

# Translational Criminology

FALL 2013

Promoting knowledge exchange to shape criminal justice research,  
practice, and policy

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Evidence-Based Policing and Integrity

Translating the Analysis of Patterns into Police Practice: An Application of a New Spatial Point Pattern Test

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## CEBCP Mission Statement

The Center for Evidence-Based Crime Policy (CEBCP), housed within the Department of Criminology, Law and Society at George Mason University, seeks to make scientific research a key component in decisions about crime and justice policies by advancing rigorous studies in criminal justice and criminology through research–practice collaborations and proactively serving as an informational link to practitioners and the policy community. *Translational Criminology* advances this mission by illustrating examples of how research is converted into criminal justice practice.

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*Photos by Evan Cantwell, Alexis Glenn, and Jeffery Egge.*

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WHERE INNOVATION IS TRADITION

## FROM THE EXECUTIVE DIRECTOR

This summer, the Center for Evidence-Based Crime Policy began its sixth year in the Department of Criminology, Law and Society at George Mason University. Over the past five years, we have pushed the envelope in evidence-based crime policy, developing new research in areas such as community partnerships, crime hot spots, and police technology, as well as increasing our knowledge and activities about evidence-translation and knowledge exchange. We have succeeded in publishing the first magazine of its kind on translational criminology and have consistently provided the research and practice communities with free symposia, congressional briefings, tools, and resources.

We certainly had much to celebrate at our most recent symposium and congressional briefing, conducted jointly with our colleagues from the Scottish Institute for Policing Research. Our three-day event brought together more than 250 participants from across the United States and abroad to discuss cutting-edge research in evidence-based policing. Our congressional briefing on police and youth was especially timely, as was our policy meeting at the U.S. Department of Justice with many senior officials from the Office of Justice Programs. Having so many of the top policing scholars, policy makers, and practitioners in one room discussing the future of police research and practice is exactly what the center was created to do. We also celebrated our two Distinguished Achievement Award Winners, Laurie Robinson and Lawrence Sherman, as well as our two Evidence-Based Policing Hall of Fame inductees, Director General José Roberto León Riaño (National Police of Colombia) and Assistant Chief James Whalen (Cincinnati Police Department). These leaders are exemplars in evidence-based crime policy and pave the way for all of us.

But none of this success could have happened without the support of George Mason University and all of you. We are grateful to the Office of the Provost and the College of Humanities and Social Sciences who will be continuing their support of the center for the next three years. These contributions help keep our conferences and resources free and available to all, and they allow us to develop *Translational Criminology*, our congressional briefings, and the countless resources we offer at [www.cebc.org](http://www.cebc.org). We appreciate the university's commitment to evidence-based crime policy, reflected in Mason's new vision—to be a university that generates consequential research. We also deeply appreciate everyone's support over the years, from those of you who regularly attend our events to our distinguished advisory board members who provide us with sage guidance to the many practitioners and researchers who connect with us daily.

But we do not want to rest on our laurels. As we move into our sixth year, we continue to take on challenging projects on both the



supply and demand sides of evidence-based crime policy. We have embarked on numerous grant projects to better understand crime at places, police partnerships addressing juvenile delinquency, the impact of technology on policing, and how research is translated and institutionalized into practice.

For our upcoming symposium in June 2014, we plan to again host national and international scholars and practitioners to help us think outside the box about evaluation and crime prevention. We also intend to take on some difficult issues in the field where research is lacking or where a different perspective is warranted. The features in this issue of *Translational Criminology* reflect our interest in these challenges and include discussions of racial bias, cybercrime, crime analysis, new statistical tools, evidence-based justice systems, and police integrity. And we plan to act on many of the suggestions from our 2013 symposium. We will be thinking about the application of evidence-based approaches in rural and suburban jurisdictions, the continued mismatch between the supply of research and the needs of practitioners, and new ways to support young scholars in their pursuit of these new and exciting ideas.

We look forward to working with all of you to achieve these goals and welcome your suggestions as we move forward together.

Professor David Weisburd  
Executive Director, Center for Evidence-Based Crime Policy



CEBCP's most recent graduate, Cody Telep, now an assistant professor at Arizona State University, getting hooded at the PhD ceremony. Picture taken by Event Photography Group, Grad Images.



# 2013 CEBCP-SIPR Joint Symposium and Congressional Briefing on Evidence-Based Policing



## THEMES

- Using Evidence in Practice
- Policing beyond the City: Research, Analysis, and Performance Measures in Small, Rural, and Suburban Places
- Policing and Vulnerable Populations: Missing Persons, Mentally Ill, and the Homeless
- Evidence-Translation and Knowledge Exchange between Researchers and Practitioners
- Establishing Community Partnerships in Policing
- Improving on Research and Practice for Police Legitimacy
- Using Research in Policing: Why the Focus on Places?
- Congressional Briefing: "Moving beyond Arrest: Research on Policing and Young People"

See our website  
[cebc.org/cebc-sipr-joint-symposium](http://cebc.org/cebc-sipr-joint-symposium)  
for presentations and more details.

"The central goal of the CEBCP as well as the Matrix Demonstration Project [funded by the Bureau of Justice Assistance] is to bring together those in research, practice, and policy to create tangible examples of partnerships, research translation, and evidence-building, as well as to disseminate information through workshops and our symposium. We are so fortunate to have had so many generous experts from both the United States and Scotland give of their time to provide this advanced training and knowledge exchange for these important purposes. Because of their efforts, the symposium, congressional briefing, and policy meetings were a success."

—Cynthia Lum, Director, CEBCP





## Thank You

**The CEBCP would like to thank all our speakers and presenters who helped make this symposium possible:**

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 Cody Telep, George Mason University/CEBCP  
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 James Willis, George Mason University/CJLM  
 Penny Woolnough, Scottish Police Service/SIPR

*"Despite the obvious differences between the United States and Scotland in terms of population size, geographical area, and law enforcement (18,000 local and state agencies in the United States compared with one national police force in Scotland), the challenges around policing are very similar—how to reduce violent crime, how to improve trust and legitimacy, how to protect vulnerable populations, and how to cope with the economic pressures of declining police budgets.... It really was an inspiring few days that have provided the foundations for a long-term and mutually beneficial trans-Atlantic relationship around evidence-based policing. On behalf of the Scottish representatives, I want to thank everyone from CEBCP for making the symposium such a success, and we very much look forward to welcoming you to the next joint symposium to be held in Edinburgh in 2014."*

—Nicholas Fyfe, Director, SIPR

**The CEBCP-SIPR symposium could not have been possible without the help of many friends and colleagues. Thank you for your help and support!**

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# Evidence-Based Policing and Integrity

BY ALEX MURRAY

*Alex Murray is a chief superintendent in the West Midlands (UK) Police. He is responsible for the policing of East Birmingham. He is also the founder and chair of the Society of Evidence Based Policing in the United Kingdom.*

Some iconic events are ingrained in the current narrative and definitions around police integrity. In the United Kingdom, they are Hillsborough and Stephen Lawrence;<sup>1</sup> in the United States, they are perhaps the events that led to the Knapp or Mollen Commissions<sup>2,3</sup> or the beating of Rodney King.<sup>4</sup> For many officers, this view of integrity and the lessons that emerge from these events are unhelpful as most officers are neither blatantly corrupt nor racist and abusive. Often questions of integrity dwell in the gray area of police policy and discretion, where violations of integrity may be subtle, difficult to discern, and not necessarily agreed on.

Because of this, challenges to integrity can occur when officers lack understanding about the impact of their actions or when expectations about what constitutes integrity are not made clear to them by their leaders. This lack of understanding was framed in an alternative view of integrity put forth by Cloud (2007), whose definition is simply stated in the title of his book—*Integrity: The Courage to Meet the Demands of Reality*.

Perhaps this definition is too cliché but consider some examples in the policing arena. How many times have you observed a police leader, when crime rates go down, attribute that reduction to their leadership and policy making? Is this the truth, though, in the *reality* to which Cloud refers? When crime starts to rise, the same leaders become socio-economic commentators blaming austerity, unemployment, weather, or immigration as the culprits. The trouble with this flip-flop is that as soon as we realize the reality but continue to make unfounded, unsubstantiated claims, we move into a space we could label as disingenuous.

Consider another example. Ask yourself, what is it we do at the moment that unknowingly causes harm in the *reality* of people's lives? Petrosino et al. (2010) recently found that in many cases sending young people to prison has a criminogenic effect; that is, it creates *more* victims. How does that sit with the police when the ninth Peelian principle<sup>5</sup> is that the success of the police should be



Alex Murray

measured in the prevention of crime, not solely the detection? What about the evidence that suggests in many cases (particularly if the suspect is unemployed) that a positive arrest policy for misdemeanor domestic violence can cause more harm to the spouse (e.g., Sherman, 1992; Sherman et al., 1992)? Other examples exist throughout criminal justice research about the potential harm interventions can make.

Coming to terms with these realities requires us to rethink what “integrity” means, and evidence-based policing forces us to do so. Evidence-based policing requires that we take a thorough, robust, and analytical approach to police problems, using both results of science and scientific processes to help make decisions. As Sherman (2013) describes, we need to move beyond the three Rs of policing (response, reactive investigations, and random patrol) to the three Ts of policing: targeting problems, high-risk people, and places; testing interventions; and tracking results and delivery of services. We need to use existing research, develop new evidence, apply rigorous scientific methods, and conduct experiments. This sounds simple, but it is far from it. As Lum et al. (2012) state, evidence-based policing also requires us to translate and convert research and research processes into everyday practice and figure out how to make research a part of the conversation of policing. This step requires us to not only apply more tools, such as the Maryland Scale (Sherman et al., 1997), the Evidence-Based Policing Matrix (Lum et al., 2011), Koper's Curve (Koper, 1995), qualitative insights, and systematic reviews, but also to find ways to institutionalize research into practice (Lum and Koper, 2012). In other words, evidence-based policing holds us accountable to reality and redefines integrity to mean that officers must link crime control efforts to outcomes and organizational reforms to objective measures.

How then do we get evidence into practice to achieve this type of integrity? Because there are so many aspects and complexities of evidence-based policing, as a commander, I start with some basic

<sup>1</sup> The flawed murder investigation into a young black male in London. See [en.wikipedia.org/wiki/Stephen\\_Lawrence](http://en.wikipedia.org/wiki/Stephen_Lawrence).

<sup>2</sup> Knapp Commission (1973). *The Knapp Commission Report on Police Corruption*, New York: G. Braziller.

<sup>3</sup> Commission to Investigate Allegations of Police Corruption Procedures of the Police Department (1994). *Commission Report*. New York: City of New York.

<sup>4</sup> Rodney King was an unarmed African American who was beaten by five Los Angeles Police Department officers following a police chase. The beating was captured on video, and the acquittal of the officers in their criminal trial is widely believed to have caused the Los Angeles Riots in 1992.

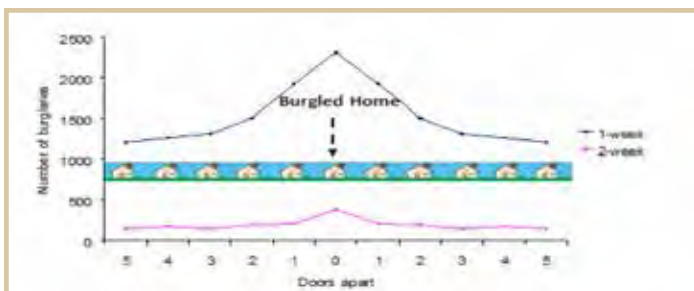
<sup>5</sup> In 1829, Sir Robert Peel, then home secretary of Britain, developed nine principles of policing as part of his efforts to create a modern Metropolitan Police Service through the Metropolitan Police Act of 1829.

steps. One basic rule I apply is making sure I am informed by reading good-quality research and constantly thinking (and challenging my officers to think), how can I apply that? Can I also test what we do, using some basic tenets of good evaluation, such as making sure I use experimental and control conditions, so as to be more certain about the effects of a particular intervention?

Take two examples of this from the West Midlands Police<sup>6</sup> where I serve. The first is known as Operation Turning Point, a project currently in its second year of implementation in Birmingham, a city of two million people. A large body of research indicates that the police and the justice system can't just arrest or imprison our way out of crime. Options such as treatment, restorative justice, or juvenile diversion all have been examined to see whether other approaches are more effective in reducing crime and recidivism. In Turning Point, we want to determine the reality of the situation to see whether alternatives might help. Offenders about to be charged with an eligible offense are randomly allocated to court as usual or to an offender manager who instead writes out a contract with the offender. The contract might include requirements to engage in restorative justice, stay inside, seek treatment, disassociate with codefendants, or meet other conditions. If they break the contract, they are charged; if not, they are free. If Operation Turning Point results in significant reductions in recidivism among those in the program compared with those we simply send on to court, this may have a major impact on how we do business.

The second example focuses on what we should do about burglary victimization. Research by Johnson and Bowers (2004) shows the vulnerability of nearby homes in the immediate aftermath of burglary, a concept called "near-repeats." As Figure 1 shows, not only is the victim's vulnerability increased in the first two weeks, but so is that of his or her neighbors and the neighbors' neighbors. Integrity to our function within an evidence-based perspective not only means we need to react to the call for service and investigate the burglary accordingly, but also address the likelihood of nearby repeat victimizations.

**Figure 1. The risk of burglary and near repeats.**  
(adapted by S. Johnson from Bowers and Johnson, 2005)



To accomplish this, we secured more than £100,000 from the local government to target harden not only victims' houses but the four neighboring houses on either side of the victimized home. Target hardening included the distribution of door and window alarms, fake televisions that shine UV light on the window, and large stickers proclaiming that there was a dog inside. But integrity to police work doesn't stop there. Because money is not only expended, but also scarce, we need to know whether this intervention works and stop, adjust, change, or continue based on evaluation of the intervention. This does not simply mean conducting this in one area and seeing what happens. Rather, through a partnership with Shane Johnson from University College London (UCL), we paired unit areas together based on burglary rates, randomly allocated them in a test and control groups, and created corridors between each area to account for displacement.

For a year, we hardened houses where there had been a burglary in the test areas and responded to burglaries in our usual manner in the control areas. We then had the results analyzed independently by researchers at UCL. Results are still being put together, but at this stage, it appears that the chances of being burgled appear to have been significantly reduced in the test areas.

Other experiments and applications of evidence-based policing are under way. But as already mentioned, a constant strategic agenda of implementing and evaluating evidence-based approaches to achieve this new integrity is complex and requires, as with many other aspects of policing, detailed planning and guidance. Some interventions and evaluations are easier than others, and many require partners in the criminal justice and social services systems, as well as scientific partners. Given our experience with experiments in Birmingham, we developed the Birmingham (England) Scale of Effectiveness in Police Experiments, shown in Table 1.

<sup>6</sup> For more information about the West Midlands Police, go to [www.west-midlands.police.uk](http://www.west-midlands.police.uk).

**Table 1. The Birmingham (England) Scale of Effectiveness in Police Experiments.**

|   | No oversight | Assistance with design and analysis | Part-time monitoring | Full-time program monitoring |
|---|--------------|-------------------------------------|----------------------|------------------------------|
| <b>Type 1:</b> Single experimenter involved. Dosage easy to monitor. Single simple outcome measurement. Simple analysis. Likely to be test and control.         | Medium       | High                                | High                 | High                         |
| <b>Type 2:</b> More experimenters. Eligibility and dosage easy to monitor. Either multiple test and control or pre-experimental randomization. Simple analysis. | Low          | Medium                              | High                 | High                         |
| <b>Type 3:</b> More experimenters. Eligibility simple. Dosage more complex. Pre-experimental randomization.   | Low          | Low                                 | Medium               | High                         |
| <b>Type 4:</b> Multiple players. Eligibility and dosage open to subjectivity. Real-time randomization. Complex analysis required.                               | Low          | Low                                 | Low                  | Medium                       |

Here we present possible hypotheses for various combinations of types of experiments (from simple to complex) and how much program support is being offered by professional researchers. The cells then hypothesize how likely the experiment is to be effective in reaching its aims (low, medium, or high likelihood of success). For simple experiments with a test and a control group, the police may still be able to obtain effective results without the use of an outside partner, although the addition of one would be helpful. At the other extreme are more complex experiments, with many moving parts including multiple officers (who will all hold strong and different opinions on the point of the experiment), data analysis, information technologies, and full randomization. Even with full-time program assistance, the effectiveness of the experiment might never be fully realized. The point of this chart is not that the values in the cells are correct; indeed, they are only hypotheses to be tested. However, this chart shows that law enforcement agencies need guidance and expectations about carrying out evaluations of their interventions to achieve this leg of evidence-based policing. It also implicates the importance of building these activities into a strategic plan and budgeting accordingly.

Of course, achieving the new integrity through evidence-based approaches requires much more than doing experiments or applying evidence. This new integrity also broadly calls for boldness in policing and police leaders to avoid spin and face the reality of their

impact. This boldness involves experimenting, using research, partnering with academics, learning new skills and knowledge, and joining and supporting others to move the profession forward. In the quiver of experience and intuition (which are themselves invaluable), let us place the arrow of evidence-based policing. In the long term and in reality, the beneficiary is the people we serve.

*For more information on the Society for Evidence-Based Policing, visit [www.sebp.police.uk](http://www.sebp.police.uk).*

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# Translating the Analysis of Patterns into Police Practice: An Application of a New Spatial Point Pattern Test

BY MARTIN A. ANDRESEN

*Martin A. Andresen is an associate professor in the School of Criminology and the Institute for Canadian Urban Research Studies at Simon Fraser University and a member of the Crime and Place Working Group in the Center for Evidence-Based Crime Policy at George Mason University. Here he discusses an important tool for crime analysts.*

Criminologists, the police, and crime analysts are interested in various patterns of crime. It is because of these patterns that we are able to identify offenders, help victims, and solve criminal events. In particular, spatial patterns have become increasingly important in recent years.

Most often, the investigation of spatial patterns involves the identification of random, uniform, or clustered patterns, for example, clusters of crime, hot spots of robbery, crime patterns of property offenses. However, because of the nature of our built environment, most of our activities are necessarily clustered: think of *central* business districts, entertainment districts, and shopping districts, to name a few. Thus, it is much more common to find clustering of all sorts of crime nearby and on top of one another. Where there is drug dealing and disorder, there may also be thefts from vehicles, burgled houses, or assaults.

Consequently, finding that a particular crime type is clustered could be supplemented with much more information that could better inform police about their choice of action at those locations. What could prove to be instructive is whether a cluster of crime is different from another cluster of crime or whether it coincides with patterns of everyday routine activities. This distinction is important because two activities may be clustered but in two different places. For example, in an analysis of drugs and violence, Lum (2008) found that while there was significant overlap of these activities, in some places, only violence or drug activity existed without the other. Knowing the similarity, or degree of overlap, of activities that may be related (and where this overlap occurs) can add greater benefit and focus to police operations than only knowing whether each is clustered separately.

Here I discuss a new spatial point pattern test I developed (Andresen, 2009) that can test the relationship of two spatial point patterns to each other, using some brief examples from Vancouver, British Columbia, Canada. Until recently, there has not been a test that allows for the statistical identification of the similarity of two



Martin A. Andresen

spatial point patterns—only descriptive measures. Developing such a test could help analysts identify the similarities between two point patterns, for example, whether burglaries and auto theft occur in similar places or whether patterns of gang activity overlap with drug markets or other crime clusters. We might also compare two point patterns of the same phenomenon at different times to see whether there is a change in the pattern over time. This could provide further insight into the impact that interventions are having at particular places.

## The Spatial Point Pattern Test

The purpose of the Andresen spatial point pattern test is to identify changes or differences in the spatial patterns of any phenomenon, including crime. The spatial point pattern test can be conducted on various spatial patterns using any geographically defined unit, for example, police beats, census areas, street segments, or simply a grid placed on top of a study area. Thus, the test not only provides a global measure of similarity for the entire study area, but also allows for local analysis in the sense that similarity is identified for each of the units. The test is not a part of any geographic information system software, but it is freely available in a graphical user interface: [code.google.com/p/spatialtest](http://code.google.com/p/spatialtest).

Technical details of the testing algorithm are available in Andresen (2009). The general thrust of the test is as follows:

1. Nominate one of your data sets as the “base” data set.
2. Repeatedly sample from the other (test) data set to generate a confidence interval for testing.
3. For each spatial unit, see whether the percentage of points within the base data is within the range of percentages generated for the test data using the sampling procedure; if it is, that unit is deemed similar.
4. Calculate an index of similarity that is the percentage of units that are defined as similar, ranging from zero to one. I use the value of 0.80 to indicate whether two spatial point patterns are similar.

One advantage of this test is that the output can be mapped, so units with significant change (i.e., where spatial patterns of two

Criminological applications of this test have included examining the stability of crime patterns over time, the appropriateness of analyzing aggregate crime statistics..., and the appropriateness of aggregating seasonal crime data to yearly data. But where this might come in handy to practitioners and crime analysts is in more detailed analysis of crime patterns for tactical and strategic purposes.

phenomena do not overlap) can be easily identified on a map. Technically, the test is not a local indicator of spatial association (LISA; Anselin, 1995), but it is in the spirit of LISA because the output can be mapped.

#### Applications of the Spatial Point Pattern Test

Criminological applications of this test have included examining the stability of crime patterns over time (Andresen and Malleson, 2011), the appropriateness of analyzing aggregate crime statistics such as property or violent crime (Andresen and Linning, 2012), and the appropriateness of aggregating seasonal crime data to yearly data (Andresen and Malleson, 2013). But where this might come in handy to practitioners and crime analysts is in more detailed analysis of crime patterns for tactical and strategic purposes. For example, police are often concerned about specific crime types (i.e., theft from vehicles, graffiti), but academics will sometimes analyze “property crime,” “violent crime,” or “all crime” when examining the impact of interventions at hot spots or on specific problems. Using this test, we can show that specific crime types have distinct spatial patterns and aggregating into property or violent crime types may not provide enough analysis to achieve tailored and focused solutions. Such tailored solutions not only have been more recently sought out by commanders wanting to implement problem-oriented policing, but are also supported by research as effective crime prevention approaches (Lum et al., 2011; Weisburd and Eck, 2004).

The spatial point pattern test has many other possible uses, which I show below using data from Vancouver. For example, take Figure 1, which compares the yearly number of theft from vehicle incidents to just those thefts occurring in the summer season, highlighting the specific places with greater concentrations of theft from vehicle in the summer months (e.g., the outer area of Stanley Park where most of the roads and parking lots are located, and the northeast corner of Vancouver where the Pacific National Exhibition (PNE) and Playland are located. This fact should come as no surprise because greater concentrations of people are in these areas during the

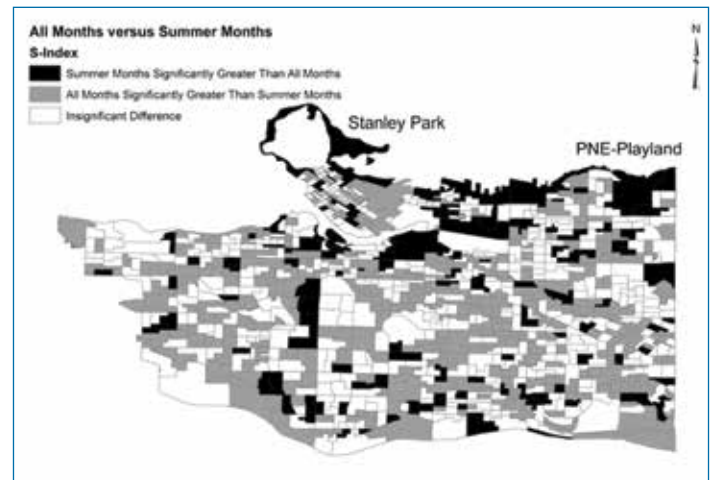


Figure 1. Spatial point pattern test output, yearly aggregate versus summer, theft from vehicle.

summer. Figure 1 also indicates there are greater concentrations of theft from vehicle due west of PNE-Playland in locations where people commonly park their vehicles and get to the PNE-Playland area by other means because of the limited and expensive parking fees during the summer. Consequently, these areas become attractive target areas for those motivated to commit theft from vehicle this time of year. Crime analysts and commanders alike often seek this level of specificity in developing preventive and tactical approaches to crime problems at any given time. From a criminological perspective, such information can help in better understanding the role that routine activities and opportunity structures play in generating crime concentrations.

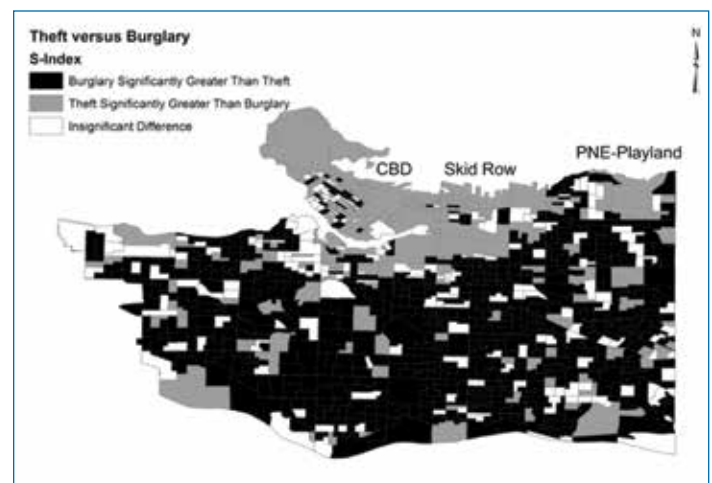
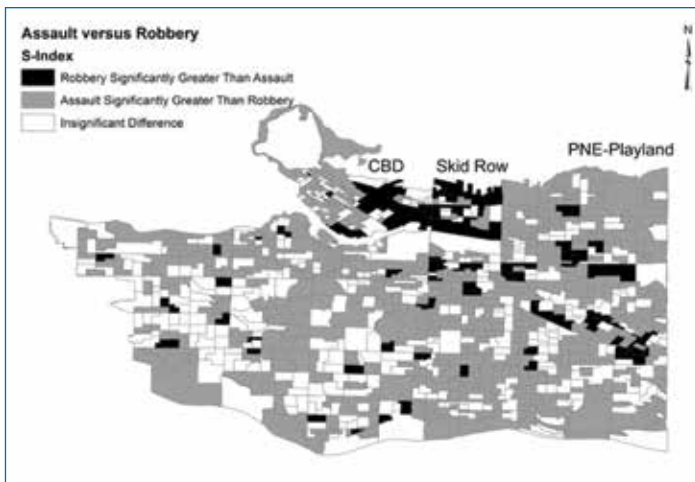


Figure 2. Spatial point pattern test output, theft versus burglary.

Figures 2 and 3 demonstrate how specific crime categories can have very different patterns. Figure 2 shows two common property crimes that are often aggregated in crime analysis: theft and burglary. Though these are both relatively common property crimes, Figure 2



**Figure 3. Spatial point pattern test output, assault versus robbery.**

indicates that they each have distinct spatial patterns. Theft has a greater concentration than burglary in Stanley Park, the central business district (CBD), Skid Row, and PNE-Playland. In the case of two types of violent crimes shown in Figure 3, assault and robbery, the spatial pattern of robbery is very similar to that of theft, concentrating in the CBD and Skid Row. The results indicate that if these various crime types are aggregated into property and violent crime, the spatial patterns of each individual crime type will be muddled by the other. Though the results of an analysis of these aggregate crime types may be representative, they may also misrepresent actual relationships in the data because of the inappropriate groupings of data.

### Further Uses

The utility of this new spatial point pattern test extends far beyond the examples discussed above to include any research question involving the comparison of two point patterns. One might imagine examining crime patterns against other socio-environmental factors including health risks, physical environment, or municipal resources. Those examining re-entry efforts might be concerned if probationers re-enter society near concentrations of drug markets or *not* near concentrations of treatment resources. Police leaders might be interested in comparing spatial patterns of patrol activity against spatial patterns of crime to determine whether adequate allocation of resources are occurring. Social services might be interested in determining the spatial relationship between domestic violence and child neglect. Understanding these and other relationships gives criminologists, crime analysts, and criminal justice planners a deeper understanding of crime.

More generally, many crime analysts are challenging themselves to move beyond simple mapping to using their skills to translate what we know from criminological research about crime patterns. They have become knowledge brokers and use their tools to achieve

this important function. Routine activities theory, environmental and place-based criminology, and opportunity theory tells us that crime patterns do not exist in a vacuum; they are a product of complex social and environmental aspects at places. Tools such as the spatial point pattern test are an important part of this translation to more accurately design and target intervention efforts.

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# This Is Not Your Grandparents' Prejudice: The Implications of the Modern Science of Bias for Police Training

BY LORIE FRIDELL

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On August 12th, District Court Judge Shira A. Scheindlin held that the stop and frisk practices of the New York City Police Department (NYPD) violated constitutional rights (*Floyd v. City of New York*, 2013). In reflecting on a key concern in the case—the targeting of racial/ethnic minorities—Judge Scheindlin wrote, “Unconscious bias could help explain the otherwise puzzling fact that NYPD officers check ‘Furtive Movements’ in 48 percent of the stops of blacks and 45 percent of the stops of Hispanics, but only 40 percent of the stops of whites. There is no evidence that black people’s movements are objectively more furtive than the movements of white people” (p. 45).

Judge Scheindlin’s reference to “unconscious bias” reflects our expanded scientific understanding of how bias and prejudice manifests in our society. Early researchers on the psychology of bias reported that prejudice was based on animus toward groups and that a person with prejudice was aware of it (see, in particular, Allport 1954/1979). Bias with these characteristics is now known as “explicit bias”; racism is an example. More recent research on this topic provides us with a fuller understanding of how prejudice is manifested. Social psychologists report that bias has changed in our society. As one scientist proclaimed, “Modern prejudice is not your grandparents’ prejudice” (Fiske, 2008, p. 14). What these scientists have determined—through voluminous research on this topic—is that bias today is less likely to manifest as explicit bias and more likely to manifest as “implicit” (or “unconscious”) bias. Social psychologists have shown that implicit bias can impact what people perceive and do. It works below consciousness and manifests even in people who consciously hold nonprejudiced attitudes (for reviews, see Greenwald and Krieger, 2006; Hardin and Banaji, 2013).

Bias starts with our automatic tendency to categorize individuals. We categorize individuals and objects to make sense of the world, which includes categorizing people we don’t know according to group membership (Allport 1954/1979; Billig, 1985). We then attribute to these individuals the stereotypes associated with their group. This does not require animus; it requires only *knowledge* of the stereotype (Devine, 1989; Blair and Banaji, 1996). Implicit bias, like explicit bias, can produce discriminatory actions (e.g., Bertrand and Mullainathan, 2004).



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Research has examined implicit biases linked to ethnicity and race (e.g., Bertrand and Mullainathan, 2004), gender (e.g., Axelson et al., 2010), social class (e.g., Haider et al., 2011), sexual orientation (e.g., Oberle et al., 2011), religion (e.g., French et al., 2013), body shape (e.g., Schwartz et al., 2006), and age (e.g., Gross and Hardin, 2007). It has examined the manifestations of bias among members of various professional

groups, such as doctors (e.g., Stone and Moskowitz, 2011), other health professionals (e.g., Schwartz et al., 2003), medical students (e.g., Haider et al., 2011), educators (e.g., Axelson et al., 2010), prosecutors (e.g., Smith and Levinson, 2012), and law enforcement (e.g., for a review, see Fridell, 2008).

In policing, implicit bias might lead the line officer to automatically perceive crime in the making when she observes two young Hispanic males driving in an all-Caucasian neighborhood. It may manifest among agency command staff who decide (without crime-relevant evidence) that the forthcoming gathering of African American college students bodes trouble, whereas the forthcoming gathering of white undergraduates does not. Moving beyond racial and ethnic biases, implicit bias might lead an officer to be consistently “over vigilant” with males and low income individuals and “under vigilant” with female subjects or people of means. Where there is a crash with two different versions of what happened, implicit bias might lead the officer to believe the Caucasian man in the white shirt and tie driving the BMW as opposed to the Hispanic man in jeans and a pick-up truck.

## Remedies: Reducing and Managing Biases

So the bad news is that prejudice remains widespread (Nosek et al., 2007) and manifests below consciousness, even in those of us who eschew, at a conscious level, prejudices and stereotypes. The good news comes from the large body of research that has identified how individuals can reduce their implicit biases or, at least, ensure that their implicit biases do not affect their behavior (for reviews, see Oskamp, 2000; Monteith et al., 2010). Scientists have shown that implicit biases can be reduced through positive contact with stereotyped groups (e.g., for a review, see Pettigrew and Tropp, 2005)



and through counter-stereotyping, whereby individuals are exposed to information that is the opposite of the cultural stereotypes about the group (e.g., Kawakami et al., 2005, 2009). The former mechanism provides further justification for community policing methods, such as permanent assignments and positive police interactions and partnerships with the diverse individuals within a community. The latter mechanism provides the theoretical rationale for use-of-force role-play training (including computer simulations) that randomly pairs the demographics of subjects to scenarios that do and do not result in threat or danger to officers (see Correll et al., 2007). In addition, taking the perspective of the stigmatized other has been shown to reduce (both explicit and implicit) biases, at least temporarily (e.g., Galinsky and Moskowitz 2000).

Another set of remedies doesn't require that we rid ourselves of the implicit biases that took a lifetime to develop. The social psychologists have shown that, with information and motivation, people can implement "controlled" (unbiased) behavioral responses that override automatic (discrimination-promoting) associations and biases (see e.g., Monteith, 1991; Devine et al., 2012).

### Science-Based Training for Police

Around the country, traditional racial-profiling training programs have not been based on science and have reflected outdated understandings about prejudice. Many such training programs have conveyed the message, "stop being prejudiced," with an emphasis on reducing animus toward stereotyped groups. From the science, we now know that this message is ill-suited for most individuals in modern society, including most individuals in policing, who may not have explicit prejudices. Further and more important, individuals receiving such messages can be offended—producing a backlash against these efforts.

In setting forth the "remedies" for NYPD, Judge Scheindlin suggested something different from the traditional training for biased policing; she wrote that "it may ... be appropriate to conduct training for officers on the effect of unconscious racial bias" (*Floyd v. City of New York*, p. 17). The Fair and Impartial Policing (FIP) training program applies the modern science of bias to policing; it trains officers on the effect of unconscious bias and gives them the information and skills they need to reduce and manage their biases (see Gove, 2011; Fridell, 2010; Laszlo and Fridell, 2012).

There are five FIP curricula, three of which were developed pursuant to cooperative agreements with the U.S. Department of Justice, Office of Community Oriented Policing Services (COPS Office).<sup>1</sup> The five curricula that address biases based on gender, sexual orientation, religion, socio-economic status, and so forth are customized for these audiences:

- Academy recruits and/or in-service patrol officers
- First-line supervisors

- Mid-level managers
- Command-level personnel (or command personnel and community leaders)
- Law enforcement trainers

They were developed with the help of an expert curriculum designer, Anna Laszlo, and a Curriculum Design Team (CDT), comprising police executives, first-line supervisors, officers, community stakeholders, and academic experts on biased policing. In addition, and also important, CDT members included some of the top social psychologists from across the nation who conduct the research on human biases.

The FIP perspective is not only based in research evidence and more accurate in terms of conveying how biased behavior is produced, but it also can reduce police defensiveness. Many FIP attendees walk into the room at the start of training somewhere between defensive and hostile; they walk out at the end of training with a new way of thinking about bias in policing and with the motivation and skills to promote fair and impartial policing. Session evaluations are overwhelmingly positive.

Evidence-based policing is not just about implementing better informed and tested crime control approaches, but also about how to effectively achieve fair and impartial policing. Developing training to control implicit bias that is based in rigorous science, and not conjecture or personal beliefs, is especially important to this long-standing concern of law enforcement and community stakeholders. And it appears practice is headed in the right direction. Several states are moving toward statewide adoption of the FIP curricula, including Kansas, Rhode Island, Wisconsin, and South Carolina.

The Special Litigation Unit (SLU) of the U. S. Department of Justice, which investigates agencies that are suspected of engaging in unconstitutional practices, including biased policing, is promoting training that addresses how implicit biases affect even well-meaning officers. The COPS Office, which has invested \$1 million in the FIP initiative, is supporting train-the-trainer sessions across the nation and bringing FIP training to agencies at risk for SLU investigations with the hopes that those agencies can get on track to produce fair and impartial policing and avoid SLU intervention.

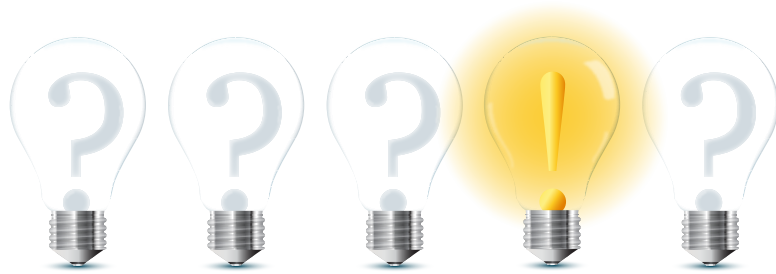
*More information about the Fair and Impartial Policing training can be obtained from [www.fairandimpartialpolicing.com](http://www.fairandimpartialpolicing.com).*

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*Continued on page 25*

<sup>1</sup> 2007-CK-WX-K004, 2010-CK-WX-K015, 2012-CK-WX-K018



# Is Crime Analysis “Evidence-Based”?

BY CYNTHIA LUM

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One question I am often asked is whether crime analysis—especially the use of mapping and data analysis in policing—is “evidence-based.” My first instinct is to reply, “Of course!”

Crime analysts have long played an important role in law enforcement progress, evaluation, and innovations in policing, most notably in the early development of hot spots policing and problem solving. Analysts and analysis have also become key components in developing both the fiscal and evidence-based accountability of law enforcement activities in an era of austerity. Yet, on deeper examination, the answer to the question of whether crime analysis is evidence-based requires more thought and perhaps some qualification.

To begin, it is important to emphasize that we now have a fairly robust evidence base for crime control interventions in policing (see for example, the Evidence-Based Policing Matrix at [www.policing-matrix.org](http://www.policing-matrix.org)). Of course, more knowledge is always needed, especially in such areas as the impact of multijurisdiction task forces (as discussed by Stevenson et al., in this issue) or whether problem-solving or hot spot approaches at places will work in large and small jurisdictions (Lum and Koper, 2013). However, there is general consensus on some principles of effective policing. Targeted, focused, tailored, proactive, and place-specific interventions can reduce and prevent crime, rather than the traditional approach of reactive patrol and case-by-case investigations.

Crime analysis lies at the heart of developing these targeted, place-based interventions and therefore is an important requirement for a police department to carry out evidence-based strategies. Analytic processes such as computerized crime mapping, repeat offender analysis, network mapping, and crime pattern discovery are essential for the deployment and evaluation of effective approaches. But is this enough to say that crime analysis itself is “evidence-based”?

Asking this question is like asking whether hot spotting is evidence based. While it is true that hot spot policing is one of the most strongly supported police tactics with regard to the evidence (see Weisburd and Eck, 2004; Sherman and Eck, 2002), the approach combines three distinct steps:

- (1) Determining the hot spots through crime analysis
- (2) Getting officers to deploy themselves to the hot spots
- (3) Determining what to do when officers get to the hot spots

Even if (1) is done successfully, hot spots policing can only reduce crime if (2) is ensured and (3) is done in a way that creates a deterrent or preventive effect within the parameters of democratic policing. Indeed, hot spots policing doesn’t always work well; it depends on dosage, timing, and what officers do when they are inside these areas where crime is highly concentrated (Koper, 2013). And, even if implemented well, hot spot policing won’t continue to work if officers lose interest in, or are not accountable for, addressing those concentrations of crime over time.

Similarly, the “effectiveness” of crime analysis is intricately tied to whether the agency carries out and sustains evidence-based practices and how crime analysis is implemented toward these goals. Indeed, just by carrying out evidence-based practices such as hot spots policing, problem solving, or targeting repeat offenders, agencies can reduce the risk that analysis will be ineffectively used or inefficiently generated. More specifically, crime analysis can be used in three ways that support evidence-based policing. First, crime analysis is useful in developing practices and policies we know to be effective. Second, crime analysis (such as outcome evaluation) is essential to determine whether an intervention is effective. And finally, crime analysis is needed to understand crime and disorder, and direct police to places



Cynthia Lum



and people to implement interventions that are evidence-based.

However, crime analysis can just as easily support the development of ineffective tactics and strategies, or be misused in ways that do not advance the development of proactive, targeted, and focused approaches. One only needs to look at certain symptoms of this problem that are pervasive throughout many law enforcement agencies. In some agencies, analysts primarily are used as accountants, generating simple statistics for COMPSTAT meetings about counts of crime—an adaptation of the historical role of analysts as data collectors for the Uniform Crime Reporting program. This symptom indicates that analysts are less often, if at all, being used for causal, exploratory, or even descriptive analysis to contribute to strategic, operational, organizational, or tactical goals. Analysts can be misused in investigative partnerships, too. When they are relegated to the role of keyword searcher, Google engager, or data sifter, investigators lose the opportunity to engage analysts in delving into underlying problems, such as patterns of robbery, to develop long-term crime reduction strategies.

Often agencies devalue the role of the crime analyst, which is evident in the low ratios of analysts to officers, the dismissal of analysts (and other civilians) before sworn personnel in times of fiscal austerity, the funding of crime analysis units solely on federal or state grants, and the way other units and officers view analysts as nonintegral parts of everyday deployment (see Lum et al., 2012; Telep, 2013). Analysts are rarely asked to be an integral part of management meetings, and it's even more rare that analysts work alongside—and are treated as professional equals with—commanders in efforts to work through crime problems, find meaningful solutions, or lay out plans for evaluating existing strategies. These situations all indicate that a law enforcement agency is not using its crime analysts in evidence-based ways.

The important question, therefore, is not whether crime analysis is evidence based, but rather, Is my agency using crime analysis in ways that directly support the development, implementation, and evaluation of tactics and strategies (whether related to crime, legitimacy, or internal issues) that are evidence based? To answer in the affirmative, here are some ideas agencies might consider:

- **Institutionalize evidence-based policing.** Crime analysis units can only be evidence based to the extent that their agencies makes a strong and tangible commitment to institutionalizing proactive strategies that are focused, targeted, place-based (when appropriate), and problem-oriented. This requires a major adjustment to traditional patrol deployment and investigative strategies. Agencies can start by unchaining themselves from reactive beat patrol. This step requires developing deployment strategies based on geographic crime patterns rather than political boundaries. It also calls for first-line supervisors and officers to focus their attention on not simply calls for service but the time in between calls for service that can be reaped for crime prevention (Dermody, 2013).



Jamie Roush, second to left, and Micheal Edwards, second to right, were inducted into the Hall of Fame in 2012 for their innovative and evidence-based use of crime analysis in the Jacksonville, Florida, Sheriff's Office.

- **Develop cases on places, not just on individuals.** In addition to traditional detective work that focuses on individual cases, analysts could be paired with investigators to focus on other units of analysis that may be more fruitful in reducing the opportunity for victimization in the first place. One idea that draws from problem-solving and place-based policing is creating investigative units charged with opening investigations on places rather than people (see “Case of Places” described in this issue and in the Matrix Demonstration Projects: [cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/case-of-places](http://cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/case-of-places)).
- **Include analysts in strategic and tactical planning.** Law enforcement agencies need to rethink the way analysts are used and incorporated into management meetings. Lead analysts should be treated as professional equals with command staff and engage together in conversations about the nature and correlates of crime, and how different types of analysis might support the development, implementation, and evaluation of tactics and strategies to address those crime problems. Using analysts to only generate and report on crime numbers per week is a waste of this resource and is disconnected from an evidence-based approach. This effort will require a sea-change in police organizational culture and the way traditional managerial meetings and COMPSTAT approaches are implemented. Too often have I encountered disheartening stories of creative and top-notch analysts being hampered by internal disagreements about their role and influence, reactive and traditional commanders who are closed-minded to innovation, or simply a lack of motivation, understanding, and use of analysis by officers, detectives, and supervisors.
- **Invest in crime analysis.** Police agencies have to invest in crime analysis as a major unit within the agency to accomplish the ideas above. This means increasing the size of analysis units at the

possible expense of reducing the number of sworn officers. Agencies have to treat these units as seriously as they do investigative units and stop using crime analysis units as places to rotate employees who do not have analytic skills or as easy targets to cut in times of austerity.

- **Use analysts to achieve evidence-based policing.** Agencies have to think more broadly about the way crime analysis can be used. For community policing efforts, analysts could develop methodologically rigorous community surveys, including developing appropriate sampling strategies, longitudinal survey plans, and questions that are informed by what we know from survey research to be most appropriate in gauging the issues of interest. Aligned with evidence-based policing, analysts could not only help develop deployments, but also evaluate interventions. Analysts could be used to help investigate problem places as mentioned above.
- **Train officers and supervisors to better understand analysis.** Training about the use and importance of crime analysis should be incorporated into academy and in-service training, just as officers and commanders are trained about the importance and use of weapons, cars, mobile computers, and radios. As a start, agencies might view the two freely available training modules that the CEBCP has created for this purpose (see [cebc.org/evidence-based-policing/the-matrix/matrix-demonstration-project/evidence-based-academy-curriculum](http://cebc.org/evidence-based-policing/the-matrix/matrix-demonstration-project/evidence-based-academy-curriculum)).

Like all technologies, innovations, or deployments, agencies have to determine the most cost-effective way to use crime analysis to reduce crime, increase legitimacy, and improve internal management. This is especially important, given that so many evidence-based practices rely on the proper application of crime analysis for implementation and evaluation. From an evidence-based perspective, crime analysis can be most cost-effective when it is used to develop geographic and person-based crime patterns, conduct network analysis, identify problems, evaluate interventions and performance measures on a regular basis, assess the pulse of the community and its relationships with officers and the department, and identify internal organizational concerns to help commanders proactively address them. Using crime analysis to bolster evidence-based practices and also adjusting police practices to be more receptive to crime analysis by encouraging and training on effective interventions that require its use, is a crucial first step.

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As part of the Matrix Demonstration Project and in collaboration with Jamie Roush, crime analyst manager for the Jacksonville Sheriff's Office, the CEBCP has created two training videos on the importance and use of crime analysis in evidence-based policing for both commanders and operations. These are located at the CEBCP YouTube site, [c/smason](https://www.youtube.com/channel/UCsmason), or can be directly accessed here at [cebc.org/evidence-based-policing/the-matrix/matrix-demonstration-project/evidence-based-academy-curriculum](http://cebc.org/evidence-based-policing/the-matrix/matrix-demonstration-project/evidence-based-academy-curriculum).



# Merging Computing and Crime Science: The Development of a Web-Crawling Tool to Investigate Cybercrime

BY MARTIN BOUCHARD

*Martin Bouchard* is associate professor of criminology at Simon Fraser University; director of the International CyberCrime Research Centre ([sfu.ca/iccrc/](http://sfu.ca/iccrc/)), and associate director of the Canadian Network for Research on Terrorism, Security, and Society ([tsas.ca](http://tsas.ca)).

Readers of *Translational Criminology* know more than anyone else the challenges surrounding collaborations between policy makers, practitioners, and academics. Yet, academics face similar challenges when they seek collaboration with scholars with different training or from other disciplines.

Multidisciplinary research sounds wonderful in theory, but making it work into a productive relationship with innovative research outcomes is not a challenge easily overcome. Is it that academics are just not very good at collaboration? Is it that our training is so specialized that we simply lack the general understanding of the concerns and issues that are at the core of other disciplines? Hyperspecialization is, after all, one of the ways to make novel contributions to our own research area. The other is, of course, to borrow from other disciplines, find new tools and frameworks that can be translated back to a familiar set of criminological puzzles and problems.

In this article, I want to tell the story of the development of an innovative tool called CENE (Child Exploitation Network Extractor), a custom-written web-crawler designed in collaboration with criminologists, a computer scientist, and a law enforcement agency at the International Cybercrime Research Centre ([sfu.ca/iccrc/index.html](http://sfu.ca/iccrc/index.html)). In addition to describing some of the research and practical implications of CENE, I reflect on the origins of this unique collaboration to identify the ingredients for successful efforts in the future.

## CENE from the Classroom

Cybercrime is a relatively new research area, and it is still struggling to find its place in the sun among mainstream criminologists. One reason is a lack of high-quality research on cybercrime. There is no tradition or widely accepted research designs, few pieces of scholarly work to



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inspire established and emerging scholars to get involved (for some exceptions, see Bossler and Holt, 2010; Décarry-Héту, Morselli, and Leman-Langlois, 2012; and Pyrooz, Decker, and Moule Jr., 2013). In addition, the subject matter may be too recent to be considered among the array of fundamental questions tackled in the field.

Yet the online aspect of crime is a growing reality that can no longer be ignored. A new generation of criminals

has made the Internet its playing field, and whether we like it or not, there is a clear need to continue to build the new generation of scholars, police investigators, policy makers, and practitioners who will interact with and manage this clientele.

My first venture into the online aspects of crime came about by accident. In my graduate course on social network analysis at Simon Fraser University in January 2010, I asked students to produce a research paper with criminal network data based on their own research interests. One student in particular, Bryce Westlake, had a difficult time finding a data set. His main research interest was sexual offending—not a type of crime where co-offending was common (far from it). Then I remembered that my former PhD supervisor, Pierre Tremblay, wrote a great piece examining social connections among pedophiles (Tremblay, 2006). Those connections were made online, not offline. The paper showed how the Internet facilitated the development of a community where for the first time these offenders could find some kind of social support for their deviance. Westlake proceeded to go online to find one of those numerous forums where “boy lovers” meet and interact in this new form of deviant subculture. He painstakingly read and coded each interaction one by one, in a large matrix of social relations, not seeing where this coding would stop as there was always a thread or hyperlink to follow.

This is where another student in the class jumped in to help.



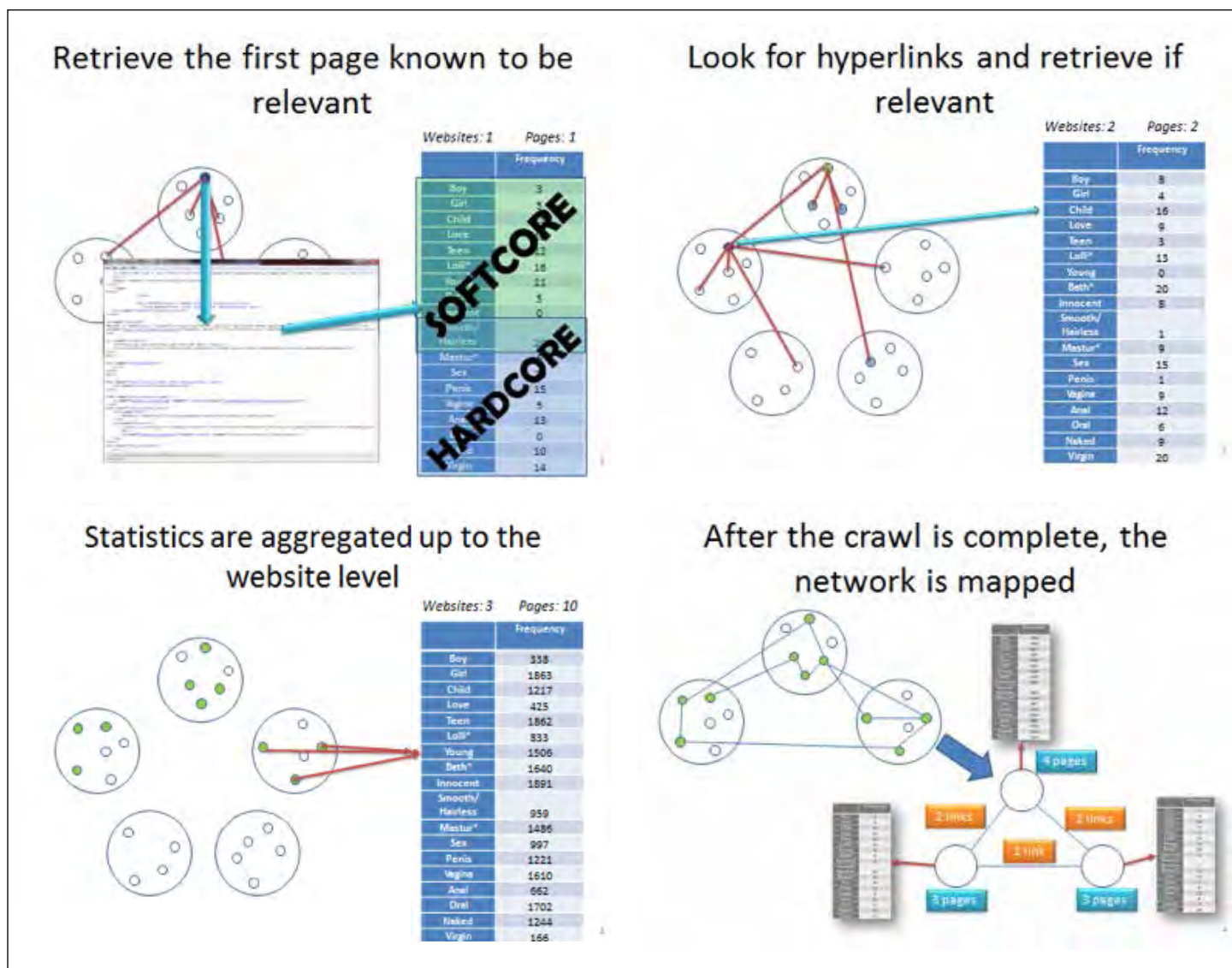


Figure 1. The web-crawling process—simplified sequence based on investigating websites containing child pornography.

Richard Frank already had a PhD in computing science but became so curious about crime issues that he decided to pursue a second PhD, this time in criminology. Given his background, Frank could hardly understand why Westlake was doing the coding manually. In a few hours of work, he could write a code to automate the process that would map all the interactions, send them into a matrix, and even associate the content of conversations to specific individuals. This moment marked the start of what became a successful collaboration among Westlake, Frank, and me. A few weeks later, CENE was born. CENE is a custom-written program that automatically crawls the web starting from a user-specified seed webpage, collecting information about the webpages it visits by recursively following the hyperlinks out of the webpage. The result of the crawl is a network structure containing information about the content of the websites

and the links between them. Figure 1 illustrates a simplified version of the process, using child pornography websites as an example.

### The Practical Side of CENE

As a custom-written web-crawler for the purpose of collecting information on illegal activities online, CENE is a product of its time and an outcome of multidisciplinary collaboration involving trained criminologists and computer scientists. In using the science of computers and the structure of the Internet, CENE is in tune with the cyber component of the type of crime it is investigating. But more important, it has immense practical implications for law enforcement agencies. There are at least three ways in which CENE makes a direct contribution to police work.

First, it has the potential to save hours of painful police time spent

in front of computers, looking at images of child pornography (Westlake, Bouchard, and Frank, 2011). Because the process is automated, investigators can be saved the trouble of looking at everything on a website. CENE can point only to websites and pages that are relevant, and even rank them according to relevance. It has been written as a target prioritization tool where concepts such as “relevance” can be measured and changed based on needs. In a recent publication, we illustrated how this process could work by calculating a score for each website based on the severity of the content and the connectivity of the website in question (Westlake, Bouchard, and Frank, 2011). The key players, in that sense, are websites that contain both harmful content and websites that are actually visited by users of child pornography. Separating the wheat from the chaff is important in a line of police work where investigators spend long hours viewing potentially traumatic content.

The notion of “networks” illustrates a second key implication of CENE: the importance of considering the surrounding community of other websites in planning interventions. A website with illegal content is always a website worth removing, but a highly visited website with illegal content in times of restricted resources is an even more valuable target in terms of deterrence and forcing co-offenders to find alternative networks—just as the arrest of highly connected offenders has more impact in the field. Making CENE both network-based and content-based has been an important innovation distinguishing it from existing tools.

Finally, the best evidence of the impact of a tool in practice is how it is welcomed in the field. From the start, CENE caught the attention of the Royal Canadian Mounted Police (RCMP), who worked with us to improve the tool and make it relevant to its work. The collaboration started with the RCMP providing a list of websites that were known to contain child pornography. This list was key to keeping CENE focused on the primary target rather than following the hyperlinks of legal adult pornography websites. While CENE crawls the web automatically, the “seed,” or starting point, is chosen by the researcher. A key development in the collaboration came when the RCMP agreed to provide its database of the unique codes, or fingerprints (known as “hash values”), of identified child pornography images. We matched the RCMP hash value database to our web-crawling process so that anytime CENE encounters an image found in this database, the webpage is flagged as containing known child pornography (Westlake, Bouchard, and Frank, 2012). Details of new content not already investigated by RCMP are pulled into a database.

### **Conclusion: From CENE to TENE**

While our research has not yet been used in actual RCMP investigations—nor was this the goal—this collaboration has inspired both sides to consider aspects of the child pornography issues they were not previously aware of, laying the foundation for continued collaboration and dialogue in the future. Academically, this particular

collaboration appears to have worked where others have failed because the project had all the ingredients needed to keep both a criminologist and a computing scientist fascinated and interested, even if that interest initially came from different places. All parties had a key role to play, all parties took the time to understand where the others came from, and all shared the same level of excitement over the creation of the tool and its empirical and practical implications. We hope to replicate this process as we embark on a new project (with colleague Garth Davies) to create a new tool that investigates terrorism and extremism online, a version we labeled as TENE: The Terrorism and Extremism Network Extractor (see Bouchard, Joffres, and Frank, in press). The presence of crime online has created new challenges for practitioners and academics alike, but it has also provided a breeding ground for innovative ideas and collaborations to emerge.

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# Case of Places

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Renee Tate



Thomas Neale



Cynthia Lum



Christopher Koper

Criminological research has built strong evidence, across many different places, that shows the majority of crime is highly concentrated at small locations. Beginning with Sherman et al.'s (1989) finding that 50 percent of all crime in a city occurs at just 3 to 5 percent of addresses and street blocks, studies of crime patterns, hot spot policing, and routine activities continue to show this concentration, so much that Weisburd et al. (2012) labeled it a “law” of crime concentration. In addition, Weisburd and colleagues have shown these concentrations are stable over time (Weisburd et al., 2004), and numerous studies have illustrated the utility of focusing police patrol and other interventions on these locations. In particular, problem-solving approaches can be particularly effective when applied to hot spots (Braga et al., 2012; Lum et al., 2011; Taylor et al., 2011; Weisburd and Eck, 2004).

At the same time, institutionalizing a place-based, problem-oriented focus remains a challenge in policing. There are agencies that apply problem-oriented policing and the SARA model<sup>1</sup> and target their crime prevention efforts to hot spots and problem-places. However, these efforts are most likely ad hoc, housed in specialized units, and not institutionalized into regular patrol or investigations. The mainstays of policing—reactive beat patrol, 911 response, and reactive arrests and case-by-case investigations—are very much alive and well today.

How might research be more institutionalized into everyday police practices? The goal of Cynthia Lum and Christopher Koper's Matrix Demonstration Project is to focus on this question (see Lum and Koper, 2012). How can police leaders make strong and innovative place-based research, which sometimes runs counter to the daily

operational and cultural realities ingrained in policing, part of daily police practices? One idea put forth in the Matrix Demonstration Project is the idea of Case

of Places—a conceptual tool and method for focusing investigative and other resources on problem places as a means to facilitate and institutionalize in-depth problem-solving approaches at these locations. Case of Places essentially provides a system for collecting better information on problems at specific places and developing and tracking interventions at those places.

To encourage the use of this tool, it was modeled after a traditional detective's case folder. The idea was to make Case of Places look and feel like everyday policing and capitalize on the status and prestige of detective work. But rather than investigate individuals suspected of a crime, Case of Places uses a different unit of investigation: a place. The notion is that “arresting” a problem place may have a much greater effect on crime reduction and prevention than arresting an individual person.

To develop Case of Places, Lum and Koper worked with personnel in the Richmond, Virginia, Police Department to create a case folder process, something very familiar to detectives, but with the concepts and terminology of place-based crime prevention. Lum and Koper (2012) describe three principles behind Case of Places:

- Law enforcement agencies should devote as many resources to investigating problem places as they do to investigating crime suspects.
- Using existing cultural and organizational structures and status surrounding detective work may be a good approach to developing a better orientation to place-based policing, as opposed to using an ad hoc, special projects approach.
- Place-based policing is a crime prevention concept strongly supported by research. Case of Places is designed to support

<sup>1</sup> [www.popcenter.org](http://www.popcenter.org)



There is no fancy case management system or program behind Case of Places. In its raw form, Case of Places is simply a shell of a case folder that detectives use but with a slight twist on the unit of investigation.

place-based policing by facilitating efforts to track the history of crime problems, actors, and police actions at hot spots.

A proactive place-based focus may also aid in making detective work less reactive and more effective in terms of crime control (see Braga et al., 2011).

There is no fancy case management system or program behind Case of Places. In its raw form, Case of Places is simply a shell of a case folder that detectives use but with a slight twist on the unit of investigation. Case folder contents mirror those of typical case folders for people or incident-based investigations, but those traditional elements have been converted to place-based equivalents. For example, a “suspect” in a traditional detective’s case folder is a person. For Case of Places, the “suspect” might be a group of people, a building, a business, or something in the physical environment. Similarly, “victims” may be people or properties, while “witnesses” or “informants” may be residents, business people, or even physical features (such as CCTV cameras) that can serve as guardians of the location. And the “arrest” may consist of one or a number of enforcement or prevention measures. The intent of Case of Places is to increase the receptivity of detectives and other officers to this evidence-based approach by making procedures (and rewards) similar to those of traditional investigative work, but with a different unit of investigation.

### The Application of Case of Places in Richmond, Virginia

As with all of the Matrix Demonstrations, Case of Places was developed in collaboration with a police agency; in this case, the Richmond, Virginia, Police Department. A committee that included command staff, detectives, crime analysts, officers, and information technology personnel was brought together to hash out what should be included in the Case of Places case folder. Of particular importance was having the input of the detective commander. His expertise on what Richmond case folders looked like was invaluable in creating similar case folder requirements for places.

The initial role for the crime analysis unit was to identify problem areas and items in the city so that a specific place to investigate could be identified. Initially, a large area of the downtown (Figure 1) was identified as suffering particularly from robbery and theft from motor vehicles. The area had seen major growth over the past couple of years, including the emergence of new restaurants, bars, clubs, and

businesses, as well as an increase in homes (condos, apartments, and lofts). An area that was usually desolate after six in the evening was becoming revitalized and alive. While this was positive on many fronts, it also provided opportunities for crime during certain times of the day and days of the week. Vehicles would be broken into during the night when bars and clubs were open. The police department also saw an uptick in assaults and shootings that would take place after young people left parties and bars.

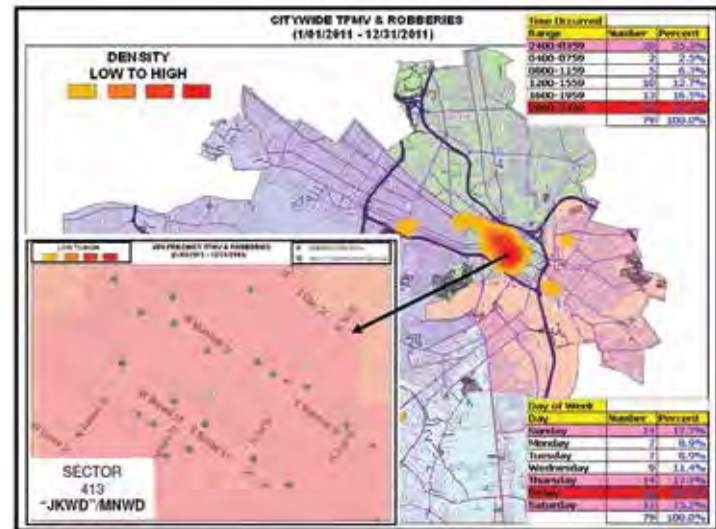
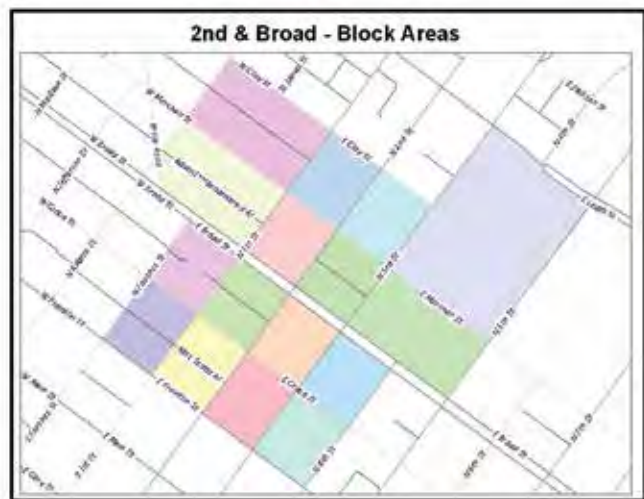


Figure 1. Downtown hot spot.

Initially, the command staff and working group identified a general area in which Case of Places might be applied (Figure 2a). Officer Thomas Neale was assigned to work on Case of Place. The analyst worked with him by providing statistics and maps of the area and information he requested. The officer’s efforts were supported by supervisors and officers, crime analysts, the major crimes division, and specialized community units, as well as community members. Applying the investigative approach to a place, Neale determined that the initial area agreed on by the committee was too large and needed to be minimized and refocused on a more appropriate “micro place.” Very much aligned with crime and place research, the on-the-ground investigation showed that not all areas of a neighborhood have crime but rather very specific places attracted specific types of crime problems (Figure 2b).



a



b



c

Figures 2a, 2b, and 2c. The progression of the development of the place for investigations. (a) Initial area based on dispatch zones for data pulling purposes. (b) Cluster of reported crimes circled in red. (c) Identification of “Micro Places.”

Neale’s investigation led to a new focus on three micro places within the initial target area (Figure 2c). Once the new micro target areas were identified, Neale began the investigation of each place so that a tailored “arrest” of the problems at that place could be planned. Detailed crime history about the “suspect” was developed from past calls for service, incidents, arrests, and offenders at that location. Current criminal activity was determined using surveillance, photographs, and monitoring of present crime data. This process mirrors an approach taken by the Jacksonville, Florida, Sheriff’s Office (see Roush and Koper, 2012). A “victimology” of the location was conducted to determine the different types of victims (people, places, properties, the community at large) that were suffering because of the crime at that place. Neale also surveyed community members at the location, asking about possible issues and concerns. He also interviewed employees from Richmond’s transit system. Possible guardians were identified.

From the investigation, a detailed understanding of the “suspects” emerged. The locations were mixed business and residential areas with a number of concerns: quality of life complaints by community members; narcotics sales and use; larcenies from buildings, people, and vehicles; assaults resulting after alcohol consumption; and individual and commercial robberies. Numerous active and known offenders visited and operated in these areas; 59 were identified through reports and field interviews. Gangs and co-offenders were also identified.

Specific place-based issues included recurring crimes; complaints about a specific eating establishment; bus stops, alleys, and bus lines that attracted opportunities for crime; and parking lots hidden by buildings and other obstructions (Figure 3). Environmental conditions contributing to these problems included overgrown trees and bushes on the street and in parking lots, poor lighting, natural voids that blocked visibility (in front of, behind, or in between buildings), graffiti, and building abandonment. All of these gave clues about the nature of the place, possible ways in which the location might be remediated, and which police units or other city agencies might be needed to “arrest” this problem. Responses are still under consideration.

In conclusion, the idea behind the Case of Places approach is not new. It builds on problem-oriented policing, situational crime prevention, and similar theories and approaches. However, injecting innovative thinking and research knowledge into traditional policing approaches (such as detective work) through Case of Places may be one way to institutionalize research into the everyday systems and nomenclature of a police agency. Case of Places also rests on the premise that some of the considerable resources devoted to detective work should be redirected to places, especially given the strong crime control potential of place-based approaches.

To view the Case of Places guide, checklist, and forms for case folders, visit [cebc.org/evidence-based-policing/the-matrix/matrix-demonstration-project/case-of-places](http://cebc.org/evidence-based-policing/the-matrix/matrix-demonstration-project/case-of-places).





**Figure 3.**  
Pictures of places  
within Richmond's  
Case of Places.

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# The Foundation of an Evidence-Based Justice System: The Need for Meaningful Academic and Applied Researcher Partnerships

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Charles Katz



Scott Decker

In the mid 1990s, researchers working in a variety of disciplines began to identify criminal and juvenile justice system practices that had been rigorously evaluated and whose evaluation findings revealed consistently positive outcomes. These practices became known in the criminal justice field as evidence-based programs—programs that, when well matched to communities’ needs and implemented with high fidelity to the program model, led to positive outcomes for program participants.

More recently, the language of the evidence-based movement (for example, fidelity, implementation science, empirically supported outcomes) has become increasingly prevalent in practitioner conversations about effective justice system policy and practice. Local, state, tribal, and federal justice system initiatives, more than ever, are seeking proven solutions to the challenges they face in responding to crime and obtaining justice.

As more jurisdictions seek evidence-based solutions, an infrastructure must be built that supports the collection, use, and sharing of justice system data. Such solutions also depend on the appropriate analyses of those data to develop, implement, monitor, and evaluate evidence-based responses to crime. At the core of an infrastructure that supports evidence-based practice are enhanced justice information sharing practices and meaningful collaborations between applied justice system researchers working in operational agencies and those in the academic research arena.

## The Ongoing Challenge of the Criminal and Juvenile Justice Systems

Contemporary evaluations of justice system initiatives have increased the number and type of evidence-based practices, yet jurisdictions around the country continue to implement programs, practices, and

policies that are based on organizational culture and political ideology, rather than what research has revealed works to prevent crime.

There are several reasons for this situation. Of particular concern to us is the disconnect between the academic and the applied research communities. The academic research community often uses language and outlets for its research that are unapproachable to practitioners, while the applied research community (i.e., crime analysts, planners, auditors) spends much of its time generating data that describe the justice system and its outputs rather than using the data to better understand how and whether the system works. This bifurcated approach does not take advantage of the strengths of each. Instead, we argue for a focused, collaborative approach to criminal and juvenile justice research that leverages the scientific and practical strengths of each, leading to greater contributions to the evidence base than the current state of affairs. In the absence of such a framework, the creation and adoption of evidence-based practices by the justice system will be slow and many justice system strategies will continue to be based on ideology and philosophy rather than data and evidence.

The challenge that lies ahead for such a collaboration is to meet the need for evidence-based practices that address the variety of issues facing our justice systems. Although evidence-based practices can be found within most components of the justice system (for example, police, probation, corrections), the science is more mature in some areas (for example, youth violence prevention programs and adult probationer supervision strategies). As a consequence, much is left to learn and the patchwork of knowledge leaves us with serious

questions about whether the current approach to generating evidence about what works meets the needs of public safety agencies and the communities they serve.

One example of the need for additional research conducted by the type of partnerships described above—to inform a popular, yet unproven, criminal justice strategy—is the multijurisdictional task force (MJTF). A MJTF is a “cooperative law enforcement effort involving two or more criminal justice agencies, with jurisdictions over two or more areas, sharing the common goal of addressing drug control or violent crime problems” (Bureau of Justice Assistance, 2013). In 2011, 535 MJTFs were funded by the Bureau of Justice Assistance in 39 states or territories. This is a considerable investment in a strategy for which the evidence of effectiveness, or lack thereof, is still being built.

MJTFs are an example of a strategy that is thought to be good and right—collaboration and information sharing across multiple law enforcement jurisdictions—especially in the absence of existing evidence-based solutions to the issues MJTFs are designed to combat (i.e., criminal networks that cross city, county, and state lines). The gap between evidence and practice, however, illustrates the distance we have yet to travel before the justice system is operating as evidence based. MJTFs are notoriously difficult to evaluate, which leads to assessments that are primarily descriptive (for example, Hayeslip and Russell-Einhorn, 2003; Rhodes et al., 2009). But, without evaluations that go beyond the descriptive, we will not know whether the investment (tax dollars expended) is worthwhile (crimes prevented). Partnerships between applied and academic researchers can create “a dynamic interface between research and practice...scientists discover new tools/ideas for use in the field and evaluate their impact. In turn, practitioners offer novel observations from the field that stimulate basic investigations” (Laub, 2011).

Another example of the disconnect between what we know and what we do can be found in our nation’s sex offender notification laws. The support for such laws in the empirical literature is scant, and the majority of the research finds few positive outcomes and a larger number of negative outcomes (Anderson and Sample, 2008; Cohen and Jeglic, 2007; Levenson and Cotter, 2005; Mercado, Alvarez and Levenson, 2008). Yet, state legislators persist in passing more and more of these laws, and local practitioners, who are often well aware of the harm these laws inflict, do little to demand more from policy makers.

While we believe that more rigorous evaluations are indeed necessary to advance evidence-based crime policy, they alone won’t do the job. To maximize the scientific and practical benefit of limited criminal justice research funding, we must also take advantage of the skills of justice system agency research staff and the information found in the administrative records with which they work.

## **Opportunities for Strengthening and Expanding the Evidence Base: Leveraging Justice System Analysts**

It is not unusual to find research staff working in state-level police, courts, probation, and correctional agencies. It is also not unusual to find research staff working for local justice agencies (for example, as law enforcement crime analysts). Indeed, many of these staff are well trained and have strong knowledge of their agency’s data and practices. In a recent report by the National Research Council (2009), the authors describe the value of involving state and local research staff, more specifically, the network of state Statistical Analysis Centers, in improving the quality and use of justice system data.

“[The Bureau of Justice Statistics (BJS)] state the Statistical Analysis Center (SAC) program has cultivated a strong federal-state partnership, relative to other federal statistical agencies. Development of the SAC network—which provides points of contact across the justice system to facilitate research on individual data series, dissemination of BJS information, and coordination of activities—has involved forging unique relationships adapted to state environments...” (p. 176).

Underlying the findings of the National Research Council’s panel is the recognition that most of the work of the criminal justice system occurs at the state, county, and local level, which illustrates the need for an infrastructure that supports the implementation of evidence-based and translational criminology at the state, county, and local infrastructure:

“[T]he vast majority of the activity related to crime and justice occurs at the subnational level. Most crime is pinpointed geographically, and much of the response to crime is handled by police, courts, and correctional facilities at the state, county, and municipal level” (p.165).

By managing and using the administrative data created by justice system agencies, research professionals working in those agencies have the potential to generate evidence on the effectiveness of justice system practices on a regular basis (rather than wait for ad hoc grant opportunities or evaluations to come along) and share that evidence with others.

While much of the research conducted by justice agency staff does not rise to the quality expected of research that appears in the top criminology and criminal justice journals, it is a mistake to ignore this work, as much of it contributes to the evidence base. What we don’t know about evidence-based practices far outweighs what we do know, and as we continue to build our knowledge base, it would be short sighted to sacrifice the good research for only the publishable research. Research published in the top journals, after all, more often serves the needs of the academic community rather than policy makers and practitioners. That said, justice agency research staff must also commit to quality research designs, increase the transparency of implementation protocols, and make findings publicly available for others to replicate.

Forging strong partnerships between academic researchers and justice agency research staff and using existing data resources takes advantage of assets that are already in place and enables a process where research is conducted in a manner that is, by definition, more rooted in the practice of our justice systems. This vision is not hypothetical; it is a reality that is within our grasp. If the process is effectively implemented as it has been in Boston (Ceasefire), Minneapolis (hot spot policing), and Newport News (problem-oriented policing), it could lead to additional evidence being created on criminal justice practices that sound good but have yet to be rigorously evaluated. Indeed, in our own state, the Administrative Office of the Courts is partnering with academic researchers, applied researchers, and county-level practitioners to more fully implement evidence-based practices in adult probation.

### Vision for the Future

Our nation has experienced historic decreases in crime over the past two decades. Yet anyone familiar with our nation's recidivism rate knows that we must do better. What can help our justice system do its work more effectively and efficiently is a concerted effort to bring together academic and applied researchers in each state to identify existing and emerging criminal justice issues, collate evidence-based practices addressing those issues, and use administrative data and other sources of information to deepen the evidence base. This step would lead to partnerships between academic researchers working in specific areas (for example, policing, probation, corrections) and their corresponding agency-based researchers (for example, crime analysts, probation and court research staff, and correctional research staff) that tap into the strengths of each.

One model for a state-based consortium of academic and applied research staff can be found in the structure and work of the Center for Violence Prevention and Community Safety. The center, whose work is guided by a diverse advisory board made up of academic researchers, applied researchers, and justice system practitioners, resides in the School of Criminology and Criminal Justice at Arizona State University. The work done by the center is measured by research that considers the public good and recognizes the real-world effects that crime and violence have on the economic, social, and cultural vitality of Arizona. Examples of policy and practice-oriented research conducted by the center include, but are not limited to, an implementation of an arrestee drug abuse monitoring project in Maricopa County, an evaluation of a local adaptation of Chicago's CeaseFire program, and its serving as academic-based research partners on SMART Policing Initiatives in Glendale and Phoenix, Arizona. Although the center's work is led by university-based researchers, in Illinois and Ohio, the state SAC is the lead for those state's initiatives to enhance partnerships between the academic and applied research communities. For example, the newly minted Ohio Consortium of Crime Science brings together researchers from local universities with criminal justice practitioners and policy makers to

find evidence-based solutions for identified problems. Past areas of focus have included technical assistance, training, data collection, analysis, and evaluation.

Meaningful partnerships between academic and applied researchers of the type described above combined with a commitment to use high-quality research designs will facilitate contributions to the evidence base and lead us ahead—ahead to justice system practices that have the potential to keep crime at historic lows and, dare we suggest, lead the most innovative and evidence-based jurisdictions to push the historically low crime rates even further down.

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## CEBCP Distinguished Achievement Award in Evidence-Based Crime Policy: 2013 Winners

The Distinguished Achievement Award in Evidence-Based Crime Policy recognizes outstanding achievements and contributions by individuals in academia, practice, or the policy arena who are committed to a leadership role in advancing the use of scientific research evidence in decisions about crime and justice policies. This role includes notable efforts in connecting criminology, law, and society researchers with criminal justice institutions, or advancing scientific research more generally in crime and justice.

Nominations are now being accepted for the 2014 awards at [www.cebc.org](http://www.cebc.org).

### Laurie Robinson

George Mason University, formerly Assistant Attorney General, Office of Justice Programs

Laurie Robinson is Clarence J. Robinson Professor of Criminology, Law and Society at George Mason University and twice served as Assistant Attorney General for the U.S. Department of Justice Office of Justice Programs (OJP), the \$2.5 billion research, statistics, and criminal justice assistance arm of the department. Her 10 years of service in this capacity in the Obama and Clinton Administrations make her the longest-serving head of the agency in its



45-year history. Robinson's recent tenure focused on putting science and evidence at the forefront of the agency and made her America's most important advocate of evidence-based crime policy. She set up a Science Advisory Board, launched an initia-

tive to better integrate evidence into OJP's programs, and created a "what works" clearinghouse for criminal justice. She has been one of the most significant individuals in the evidence-based crime policy effort in the federal government. Outside the government, Robinson has directed the University of Pennsylvania's Master of Science program in criminology and served as a Distinguished Senior Scholar in Penn's Jerry Lee Center of Criminology.

### Lawrence Sherman

Cambridge University and University of Maryland

Lawrence Sherman is Wolfson Professor of Criminology at the University of Cambridge, where he also directs the Institute of Criminology, and Distinguished University Professor in the Department of Criminology and Criminal Justice at the University of Maryland. Sherman is

the preeminent scholar in evidence-based policing. He is widely known for spearheading the evi-

dence-based movement, from the Maryland report to the U.S. Congress ("What Works, What Doesn't, What's Promising"). He is also known for his involvement with the Campbell Col-

laboration; his many field experiments on domestic violence, restorative justice, gun violence

and intensive probation; and his worldwide efforts to promote evidence-based policing. Sherman's influence has been key to moving research into practice among the many agencies around the world with which he has worked throughout his career. Furthermore, he has mentored many experimental criminologists and practitioners, developing the first graduate class on experimental criminology at Maryland, linking highly skilled researchers to policy and practice careers, and directing the Cambridge Police Executive Programme, which offers degrees in evidence-based policing to international police leaders.



## CEBCP Evidence-Based Policing Hall of Fame: 2013 Inductees

The Evidence-Based Policing Hall of Fame recognizes innovative law enforcement practitioners who have been central to the implementation of a high-quality research program in their affiliated agency, highlighting individual excellence in both using and conducting policing research. These champions of evidence-based policing help to make high-quality police scholarship possible and their efforts advance our knowledge of the field. Induction into the Hall of Fame is the highest honor of its kind in the evidence-based policing field.

### José Roberto León Riaño

**Director General of the National Police of Colombia**

General León Riaño has served with the National Police of Colombia since 1977 and has received 279 decorations during his distinguished career. He has worked in numerous regions and cities, including the cities of Medellín; Cali; and the capital, Bogotá. He has tackled a number of challenges including anti-extortion, anti-narcotics trafficking, anti-kidnapping, citizen security, rural security, and intelligence analysis. León Riaño is recognized by the Hall of Fame for his involvement in implementing a series of evidence-based approaches in Colombia's National Police. He and his team oversaw 26 police improvement projects including the National Plan for Community Policing in Quadrants (PNVCC), which identified small geographic areas (quadrants) in Colombia's eight major cities and provided community policing and problem solving tailored to each quadrant's specific issues. He also supported a major experimental evaluation of these efforts, representing a major step forward in Colombia's National Police policing model.



### James Whalen

**Assistant Chief, Cincinnati (OH) Police Department**

Lt. Colonel James Whalen is assistant chief of the Cincinnati Police Department, commander for the Office of Support Services, which includes planning, human resources, technology and systems, crime analysis, problem solving, and SWAT. He has held a number of leadership positions since joining the department in 1986. Whalen is recognized by the Hall of Fame for his efforts to advance evidence-based policing in Cincinnati, including transitioning the department to a problem-solving model and working to implement the Cincinnati Initiative to Reduce Violence (CIRV), a multi-agency, community collaboration designed to reduce gun violence. The University of Cincinnati demonstrated a 41 percent reduction in gang-involved homicides and a 22 percent reduction in all shootings following CIRV. Cincinnati professor Robin Engel, in nominating Whalen for the Hall of Fame, stated, "It is clear to those working in partnership with the Cincinnati Police Department that the seemingly miraculous shift in agency culture, was not a miracle at all, but rather was led by the persistent dedication and hard work of Lt. Colonel Whalen." Whalen says, "Police agencies that are able to understand the value of transparency, work smarter, and establish valuable external partnerships will be the agencies that succeed in the future."





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# New Publications by CEBCP Team Members

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