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The Importance of Reproduction in Evidence Based Policing: A Comment

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Recently a colleague of mine was beset by a not unusual problem in research: lack of willing participants. In this instance, she was seeking to find police organizations to participate in a study aimed at replicating work¹ that had been undertaken in the U.S., U.K. and in a couple of cities in Canada. The purpose of her study was to contribute to the development of an evidence base in Canada by producing work that would help police organizations, researchers, policy-makers and other stakeholders have a better idea of ‘what works’. Given that the topic was of some importance in current discussions of policing, she was somewhat perplexed when requests to participate were met with a series of rejections. Of explanations proffered, the most frequent was that there were already ongoing studies on this topic elsewhere and that decision-makers would wait on those results. In other words, they did not see sufficient value in contributing resources to participating in one study, when they could rely on research conducted elsewhere.

Previously I have discussed ‘austerity policing’ and the nature of contemporaneous demands for high levels of service delivery coupled with reductions in police budgets (Huey and Ricciardelli *in press*; Huey, Cyr and Ricciardelli *in review*). Understanding the effects of these demands affords some insight into why police leaders might be hesitant to commit resources to activities. After all, during a time when some organizations struggle with fulfilling their core mandate, participating in research projects may be seen as something of a ‘luxury’ (Weisburd and Neyroud 2011). That said, it is for that very reason – that police are expected to ‘do more with

¹ In the interests of respecting her privacy, I’ll forgo identifying the nature of the study.

less’ – they have a vested interest in ensuring that strategies, tools, technologies and programs, be grounded in the most solid evidence base possible.

Reproducibility has long been one of the hallmarks of scientific research (Open Science Collaboration 2015; Ram 2013; Drummond 2009). We use this term to mean that studies should be able to be independently reproduced. As Sonnenburg et al. (2007: 2449) observe, “In many areas of science it is only when an experiment has been corroborated independently by another group of researchers that it is generally accepted by the scientific community.” The reason for this measured approach is simple: initial research findings from one study may be built on flawed methodology, incorrect interpretations and/or unique circumstances, among other potentially confounding factors. Thus, the more times a study is externally validated, the more confidence we can have in the results.

The ability to replicate a study is, however, only one component of what we term reproduction and, as some would argue, should not be considered as the most important part (Drummond 2009). Rather we can have greater confidence in our understanding of a phenomenon if we explore it using multiple methodological strategies and still achieve the same or similar results (ibid.). As Drummond puts it, increased certainty in research comes from when one “replicate[s] the result not the experiment” (ibid.: 2). In a nutshell, we might say that reproduction using both similar and mixed methods is good science.

Reproduction is intrinsic to Evidence Base Policing (EBP). Perhaps this should not be surprising given that the guiding tenet of EBP is that police decision-making should be informed by scientifically rigorous research (Sherman 2013; see also Stanko and Dawson 2015). My colleague Peter Neyroud (2015) recently summarized EBP as follows:

[it] is about (a) testing experience-based intuitions/ideas with the best methods (b) using the evidence to target police effort at the most effective strategies and tactics by focusing on places, victims and offenders² (c) building an evidence base on how best to implement and how best (d) to adapt and translate tested evidence from one context to another.

For EBP proponents, part of what they refer to as ‘methodological rigour’ is the concept of reproducibility, that studies are not only designed to be reproduced, but more importantly for the EBP researcher, should be reproduced (with and without variations). This idea of reproduction can be found in Neyroud’s statement that EBP is concerned with the ‘building of an evidence base’—that is, with the reproduction of research. Indeed, whenever EBP researchers and practitioners refer to an ‘evidence base’, they are invariably referring to the *body* of scientific knowledge built up through similar and disparate studies of a particular subject. What they are *not* referring to is the results of an *individual* study³.

To expand on my previous point: it is only when we have a sizeable volume of quality research on a given topic that we can begin to synthesize that research in order to abstract general principles associated with ‘what works’ (as well as with its less vaunted cousin, ‘what doesn’t work’). Indeed, because of reproduction in criminal justice research there are certain things we can reasonably say we know regarding community safety innovations and their effectiveness. For example, a systematic review of the research on hot spot policing concluded that ‘it works’ in urban environments⁴ (Braga, Papachristos and Hureau 2012). The same is also true for sobriety

² Having recently begun two projects using an EBP approach – one an evaluation of a police peer support program and the other a meta-analysis of mid-career police training – my only quibble with the description above is that I see a broader utility in EBP beyond informing frontline policing strategies. Beyond that relatively minor point, I think Neyroud (2015) sets out a very useful way of thinking about what EBP is and what it is not.

³ The language used by EBP proponents is instructive in this case: beyond the term ‘evidence base’, we also find references to reliance on ‘robust evidence’ (Bullock and Tilley 2009).

⁴ Subject, of course, to some adaptation to local conditions.

checkpoints, which a systematic review found to have had positive effects on decreasing alcohol-related injuries and deaths (UK College of Policing 2015). Conversely, analysis of the research literature also shows that Scared Straight programs are not effective in the long-term for dealing with youth offending (ibid.). It is also worth noting that efforts in research synthesis by EBP advocates have also produced new techniques for conducting systematic reviews in policing research – EMMIE (Johnson, Tilley and Bowers 2015) and the Matrix (Lum, Koper and Telep 2011) – as well as tools for understanding ‘what works’ that are widely available to police, policy-makers, community safety groups and researchers. These tools include the U.K. College of Policing’s ‘Crime Reduction Toolkit⁵’ and the Centre for Evidence Based Policy’s ‘Evidence Based Policing Matrix⁶’.

Returning to the idea that it is acceptable, indeed preferable, to sit out research participation on the ground that someone else is doing it, I have advanced what I take to be a fairly strong counter-argument. Not only is lack of reproduction antithetical to the EBP approach, it is antithetical to good science. This is not to say that all organizations should always participate when asked, but rather that decision-makers recognize the value of reproduction and count it as factor when deciding whether or not to participate in research.

⁵ Available at: <http://whatworks.college.police.uk/toolkit/Pages/Toolkit.aspx>

⁶ Available at: <http://cebcp.org/evidence-based-policing/the-matrix/using-the-matrix/>

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