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Applying Sentinel Event Reviews to Policing

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*Abstract***Research Summary**

A Sentinel Event Review (SER) is a system-based, multi-stakeholder review of an organizational error. The goal of an SER is to prevent similar errors from recurring in the future rather than identifying and punishing the responsible parties. This paper provides a detailed description of one of the first SERs conducted in an American police department—the review of the Lex Street Massacre investigation and prosecution, which resulted in the wrongful incarceration of four innocent men for eighteen months. The results of the review suggest that SERs may help participating organizations identify new systemic reforms for police departments and other criminal justice agencies.

Policy Implications

Police departments and other criminal justice agencies should begin implementing SERs to review a wide range of organizational errors and “near misses.” We offer guiding principles about the kinds of errors that may be more or less susceptible to fruitful review. Congress, state legislatures, and municipalities should also enact policies—such as safe harbor provisions—to encourage police departments and other criminal justice agencies to conduct SERs.

Keywords

Sentinel event review, root cause analysis, quality improvement, procedural justice, policing

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I. Introduction

When something goes wrong in the criminal justice system, the public debate, the courts, and the media tend to focus on a series of questions related to individual fault. Who committed the error? Was their judgement reasonable? Was it improperly influenced by legally suspect considerations like race, class, or a conflict of interest? And will they be punished for the error? This kind of response is often called the *person-based approach to error* (Reason, 1990).

Focusing on individual fault makes sense, at least to some extent. Criminal justice officials hold massive powers over the lives of American citizens (Bittner, 1970; Lipsky, 2010; NAS, 2004). When they wield that power inappropriately, one correct response may be to retrain, discipline, or fire them (Kane & White, 2013).

But individual actions are just one part of a larger and more complicated puzzle about errors in complex human systems (Baer, Frese, & Sonnentag, 2005; Dekker, 2016; Reason, 1990; Van Dyck). Organizational management scholars have argued for decades that rather than investigating and punishing the faults of the individual actor alone, organizations should focus on preventing similar errors from recurring in the future. To do so, they should expand their attention to flaws in the wider system in which individual actors operate. This is the *system-based approach to error* (Reason, 1997). It has been adopted in many professional fields—like aviation, energy and medicine—in which individuals in rapidly-changing circumstances must make split-second decisions based on imperfect information.

One core tool in the system-based approach to error is the sentinel event review (SER). A sentinel event is a high-profile error—an undesired outcome that results in significant damage to the system and its credibility. An SER is a voluntary, multi-stakeholder, non-punitive review of such an undesired outcome. Its primary goal is to apply a root cause analysis (RCA) to identify, assess, and respond to the contributing causes—the underlying acts, omissions, or environmental factors—that led to the error and to devise solutions to minimize such errors in the future (Carroll, Rudolph & Hatakenaka, 2002; Doyle, 2014; Doyle, 2018).

From decades of experience, we know that the system-based approach to error in general, and SERs in particular, have helped reduce errors in other fields (Reason, 2000). And, in the last four years, the SER has received significant support from both the National Institute of Justice and the President's Task Force on 21st Century Policing (2015). In this paper, we seek to assess the potential contributions of SERs to policing and other criminal justice agencies.

We begin by arguing that SERs may provide at least three primary benefits to police departments. First, as in other fields (Bagian et al., 2002; Carroll et al., 2002; Knudsen, et al., 2007), they may generate novel institutional reforms that, over time, promote a department's effectiveness by reducing errors. As one example, SERs might improve a department's investigative practices, thus helping it catch more offenders and arrest fewer innocent people. Second, SERs may build institutional buy-in to implement both well-known best practices as well as new reform proposals generated by the SER. And finally, SERs may help improve public perceptions of the legitimacy of a participating criminal justice agency, not only by reducing its

errors over time, but also by demonstrating to the public that the agency takes its errors seriously and is committed to learning from them (Tyler, Goff, & MacCoun, 2015).

Unfortunately, there is little data available to assess how successful an SER might be in practice because the idea is relatively new to the criminal justice system. Indeed, criminal justice agencies are often reluctant to open themselves up to close public scrutiny. Perhaps more important, there are real implementation obstacles, even in departments that are open to system-based review. In the absence of any legislative safe harbor (Nijm, 2003), police agencies and their employees may worry that information collected during an SER may be disclosed in civil discovery and used against them in court. As a result, we have little data about how an SER might work in practice in a police department.

In this paper, we begin solving that problem by providing the first detailed description of an SER in an American police department—one that circumvented the obstacles described above by examining an error thirteen years after the events occurred, long after legal liabilities were settled through litigation.

In 2000, four men killed seven occupants of a row house in West Philadelphia and severely wounded three more. The attack, called the “Lex Street Massacre” by the media, was the largest mass murder in Philadelphia history (Jones, 2001). Based on a confession and eyewitness identification, the Philadelphia Police Department (PPD) arrested four suspects, who were jailed pre-trial for 18 months, before city authorities announced that they had the wrong men. Four other men were later arrested and convicted for the crime. In 2014, the PPD, the District Attorney’s Office (DA’s Office), and Superior Court agreed to participate in an SER to review the Lex Street investigation and prosecution.

This paper reports on the implementation of the Lex Street SER, its challenges, successes, and outcomes. Through its close review, the SER ultimately identified a number of contributing causes and recommendations for reform. As we argue in greater detail in Section V.B., some of the causes were obvious or consistent with well-known best practices but several others were potentially novel, and non-obvious causes with feasible, and potentially effective reforms—reforms which had not been proposed or implemented in the fifteen years since the Lex Street investigation.

The remainder of the paper unfolds as follows. Section II summarizes the literature on the system-based approach to error, SERs, and wrongful convictions. Then, Section III lays out our methodology and its limitations. Section IV outlines the investigation and prosecution of the Lex Street Massacre and Section V describes the implementation of the SER and the contributing causes and corrective actions identified by the review team. We conclude by discussing potential limitations of the SER strategy and policy implications for criminal justice officials and policymakers.

II. Literature Review: Errors and Organizational Management

A. *Two Approaches to Error*

We define an “error” broadly as any undesirable outcome in the criminal process (Grober & Bohnen, 2005). Thus, the incarceration and conviction of an innocent person is an error. The failure to apprehend a violent offender is an error. So too is an officer-involved shooting of a civilian, even if the officer made the right decision to pull the trigger. The criminal justice system should seek to prevent and avoid such events even when their participants are blameless.

Organizational management scholars have described two main approaches to reviewing errors. The “longstanding and widespread tradition” of the *person-based* approach focuses on *individual fault*. It begins with the assumption that organizational errors generally arise when an individual engages in “aberrant mental processes such as forgetfulness, inattention, poor motivation, carelessness, negligence, and recklessness” (Reason, 2000, p. 768). The primary strategy to reduce errors is to discipline, shame, retrain, or remove people that are more likely to engage in those aberrant mental processes.

As organizational management scholars have pointed out, however, the person-based approach has several important limitations. First, many errors might not be due to individual fault. One commonly cited statistic, for example, is that as many as 90% of errors in aviation are blameless (Reason, 2000). Second, mistakes are part of the “human condition,” and some cannot be avoided (Reason, 2000). Third, and most important, some errors are the result of weaknesses in the wider system—in the poor judgements of individuals at upstream phases in the organizational process or in inadequate policies, practices or technologies (Dekker, 2016).

For these reasons, organizational management scholars advocate for an alternative *systems-based* approach, which has at least two key distinguishing characteristics. First, the systems-based approach begins with the assumption that humans are fallible and errors are to be expected, even in the best organizations. Thus, rather than focusing on whether an individual was at fault, the systems-based approach prioritizes preventing the error from recurring in the future. Second, unlike the person-based approach that searches for the causes of errors in individual behavior, the systems-based approach looks more broadly for weaknesses in the entire system in which those individuals operate—a system composed of policies, practices, technologies, and other people. It then seeks to reduce future errors by making changes at every level of the organization: “the person, the team, the task, the workplace, and the institution as a whole.” (Reason, 2000, p. 769).

Organizational management scholars argue that the systems-based approach has another benefit: it may generate a “culture of safety” in which actors in the system feel both safe to report errors and near misses (Dekker, 2016; Ito, Omata & Andersen, 2009). Increased reporting provides institutions more opportunities to learn and adapt.

There is little systematic data about police departments’ orientation towards the person- and system-based approaches to error. The only relevant study supports the view that policing is dominated by the person-based approach, but it is over a decade old. Archbold (2005) conducted a nationally representative survey of 300 police agencies, asking whether they engage in proactive risk management practices to reduce police misconduct. The author found that just 14 of the surveyed police agencies—less than 4 percent—used such strategies.

Other observations support the conclusion that policing is dominated by the person-based approach to error. For one thing, the traditional tools for reviewing policing errors use an adversarial process to determine whether an officer engaged in blameworthy conduct (Hollway, Lee & Smoot, 2017). The “primary role” of the internal affairs unit, for example, “is to investigate employees who are the subject of allegations of misconduct.” (Noble & Alpert, 2009, p. 9). Similarly, while some civilian oversight boards engage in other activities (Walker & Archbold, 2014), their primary purpose is the same (Noble & Alpert, 2009). The remaining traditional tools for reviewing policing errors—like criminal prosecutions, § 1983 claims, and state tort law claims—are based in adversarial litigation and focus on fault (Kappeler, 2006; Schwartz, 2014).

We also find some evidence in police textbooks that the person-based approach dominates policing. With only one exception (Walker & Katz, 2017), the policing textbooks we reviewed focused almost exclusively on methods of error review that fit firmly in the person-based approach. Two textbooks only discussed tort, civil rights, and criminal lawsuits (Gaines & Kappeler, 2011; Hess & Wroblecki, 2006). Others focused on a wider range of traditional mechanisms—like internal affairs divisions, citizen complaint reviews, and blue ribbon commissions—but did not discuss at all (Doerner, 2004; Lyman, 2002; Peak, 2015) or devoted no more than a few sentences or paragraphs to system-based approaches like agency policy review (Champion & Hooper, 2003; Dempsey & Forst, 2014; Gaines & Worrall, 2012; Noble & Alpert, 2009), or DOJ pattern and practice lawsuits (Noble & Alpert, 2009; White, 2007). Several textbooks describe early intervention systems but do so in just a sentence or paragraph (Cox, Marchionna & Fitch, 2017; Dempsey & Forst, 2014; Grant & Terry, 2005; Haberfeld, Lieberman & Horning, 2015; Langworthy & Travis, 2003) or a couple of pages (Swanson, Territo & Taylor, 2008). Another recent textbook devoted a quarter of a page to “sentinel event reviews” but did not indicate whether any police departments have implemented them (Worrall & Schmalleger, 2018). The contents of mainstream policing textbooks thus appear to reflect the focus of the discipline on the person-based approach to error.

Of course, we do not mean to suggest that American police departments have completely eschewed the systems-based approach. For example, early intervention systems straddle both worlds, maintaining the focus of the person-based approach by examining the individual behavior of officers, but also adopting some of the systems-based approach by trying to avoid problems in a non-fault-based setting, one in which officers have not yet done serious harm (Walker & Archbold, 2014). There are also documented examples of auditing organizations proactively revising agency policies and practices (Walker and Archbold, 2014). Furthermore, while they do not respond to specific errors, accreditation organizations help departments proactively revise their policies and practices, and a few crime labs have undergone long-term audits. But each of these systems-based efforts represent exceptions to a culture that is much more in line with the person-based approach to error. Policing institutions might significantly improve by embracing the system-based approach.

B. Sentinel Event Reviews

SERs serve an important role in the system-based approach to error. An SER is a voluntary, multi-stakeholder, non-punitive review of an organizational error or “near miss.” Such reviews do

not focus on identifying who is to blame or for determining appropriate sanctions. Instead, their primary goal is to identify and respond to the root causes, or what we call the contributing causes—the underlying acts, omissions, or environmental factors—that allowed the error to occur, and to devise solutions to minimize such errors in the future (Carroll et al., 2002; Doyle, 2014; Doyle, 2018).

SERs frequently apply RCA (Rooney & Vanden Heuvel, 2004) to answer three basic questions: “what happened, why did it happen, and what can be done to prevent it from happening again?” (Wu, Lipshutz, & Pronovost, 2008: 685). To answer these questions, RCAs often deploy the “five whys” strategy (Serrat, 2017), which requires the investigator to explore a “relentless barrage of whys.” By seeking causal answers that go further back in the organizational process, RCA attempts to identify a broad array of contributing factors that acted in concert to permit the error to occur. These underlying causes may originate from a range of sources, including communications (language or terminology differences, availability of information, etc.), environmental conditions (noise, lighting, weather, etc.), equipment or device challenges, task or process factors, specific actions or omissions by individuals or teams, management or supervision, organizational culture, or leadership (Joint Commission, 2017). Importantly, while there can be a tendency to blame an individual, the RCA process generally presumes that acts leading to the error were committed without individual fault and that focusing on individual fault can distract from efforts to prevent the error from recurring in the future. Accordingly, RCAs attempt to separate responsibility for an error from blame, and seek not to punish the individuals involved, but to enable other similarly well-intentioned actors in the future to avoid an error under similar circumstances (Wachter & Pronovost, 2009).

After identifying all relevant contributing causes, the SER seeks to develop systems-based solutions to reduce the chance of future errors. In doing so, they are discouraged from addressing contributing causes exclusively through individual training, which is seen as a relatively weak, short-term solution, and encouraged instead to develop systemic or environmental changes that force individuals into different decisions and have longer-term effects on individual and organizational behavior. Ideally, the participants also work to ensure the solutions are implemented and to evaluate their effectiveness (National Patient Safety Foundation, 2016).

C. Applying SER to Policing

As noted, one of the core assumptions of the systems-based approach is that systemic weaknesses—rather than individual misconduct—are the root cause of organizational errors. That assumption makes sense in many professional fields, including aviation, where the system-based approach to error was first developed. Indeed, aviation is a highly regulated field. Nearly every decision a pilot makes during a commercial flight is guided by detailed, specific, and concrete rules and regulations. And the pilot’s incentives to fly safely are closely aligned with the safety of her passengers: if the plane crashes, she is likely the first to be injured.

The assumption that individual misconduct is not a root cause of organizational error may not apply with the same force in policing. Unlike pilots, police officers exercise significant discretion in many of their daily decisions, including who to investigate, stop, frisk, arrest, or use force against (NAS, 2004; Lipsky, 2010; Bittner, 1970). And, while many officers join the police

to protect and serve their communities, numerous recent examples of police corruption, misconduct, and unjustified use of force, particularly against young, black men, reinforce the potential of intentional individual misconduct in policing.

For these reasons, it is hard to know *ex ante* to what extent SERs will be a valuable reform tool in the criminal justice system. The contextual differences between aviation and criminal justice may justify the use of a third approach to error review that combines elements of both the person-based and systems-based approaches. This third approach has gained traction in other fields, like healthcare, where concerns have been raised that the systems-based approach may shift the focus too far from individual accountability.

Once again, the organizational management literature offers guidance on how to fuse the person- and system-based approaches (Dekker, 2016; Reason, 1997). An SER may begin by applying the systems-based approach to identify systemic root causes while assuming good faith participation by individuals involved. Once the SER identifies such causes and solutions to help reduce the chance of future errors, it then turns to an assessment of individual misconduct—whether to hold an individual, rather than the organizational system, accountable for an error (Reason, 1997).

The threshold question is whether the individual departed from established training, policies or practices. If not, individual sanctions are likely unnecessary, and the SER should instead focus exclusively on systemic remedies. If, however, the individual departed from established training, policies or practices, the SER should consider two further questions. The first is called the *intentionality test*: did the individual intentionally violate established training, policies, or practices? The second is called the *substitution test*: could a competent associate with similar training have responded to the situation as the participant did (Dekker, 2016; Reason, 1997)?

The intentionality and substitution tests create four possible responses (Reason, 1997). If the actor unintentionally departed from protocol and passed the substitution test, the appropriate response is typically to console the actor, who may have suffered, emotionally or professionally, for contributing to an error in which she lacked the capacity to obtain a better outcome. If, on the other hand, the actor intentionally departed from agency training or policy, the appropriate responses are different. If the individual passes the substitution test, the appropriate response is often to coach the individual. If the individual fails the substitution test, the appropriate response is typically to discipline or terminate them for reckless behavior.

D. Benefits of SER to Policing

In our view, SERs may provide at least three important institutional benefits to a police department. First, they may generate novel and effective systemic reforms that, over time, help a department reduce its errors. Indeed, as noted, the systems-based approach has found success in other fields (Carroll et al., 2002; Reason 1997). Aviation experienced a dramatic decline in accidents in the 1970s and 80s, and many scholars attribute at least some of that decline to systems-based improvements in the industry (e.g., Michaelides-Mateou & Mateou, 2010; Stoop, 2017). In the field of medicine, RCA has become a standard method for investigating errors (Knudsen et al.,

2007; Wu et al., 2008). For example, a decade ago, the US Department of Veterans Affairs had already performed over 7,000 RCAs (Wu et al., 2008).

There are likely many potential opportunities to reduce errors in police departments through systemic improvements. As Schwartz (2018) has argued, police departments could try to reduce police shootings by limiting the circumstances in which officers are allowed to stop civilians or cars on the street. They might also reduce instances of alleged taser confusion—when officers mistakenly fire a handgun instead of a taser—by redesigning the latter to look and feel less like handguns (Schwartz, 2018). Given that sleep deprivation and exhaustion are known to increase the chance of error (Amendola, Weisburd, Hamilton, Jones, & Slipka, 2011), departments might also restrict overtime shifts and moonlighting. Police departments might also reduce errors by introducing checklists—like those employed in aviation and medicine (Hales et al., 2007)—to ensure that officers avoid violating the Constitution in searching vehicles and raiding homes (Schwartz, 2018). Systemic improvements to the investigative process may also help a police department apprehend more guilty offenders and avoid investigating and charging innocent suspects.

Second, SERs may help build institutional buy-in to implement reform proposals generated by the SER—whether they are well-known, best practices or new insights developed by the review team. Because police participate in the evaluation of the error, the proposed reforms are created with the input and support of both operational- and supervisory-level police officials, giving them a greater chance of being perceived as “friendly amendments” and being informed by the realities of police practice. Furthermore, because the reforms are designed and implemented in an environment that recognizes the interplay between the individual’s conduct and the contributory factors of managerial, supervisory, cultural, and environmental roles, police may be more likely to accept the proposed reforms as procedurally just, and therefore useful to the officers and to the organization (Shane, 2010; Sunshine & Tyler, 2003; Trinkner, Tyler, & Goff, 2016).

Third, SERs may help improve public perceptions of the legitimacy of a police department (Tyler et al., 2015). They may do so simply by reducing publicly salient errors but also by demonstrating that the organization takes its errors seriously and is committed to learning from them.

Thus, SERS have the potential to generate novel institutional modifications that reduce errors in police departments; provide momentum to implement these modifications; and improve public perceptions of the legitimacy of those departments. In the next section, we turn to the kind of sentinel event at issue in the Lex Street investigation—wrongful incarceration—and describe the relevant social science literature.

E. Wrongful Incarceration as a Sentinel Event

The sentinel event in the Lex Street SER was the wrongful incarceration of four innocent men for eighteen months.¹ There is relatively little scholarly research on cases of wrongful incarceration where, as here, a defendant was held pretrial but was *not* ultimately convicted. But we might gain some insight from prior work on wrongful *conviction* cases that share similarities with the Lex Street investigation.

While a precise rate of error on wrongful incarcerations is not known, a number of scholars have sought to estimate the prevalence of wrongful convictions. Studies examining capital punishment cases have estimated rates of false conviction ranging from 2 to 4 percent (Gross & O'Brien 2008; Gross, O'Brien, Hu & Kennedy, 2014; Risinger 2006). One recent study attempted to measure the rate of wrongful convictions across a broader group of cases—the cases of all state prisoners in Pennsylvania—by asking the prisoners whether they committed the crimes for which they were convicted (Loeffler, Hyatt & Ridgeway, 2017). That study estimated that wrongful convictions occur in as many as 6 percent of cases resulting in imprisonment. We suspect that the rate of wrongful incarceration is even higher among pre-trial defendants, who have not been proven guilty beyond reasonable doubt.

SERs reviewing wrongful incarceration cases might benefit from understanding the factors that have contributed to past wrongful convictions. Much of what we know in this area comes from the roughly 2,300 cases that have been documented to date by the National Registry of Exonerations. Among these cases, the leading contributing cause of wrongful conviction varies by case type. As in Lex Street, 21 percent of murder exonerations involved a false confession (Gross & Shaffer, 2017). A number of risk factors predict false confessions, including young suspects with intellectual disability or mental illness and deceptive or coercive interrogation tactics (Kassin, Drizin, Grisso, Gudjonsson, Leo, & Redlich, 2010). False confessions can be especially difficult to detect if police officers feed facts to the suspect that are not known to the public, and the suspect then repeats those facts in his or her description of the crime (Garrett 2011).

Another leading cause of convictions in exonerated murder cases are mistaken witness identifications (Garrett 2011; Gross & Shaffer, 2017). Indeed, as in Lex Street, roughly 25 percent of known murder exonerations involved a misidentification. A rich empirical literature on the subject has found numerous risk factors, including poor lighting at the time of the crime, cross-racial identifications, simultaneous lineups, and suggestive comments by officers administering the identification procedure (Brewer & Wells, 2011; Garrett, 2011).

Of course, not all false confessions or misidentifications lead to a conviction (Gross, 1987; Drizin & Leo, 2004). The critical questions, therefore, are “why did the witness falsely confess or misidentify?” and “why did the checks and balances built in to the system fail to detect the false confession or misidentification at the time?” (Gross 2017, p. 776). Because the literature has

¹ While it is a desirable outcome that the first four Lex Street defendants were not actually convicted, their arrest and incarceration was clearly undesirable not just for the four men and their families, but for the police officers, attorneys, and judges who participated in the case, as well as for the community that followed the case so closely. While some may describe the Lex Street case as a “near miss,” in that wrongful convictions were avoided at the last moment, such a definition would still render Lex Street suitable for SER, as it includes all of the necessary components of a wrongful conviction except the final erroneous adjudication.

focused on false *convictions*, we have comparatively little empirical research to answer these questions. But there is some evidence that under-resourced defense representation and cognitive biases in the investigative process—including tunnel vision, confirmation bias and hindsight bias—increase the chance that a serious investigative error will lead to a wrongful conviction (Batts, DeLone and Stephens, 2014; Gould et al. 2014).

While scholars have identified a number of important causes of errors in criminal justice—in both the wrongful conviction literature and elsewhere—there is much work left to be done. An SER can and should, therefore, rely on existing literatures to examine a sentinel event, but it should also be mindful that other causes, not yet known to the literature, may be responsible for an error under review. As an example, one cause of the wrongful incarceration in the Lex Street case was a false confession by one of the first four defendants. Importantly, none of the hallmarks of a false confession identified in the wrongful conviction literature were present: *e.g.*, the suspect was not young or impressionable or have any cognitive disabilities; the interrogation lasted only a few hours; and the interrogators did not appear to use any improper force or coercive tactics. Thus, it is important for an SER to closely scrutinize the facts of each sentinel event and search for novel case characteristics that may not yet be recognized by the literature.

We next turn to our description of the Lex Street investigation and prosecution.

III. The Lex Street Massacre Investigation

On December 28, 2000, four armed men entered a row home at 816 Lex Street in West Philadelphia.² The gunmen herded the house's 10 occupants to the ground floor, made them lie face down, side by side, and opened fire, killing seven and seriously wounding the other three.

The “Lex Street Massacre” was the worst mass murder in Philadelphia history. Given the scale and savagery of the crimes, the City and Police Department leapt into motion. The DA and Chief of Police held press conferences encouraging witnesses to come forward, and the Mayor announced a \$50,000 reward for information leading to an arrest. Homicide detectives and other police officers investigated the case around the clock.

They had little to work with. The survivors agreed that the four shooters were young black men, and that two had worn scarves, but none could positively identify any of the shooters. The house had been used by a group of young men, including victim George Porter, as a base to sell drugs. Survivor Yvette Long told police and a reporter that after the initial volley of shots, one of the shooters had stepped forward, uttered an obscenity, and shot Porter three more times. For this and other reasons, the prevailing narrative quickly became that the attack was a dispute about drug turf, and the investigation proceeded accordingly.

² The parties that conducted the SER—the Philadelphia District Attorney's Office, the Philadelphia Police Department, the Pennsylvania Court of Common Pleas 1st Judicial District, the University of Pennsylvania Law School, and select individuals—signed a confidentiality agreement in May of 2014 that limits the disclosure of certain facts discussed by the review team. Any factual information contained in this paper is either public by virtue of its publication by third parties outside the scope of the confidentiality agreement or by its publication in a report authorized by all parties to the May 2014 confidentiality agreement that outlined root causes and proposed recommendations for reform.

On January 11, police found their big break. Yvette Long, interviewed for the fourth time by Homicide detectives, identified a young man named Sacon Youk as one of the shooters. Coincidentally, at the same time the identification was made, police were interviewing Jermel Lewis, a known associate of both Youk and Porter. Initially, Lewis had not been a suspect. But his interview immediately turned into an interrogation when Yvette Long identified Youk because of the connection between Youk and Lewis (and Porter). Not long after, Lewis confessed that he, Youk, and two other men—Hezekiah Thomas and Quiante Perrin—perpetrated the attack. Lewis' statement provided substantial details of the incident, including that only two of the four men wore a mask. His statement also matched Yvette Long's description of Youk's specific role in the event. While the types of guns he described did not match cartridges recovered at the scene, the police were certain they had their perpetrators. They immediately called the head of the DA's Homicide Unit, who negotiated a plea deal on the spot in which Lewis agreed to testify against his accomplices in exchange for a waiver of the death penalty. The DA's office then obtained arrest warrants for the other two men that Lewis identified—Thomas and Perrin.

While the city rejoiced that the four shooters were in custody, the police proceeded cautiously. In an interview the next day announcing the arrests, Chief Timoney said, “[t]his has been as thorough an investigation as I’ve seen. . . . It’s been methodical. We’ve taken our time. There’s been no rush to judgment—evidenced by the fact that we’re announcing two arrests for murder, instead of four”³ (Conroy, 2001).

The four men were detained in jail while they awaited trial. As time passed, the strength of the case appeared to increase because Yvette Long, who was interviewed at least six times by police detectives and an Assistant DA, was ultimately able to provide positive identifications of three of the four perpetrators at the preliminary hearing. Given the crowded Philadelphia docket, a jury was not empaneled until June 4, 2002. When the trial did not begin on that date, however, a local reporter began asking questions. Four days later, she published a story revealing that PPD was aware of another potential Lex Street perpetrator, creating some doubt about the defendants' guilt. Two days after that, the prosecutor requested and received a 30-day continuance by the trial judge. On July 9, with pressure mounting from defense counsel and the media to try the case or release the defendants, the prosecutor's request for a second continuance was denied.

The next day, the DA's Office dropped all charges against the four defendants. The day after that, arrest warrants were issued for a second group of defendants: Shihean Black, Bruce Veney, and brothers Dawud and Khalid Faruqi. Unknown to all but a select few, these four had been under investigation by the Philadelphia Police since only weeks after the first group of defendants were arrested. Indeed, Shihean Black had confessed to the Lex Street shootings on February 1, 2001 and again on February 28, 2001 when confronted with evidence that a gun in his possession (provided to him by Khalid Faruqi) had been used in the Lex Street shootings. His confessions were deemed to insufficiently reliable to dismiss Jermel Lewis' confession, but they raised enough concern that police began investigating Black. Over time, additional testimonial and ballistic evidence conclusively linked this second group of men to the Lex Street murders.

³ Perrin and Thomas were charged with lesser crimes, as Pennsylvania law prohibited a murder charge based solely on the testimony of a co-defendant. At the preliminary hearing, and after a meeting the day before with lead prosecutor Roger King, Yvette Long positively identified Perrin and Thomas, and their charges were upgraded to murder.

Black and Veney confessed to the shootings, and the Faruqi brothers were convicted at trial. But no information about this second investigation—not even Shihean Black’s initial confession—was disclosed to the first group of defendants until well after the empanelment of a jury; even then, the disclosure was made under a media gag order imposed by the trial judge.

In short, everything that the government had believed about the first group of defendants was incorrect, including the true motive for the shootings. The attack was not part of a drug turf dispute. Instead, it was a retaliation against Porter who had sold a car to Shihean Black and had refused to reverse the sale when the car broke down.

The costs of the errors in the Lex Street Investigation were high. The police department and DA’s Office invested substantial resources investigating and prosecuting innocent defendants. They subjected those innocent defendants and their families to the pains and stigma of eighteen months of incarceration. And all the while, the four true murderers were left on the streets, where they were free to—and did—commit crimes and harm other people. Black, for example, was linked to two separate subsequent shootings, while the Faruqi brothers allegedly participated in a firearm purchase-and-resale scheme to circumvent registration requirements.

When the error was revealed to the public, recriminations and civil litigation ensued, generating complicated and often conflicting narratives about the Lex Street investigation. Some thought the police detectives were to blame. Others blamed the DA’s Office. The head of the DA’s Homicide Division was reassigned, while the Daily News reporter who broke the story of the second defendants was widely praised.

What was not done was an SER, a systems-based review that would have asked how, in one of the most scrutinized cases in Philadelphia history, the police and DA’s Office could have arrested, charged, and incarcerated four innocent men for 18 months, and why the existing checks and balances in the system—the defense attorneys and court—were unable to correct the error for so long. The community had to wait 13 years for that SER, which we describe below.

IV. Methodology

Our study seeks to provide a detailed description of a multi-stakeholder SER in the criminal justice system, to flag potential implementation problems and to assess the extent to which the review team could identify novel, non-obvious, contributing causes with feasible, and potentially effective reforms.

We adopted a single-case study design, a common methodology in the social sciences (Yin, 2013) that has been applied in criminology (e.g., Shane, 2013; Swanson, 2009). A case study examines “a complex instance based on a comprehensive understanding of that instance obtained by extensive description and analysis of that instance taken as a whole and in its context” (GAO, 1990, p. 15). While the single-case study approach limits the generalizability of our findings, it is appropriate where, as here, the object under examination is unique or of critical interest (Yin, 2013). Indeed, we believe that Lex Street was one of the first multi-stakeholder SERs attempted in the criminal justice.

We gathered and reviewed the documents that formed the basis of the SER. Those documents included primary materials generated by the participating organizations during the Lex Street investigation and prosecution as well as transcripts and notes from interviews conducted during the SER. We also reviewed other documents created by the SER team, including presentation materials, contemporaneous notes from group meetings, and drafts of the final report.

Of course, our study design represents a tradeoff of methodological strengths and weaknesses. Perhaps most important is the thirteen-year time lag between the Lex Street Investigation and the SER. This time lag is a strength because, in a rough sense, it allows us to compare two counterfactual worlds. On the one hand, we can observe the actual world in which the police department reviewed the Lex Street investigation according to business-as-usual practice—within the traditional person-based approach to error. And we can compare the results of that review against the reform proposals generated by the SER. We can therefore assess whether the SER devised reforms that would not have been proposed without it. The time lag creates a second methodological advantage as well. By examining an old case—a case for which all of the litigation had already settled—we can observe the potential value of an SER when the participants are not subject to legal liability and can instead freely provide information to improve the system.

The time lag also presents certain limitations, however. It is difficult to generalize the results of the Lex Street SER to future SERs that may be conducted in closer temporal proximity to the errors they review. We note, though, that this limitation cuts in both directions. On the one hand, the time lag might mean that our results *overstate* the success of the SER strategy. For example, it would have helped the Lex Street SER to collect a larger quantity of useful information if participants were more forthcoming because their comments couldn't be used against them in litigation. On the other hand, the time lag could also mean that our results *understate* the success of SERs. During the intervening decade, participants' memories of the Lex Street investigation faded; documents were misplaced, lost, or destroyed; and key personnel passed away or retired. If the SER had taken place soon after the investigation, the review team may have had access to more useful information than they did over a decade later.

The fact that the first author of this paper served as the SER moderator is also both a strength and weakness of our study. It is a strength because it provides us with rich, detailed knowledge and real-time observation of the review process. Indeed, because the participating organizations did not share primary documents with each other, the Quattrone Center, which the first author directs, was the only party that had access to the primary documents of *every* agency involved in the review. The first author was also present for many interviews and for all review team meetings, including those in which the team discussed and finalized its list of contributing causes and corrective actions. On the other hand, of course, the first author's participation in the SER might also introduce the risk of researcher bias (Darke, Shanks and Broadbent, 1998) if his participation influenced his views or reporting about the process.

In the remainder of this paper, we describe the implementation of the Lex Street SER and examine the contributing causes and corrective actions it identified.

V. Results: The Lex Street Sentinel Event Review

A. *Implementing the SER*

In January 2014, the Police Department, DA's Office and Court of Common Pleas in Philadelphia, along with defense attorneys and a reporter who had been involved in the case, agreed to conduct an SER of the Lex Street Investigation. As we have discussed, conducting an SER in a police department raises serious challenges. In this subsection, we describe the implementation of the Lex Street SER, highlight key challenges that arose during the process, and discuss how the review team worked to address them.

1. *Case selection.*

Lex Street was selected as a test case for three primary reasons. First, the 13-year time lag between the crime and the SER meant that civil liability issues in the case were already resolved. Thus, the fear that participating could lead to liability was mitigated.

Second, the error in the Lex Street investigation was clear to all: four defendants had been inaccurately identified and then incarcerated for months despite the fact that Shihean Black's conflicting confession had occurred only weeks after Lewis' arrest.

Third, it was clear to each of the participating organizations that they had all contributed to the error. The police had accepted Lewis' confession and Long's eyewitness identification and did not arrest the second group of defendants for roughly eighteen months. The DA's Office aggressively prosecuted the first group of defendants, only dropping charges against them when the court refused to grant a second continuance despite the existence of an ongoing investigation against the second group of defendants. The court allowed the DA's office to withhold information about that second investigation far beyond normal discovery deadlines. And the attorneys for the first group of defendants had been unable to convince others of their clients' innocence. Thus, each organization hoped to learn from the error and implement systemic improvements to its policies, practices and procedures to prevent similar errors in the future.

2. *The moderator.*

The participating organizations agreed to include an academic moderator to facilitate the SER. To serve that role, they selected the Quattrone Center for the Fair Administration of Justice at the University of Pennsylvania Law School. The first author of this paper served the leading role as moderator throughout the process.

The moderator served two primary functions. First, the Quattrone Center provided administrative and project management support. More specifically, it provided introductory training on SERs to the reviewers; gathered all documentary materials from each participating organization; helped identify potential interviewees who were involved in the Lex Street investigation and prosecution; coordinated outreach to potential interviewees; gathered and organized the information generated by interviews and documents; and compiled a detailed time line.

Second, the Quattrone Center was tasked with serving as a neutral moderator to guide the substantive direction of the review. The moderator led all the investigative interviews and review-team discussions, and drafted a final report agreed to by each participating organization. Throughout this process, the Quattrone Center sought to ensure that the error review followed the basic tenets of system-based approach to error and SERs, including non-blaming, factual accuracy, and candor (Dekker, 2016).

3. *Choosing the reviewers.*

While participation in the SER was voluntary, every organization that was invited to participate agreed to do so, including the Philadelphia Police Department, the District Attorney's Office, and the First Judicial Court of Common Pleas of Pennsylvania.

Due to confidentiality agreements, we cannot disclose the identities of the individual reviewers, but three basic principles were followed during the selection process. First, the participant organizations selected individuals who had an expertise over the technical aspects of a homicide investigation and prosecution, to allow for fair assessments of participant behavior and accountability. As Dekker (2016, p. 109) has explained, “[i]f you are held accountable by someone who really does not understand the first thing about what it means to be a professional in a particular setting, then you will likely see their calls for accountability as unfair . . . , as uninformed, and as unjust.”

Second, the participating organizations sought at least one reviewer from each organization who held a senior management role, to increase the chance that corrective actions identified by the review team would be implemented.

Third, they selected reviewers who were known to be “bridgers,” those who are effective at building social connections with people from other social and professional groups (Putnam, 2001). Because of tensions among the various criminal justice agencies in Philadelphia, people with reputations as “aisle crossers” and “honest brokers” were sought to conduct difficult conversations with candor and calm.

Ultimately, 13 individuals were selected for the review team. The team included representatives from the Philadelphia Police Department, the Philadelphia District Attorney's Office, and the First Judicial Court of Pennsylvania. It also included three defense attorneys who had represented one of the first four or second four defendants.⁴ The team also included one news reporter, who had covered the case from the crime all the way through conviction.

4. *Ground rules.*

Work on the Lex Street SER began in earnest in April 2014. The first key step was to agree to basic ground rules. First, all parties agreed to confidentiality. The interviews and information gathered would be de-identified, and statements from interviewees would not be used with attribution.

⁴ Because all eight defendants in the case retained private counsel, the Philadelphia Defender Association was not invited to participate.

Second, the parties agreed that unanimity would be required for any publication of proposed reforms or recommendations. Thus, any stakeholder could have vetoed any of the reforms published by the review team. Because of this rule, several recommendations were dropped and virtually every recommendation was edited from its original form prior to publishing the report.

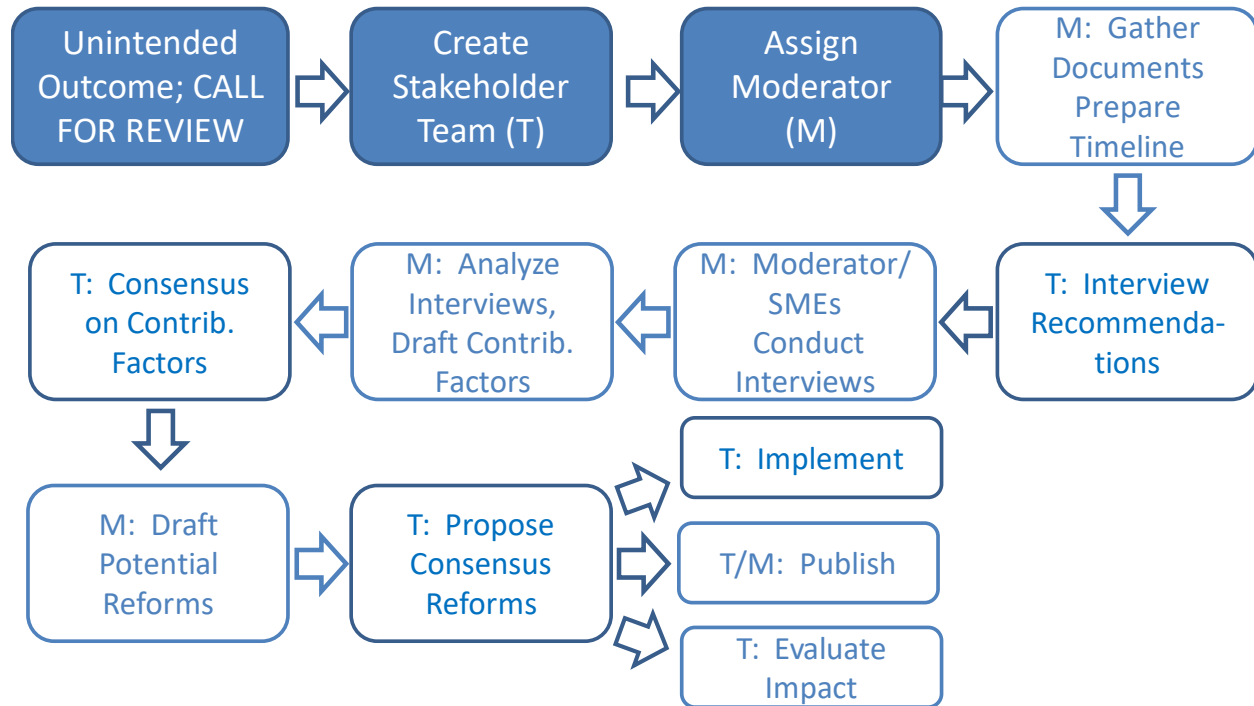
Third, to help avoid politicizing the review process, the parties agreed that all proposed corrective actions must be directly connected to the contributing causes of error in the Lex Street investigation. This rule, which was called the “Direct Connection Rule,” helped build consensus among reviewers by demonstrating that all reform proposals were grounded in real, rather than hypothetical, contributing causes.

Fourth, an unforeseen challenge occurred at an early stage of the SER, when the group considered how to share information about the Lex Street investigation and prosecution with each other. To understand the mindset and actions of participants at the time of the events in question, each organization needed to share previously undisclosed internal documents. But for legal and political reasons, no organization was comfortable sharing their documents with the other stakeholders. After some discussion, the parties agreed to a hub-and-spoke model for document review. First, the participating organizations agreed that no party would disclose documents protected by pre-existing ethical or legal obligations (e.g., attorney/client privileged documents). Second, each party would only disclose its documents to the moderator. Some parties copied entire files and sent them to the moderator, while others permitted the moderator to review and select all documents relevant to the review. The moderator agreed to hold these documents in confidence, and not to disclose them to other parties.

A similar problem arose during the interview process. No group was willing to have their employees interviewed by representatives of the other participating organizations. Again, the parties agreed to permit the moderator to conduct interviews with each interviewee. The moderator agreed not to share the interview notes or transcripts with any of the parties and not to provide any identifiable quotes from any interviewee without express permission. The moderator also agreed to “anonymize” information reported back to the reviewers to the extent possible.

After laying the basic ground rules, the team then planned out an overview plan of each of the stages of the review (Figure 1). Those stages included gathering and analyzing documents, preparing for interviews, conducting interviews, drafting problem statements, identifying potential corrective actions, agreeing to corrective actions, and implementing and monitoring the effectiveness of those actions.

Figure 1. Steps in the Lex Street Error Review Process



5. Laying the seeds for system-based error review.

At the initial meetings of the SER, the moderator worked with the review team to promote the values of system-based error review. The moderator emphasized several themes in particular.

First, the moderator sought to change the reviewers’ view of error, to understand that Lex Street had been an occasion for criticism but was better considered as an opportunity for organizational learning and improvement. Second, the moderator encouraged the reviewers to conceive of the review team as a unified group, independent of their respective organizational affiliations, tasked with educating the participating organizations about their contributions to the error and about potential corrective actions that might prevent similar errors in the future. Third, the moderator sought to acknowledge that organizational errors occur when individual participants are acting in good faith. Fourth, the moderator sought to encourage a culture of non-blaming. One particularly helpful moment at this early stage occurred when a reviewer introduced himself by openly acknowledging that his agency had made mistakes in handling the case. This acceptance of responsibility appeared to encourage other reviewers to do the same. This may have made it easier for the reviewers to share information, seek feedback, ask for help, discuss errors, and experiment with possible solutions (Edmondson, 1999).

In short, the initial meetings of the SER engaged the reviewers in a mutual acknowledgement of error, a focus on the system’s responsibility for that error rather than the incompetence of individual participants, a shared acknowledgement of each stakeholder’s contributions to that error, and a commitment to mutual support and compassion for the participants (Luthans, Luthans, & Luthans, 2004). Sustaining such an environment required constant vigilance, as participants often made statements that could cause others to fall back into defensiveness or accusatory behaviors that might have become disruptive to the SER. Regular

reminders of the overarching philosophy and attention to detail in vocabulary and presentation of information remained important throughout.

Fostering this professional atmosphere was a fragile process. As an example, near the end of the SER, the review was discussing potential reforms that might assist homicide detectives in distinguishing between true and false confessions. One reviewer became frustrated, perceiving that the group was blaming and criticizing the detectives rather than seeking to develop new tools (e.g., new interviewing techniques, changes to interrogation room environments, etc.) to prevent false confessions in the future. Efforts to dissuade this reviewer of his position were unsuccessful, and he did not return for subsequent meetings.

6. *Investigating the error and conducting interviews.*

Having laid a cultural groundwork, the team next began its review of the Lex Street investigation and prosecution. The first step was for the moderator to gather all relevant information held by the participating organizations, including agency documents, police reports, court dockets, and media accounts. The moderator assembled a detailed timeline of people, places, and actions—beginning with the crime itself and leading up to the discovery of the error. The timeline helped identify potential participants that might have valuable insights into the various motivations, factors, and incentives that shaped the behavior of each of the individuals that participated in the Lex Street investigation and prosecution.

Using the timeline, the review team discussed which participants would be useful to interview. Ultimately, the team limited interviewees to current and past employees of the participating organizations with knowledge of the Lex Street investigation. The team decided not to include the victims of Lex Street—including the first groups of defendants and their families—to avoid adding to the trauma caused by the underlying events. Unfortunately, this meant that the review team could not learn from their perspectives. Future SERs may well reach different conclusions about whether to include community participants and victims; indeed, it would often be challenging, if not impossible, to fully understand how and why an error occurred without engaging those viewpoints.

The review team next contacted participants to request an interview. To allay potential concerns about the motives and goals of the review, the team typically reached out through intermediaries with whom the participants had prior personal relationships. The intermediaries were coached on the non-blaming goals of the SER.

In total, twenty individuals were interviewed. Interviews were unstructured, with questions devised by the interviewers, often in real-time, based on the information provided by the interviewee. The team took several steps to promote the values of systems-based error review in each interview. The interviews were wholly voluntary, even for current employees of the participating organizations. About half of the people who were invited to interview agreed to do so. Interviewees were asked for permission to record all interviews, conveying at the outset that they were in control and thus were less likely to experience unwanted and negative consequences (Dutton, 2006). Interviews were conducted face to face wherever possible (Dutton, 2006) and in

neutral locations free of distractions. Interviewees were also reminded of their importance to the SER and to its goal of improving the criminal justice system.

Each interview was conducted by two people, neither of whom were members of the review team: a representative of the Quattrone Center and a subject-matter expert (SME) who had firsthand experience in the interviewee's role but who worked outside of Philadelphia. The review team believed that interviewers who were not employed by the same organization as the interviewee and who had no disciplinary authority would reassure interviewees about the objectivity and fairness of the review process. The team also believed that the presence of a second viewpoint would help check potential interviewer biases (Schmeer, 1999).

In practice, the interviewer pair often generated additional useful information about the motivations and circumstances that contributed to the interviewee's participation in the error. In some cases, it did so by helping build rapport with the interviewee (Dekker, 2016). For example, firsthand experience with their job sometimes helped the SME empathize with and verbalize the pressures and challenges that motivated a participant during the Lex Street investigation and prosecution. This experience also helped generate new insights about the causes of the error. For example, as we discuss in greater detail below, based on his experience in police investigations, one SME was the first to observe that certain leadership vacancies in the Homicide Division of the police department could have contributed to the investigators' reliance on Lewis' false confession and Long's eyewitness identification.

The interviewers were instructed to ask simple, open-ended questions that allowed the interviewee to tell his or her own story. They were also instructed to focus on engaged listening, rather than seeking to control the direction of the interview. Interviews emphasized understanding the participant's state of mind at the time of the Lex Street investigation, and the beliefs, perceptions, or feelings that influenced their decision-making. Interviewers were also instructed to express sympathy for the participant's actions during the Lex Street investigation wherever appropriate, so he or she would feel comfortable and safe providing information (Dutton, 2006; Stone, Patten & Heen, 2010).

Interviewers were coached to slow down the sequence of events as they were being described, and to try to understand, moment by moment, what the individual knew and what factors influenced his or her decisions as events unfolded. This "real-time" or "then-current" perspective from the participants was necessary to understand what factors were actually involved in the participants' decision making. This information was crucial both to fashion system modifications that would be valuable to future criminal justice professionals in similar situations, and to combat hindsight bias (McCall & Pruchnicki, 2017) or mistaken pattern recognition from the members of the review team. It was common in the early stages of the SER for senior-level officials—to jump to conclusions about why certain decisions were made. Statements like "well, I can tell you what we're going to learn," or "it's obvious what went wrong here" created a risk of confirmation bias that could lead to inaccurate conclusions about the factors that impacted a participant's decision making.

Finally, as the interview closed, participants were asked about what might have helped them avoid the error (Dekker, 2016), such as training, additional experience or knowledge,

procedures, or assistance from colleagues or supervisors. These first-person assessments often provided useful ideas to the review team as they worked to design effective corrective actions.

B. Contributing Causes and Corrective Actions

Once the interviews were completed, the review team examined and analyzed the collected information with two goals in mind. First, it sought to identify the contributing causes of the errors in the Lex Street investigation. The moderator proposed an initial list of causes that was supplemented by each reviewer. The group then discussed each proposed cause and added to, deleted, or modified items on the list until consensus was reached. The review team reached agreement on the contributing causes through a roughly two-hour meeting. It then took the team another three-hour meeting to edit a description of the causes that used objective, non-blaming language. In total, the team identified eight contributing causes, which fell into four categories: (1) inaccurate confessions; (2) inaccurate eyewitness identification; (3) discovery; (4) media coverage. Second, the review team identified corrective actions to prevent similar errors in the future.

In our view, some of the contributing causes and corrective actions identified by the review team were well-known before the SER. But the team also identified several potentially novel, non-obvious, and important causes and corrective actions, which to our knowledge, no one had proposed in the 13 years since the error came to light. We describe all of these causes and corrective actions next.

1. False confessions.

According to the review team, the first and second contributing causes were the responses of the Philadelphia Police Department and the DA's office to Jermel Lewis' false confession and to Shihean Black's true confession (which occurred three weeks later). Taken together, these factors revealed that the participating organizations might prevent future errors by reducing the chance of generating false confessions and by improving their ability to distinguish between true and false confessions.

The review team devised several reform proposals to reduce the probability of generating false confessions (Philadelphia Event Review Team, 2016). First, the team recommended that the police department and DA's office train their interrogators in progressive interview techniques—such as PEACE or the cognitive interview method—which reduce the probability of false confessions (Kassin et al., 2009). Second, the team recommended that the police department and DA's office modify the physical environment in which interviews take place consistent with current scientific research (Kassin et al., 2009). Third, the team recommended that Philadelphia judges and defense attorneys receive training about the causes of false confessions to be able to better identify them.

These recommendations are largely consistent with current best practices for police interrogation (Kassin et al., 2009), but at least one feature stands out as potentially novel: for the first corrective action listed above, the review team elected to hold not only the police department responsible but also the DA's office. They did so on the theory that prosecutors can serve as an important screen for cases assembled by the police and, therefore, can encourage the police

department to improve its interrogation practices by changing their criteria for accepting criminal cases. Thus, the group showed an understanding of how upstream and downstream phases of the criminal process can interact in meaningful ways that contribute to or prevent reliance on inaccurate confessions.

Next, the team devised two proposals to help the police department and DA's office compare conflicting confessions and determine which is more credible. First, the team recommended that the police department record all interrogations, which would have enabled a side-by-side comparison of Lewis's and Black's confessions.⁵ At some point after the Lex Street investigation—but before the SER—the Philadelphia Police Department had already agreed to videotape custodial interrogations in homicide investigations. However, by the end of the SER, that policy had still not been fully implemented. The team included this recommendation to support the expanded implementation of the new recording policy.

Second, to reduce the effects of confirmatory bias on police investigators (Hill, Memon & McGeorge 2008), the review team recommended a creative proposal that—to our knowledge—is not already part of standard best practice for interrogations (see e.g., Kassin et al., 2009): requiring that confessions in all felony investigations be “reviewed by a member of the police department who is not directly involved in the investigation and by the DA's office prior to charging” (Philadelphia Event Review Team, 2016, p. 5). These second reviews could serve as independent checks that a confession is accurate.

2. *Inaccurate eyewitness identifications.*

As detailed above, survivor Yvette Long provided inaccurate positive identifications of three of the first defendants.⁶ Early on in the Lex Street investigation, Long incorrectly identified Youk as one of the shooters. Over the course of six subsequent interviews, Long incorrectly identified Thomas and Perrin as well. Accordingly, the review team found that a third contributing cause was that the police department and DA's office relied upon these identifications.

The review team sought corrective actions to reduce the probability of generating inaccurate eyewitness identifications. Perhaps most important, the team discussed the risks of conducting multiple interviews with the same eyewitness. While multiple interviews can be necessary in complex investigations, they also create the risk of implanting information in the witness's mind that may bias the investigation. Some review team members were also concerned that multiple interviews increase opportunities for witnesses to make conflicting statements that undermine their credibility in court. The team recommended that the police department and DA's office implement training and policies to minimize the number of interviews conducted with witnesses. One of their recommendations, which we have already discussed, is consistent with well-known best practice: recording interrogations. But the team also proposed several other potentially novel methods for reducing the need for multiple interviews: rules requiring that the DA's office share witness statements with defense counsel in a timely fashion; and when interviewers are interviewed on multiple occasions, preparing documents that “compare and

⁵ This assumes that individuals consent to videotape their interviews, which is hardly guaranteed in actual practice.

⁶ There was no suggestion that Ms. Long's identifications were provided in bad faith.

contrast the statements made by the witness to highlight potentially conflicting statements.” (Philadelphia Review Team, 2016, p. 6). These corrective actions are helpful, both in reducing the probability of generating a false confession and of relying on it. Indeed, when the SER team compared each of Long’s interview transcripts, the shifts in her statements over time highlighted the weaknesses in her testimony.

The review team also pointed to a subtle and unappreciated bureaucratic feature of the police department’s Homicide Division, which may have contributed to the investigation’s reliance on Lewis’ false confession and Long’s corroborating identification. A lieutenant oversees the Homicide Division, managing multiple sergeants. Each of these sergeants then supervise multiple detectives and oversee the day to day operations of their investigations. This structure has two theoretical benefits. First, it allows the Lieutenant to maintain distance from the investigation, and thus provide a more objective assessment of the evidence when the detectives seek an arrest warrant. Second, the higher-ranked officers provide some political insulation, allowing the investigation to proceed according to best practice rather than political pressures. That’s particularly important in high-profile cases, like Lex Street, where there is significant media scrutiny and public attention. The reviewers concluded that the open leadership position meant that there weren’t two layers of supervision for the Lex Street investigation, and as a result, these two objectives may not have been fully met. The vacancy, therefore, may have contributed to the investigation’s overreliance on the false confession and eyewitness identification.

To our knowledge, the role of this subtle bureaucratic structure in shaping the direction of police investigations has received little attention from criminologists or legal scholars (for exceptions, see Braga & Dusseault, 2018; Braga et al., 2011). One important implication is that the police department should take special care to ensure that, where possible, there are two layers of supervision, particularly in high-profile investigations. The review team also recommended that specific resources be devoted to conduct objective, independent review of arrest warrants within both police and prosecutor’s offices, and that in high-profile cases, senior law enforcement personnel should be sufficiently removed from active investigation so that their review of the case is objective and unbiased and that the investigators have the time and space to reach an accurate conclusion.

3. *Discovery.*

The review team next explored contributing causes that arose during the adjudication phase of the Lex Street case. One cause, it concluded, was that the DA’s office did not disclose the existence of the second investigation to the first group of defendants until the eve of trial. That second investigation generated significant exculpatory material, including a confession by Shihean Black. If disclosed, it may have enabled the first group of defendants to obtain their freedom sooner.

Some people interviewed for the SER, particularly those in the defense community, believed that the DA’s Office intentionally withheld discovery from the first group of defendants in clear violation of the law. By applying RCA, however, the review team discovered that the reason for the non-disclosure was more complex, involving the interaction between judicial and prosecutorial discretion, discovery rules, and imperfect case management practices.

Early in the case, the lead prosecutor informed the calendar judge about the existence of the exculpatory information, and the calendar judge orally approved a request to temporarily withhold it from the first group of defendants to preserve the integrity of an ongoing federal gun investigation against two of the second defendants.⁷ But the case was then transferred to a trial judge, who was unaware of this discovery exception because it was never memorialized in writing. As a result, the trial judge did not know he should press the prosecutor on disclosure, and the prosecutor did not volunteer it himself.

The review team proposed several corrective actions. First, it recommended that, as a general matter, judges manage pre-trial discovery proactively rather than waiting for the parties to raise discovery violations themselves. Second, they recommended that the judge should actively monitor any exceptions granted for discovery to ensure those exceptions are limited and their conditions followed. Third, they recommended that, prior to transferring the case to another courtroom, the calendar judge should revisit all standing orders and decide whether they can be dismissed or modified.

The review team also devised a creative proposal to use checklists—which are common in other fields like aviation and healthcare (Hales, Terblanche, Fowler, & Sibbald, 2007)—to facilitate case management in criminal court. More specifically, they recommended that the court develop a checklist of all possible types of documents and information that might be provided from one judge to the next whenever a case is transferred. The checklist would include all orders made by the transferring judge, whether issued in writing or from the bench. It would also include any discovery items not yet disclosed. Had such a checklist existed, the Lex Street trial judge may have known about the discovery exception granted by the calendar judge and have pressured the DA's office to disclose the second investigation.

The team also identified several relevant corrective actions for discovery policies in the DA's office. Consistent with well-established best practices (Justice Project 2007; Grunwald, 2016), the team recommended that the DA's office adopt open-file criminal discovery, which would provide the defense access to all materials in the investigative file. For the subset of evidence that qualifies as exculpatory *Brady* material, the team also recommended that the DA's office accelerate the timing of disclosure to the earlier of two dates: a specific number of days before trial or a specific number of days after the DA's Office receives the evidence. Tying disclosure to the prosecutor's receipt of the information increases the chance the defense has the information in time to negotiate plea bargains and develop a trial strategy. To address cases with special concerns about witness intimidation or evidence tampering, the review team allowed for *in camera* judicial review and deadline extensions.

4. *The media.*

⁷ The Lex Street ADA was terminally ill at the time of the SER and thus unable to participate in the process. While many have questioned his motives and actions at the time and in the intervening years since, the SER was unable to shed light on his actions. The group elected to remain silent on the topic rather than expressing any speculative opinions.

A reporter who covered the Lex Street investigation was included on the SER team to examine the effects of media coverage on the case. The review team concluded that the effects of the media likely cut both ways. On the one hand, early media accounts of the crime from surviving witness Yvette Long may have provided new information that convinced police Jermel Lewis' false confession was accurate. Furthermore, media reporting in the aftermath of the murders may have increased pressure on law enforcement to arrest the first group of defendants and to refuse to release them. Indeed, there was—or seemed to be—ample evidence of their guilt, which the media and public believed. Releasing the first group of defendants, particularly without identifying a credible new group of perpetrators, could have created a serious publicity challenge for city authorities. On the other hand, the media was also the first to publicize the existence of the second investigation. Once it became public, the attorneys of the first group of defendants had more resources to advocate for their clients' freedom.

Given that the participating reporter had limited control of her own organization's coverage of Lex Street and no control whatsoever of many other media organizations, the review team felt limited in the corrective actions it could recommend. It therefore restricted its proposed reforms to the police department, recommending that the department insulate investigators from media pressure and only provide information to the media that was necessary to protect public safety.

VI. Discussion

The Lex Street SER identified a number of causes that contributed to the wrongful incarceration of four men and designed recommendations for reform that may help prevent similar events from occurring in the future. Some of these causes and recommendations were obvious or consistent with best practices in policing, but several others were novel, non-obvious reforms that had not been proposed or implemented in the thirteen years since the Lex Street investigation.

To highlight a couple of examples, one contributing cause identified by the review team concerned a subtle bureaucratic feature of the police department's Homicide Division that, to our knowledge, has received little attention from criminologists or policing experts. Specifically, the reviewers noted that an open leadership position in the Homicide Division during the Lex Street investigation meant that the police investigators did not have a second layer of supervision to provide both an objective check on the investigation and political insulation. As another example, another root involved a complex interaction between judicial and prosecutorial discretion, discovery rules, and imperfect case management practices, which meant that the first group of defendants were left in the dark about the second investigation. The review team proposed several corrective actions, including requiring judges to use a checklist when handing a case over to another judge (Hales, Terblanche, Fowler, & Sibbald, 2007).

The results of our study thus suggest that the SER's proposals may help prevent each component of the Philadelphia criminal justice system—the police, the prosecutors, and the courts—from investigating and incarcerating innocent suspects in the future and may accelerate the discovery of such wrongful incarcerations when they recur.

As we discussed in greater detail in Section IV., there were several important methodological limitations on our study. To conserve space, we refer the reader back to that section for more information, but one limitation worth revisiting now that we have described the results

of the SER: the use of a single-case study design, examining one SER that reviewed only one error, limits the generalizability of our findings. That methodological choice was driven primarily by the fact that so few other SERs have been carried out in criminal justice agencies to date. To learn more about their potential value and limitations, we need to carry out and study more SERs. The Quattrone Center has conducted additional SERs since the completion of the Lex Street investigation, and we are aware of several additional SERs currently underway, including one reviewing a DNA laboratory's errors in processing mixture samples, one reviewing an inaccurate conviction, another examining opium-induced fatalities, and a third reviewing the suicide of a juvenile who had multiple prior interactions with the juvenile justice system.

Despite our methodological constraints, the Lex Street SER sheds light on some important limitations inherent in the SER strategy as a tool for criminal justice reform. One limitation was that the Lex Street SER was an entirely voluntary process, which meant that roughly half of the individuals invited for an interview did not agree to participate, including line and senior officers in the police department with important roles in the original investigation, and the lead prosecutor from the District Attorney's Office. As a result, the SER may have suffered from participant bias.

Another potential limitation is that an SER that focuses on only one instance of an error may craft idiosyncratic corrective actions that are not worth their costs or that have an undesirable impact on other cases. The Lex Street review team was aware of this risk, and attempted to design corrective actions that would help avoid errors in a larger body of cases. Future SERs might help avoid that problem by reviewing and gathering data on multiple related errors.

One important limitation unique specifically to multi-organizational SERs is that, due to the sometimes-adversarial relationship between criminal justice agencies, participating organizations may be unwilling to share their primary documents with each other. The Lex Street SER's solution to this problem was relatively successful: a neutral moderator collected organizations' relevant documents, conducted each of the interviews, synthesized all of the resulting information, and then distributed it to participants in aggregated form.

Another important limitation is that SERs can be resource intensive. While we did not conduct a rigorous cost analysis, the Lex Street SER required hours of labor by the thirteen members of the review team—some of whom were high level officials in the police department, DA's office, and court system. It also required many hours of work by the moderator to compile, review, and synthesize the documentary evidence and to conduct each of the twenty interviews. Future research into the costs of SERs would provide important information to criminal justice officials and policymakers. That is particularly important given that there are other tools available to promote institutional reform—like accreditation, early intervention systems, policy audits, etc.

A related and important question is whether there are certain kinds of errors that SERs are more or less well-suited to review. We have examined only one SER here and therefore are hesitant to draw strong conclusions on this topic, but a few guidelines may be helpful. First, SERs are probably more effective when they review errors that are discrete and precisely defined. For example, an SER may be less successful when reviewing an abstract error that lacks clear temporal or organizational delineation—*e.g.*, that police officers in a department are racist or have generally engaged in racial discrimination in the past. A more workable error would narrow the definition,

both temporally and organizationally—*e.g.*, that one or more officers engaged in discriminatory conduct during a specific incident, or alternatively, that officers who displayed racial animus were hired onto the force. Defining errors precisely and concretely may help focus the review team’s attention on a particularized problem, which may, in turn, help it devise systemic improvements.

Second, an SER is probably more effective when all participants can agree that the error is, in fact, an error. Everyone can agree, for example, that a civilian death or wrongful incarceration are undesirable outcomes. But reasonable people might disagree about whether the use of a particular investigative practice is an error because, say, it represents a suboptimal tradeoff of personal privacy and public safety. SERs may, therefore, not be well-suited to that latter kind of error.

Third, in some cases, SERs may lead to more meaningful reforms (and better justify the resource commitment) if they review important errors. Thus, SERs should select errors that impose high costs individually or that occur with enough frequency to impose high costs in the aggregate.

Fourth, and admittedly in tension with the previous guideline, SERs will likely experience greater participation and candor from participants when reviewing cases that raise fewer liability issues or cases, like Lex Street, where liability issues have already been resolved. They might, for example, be particularly successful in reviewing “near misses,” where nobody is ultimately hurt, or errors where no person has standing to sue, such as a *failure* to arrest a culprit.

Fifth, SERs might be more fruitful to review errors that are highly complex, like the errors in the Lex Street investigation, which involved numerous actors across multiple criminal justice organizations at various layers of the criminal process. Such errors may more frequently require a deep qualitative dive into a single case, which is possible through an SER.

If SERs are a valuable tool in criminal justice, how might we encourage police departments to carry them out more frequently? Thus far, the biggest hurdle is that a review can expose an agency to civil liability. Without some legal protection, departments that conduct SERs may be required to disclose through discovery their findings, documents, data, and statements arising from the review.

Criminal justice agencies and policymakers might look to other fields to help address this problem. For example, some contents of National Transportation Safety Board reports about transportation accidents are inadmissible in civil actions for damages (Rosa, 2018). Perhaps even more analogous, almost every state legislature has created a peer-review privilege, which protects certain documents, statements, and information compiled during medical peer reviews in hospitals that meet certain statutory requirements (Jones, 2003). The scope of this privilege varies by jurisdiction. Some states protect documents generated by the peer review process while other states go further, protecting information provided to the peer review group (Kohn et al. 2000).⁸ To encourage criminal justice agencies to engage in SERs, state legislatures should consider adopting a similar statutory framework. Given exposure to federal liability under § 1983, it’s particularly important that Congress also adopt protections for criminal justice agencies—something it has not

⁸ It is worth noting for multi-organizational SERs that some states do not extend the privilege to peer reviews involving multiple institutions (Kohn et al., 2000).

yet done in the medical peer-review context (Moore, Pichert, Hickson, & Federspiel, 2006). While far from perfect, these kinds of protections may help criminal justice agencies conduct some SERs relatively soon after an error, and perhaps even in parallel with other disciplinary reviews or civil or criminal cases.

Importantly, these privileges would not preclude appropriate findings of accountability or compensation for victims through existing channels of disciplinary review and civil or criminal litigation. Victims would retain rights to obtain any information independently through the civil discovery process, but the SER could proceed in parallel without providing evidence to prove liability.

Other steps can also be taken to encourage the conduct of SERs. Insurance companies could require police departments to undergo SERs in the wake of high-cost errors to avoid hikes in their premiums (Rappaport 2016; Schwartz 2018). Judges might require police departments to conduct an SER, supervised by an independent moderator, as a form of injunctive relief. The victims of policing errors might negotiate into settlement agreements a contractual requirement that the agency conduct an SER. Indeed, empirical research on medical litigation has found that many victims of medical malpractice care most about getting their story out, preventing similar errors from occurring in the future, and learning about why the error they experience happened (Robbennolt, 2009).

Conclusion

SERs are a promising tool for criminal justice reform, with significant potential benefits for police departments. As we have argued, SERs may improve the effectiveness of participating departments by identifying new systemic tweaks that help reduce organizational errors. They might, for example, improve a department's investigative practices, thus helping it catch more offenders and arrest fewer innocent people. In turn, SERs may help departments reduce crime in the neighborhoods they serve.

SERs may also promote police effectiveness more indirectly, by improving public perceptions of the legitimacy of a department. They might do so, simply by preventing miscarriages of justice, which seriously damage the credibility of an agency. But they might also do so by demonstrating to the public that the agency takes its errors seriously and is committed to learning from them (Sunshine & Tyler, 2003; Tyler, Trinkner & Goff, 2016). In the long run, then, SERs may improve police effectiveness by promoting stronger partnerships and communication between communities and law enforcement.

Like any reform strategy, SERs have both strategic advantages and limitations. We have sketched out some of both here, based on the findings of our study of the Lex Street SER. But we have much more to learn, and future research should explore these issues further.

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