

❏ RECEPTIVITY TO RESEARCH IN POLICING

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❏ Abstract

Evidence-based policing—using research and scientific processes to inform police decisions—is a complex approach to policing that involves various challenges. One primary difficulty is how research can be translated into digestible and familiar forms for practitioners. A central part of successful translation is the receptivity of decisionmakers to research as well as how research is presented and packaged to increase receptivity. In this article we first discuss the complexity of evidence-based policing, highlighting the much-lamented gap between research and practice. We review research from other disciplines and also in policing about what contributes to research being better received and used by practitioners. We then describe our own receptivity survey, offering preliminary findings about the receptivity of officers to research, researchers, and tactics influenced by research. Finally, we conclude with examples of the types of efforts practitioners and researchers can engage in that might improve receptivity to research. Specifically, we discuss the Evidence-Based Policing Matrix as a research translation tool, as well as multiple demonstrations conducted by the authors that focus on institutionalizing the use of research into daily police activities.

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In his 1998 *Ideas in American Policing* lecture for the Police Foundation, Lawrence Sherman stated that “police practices should be based on scientific evidence about what works best” (Sherman, 1998, p. 2). Sherman described two dimensions of a research orientation in policing: the use of information from evaluations of police activities and the application of knowledge arising from an agency’s own internal analysis. He emphasized that the police should use scientifically rigorous evaluations and research in a more direct and central way, arguing that research findings and data analysis should guide police decisions about tactics and strategies.

While this approach seems rational and straightforward, Sherman was not arguing that the road to evidence-based policing is an easy one to follow. Evidence-based policing, like many policing perspectives, involves complexity and nuance. Those who support this approach are far from asserting that researchers, research, or scientific processes can run a police department’s daily operations or resolve law enforcement’s concerns, as some have implied (e.g., Sparrow, 2011). Just as the SARA model (scanning, analysis, response, and assessment) of problem-oriented policing (Eck & Spelman, 1987) cannot be expected to be used for all of the activities in which the police engage, and just as community policing is hampered by political and resource constraints, evidence-based policing also has limitations. Why? Because evidence-based policing is a decisionmaking *perspective*, not a panacea. It is grounded in the idea that policies and practices should be *supported by* scientifically rigorous evidence and analytics; that research is *not ignored*; and that research at least becomes a *part of the conversation* about what to do about reducing crime, increasing legitimacy, and addressing internal problems. These nuances provide flexibility in thinking about the role that research and science should play in policing.

Making research a part of the conversation on policing is complicated by the fact that two entities (the scientist and the practitioner) with different expectations and worldviews are attempting to foster and sustain exchanges with one another in order to trade knowledge, skills, and products. These differences can result in divergent interpretations of that knowledge and, more generally, different philosophies about the role and meaning of science in policing. Scientists and practitioners may also disagree on which outputs best measure police effectiveness (e.g., crime reduction or crime detection), how evaluations should be carried out (e.g., experiments, quasi-experiments, simulations, or before/after designs), or what “good policing” should look like (Mastrofski, Willis, & Revier, 2011). The worlds of the practitioner and the scientist operate on vastly different timelines, with police chiefs believing that they need quick solutions, and academics believing that without adequate deliberation, the quality of the science might be compromised. These many difficulties can sometimes result in either the researcher or the practitioner conceding defeat or simply avoiding the relationship, which then manifests itself as the proverbial gap between research and practice (Lum, 2009; Sherman, 1998, 2011; Weisburd, 2008).

At the same time, some police and research personnel are committed to fostering such conversation and see the value of public policy and social interventions being informed by science rather than by hunches, best guesses, or even

“best practices” (Lum, 2009). This mutual belief is reflected in a history of police-research partnerships, as well as initiatives at the federal level to fund such partnerships (see the report on this topic by the International Association of Chiefs of Police [IACP], 2004). Recent examples of federal support for these partnerships are the Bureau of Justice Assistance’s *Smart Policing Initiative* (Medaris & Huntoon, 2009) and the National Institute of Justice’s *Building and Enhancing Criminal Justice Researcher-Practitioner Partnerships* solicitation.¹

This interest in reducing the barriers between research and practice is certainly not a new pursuit in modern democratic societies. When Carol Weiss (with Michael Bucuvalas) wrote *Social Science Research and Decision-Making* in 1980, she pointed out that numerous commissions and inquiries by the National Research Council (NRC) and the National Science Foundation had already been undertaken to examine the limited impact of research in the social sciences. And, she wrote, even the most optimistic felt that the “potential of social science research for informing the processes of government ... has not been realized” (p. 9; see also Hirschhorn & Geelan, 2008). In the evaluation discipline since, there has been much debate and discussion over the utilization of research (for a review, see Shulha & Cousins, 1997). Twenty years after her study, Weiss (1998) addressed the American Evaluation Association and again offered cautious optimism. In response to the question posed by the title of her speech, *Have We Learned Anything New About the Use of Evaluation?* she answers, “yes, we have learned some things, but the learnings have come more from applying new constructs and perspectives than from research on evaluation use” (p. 23). Nutley, Walter and Davies (2007) in their excellent work *Using Evidence: How Research Can Inform Public Services* also emphasize the lack of empirical evidence on the various models and conceptualizations of research use.

In policing, concern over the gap between research and practice also seems to be a recurring lament. Bayley (1998) bluntly 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” (pp. 4–5). Mastrofski (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” (p. 6). Weisburd (2008) cited the continued reliance by police on random beat patrol as an example of this gap, given the decades of research on directed patrol and problem solving at hot spots. Lum (2009) continued by noting the lack of research in daily policing, suggesting that better translation of research was needed in order for evidence-based policing to be realized.

It is clear that both researchers and police innovators want research to be useful and are sometimes frustrated by its lack of use. When the NRC’s Committee to Review Research on Police Policy and Practices convened, it concluded that gaps

¹ Grants.gov assignment number - NIJ-2012-3083; NIJ Solicitation number SL000978. Available at: <https://www.ncjrs.gov/pdffiles1/nij/sl000978.pdf>.

in the supply of, and demand for, studies that address the needs of modern policing continue (NRC, 2004). One problem is that it is not clear what these needs are. Further, any determination of what the police may need from research may depend on what people believe the role and impact of science should be in governance more generally (Sherman, 2011). Evidence-based policing, like problem-oriented policing, ultimately suggests an ideology that incorporates science and research in the practice of policing in democratic societies. However, the notion that science should matter is often trumped by the reality that public opinion, political will, or consensus-based opinions about best practices are what should underpin and drive police actions. But public opinion, political will and consensus-based opinions can be problematic and sometimes conflict with democratic values, such as the protection of due process, equality in service quality and delivery, control of bureaucratic discretion and abuse of authority, or fiscal responsibility to effective and accountable practices. Ideological debates aside, even if we start from a reasonable democratic notion that public policy should at least be partially supported by information, facts, and research knowledge, we still must confront the complex process and difficult research-practitioner conversations implied by the term “evidence-based policy” (Lynn, 1987). This process requires not only that both work together to generate the research, but also that they figure out ways to translate and then use it.

In policing, the generation and supply of research is less the problem than the quality of its translation. There is already a large body of research synthesizing the evaluation literature on a variety of policing interventions (see Braga, 2007; Braga & Weisburd, in press; Bennett, Holloway, & Farrington, 2008; Bowers, Johnson, Guerette, Summers, & Poynton, 2011; Davis, Weisburd, & Taylor, 2008; Koper & Mayo-Wilson, 2006; Lum, Koper, & Telep, 2011; Mazerolle, Soole, & Rombouts, 2007; NRC, 2004; Sherman et al., 1997; Sherman, Farrington, Welsh, & MacKenzie, 2002; Weisburd, Telep, Hinkle, & Eck, 2008; Wilson, Weisburd, & McClure, 2011). There are also Web-based reference tools such as the *Evidence-Based Policing Matrix* (Lum, Koper, & Telep, 2009, 2011)² and the Office of Justice Programs’ *CrimeSolutions.gov* that house research in more accessible digital forms. But the translation (and effective use) of the research is another story. Compared to police evaluation research, unveiling the mysteries of evidence translation and knowledge utilization has attracted much less funding and interest, despite the implied significance of these endeavors in the push toward evidence-based policy (Tseng, 2010). And, the principles that have emerged about effective policing practices from decades of evaluation research in policing have yet to be seriously institutionalized into police practice. For example, we know that police can be more effective in crime prevention if they focus on targeting places, not just individuals, if they tailor their response to a specific problem (rather than use a more general approach), and if they are proactive, not reactive (Lum, Koper, & Telep, 2011; Sherman & Eck,

² See <http://gemini.gmu.edu/cebcp/Matrix.html>.

2002; Weisburd & Eck, 2004). However, many of the mainstays of policing tend to be individual-based, reactive, and general in nature. Reiterating Bayley's concern, police research may not have made as much of an impact as some may think.

There is also more to be learned regarding what characteristics of researchers, practitioners, and/or organizations improve receptivity to using scientifically derived knowledge to guide practice decisionmaking. Weiss and Bucuvalas (1980) found research use by decisionmakers to be multidimensional, making the study of knowledge utilization challenging. They hypothesized that research could be used to bring an issue to the attention of decisionmakers; formulate new policies or programs; evaluate the merit of alternatives; improve existing programs; mobilize support for positions; change ways of thinking about an issue; or plan new decision-relevant research (see Weiss & Bucuvalas, 1980, p. 141). They argued that with this list of varied and sometimes ambiguous uses comes potential misuse of research, distorted expectations, obstacles to research use, and other difficulties. Sometimes expectations about the promise of research are unrealistic on both the research and practice sides, or research is taken out of context to criticize either the researcher or the practitioner. Barriers to the use of research can be individual, organizational, or political.

Another challenge is that policing occurs in the context of local, state, and federal politics and is constrained by budgets, unions, and organizational cultures and systems, all of which can make change difficult. For example, in budget crises, civilian researchers and analysts may be cut before sworn positions. Yet analysis is a key component in facilitating change and evidence-based policing. Unions may issue statements about new deployment schemes (e.g., problem-oriented policing, hot spots policing, etc.), arguing that such approaches place officers at unnecessary risk, or require more pay or overtime opportunities. These assertions may not only be uncorroborated by research, but may actually be counterintuitive (i.e., if innovations reduce crime and calls for service, this may reduce risk to officers more generally). Shifting from beat patrol to targeted patrol means that ultimately some neighborhoods that have little to no crime will not be patrolled. This may lead to those communities protesting to their local city council member about not seeing an officer. Or, the organizational culture and system of promotions that focus on rewarding knowledge of procedures and reactivity also help strengthen barriers to using research that promotes proactivity or problem solving. Finally, these factors, systems, and cultures in policing can differ across law enforcement agencies of varying sizes, types, and characteristics, which further muddies our understanding of their impact on evidence-based policing.

Weiss (1998; Weiss & Bucuvalas, 1980) also reminds us that researchers have their own set of problems in this venture to have research evidence become part of the policy conversation. Researchers sometimes simplify issues for purposes of analysis or focus on parts of issues and problems rather than on whole, multifaceted systems (IACP, 2004). This reduction may serve scientific ventures well but may reduce the meaningfulness of scientific knowledge for practitioners. Evaluators and

scientists might overestimate the usefulness of their work and, as Patton (2002) points out, lack humility about their science—humility that could serve them better among practitioners (Weiss, 1988). University and scientific cultures may provide little incentive or training for field research or policy evaluation. Learning how to disseminate research and translate it into meaningful forms is rarely emphasized over learning about the tools of research. Further, in decisions about salary and promotions, the academic world gives researchers little credit for writing articles and reports geared toward practitioner audiences as opposed to scientific ones.

Moreover, officers and researchers may have different philosophies about the role of science in law enforcement, and both sides may struggle to understand what is important to the other (Hirschhorn & Geelan, 2008). Rigorous research projects can be time consuming, and police leaders and practitioners work in a world where immediate decisionmaking is required. Research outcomes are sometimes ambiguous and contradictory, often frustrating police leaders who just want to know whether a new program or intervention “works.” Evidence-based policing is a difficult venture, which unfortunately can lead to practitioners and researchers both losing interest in the other. Relationships, after all, are messy and require hard work.

☒ Receptivity to Research and Analysis: Lessons from Other Fields

Rather than throwing in the towel, we need to better understand what might improve the chances of productive communication between researchers and the police. Perhaps if we could measure and understand characteristics of police researchers, officers, and their respective organizations that enhance or inhibit knowledge generation and use, we then could achieve the goal of closing the research-practice gap. Currently, we know very little about how individual and organizational aspects of criminal justice practice predict or condition receptivity to research knowledge (Tseng, 2010) or how to use such knowledge if we had it. Building this body of empirical knowledge, however, may prove just as important as generating evaluation results.

Although not often focused on policing or criminal justice, theoretical modeling and empirical research on receptivity to and utilization of research does exist (Nuttley et al., 2007; Shulha & Cousins, 1997). In the evaluation science arena, Weiss’s research is groundbreaking (Weiss, 1977, 1979, 1988, 1998; Weiss & Bucuvalas, 1980). In 1980, building on earlier work by Caplan (1976), Caplan, Morrison, and Stambaugh (1975) and Caplan and Barton (1976), she and coauthor Michael Bucuvalas empirically examined receptivity to mental health research by decisionmakers, pushing forward a “sociology of knowledge application” (Weiss & Bucuvalas, 1980, p. 23). They interviewed 255 individuals—decisionmakers in mental health agencies and scientists in research communities—asking them a variety of questions related to their views and use of research. They focused on attributes of research studies, as well as factors that might influence individual receptivity, such as attitudes, education, experience, and personal characteristics.

The findings were illuminating and conflicting at the same time, illustrating the complexity of evidence-based processes (Lynn, 1987; Nutley et al., 2007). They found a general receptivity to, and support of, social science research by decisionmakers, as well as strong levels of knowledge about research. The decisionmakers did see research as useful if it was relevant to their work, was plausible and feasible given their experience, provided explicit guidance, challenged the status quo, and was objective and of high quality. Indeed, the quality of research was the single most significant factor for belief in research usefulness (although the sample likely understood research design issues better than other possible samples). At the same time, Weiss and Bucuvalas found that the same decisionmakers who saw research as useful also felt that actual use was uncommon. Use and receptivity to research was further complicated by an individual's personal beliefs and perceptions of the organization. For example, the study's subjects were more receptive to research, even if it critiqued their organization, as long as it meshed well with their personal beliefs and values. Research that challenged the status quo was actually viewed as valuable by decisionmakers, although the use of research as a change agent was uncommon.

In addition to Weiss's foundational work, others have studied research receptivity empirically, often in the public health or social work sectors. Aarons (2004), also working in the mental health field, developed a survey (the Evidence-Based Practice Attitude Scale) to measure the attitudes of mental health providers toward adopting evidence-based practices. He identified four dimensions of willingness to adopt evidence-based practices: intuitive appeal (e.g., whether the practice makes sense), requirements (e.g., whether the practice is required by a supervisor or law), openness (e.g., whether the provider likes trying new things), and divergence (e.g., whether the practice fits in with usual practices). Further, individual and organizational characteristics are associated with these different dimensions. For example, more highly educated providers were more supportive of evidence-based practices with intuitive appeal.

In the fields within medicine, Lacey (1994) and Wangensteen and colleagues (2011) found that many nurses, like the mental health workers in Weiss and Bucuvalas' sample, had positive attitudes toward research and implementing research findings. Wangensteen and colleagues (2011) found that certain personal characteristics made nurses more positive toward research use, including those having "critical thinking"³ traits and those who more recently graduated from school. However, also like Weiss and Bucuvalas' respondents, the *use* of research findings in practice was low; only 24% of respondents defined themselves as users of research. Guindon and colleagues (2010) found that receptivity toward

³ Wangensteen and colleagues (2011), using the California Critical Thinking Disposition Inventory (CCTDI) subscales, defined critical thinking as truth-seeking, open-mindedness, analyticity, systematicity, critical thinking self-confidence, inquisitiveness, and maturity (p. 2,438).

research by healthcare providers in low- and middle-income countries may be greater if research is generated and published in their own countries. Further, respondents in these places who were more likely to use research were also more likely to use paper-format clinical guidelines, read scientific journals from their countries, and have trust in the research performed in their countries. Internet access was also positively connected to receptivity. In addition, these researchers cited a number of barriers to using research in medical practices (see also Parahoo & Mccaughan, 2001). These included lack of resources, time, or knowledge, as well as cultural obstructions between doctors and nurses and between employees and hospital management.

Practitioners and researchers in the field of social work have also debated the merits of evidence-based practice and policy. Edmond and colleagues (2006) reviewed the literature in this area and highlighted concerns about the barriers to research use, the paucity of evidence, and the meaningfulness of research for practitioners. Their survey of field instructors, like the surveys of practitioners mentioned above, revealed a generally positive outlook toward evidence-based practices. However, the instructors were much less likely to use research in their daily work. Adding to that work, Chagnon and colleagues (2010) examined factors that might predict research application by child protective service employees. Eight elements appeared important to predicting research application in practice among those surveyed:

- collaboration in research knowledge development;
- perceived usefulness of research knowledge;
- perceived efforts by researchers to disseminate research knowledge;
- personal efforts to acquire research knowledge;
- favorable attitudes toward relations with researchers;
- the medium of communication used to obtain research knowledge;
- organizational context; and
- perceived cost of knowledge utilization.

☒ Receptivity to Research and Analysis in Policing

In police scholarship, empirical receptivity research regarding the acceptance and utilization of knowledge is rare. One example comes from Birkeland, Murphy-Graham, and Weiss (2005), who examined why evaluation findings of D.A.R.E. (Drug Abuse Resistance Education) are often ignored by schools (see also Weiss, Murphy-Graham, & Birkeland, 2005). Of the eight schools they studied, six continued to implement D.A.R.E. despite negative evaluation results. The reasons that were given illuminate some of the difficulties of implementing evidence-based policing. Some schools and police officials felt that the evaluations were measuring unrealistic program goals. Others felt that the evaluations overlooked the program's ability to build relationships between police, students, and their families.

Lastly, police and school officials felt that their own personal experiences with D.A.R.E. outweighed any scientific evidence against it.

Palmer (2011) found complexities and contradictions similar to those found by Weiss and Bucuvalas (1980) with regard to the research receptivity of the police. Building on the Lum and Telep receptivity survey described below, Palmer surveyed all officers of inspector and chief inspector rank in the Greater Manchester Police Department in the United Kingdom about their receptivity toward conducting experimental evaluations and using research. Although his response rate was low (32%, $n = 153$ of a population of 467), his findings are still illuminating. Among his participants, officers relied highly on professional experience rather than research to guide decisionmaking. However, officers did not reject the idea that research knowledge and evaluations should have some influence in policing. A majority of chief inspectors read research from the Home Office (67%) or the National Policing Improvement Agency of the United Kingdom (NPIA) (54%). While the lower ranking (but still supervisory) inspectors were less likely to read research from these sources, close to half still did (44% read Home Office reports and 48% NPIA reports). Those officers who were more likely to say that the police had sufficient knowledge without acknowledging research were also those who had the least exposure to scientific research. In other words, the more an officer knew about research, the less he or she believed the police organization had enough information on its own about crime and what to do about it.

Palmer (2011) also homed in on the receptivity of the police to experimental evaluation. The use of the randomized controlled trial is viewed as providing researchers with high levels of confidence in evaluation results (Boruch, Snyder, & DeMoya, 2000; Campbell & Stanley, 1963; Cook, 2003; Farrington & Petrosino, 2001; Sherman, 2003; Weisburd, 2003). However, experiments are also difficult and can be challenging to police practice. Moore (2006), for instance, has argued that there may be practical trade-offs with experiments, including de-valuing experience in light of outcomes. Others cite difficulties in using experiments to examine very complex or citywide policing interventions (see Telep & Weisburd, 2011; Weisburd, Telep, Hinkle, & Eck, 2010). In light of these debates, Palmer's use of experiments to evoke feelings about evidence-based practice is helpful, for it taps into these problems as they manifest in the field. Surveying officers about their views on experimental evaluation focuses their attention on research rigor (a factor Weiss and Bucuvalas found compelling to research believability and acceptance), as well as on the barriers to and risks of the use of research more generally.

To gauge receptivity to experimentation, Palmer posed experiment scenarios to the respondents. He found that the more officers had been exposed to research, the more likely they would be willing to engage in an experimental evaluation. He also found that officers were much less likely to stop a tactic in order to conduct a controlled experiment, but they were still willing to participate in pre- and post- designs, showing at least a general willingness to conduct research. Officers were also more likely to stop a tactic for evaluation if the risk to public safety in

doing so was relatively low. However—and again reflecting the contradictions that Weiss and Bucuvalas (1980) found—the officers he surveyed were more likely to be swayed by personal experience and perceptions of community needs, rather than results of experiments, when deciding whether to *use* certain tactics. Practical reasons for research involvement and use seemed to trump scientific ones, and Palmer emphasized that officer receptivity to research depends on the meaningfulness, cost, and perceived risk of the research, as well as on its alignment with an officer’s own “sense” (see similar assertions by Landry, Amara, & Lamari, 2001).

Overall, the empirical research on the sociology of knowledge application and acquisition is scant in policing and in other fields. However, these types of studies may prove just as useful as research that generates evaluations or reviews that synthesize knowledge. Understanding what makes police officers and their supervisors willing to look at and incorporate scientific knowledge and processes into their decisionmaking may better inform both researchers and practitioners about how to apply the results of evaluations. Further, although the studies reviewed above examine individual receptivity, deciphering how acceptance and use of research occurs at the organizational level—and the structural changes associated with increasing this use—is also an important venture. While there is much theoretical and empirical research on organizational receptivity to change (see, for example, Newton, Graham, McLoughlin, & Moore, 2003; Pettigrew, Ferlie, & McKee, 1992), it is more difficult to find studies that have specifically examined the receptivity of organizations to research. Nonetheless, such knowledge could be helpful to practitioners who are interested in developing strategies to incorporate research into their practices.

☒ Officer Insights about Receptivity

Given the greater emphasis placed on research generation than on receptivity, Lum, Koper, and Telep developed the *Matrix Demonstration Project* (MDP),⁴ which is now funded by the Bureau of Justice Assistance (BJA). The MDP develops, in collaboration with multiple law enforcement agencies, demonstrations and associated tools that show how research use might be institutionalized into daily police practices (academy and field training, management meetings, deployment, etc.). As part of the MDP, the Matrix team developed a “receptivity survey” to gauge officer attitudes, understanding, and use of research.⁵ The survey was also designed so that agencies could compare responses before and after research projects or training on the use of research in practice, and compare themselves with other agencies. For researchers, the survey provides more empirical data to develop theory in this area

⁴ See <http://gemini.gmu.edu/cebcp/MatrixDemo.html>.

⁵ An updated version of the survey can be found at the Matrix Demonstration Project Web site at <http://gemini.gmu.edu/cebcp/matrixdemo/receptivitysurvey.pdf>.

and to test factors contributing to (or inhibiting) the use of research in practice. Here, we present some initial results from our piloting of the receptivity survey in the Sacramento, California, Police Department (SPD) and offer commentary on the insights surveys like this can offer with regard to receptivity of evidence-based practices and research. In SPD, 523 officers from a total force of approximately 700 answered the survey during in-service training.⁶ In the long term, we hope to survey enough officers across multiple agencies to begin to develop benchmarks for understanding receptivity. These benchmarks would be based on the responses of similar departments in terms of size, geographic location, and problems faced.

The survey instrument focuses on themes related to receptivity to evidence-based policing approaches. An important first question was whether or not officers had heard of the term “evidence-based policing,” and if so, how they defined the concept. We then asked a series of questions to better understand what, if any, academic and professional journals and magazines the officer had recently read and the officer’s knowledge of the evidence underlying commonly used interventions in policing. We also assessed officers’ views regarding crime analysis and criminologists working within the department, and how often officers made use of materials from crime analysis. The survey included a series of questions on officers’ views toward innovation, new ideas, working with outsiders (e.g., researchers), and education in policing. Finally, we asked a number of questions about the officer’s background. We show some of the preliminary results here, since combined with previous research, they may prove useful in developing future research questions in research translation, receptivity, and use.

Knowledge of Evidence-Based Policing and Use of Research Resources

Our first set of questions asked officers if they were familiar with the term *evidence-based policing*. *Community policing*, for instance, is a household term in policing with commonly ascribed principles, and we were interested in whether a similar diffusion of the term evidence-based policing had occurred. New approaches and perspectives often rely on the spread of information by leadership and other word-of-mouth systems (Rogers, 2003). While the concepts of “evidence-based” or “research-based” policing and crime policy have become common terminology in the academic world, it seems clear that the term “evidence-based policing” is not as

⁶ The survey was administered by Sergeant Renee Mitchell at the beginning of an in-service training course on crime analysis that was taught to most officers. The survey took 15 to 20 minutes to complete, and officers were told the survey was voluntary and that results would only be shared with their department in aggregate form. Officers were also asked to provide some demographic information (gender, race, age) and departmental information (rank, years of experience), but no efforts were made to link these data to particular officers in order to protect officer confidentiality. We do not have exact response rate data, but Sgt. Mitchell reported only a small proportion of officers refused to take the survey. The survey was administered over a nine-month period beginning in February 2011.

well known in the world of practitioners. Only a quarter of SPD officers had heard of it (24.9%), and we suspect this finding would be common in other agencies.

Along these same lines, we were also interested in officers' general knowledge of police research and the sources of that knowledge. We asked officers what journals or magazines they had read in the past six months, including both academic (e.g., *Criminology*) and professional (e.g., *The Police Chief*) publications. As Table 1 shows, three quarters of the officers had not read any of the seven well-known publications listed in the survey. We also asked whether they had read any information about the effectiveness of particular tactics or strategies and if so, to name the organization that provided it. Officers were much more likely to have read formal or written information provided by their own agency versus information from federal, state, nonprofit, or research organizations (see Table 1). This stands in contrast to Palmer's (2011) sample, which showed a greater level of exposure to research among police in Greater Manchester. This might reflect a general difference in national versus local policing (police agencies in the United Kingdom are all

☒ Table 1

Officers' Responses to Survey Questions Regarding Professional Reading

<i>"In the last SIX months, from which of the following journals or magazines have you read an article or feature?"</i>			<i>"In the last SIX months, have you read any formal or written information provided by the following organizations specifically about the effectiveness of particular tactics or strategies?"</i>		
Source	n	%	Source	n	%
• None of the above ^a	402	76.9%	• Your own police agency	241	46.1%
• Other	73	14.0	• None of the above ^a	236	45.1
• <i>FBI Law Enforcement Bulletin</i>	32	6.1	• Other	38	7.3
• <i>The Police Chief</i>	18	3.4	• COPS Office	22	4.2
• <i>Criminology and Public Policy</i>	5	1.0	• International Association of Chiefs of Police (IACP)	20	3.8
• <i>The Criminologist</i>	4	0.8	• A university	13	2.5
• <i>Criminology</i>	4	0.8	• Police Foundation	10	1.9
• <i>Justice Quarterly</i>	4	0.4	• National Institute of Justice	9	1.7
• <i>Police Quarterly</i>	4	0.8	• Police Executive Research Forum (PERF)	9	1.7
			• BJA	8	1.5
			• Bureau of Justice Statistics	5	1.0
			• Office of Justice Programs	3	0.6
			• A library database	1	0.2

Note. Officers could choose as many answers as were applicable.

^a This item appeared in the survey at the bottom of the list within this table, hence the use of the term "above."

part of a national police force), differences in the knowledge requirements placed on supervisors in the agencies, or differences in the average rank of the respondents in the agencies (which was higher in Greater Manchester). Indeed, in a survey of police chief executives, Rojek, Alpert, and Smith (2012) found more exposure and use of research than discovered here.

Given Weiss and Bucavalas's (1980) and Palmer's (2011) findings and the organizational literature more generally, our findings regarding the source of knowledge that officers rely upon are not surprising. Practitioners tend to get their information from their organization and from each other, not from other sources (academic or otherwise) unless required by their jobs or positions. This emphasizes the importance of researchers and police leaders using existing mechanisms of communication within the organization to disseminate information, such as discourse by official, unofficial, and opinion leaders, as well as organizational systems of information dissemination. Using these existing systems may help information to be better disseminated and received.

It is also important to consider the form of information disseminated. While it may not be realistic to think a sizable number of officers will regularly read academic journals, they may read summary information from relevant studies. Each study included in the Evidence-Based Policing Matrix, for example, has a Web page with the study's abstract and some brief information on the overall findings. Additionally, the Center for Evidence-Based Crime Policy has put together a series of one-page research summaries⁷ highlighting key findings and policy implications of a number of studies in policing. Combining these easy-to-digest forms of information with existing communication systems could be one means to better highlight research findings for officers.

Knowledge of Research Findings on Effective Practices

To further gauge officer knowledge and impact of existing policing research, we asked officers about the effectiveness of a variety of police strategies that have already been researched and evaluated. We felt this would be more useful than asking officers more directly: "Do you use research?" Research use may be subconscious, and activities the police engage in may indeed be supported by research, even if not obvious. Thus, we instead gave officers a series of common police tactics, and then for each we asked them to answer whether the tactic was "very effective," "effective," "somewhat effective," or "not effective." They could also choose, "I have not heard of this tactic." We asked about 14 different tactics (Question 5 of the survey instrument). Again, while the full results will be reported after other agencies take this survey, we highlight a few results here.

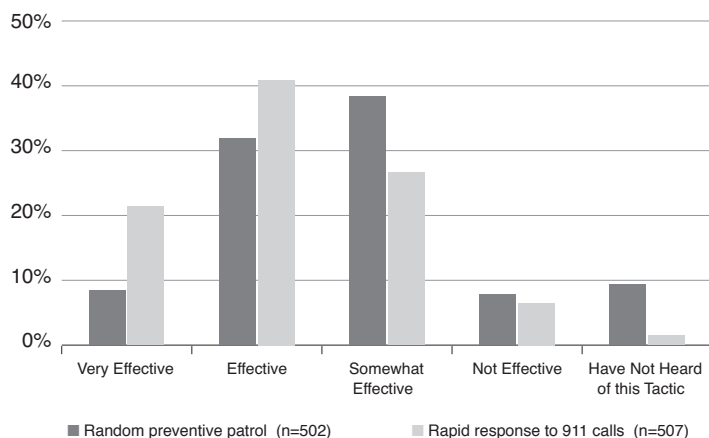
The survey results revealed that traditional beliefs about the effectiveness of random preventive patrol, as well as rapid response to 911 calls still persist. Only 7.8% of officers thought random preventive patrol was ineffective (see Figure 1).

⁷ See <http://gemini.gmu.edu/cebcp/OnePageBriefs.html>.

Of course, agencies may vary widely on these beliefs depending on size, leadership orientation, and past training. Further, while research has shown that rapid response to 911 calls has little effect on crime (e.g., see review in Sherman & Eck, 2002), Sacramento officers attributed even greater crime control effectiveness to this practice than to random patrol (see Figure 1); indeed, a majority of officers in Sacramento (62.3%) believe rapid response is either very effective or effective.

Figure 1

Officers' Responses to Question of Whether Random Preventive Patrol and Rapid Response to 911 Calls Are Effective for Reducing Crime and Disorder



Further, when we asked officers specifically about directed patrol (also known as hot spots policing), only 19.2% of officers responded that the tactic was effective or very effective, and 27.9% responded that hot spots policing is ineffective (see Figure 2). This finding was especially interesting for two reasons. First, the police department had just internally undertaken a highly publicized experimental evaluation on hot spots, which showed that the intervention significantly reduced crime (Telep, Mitchell, & Weisburd, in progress).⁸ Secondly, a large body of research has indicated that (1) directing officers to crime hot spots so they can implement problem-solving patrols and (2) providing greater visibility in these high-crime areas are more effective than traditional or “random” preventive beat patrol (see

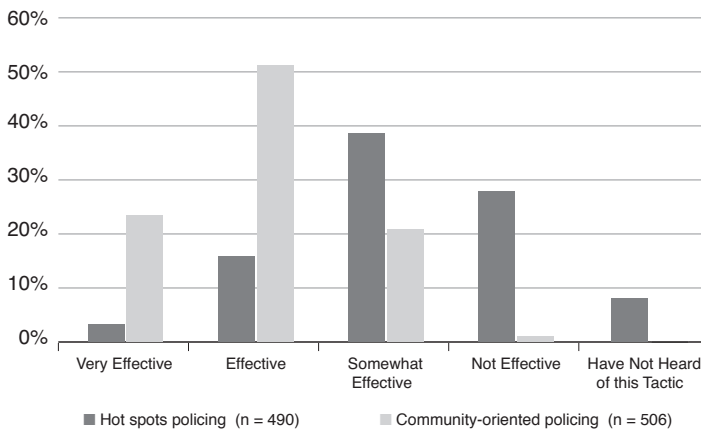
⁸ This evaluation was entirely conducted and funded internally, and developed and led by Sgt. Renee Mitchell of the Sacramento Police Department with consultation from the Center for Evidence-Based Crime Policy. The results of the experiment were covered by several media outlets, including the *Sacramento Bee* (see <http://blogs.sacbee.com/crime/archives/2011/10/sacramento-police-hot-spot-study-shows-focus-the-key.html>) and the local Fox affiliate (see <http://www.fox40.com/news/headlines/ktxl-sacramento-police-hot-spot-policing-new-strategy-for-reducing-hot-spot-crime-20111004,0,7921680.story>). However, since the experiment was not completed until May 2011, some officers took the survey before the final results were available.

reviews by Braga, 2007; Lum, Koper, & Telep, 2011; NRC, 2004; Sherman & Eck, 2002; Weisburd & Eck, 2004). A variety of randomized controlled experiments support this notion (e.g., Braga & Bond, 2008; Braga et al., 1999; Sherman & Weisburd, 1995; Taylor, Koper, & Woods, 2011; also see the compilation of these experiments in Lum, Koper, & Telep, 2011). At the basic level, officers and law enforcement agencies that focus some of their attention on geographic concentrations of crime (whether they call this hot spots, predictive policing, intelligence-led policing, or even community-oriented policing) would show they were more in tune with an evidence-based approach (Weisburd, 2008). Despite this, there appears to be a belief that these approaches are not effective.

In contrast, community-oriented policing—a well-known and common police innovation but one for which the evidence on crime-control effectiveness is limited and vague (see Sherman & Eck, 2002; Weisburd & Eck, 2004; Weisburd, Bennett, Gill, Telep, & Vitter, in progress)—was believed by 74.7% of officers to be “very effective” or “effective” in controlling crime (Figure 2). Also interesting was the fact that while 8.0% of officers had not heard of hot spots policing, not a single officer responded that he or she had not heard of community-oriented policing.

Figure 2

Officers’ Responses to Question of Whether Hot Spots Policing and Community-Oriented Policing Are Effective for Reducing Crime and Disorder



Why were these officers’ views so inconsistent with research on these strategies? While we cannot generalize about all officers, given that *these* officers are generally unaware of research findings, their beliefs about the effectiveness of innovations like hot spots policing, predictive policing, or community-oriented policing might depend on how interventions are discussed informally and presented to officers. Officers may be asked by senior leadership to engage in new tactics for the purposes of research evaluation or accountability for COMPSTAT meetings, and because of that they may view such orders with disdain or suspicion. Or, even

when officers are aware of research, perhaps they remain unconvinced of the more global effectiveness of certain approaches, given that their daily experiences are so individualized and case-by-case. Perhaps another explanation is that officers may resent the loss of discretion that occurs in more targeted deployment strategies like hot spots policing. In terms of community policing, while our question asked specifically about crime control effectiveness, it could be the case that officers were answering in terms of other potential benefits of community policing, like increasing citizen satisfaction or increased perceptions of legitimacy. These outcomes are more consistent with the research evidence (see Weisburd, Bennett, Gill, Telep, & Vitter, in progress) and do have some potential to impact crime indirectly (e.g. see Sherman & Eck, 2002; Telep & Weisburd, 2011).

Even though hot spots policing shows great promise, officers' assertion that it is "not effective" may reflect displeasure toward the recent experiment that the agency had conducted on hot spots. Anecdotal accounts of that experiment indicated that some officers resisted or resented changes in their routines. Their reaction may explain some findings, but also provides important lessons in transitioning evidence-based activities from ad-hoc studies to regular deployment. Thus, not only are the mechanism of dissemination and the translation of information important to officer receptivity of research knowledge, but the context of the introduction of the information is also key. It could also be the case that officers remain concerned that hot spots interventions will simply displace crime to other places nearby (i.e., just push crime around the corner). We did not ask directly about this on our survey, but this was an issue raised by SPD officers during the hot spots experiment. This is another instance where officers' views could potentially be altered by greater familiarity with research, which generally shows little or no displacement resulting from hot spots interventions (see Braga, 2007).

Interestingly, 85.7% of SPD officers felt problem-oriented policing (POP) was either effective or very effective, which is consistent with research showing the effectiveness of this strategy (NRC, 2004; Weisburd et al., 2010). It is not clear from our survey data why officers are so much more amenable to POP than hot spots policing, given that they can have substantial overlap in practice, and given that POP would require an even greater level of effort and evaluation. It could be because of more familiarity (and potentially more personal success) with problem solving. On the other hand, the problem-solving process may be much less familiar to officers than targeted patrol and crackdowns.⁹ Whatever the reason, this raises the intriguing notion that POP might be an effective vehicle for institutionalizing the use of research, given that POP involves research assessment, data analysis, and the evaluation of interventions as part of the well-known SARA model (Eck & Spelman, 1987).

⁹ One reviewer of this article made an interesting suggestion here that is worth mentioning: He/she stated that "it might be an important finding that police might be more responsive to modifications to existing practices, rather than to wholesale changes in the way they conduct their work." The question for debate and deliberation is which approach—problem solving or hot spots policing—is closer to traditional policing.

Receptivity Toward Researchers and Analysts

We also gauged officer receptivity to researchers, analysts, and the products they create. Reservations and misgivings between researchers, analysts, and practitioners are not unusual in anecdotes about police research. However, these reactions likely vary among police agencies and are tempered by the agencies' and officers' experiences with researchers and their own beliefs about education (Palmer, 2011). To gauge this dimension of receptivity, we asked officers a series of questions about how they felt about researchers inside and external to their agency. Overall, responses reflected some optimism and some pessimism toward researchers by these officers. More feel analysts and researchers are integral to day-to-day work than not (25.0% versus 16.4%). We also found that over 71% of officers find research regarding police tactics to be somewhat (50.3%) or very (21.0%) useful.

However, SPD officers seemed to have lukewarm feelings about the usefulness of products generated by crime analysts and researchers, as Table 2 indicates. The most popular response category was that crime analysts seem to generate a lot of statistics that are "useful mostly to high command." While other receptivity surveys in different arenas (e.g., nursing, mental health, medical fields) showed more positive feelings toward research than seen in policing, these findings are nonetheless somewhat encouraging.¹⁰

☒ Table 2

Officers' Responses to Survey Question Regarding Their Views of Researchers

"Which best describes your view about crime analysts, statisticians, or other researchers who work in a police department?" (n = 490)

Response	n	%
• They seem to generate a lot of statistics that are useful mostly to high command.	203	38.8%
• They are/should be an integral part of day-to-day field operations.	131	25.0
• They don't seem to be a very integral part of the daily work of officers and supervisors.	86	16.4
• They are a very specialized unit who work on very specific problems.	37	7.1
• They are usually called upon on an ad-hoc, when-needed basis.	27	5.2
• I do not know if these individuals exist in my agency.	6	1.1

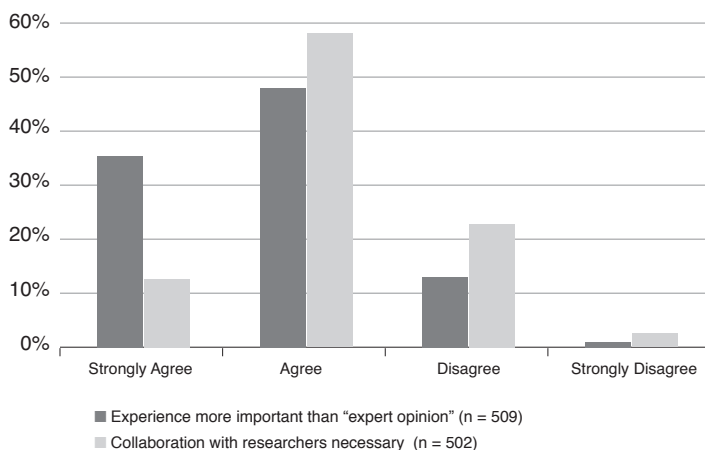
¹⁰ One reviewer of this article asked whether we had thoughts about the receptivity of civilian versus sworn analysts. While our survey did not gauge this, the study authors have informally observed the analyst-officer relationship in many agencies since the widespread diffusion of analysis and crime mapping in the early 1990s. Anecdotally, it seems that the sworn/civilian status matters less to officers than the function assigned to that officer. Sworn officers who become analysts may also be held in greater disdain, especially when analysis is linked to managerial processes like COMPSTAT, which other officers may view negatively because they are seen as accountability systems. While our survey in Sacramento was only of sworn officers, we plan to survey both sworn and civilian employees in other agencies, which should shed more light on this issue.

Similar to what Palmer found in Greater Manchester, SPD officers greatly value experience over expert opinion. More than four fifths (83.4%) of respondents felt their own experience, rather than “expert opinion” was key to determining the most effective strategies to use (Figure 3). However, this finding may not necessarily be contrary to the belief that research and researchers can play a role in law enforcement agencies. Experience is undoubtedly shaped and created by the mandates, opportunities, and environment presented to officers by their agencies in the form of their work assignments and mission. What officers believe to be their experience, to which they attach great importance, is perhaps “a collection of loose and non-systematic combinations of memories that emerge from [reactive and procedural] routines” (Lum, 2009, p.12). Thus, U.S. police are not fated to their current “experience” that is created by a reactive, procedures-based, case-by-case, rapid response perspective. We already know from lessons learned when community policing was introduced into policing that agencies and officers can (and do) alter their approach and worldview.

We are also not certain to what extent officers correlate “experts” with “researchers”; they might see them as two separate groups of people. For example, when we asked whether officers would be willing to take the initiative to approach an outside researcher to help with evaluating a policing tactic, only a third of officers (31.2%) said that they would be unwilling. Additionally, 70.7% of officers either agreed or strongly agreed that collaboration with researchers is necessary for a police agency to improve its ability to reduce crime (Figure 3). These findings

Figure 3

Officers’ Level of Agreement to the Statements, “Experience Is More Important than ‘Expert Opinion’ in Determining ‘What Works’ in Policing” and “Collaboration with Researchers Is Necessary for a Police Agency to Improve Its Ability to Reduce Crime.”



suggest an important lesson for researchers working with police agencies. The professional experience of officers should not be ignored in undertaking evaluation research not only because officers likely have valuable insights that will improve the overall project, but also because officers will likely be more willing to cooperate with researchers who recognize and appreciate the value of officer knowledge and experience (see Weiss, Murphy-Graham, Petrosino, & Gandhi, 2008 for an example of the problems that can result from not appreciating the professional judgment of practitioners).

Willingness to Engage in Research

We also asked officers questions to gauge their innovativeness and openness to trying new tactics, including carrying out evaluations of tactics, even if it meant stopping their existing activities. Here, like Weiss and Bucuvalas (1980), we discovered interesting contradictions that seem to indicate two dimensions of receptivity to innovation and research. Nearly all officers (94.1%) were willing to try new tactics and ideas, and close to two thirds (64.6%) felt that SPD uses a mix of innovative and more traditional tactics (although, 22.4% of officers viewed the department's tactics as primarily traditional). However, *how* these new ideas are presented to them may matter in terms of their receptivity. There were 75.1% of officers who agreed or strongly agreed that when a new idea was presented by top commanders, it was usually a fad and that things would eventually return to normal. This nuance may reflect a cultural resistance to command (Bayley, 1994) rather than a true resistance toward doing something new or different.

High-quality research evaluation often requires experimentation and may involve the police stopping their existing tactics or starting up new ones for some people or places and not others. In the SPD sample, 47.0% were somewhat willing and 27.2% were quite willing to do this, with a smaller percentage (8.8%) being very willing to stop a tactic to see if a problem gets worse. Compared to their British counterparts in Palmer's study, officers in Sacramento were more willing to stop a tactic for purposes of evaluation, even though they had less knowledge of and exposure to research. We also asked officers whether they would be willing to implement a small, place-based, randomized experiment by randomly selecting 20 areas where a problem occurs and using a coin flip to assign 10 to a treatment group that receives the tactic and 10 to a control group that does not. Just over a quarter of officers (27.5%) responded that they were unwilling to do this, while just over one third (35.0%) were somewhat willing. About 36.0% of officers were either quite willing or very willing to try this method to evaluate a tactic (see Figure 4). And, like Palmer's officers, when SPD officers were asked whether they were willing to implement what is typically called a before/after design for evaluating a tactic, more than 62.0% of officers were quite willing or very willing to do so. The greater willingness to use this less rigorous evaluation tactic is clearly obvious in Figure 4. It might be expected that officers are more

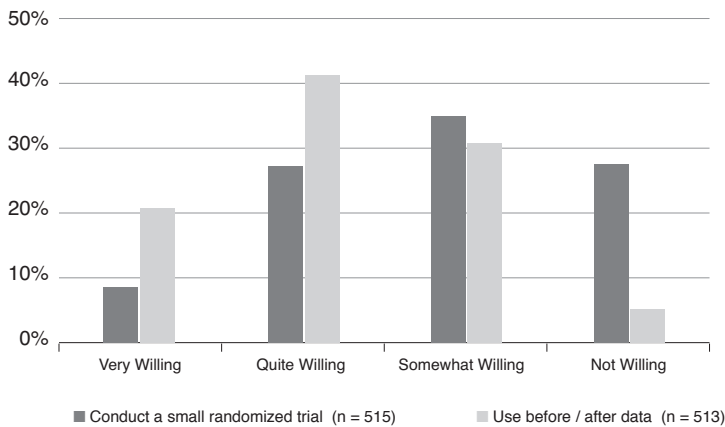
open to evaluations that are less disruptive to daily operations, even though the lower internal validity of such designs make the results less believable than those from a randomized trial.

Figure 4

Officers' Level of Willingness to Test Effectiveness of Two Tactics

“Find the Top 20 Areas Where this Problem Exists and Toss a Coin to Assign 10 Areas to Have the Tactic and 10 Areas Not to Receive the Tactic and Compare”

“Use Data Before the Police Implemented the Tactic and Compare It to Data from After the Tactic Was Up and Running” in Order to Test Whether a Particular Tactic the Police Are Currently Using Was Effective.



Digestible Research

The findings from previous studies, as well as our survey of Sacramento officers, tells researchers that we will have to try harder and be more creative if we want those in the trenches of everyday criminal justice practice to pay attention to our efforts. The beliefs that science and reason are the solid foundations on which modern democracy is built or that the main priority of the police is to reduce crime through effective, evidence-based practices are only idealistic fantasies if we cannot show that using research, analysis, and science is possible, beneficial, cost-effective, and community-oriented. Of course, there are many excellent examples of positive and mutually respectful police-researcher relationships, especially between seasoned researchers and high-ranking police officials. But while many different types of practitioners—police officers, nurses, doctors, social workers, and teachers—respect research, *using* the information, especially at the level of the rank and file, is an entirely different matter. If officers in other agencies are like those we surveyed, they may rarely seek outside sources of information, and primarily rely on

knowledge dissemination from within their own agency. Even the belief that professional magazines like *The Police Chief* are more widely read than other sources of research may only be true at the highest levels of command. These commanders themselves may also face similar difficulties in translating their research-influenced ideas into daily practice. Further, officers continue to believe in the efficacy of long-standing traditional approaches to policing, even though many “standard model” tactics have long been shown to be ineffective (see Weisburd & Eck, 2004). They are less informed about research on the effectiveness of practices than we think; indeed, the findings related to officer views about hot spots policing in this study emphasize that the strong research knowledge regarding hot spots policing (NRC, 2004) has not necessarily reached (or convinced) a wide audience.

Additionally, the deliverers of the research—crime analysts and researchers inside or external to an agency—are still viewed cautiously. While it may be clear to some that crime analysis is incredibly important to policing, and while the SARA problem-oriented policing model directly requires analysis and assessment for problem solving, officers question the role of researchers, analysts, and experts in their daily work. SPD officers are likely similar to officers in many other agencies and to other professionals across different social services. In this and other studies, experience is placed on a much higher pedestal than analytic or scientific knowledge, which may be viewed with suspicion. Yet, at the same time, officers show a willingness to try new things, to take the risks that evaluation might pose, and to work with outsiders. Weiss and Bucuvalas (1980) also saw a similar nuance in their study. Decisionmakers were willing to challenge the status quo with new ideas as long as ideas did not go against their personal beliefs or daily routines. Their and our findings indicate an interesting organizational paradox about practitioners’ receptivity toward research.

This organizational paradox regarding research receptivity should not be seen as a barrier to evidence-based crime policy but rather an opportunity to harness a force that could improve receptivity to research. Police researchers and police officers (and not just top commanders) need to work together to make research more digestible and ready for the consumer—law enforcement officers. Agencies that value research, evaluation, and analysis have to build these ideas into the officer’s everyday experience. At a minimum, the few empirical findings in this area suggest that we have to rethink how scientists and their practitioner partners not only generate research but package both research processes and outputs for organizations and their employees. Research and researchers may be better received in police agencies if familiar and internal mechanisms of information dissemination are used to present their findings. Further, it appears officers do not reject new ideas up front, but they may be highly suspicious if they look like fads and if they come from the high command or outside experts. Research ideas that arise from officers themselves, in which they have a stake and are part of a team effort, as well as outputs and processes that look and feel like regular policing, may fare much better (see Toch, Grant, & Galvin, 1975).

But how can we translate research into concepts, deployments, procedures, operations, strategies, and tactics that look and feel like everyday police activities? A wide variety of ideas might be tried, some of which might directly attempt to use or generate research and others that might be more creative. Nutley et al. (2007) delineate different models by which research use occurs, and they developed their own taxonomy of research use (pp. 129-130). In that taxonomy, they highlight five key mechanisms to improving research use: dissemination, interaction, social influence, facilitation, and incentives and reinforcement. Nutley et al. suggest that these mechanisms often overlap in practice. Reflecting many of their ideas, we give two examples in policing, one focusing on the translation of research into practice and the other discussing the institutionalization of research into practice.

Translating Research: The Evidence-Based Policing Matrix

One way to translate research into practice is to create tools that convert abstract ideas and multiple research findings into easy-to-understand principles that can be applied to practice. But dissemination, as Nutley et al. (2007) point out, is often viewed linearly and one-way. An alternative might consider conversion tools that satisfy the demand for research, rather than its supply. The Evidence-Based Policing Matrix is an example of how this might be accomplished (and also of the challenges in doing so). The Matrix was initially developed by Lum, Koper, and Telep as an unfunded project (see Lum, 2009; Lum & Koper, 2011; Lum, Koper & Telep, 2009, 2011).¹¹ The goal of the Matrix creators was to develop a translation tool that would make the large body of police crime prevention research more usable and accessible. All evaluations of police-related crime prevention/control interventions that are at least “moderately rigorous”¹² are included in the Matrix. They are individually mapped into a three-dimensional visualization intended to reveal generalizations across the body of research in order to assist police in developing crime prevention strategies that are evidence-based.

The translation occurs from placing dots (each representing an evaluation and its findings) into the three-dimensional matrix and then drawing generalizations from the visual clusters within the Matrix. Each evaluation is classified according to three very common dimensions of crime prevention strategies that make up the Matrix’s x-, y-, and z-axes, as shown in Figure 5. The x-axis comprises the type and scope of the target of an intervention—from an individual or group of individuals to

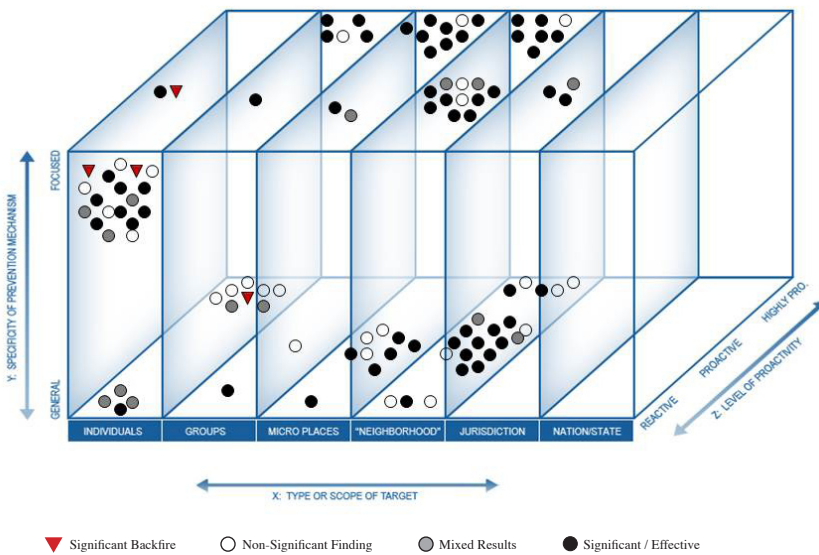
¹¹ After the Matrix was developed, the Bureau of Justice Assistance funded its transition into a Web-based tool and ultimately into a demonstration project. But at the start, the Matrix did not fit into regular grant solicitations, which either called for evaluations or primary research.

¹² The minimum threshold for a study’s inclusion in the Matrix is that at least one comparison group (or area) that did not receive the intervention was included in the evaluation. Additionally, the study had to meet at least one of the following criteria: (1) comparison group was well matched, (2) use of multivariate controls, or (3) use of rigorous time series analysis (Lum, Koper, & Telep, 2011)

micro places, neighborhoods, and even larger geographic aggregations. The y-axis indicates the level of specificity of an intervention and its goals, from general to focused (see Weisburd & Eck, 2004). This axis should be viewed as a continuum, since many tactics share both general and specific deterrent goals (see Sherman, 1990), and divisions can be murky. Finally, the z-axis represents the level of proactivity of an intervention, ranging from reactive to proactive to highly proactive. Using this Matrix, the authors mapped all¹³ moderately rigorous to highly rigorous research studies on police crime control interventions according to how they might be characterized on these three dimensions, as shown in Figure 5.

Figure 5

The Evidence-Based Policing Matrix



As a result of this process, clusters of studies (and their findings) illustrate the distribution and concentration of evaluations and effective practices within areas of the Matrix that represent intersections of dimensions. Each area reflects the combination of three factors or dimensions: the description of the intervention evaluated in terms of the target, the specificity of the prevention mechanism, and the extent to which the program was proactive. For example, notice the cluster of black dots in the portion of the Matrix in which “micro-places,” “highly proactive,” and “focused” intersect. These seven black dots and one white dot reflect seven evaluated interventions that showed significant positive effects of an

¹³ At the time of writing the Matrix contained 104 studies.

intervention, and one that did not. What this suggests is that, overall, interventions targeted at small geographic units that are more specific and proactive tend to fare well with regard to crime prevention. A number of problem-oriented, hot spots policing approaches fit this bill, and these general principles could help guide the creation of new tactics in a specific agency.

Thus, using the Matrix, police might be able to better glean generalizations from a large body of research about what intersecting dimensions tend to characterize effective interventions. Agencies could also use the Matrix by mapping existing strategies against studies already mapped to quickly assess strategies and tactics (as done by Veigas, 2011; see also Lum & Koper, 2011; Lum, Koper, & Telep, 2011). Or, principles from the Matrix might be used to guide the development of jurisdiction-specific interventions for specific problems, or even be used to map deployment portfolios of those looking to be promoted (e.g., from squad sergeant to shift lieutenant). Hence, at least in theory, research knowledge could be translated for potential applications through such a translation tool.

Institutionalizing Research: The Matrix Demonstration Project

One way that individuals in an agency might change their attitudes towards research, researchers, and research-supported interventions may be to make fundamental organizational changes in the everyday functions of the agency that create more receptivity to research. Institutionalizing research into practice reflects many of the interaction, social influence, facilitation, and incentives and reinforcement mechanisms discussed by Nutley et al. Institutionalization also suggests structural changes to processes that the agency regularly employs, which may help to adjust and transform habits that reflect evidence-based approaches. As mentioned previously, the authors have begun the Matrix Demonstration Project (MDP) which attempts to perform this task. The goal of this project is for researchers and practitioners to interact to develop specific demonstrations in agencies that show how research might be more permanently institutionalized into everyday tactics, activities, routines, standard operating procedures, organizational practices and cultures in ways that are easily digestible and familiar. This is slightly different than (but akin to) Weiss's (1998) suggestion to involve practitioners in evaluations to increase the use of findings from them. In the MDP, police personnel take ownership (see Weisburd & Neyroud, 2011) of figuring out how to use research already generated.

Three guiding principles surround the MDP. First, projects must focus on institutionalizing research and analytic processes into the *regular* practices of policing through a more permanent change in infrastructure or operations. The MDP demonstrations are not ad-hoc deployments or stand-alone evaluations, but are demonstrations and examples that show how the processes or outputs of research might be more permanently institutionalized. Second, each project must be anchored by good-quality research evidence on police practices. Research anchors can be of many different types, including research on police interventions, officer

discretion, departmental practices and policies, use of force, or other internal or external issues that law enforcement agencies face. But the visibility of the research used need not be obvious. For example, a more visible use of research might be the replication of an intervention shown to be successful in a research study. However, a more inconspicuous approach might be adjusting field training activities to better reflect broad principles from the Matrix, or to reflect the spirit of a research finding (i.e., proactivity, place-based). The third guiding principle is that each agency will work closely with the MDP team to create a free tool or Web site download so that other agencies can try something similar in their agencies, using the advice provided by the demonstration agencies (rather than the researchers). A few demonstrations might help illustrate the MDP further.

In one demonstration, we are working with agencies to develop the capacity for training academies to have a regular module focused on knowledge derived from research about police practices. However, the knowledge would be delivered in ways that were meaningful to recruits, and the module would be designed to be taught by academy instructors, like the majority of modules. As a part of training on how to correctly make an arrest, for example, recruits might also learn about targeting repeat offenders or focused deterrence strategies. Or, officers learning how to speak with citizens or victims might also learn some of the research about why this is important (i.e., using procedural justice to enhance police legitimacy). Although training seems the easiest way to incorporate research knowledge in policing, such incorporation is far from reality. It would not be surprising to find that most police academies and in-service systems do not incorporate the latest information on the most effective tactics and strategies police can use to reduce crime, increase legitimacy in the community, or reduce problem behaviors within the agency. Academies traditionally teach about police procedures and the law, and they provide physical, firearm, and driver training.

Training also can't be one-size-fits-all. The officer on the street finds different meaning from research and interprets and digests it differently than the police chief, the crime analyst, or the first-line supervisor. Tailoring research to fit the characteristics, expectations, and responsibilities of different types of ranks and units can help make knowledge more digestible.

Further, field training is also an area ripe for modification toward an evidence-based approach. Another demonstration focuses on changing activities in field-training checklists and manuals in order to bring in activities and performance measures that reflect what we know from research (for example, having a SARA exercise as a requirement for completion of field training). This may better help police officers develop their craft.

Another demonstration focuses on using radio/computer-aided dispatch call codes to create proactive habits in officers through their interaction with the dispatch in the daily recording of their activities. In its totality, the research on police effectiveness indicates that proactive, problem-solving, and place-based approaches are the most fruitful approaches to crime prevention (see Lum, Koper, & Telep,

2011). But how do we shift a very reactive police culture to one that better balances proactivity and reactivity orientations? Police may not respond to training on problem-oriented policing or commands calling for “more proactivity.” However, requiring a call code to be used when officers engage in proactive activity during the time they are not answering calls may help to institutionalize this habit, especially if the code is measured against crime-reduction efforts (and then built into accountability systems for officers and first-line supervisors).

Research might also be institutionalized in investigations by taking advantage of the well-understood structures of investigative work, as well as the prestige and culture of detective work. In another demonstration, we developed something called “case of places.” Here, we ask detectives to change their unit of investigation—from a person suspected of a crime to a place suspected to be connected to multiple crimes. The research team is working with one agency to use the same case folder system detectives use to investigate people to investigate places. The requirements in those case folders that detectives must meet when building a case are then converted to place-based “equivalents.” For instance, “suspects” in a traditional case folder might also be “suspects” in a case of place, but the suspect could be a person, a building, a problem or situation, or a routine. In this way, we hope to increase detectives’ receptivity to this evidence-based approach by making procedures (and rewards) similar to traditional investigative work, but with a different unit of investigation. A proactive place-based focus may aid in making detective work less reactive and more effective in terms of crime control (see Braga, Flynn, Kelling, & Cole, 2011).

Yet another demonstration example: A command staff that wants first-line supervisors and officers to move toward more innovative types of policing might build in new knowledge and activity requirements within its existing promotions and accountability systems. This will require not only specialized training on what the research is, where to find it, and how to interpret it, but also a strong effort on the part of researchers to make products that are geared for practice. Along these same lines, in an age where COMPSTAT-like management meetings are a primary way in which agencies are attempting to develop accountability structures, departments might consider experimenting with ways to use such meetings and systems to transfer different types of knowledge to leaders and officers. Such meetings might also be transitioned from pre-planned (and often boring) recitations of statistics by precinct commanders or even one way conversations and question-asking to learning environments in which research and analysis are discussed, debated, and explored. As Weiss ponders:

What they may really want is a forum, a place where program managers, planners, and policymakers can interact with evaluators, researchers and academic experts to discuss their questions, offer their own experience and learn about the state of knowledge in the field. The forum would be a place to negotiate the meanings of available knowledge for their own particular circumstances. (Weiss, 1998, p. 31)

Following this idea, the MDP team is working with an agency to consider how COMPSTAT meetings might be transitioned into more dynamic learning environments. Perhaps research findings disseminated through videos or live feed by other police leaders or researchers could be used to generate lively debate and discussion or on-the-spot strategic or tactical planning. Research findings can help jumpstart discussions and provide a learning environment for commanders who often do not have opportunities for professional development. In other words, the use of more interesting visuals and videos might make COMPSTAT meetings a better forum for receptivity of research to occur.

There are many other organizational transformations that may not at first seem related to evidence-based policing or problem solving but may also help to improve research digestion. This does not mean simply hiring more officers who have more education, which may prove fruitless if organizational structures and cultures of reactivity are stronger than abstract benefits that a previous education might provide. Rather, transformations that may help improve receptivity toward research, evaluation, and analysis include strengthening analytic capabilities by increasing both the number and training of analysts in an agency, making information systems easier to access by all, building outcome measures like crime reduction as opposed to arrests into accountability systems, or creating systems of friendly competition between units and precincts to use analysis and to problem solve. Further, normalizing relationships with outside researchers through memorandums of understanding, regular interaction, and police leaders facilitating good quality interactions is important. Adopting new technologies through a filter of evidence about that technology, rather than the lens of efficiency, politics, or special interests, is also key.

Perhaps one of the most important changes that might improve police receptivity to research and analysis is changing the community's expectations about what the police should and can achieve with regard to crime prevention and high-quality policing. Law enforcement executives and leaders must not only educate their city councils but also help their city councils educate the public about why police are undertaking certain approaches to crime and what types of interventions work (or do not work). As an example, chiefs and city council members may need to write/speak/communicate about evidence-based policies in policing as a way to both reduce crime and efficiently spend public dollars. The public may also need to be educated about what they and the police can do together to increase the fairness and effectiveness of police strategies. Some communities may benefit from better knowledge about why they might not require the extra police patrols needed by other communities. The point is that the police are not fated to a single and unchanging public understanding and opinion about them. The argument that evidence-based policing cannot survive because of "politics" implies such a fate, and that local public officials are incapable of educating their public or reshaping expectations.

Of course, all of these ideas (and many efforts by others to institutionalize research into practice) themselves need rigorous testing; some approaches to

institutionalizing research into daily practice may work better than others and under different conditions and situations. And, while the efforts to improve receptivity discussed here focus on police agencies, receptivity also requires effort by researchers as well—a subject that is scarcely addressed here but is equally as compelling. For example, how can researchers improve the way they approach and implement evaluations and experiments in order to simultaneously build support for both science and the results of the evaluation (whatever they may be)? In what ways can academic promotion and tenure requirements be adjusted to create greater incentives for researchers to care about the receptivity of their research? Can we test certain types of dissemination mechanisms (i.e., the Policing Matrix, *CrimeSolutions.gov*, Campbell Collaboration systematic review summaries,¹⁴ professional education) with regard to efficacy and effectiveness of research dissemination? What types of organizational structures are best exploited to convert research into tangible and operational forms? Does the way researchers conduct their projects have a greater impact on the receptivity to research than the findings from the research, no matter how compelling? How can we improve and hone the craft of practice-oriented research? Although formal training may help (see IACP, 2004), this only works if incentive structures for both researchers and practitioners are attached to that acquisition of knowledge.

Translating and applying knowledge for practical use requires a mutual interaction and understanding between both parties (i.e., researchers and practitioners). As Bradley and Nixon (2009) suggest, we should examine more sophisticated, long-term, and complex types of relationships, which may better help us understand collaboration than an examination of more traditional, ad-hoc partnerships. Police-research collaborations are excellently positioned for this type of effort and knowledge generation, as the infrastructure for research-practice relationships is no longer in its infancy. And, in a time of austerity and tight budgets for police departments and universities, leveraging one another to improve practices, shake up traditions and cultures, and provide meaningful experiences to advance both may be just what the doctor ordered.

¹⁴ A list of these summaries is available at <http://gemini.gmu.edu/cebcp/ReviewBriefs.html>.

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