofski, Stephen D. 1999. Policing For People. Ideas in

- American Policing Series. Washington, DC: Police Foundation. Available online at http://www.police foundation.org/pdf/ Mastrofski.pdf.
- Mazerolle, Lorraine, David W.
  Soole, and Sacha Rombouts.
  2007. Street-level drug law
  enforcement: A meta-analytic
  review. Campbell Systematic
  Reviews 2007:2,
  DOI:10.4073/csr.2007.2.
  Available online at http://db
  .c2admin.org/doc-pdf/
  Mazerolle\_DrugLaw\_
  Enforcement\_review.pdf.
- McEwen, Tom. 1999. NIJ's
  Locally Initiated Research
  Partnerships in policing:
  Factors that add up to
  success. *National Institute of Justice Journal*, January:
  2–10. Available online at
  http://www.ncjrs.gov/
  pdffiles1/jr000238.pdf.
- Moore, Mark H. 2006.

  Improving police through expertise, experience, and experiments. In *Police Innovation: Contrasting Perspectives*, eds. David Weisburd and Anthony A. Braga. New York: Cambridge University Press.
- National Research Council. 2004.

  Fairness and effectiveness in policing: The evidence.

  Committee to Review

  Research on Police Policy and Practices, eds. Wesley Skogan and Kathleen Frydl.

  Committee on Law and

- Justice, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.
- O'Neill, Megan, Monique Marks and Anne-Marie Singh (Eds.). 2007. Police Occupational Culture: New Debates and Directions. Sociology of Crime, Law and Deviance, Volume 8. Oxford, UK: Elsevier Press.
- Police Executive Research Forum.

  2008. Violent Crime in

  America: What We Know about

  Hot Spots Enforcement. Critical

  Issues in Policing Series.

  Washington, DC: Police

  Executive Research Forum.
- Ratcliffe, Jerry. 2008. *Intelligence-Led Policing*. Cullompton, Devon: Willan Publishing.
- Rosenberg, Mark and Lyndee M. Knox. 2005. The matrix comes to youth violence prevention: A strengths-based, ecologic, and developmental framework. *American Journal of Preventative Medicine* 29 (5): 185–190.
- Sherman, Lawrence W. 1998.

  Evidence-Based Policing. Ideas in American Policing Series.

  Washington, DC: Police
  Foundation. Available online at http://www.police
  foundation.org/pdf/
  Sherman.pdf.
- Sherman, Lawrence W. 1997.

  Policing for crime prevention.

  In Preventing Crime: What

  Works, What Doesn't, What's

- Promising, eds. Lawrence W. Sherman, Denise Gottfredson, Doris MacKenzie, John Eck, Peter Reuter, and Shawn Bushway. Washington, DC: National Institute of Justice, U.S. Department of Justice.
- Sherman, Lawrence W. 1984.

  Experiments in police
  discretion: Scientific boon or
  dangerous knowledge? Law
  and Contemporary Problems
  47: 61–81.
- Sherman, Lawrence W. and
  John E. Eck. 2002. Policing
  for crime prevention. In
  Evidence-Based Crime
  Prevention, eds. Lawrence W.
  Sherman, David P.
  Farrington, Brandon C.
  Welsh, and Doris L.
  MacKenzie. New York:
  Routledge.
- Sherman, Lawrence W. and Dennis P. Rogan. 1995a.
  Deterrent effects of police raids on crack houses: A randomized controlled experiment. *Justice Quarterly* 12: 755–782.
- Sherman, Lawrence W. and Dennis P. Rogan. 1995b.
  Effects of gun seizures on gun violence: 'Hot spots' patrol in Kansas City. *Justice Quarterly* 12: 673–694.
- Sherman, Lawrence W. and David Weisburd. 1995. General deterrent effects of police patrol in crime hot spots: A randomized controlled trial. *Justice Quarterly* 12: 625–648.

- Weisburd, David. 2008. *Place-Based Policing*. Ideas in American Policing Series. Washington, DC: Police Foundation. Available online at http://www.police foundation.org/pdf/placebasedpolicing.pdf.
- Weisburd, David and Peter
  Neyroud. Forthcoming.
  Policing and scientific
  evidence: Toward a new
  paradigm. Harvard/National
  Institute of Justice Executive
  Session on Policing and
  Public Safety.
- Weisburd, David and Anthony A.
  Braga (eds.). 2006. Police
  Innovation: Contrasting
  Perspectives. New York:
  Cambridge University Press.
- Weisburd, David and Cynthia Lum. 2005. The diffusion of computerized crime mapping in policing: Linking research and practice. *Police Practice and Research: An International Journal* 6: 419–434.

- Weisburd, David and John E. Eck. 2004. What can police do to reduce crime, disorder and fear? The Annals of the American Academy of Political and Social Science 593: 42-65.
- Weisburd, David and Lorraine Green. 1995. Policing drug hot spots: The Jersey City DMA experiment. *Justice Quarterly* 12: 711–736.
- Weisburd, David, Cynthia Lum, and Anthony Petrosino.
  2001. Does research design affect study outcomes? The Annals of the American Academy of Political and Social Science 578: 50–70.
- Weisburd, David, Cody W. Telep, Joshua C. Hinkle, and John E. Eck. 2008. Effects of problem oriented policing on crime and disorder. Campbell Systematic Reviews 2008:14, DOI:10.4073/csr.2008:14. Available online at http://db.c2admin.org/doc-pdf/Weisburd\_POP\_review.pdf.

- Weisburd, David, Stephen D.
  Mastrofski, Ann M. McNally,
  Rosann Greenspan, and
  James J. Willis. 2003.
  Reforming to preserve:
  Compstat and strategic
  problem solving in American
  policing. *Criminology and Public Policy* 2: 421–456.
- Willis, James J., Stephen D.
  Mastrofski, and David
  Weisburd. 2003. Compstat in
  Practice: An In-Depth
  Analysis of Three Cities.
  Washington, DC: Police
  Foundation. Available online
  at http://www.police
  foundation.org/pdf/
  compstatinpractice.pdf.
- Willis, James J., Stephen D.

  Mastrofski, and David
  Weisburd. 2007. Making
  sense of Compstat: A theorybased analysis of change in
  three police departments. Law
  & Society Review 42: 147–
  188.

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