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Opinion Versus Reality: How Should Wrongfully Convicted Individuals Be Compensated Versus How They Are Actually Compensated

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Securing compensation following exoneration is an important step for wrongfully convicted individuals in getting some semblance of a normal life post-release. This study seeks to determine what the public believes to be fair compensation for individuals who were wrongfully incarcerated for ten years prior to exoneration, as compared to how much compensation a state would offer the same exoneree. Prior research has tracked what compensation is offered to exonerees through state statutes and detailed difficulties in securing compensation at trial, yet little is known about how statutory compensation compares to what the public believes exonerees should receive. Through two experimental surveys, the current study surveys over 200 students and online respondents to determine how much compensation is fair to individuals and compares these amounts to what states give to qualifying exonerees. Results indicate that individuals give more compensation on average to a fictional exoneree than do state governments; though the dollar amounts were not statistically significantly different, respondents gave millions more to exonerees than did state statutes. The significance of these findings and avenues for future research are examined.

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I Introduction and Literature Review

Walter Ogrod was convicted in 1996 of murder and child sex abuse in Philadelphia, Pennsylvania and was sentenced to death. He was exonerated in 2020 with the help of DNA evidence after serving 24 years in prison (Possley, 2021a). Lacino Hamilton was convicted in 1995 of murder and illegal use of a weapon in Detroit, Michigan and was sentenced to 52-82 years, potentially a death sentence for an individual who was 20 years old at the time of conviction. He was exonerated in 2020 with the help of DNA evidence after serving 25 years in prison (Possley, 2021b). While these two men suffered similar fates by being wrongfully convicted and incarcerated for more than two decades, their outcomes after exoneration will in part be determined by whether they receive compensation.

In June 2021, Walter Ogrod filed a federal lawsuit against the city of Philadelphia and several Philadelphia police officers in the hopes of securing compensation because Pennsylvania does not have any statutory compensation for exonerees. Pennsylvania has historically yielded compensation to exonerees claiming malicious prosecution in only 37% of their cases (Melamed, 2021). Lacino Hamilton filed a claim for compensation from the state of Michigan in October 2020; according to Michigan statute, Hamilton is entitled to $50,000 per year of incarceration and should be awarded $1.25 million for the time he served. While both Hamilton and Ogrod suffered for years for crimes they did not commit, only one of them can reasonably expect to receive recompense for two dozen years of suffering.

As of July 2021, the U.S. Federal Government, the District of Columbia, and 36 states have compensation statutes that grant either money, social services, or both to wrongfully convicted and exonerated individuals. That 14 states have no compensation laws at all is shameful, adding further injury to that already borne by exonerees. There is widespread support for government compensation of all wrongfully convicted individuals, yet little in terms of research into exactly how much compensation should be given (Clow et al., 2012; Clow & Ricciardelli, 2014; Karaffa et al., 2015). The current research surveyed students and laypersons in order to help explain how the current state of compensation statutes compares to what individuals feel is “fair compensation” for exonerees.

Wrongfully convicted individuals who are eventually exonerated were subjected to unfathomable difficulties as a result of their imprisonment. Those lucky few who are eventually recognized as innocent were incarcerated for an average of nine years (National Registry of Exonerations). During that time, as well as after release, exonerees struggle with mental, physical, and financial health and wellbeing, have difficulties finding work and housing and building and maintaining relationships, and endure still other difficulties beyond their control. One of the ways this suffering can be alleviated is by guaranteeing compensation to all exonerated individuals. The current patchwork system of state and Federal statutory compensation is not guaranteed, as there are procedural hurdles to navigate. Receiving statutory compensation is still far more likely in 36 states and the District of Columbia than it is in the 14 states where an exoneree’s only hope is to receive a payout from a lawsuit. This study describes how current state statutes compare to what individuals believe is fair compensation for exonerees to argue that guaranteed compensation is necessary for individuals as well as the criminal justice system as a whole.

A. Compensation Research

For more than 20 years, research has highlighted just how poorly exonerees fare when seeking compensation, even in states that offered it, and has advocated for increases in compensation amounts and decreases in statutory hurdles that made it difficult for exonerees to actually receive compensation (Bernhard, 1999; 2004; 2009). While the steady increase in the number of states offering statutory compensation is better than the alternative, progress has been slow. Bernhard (1999; 2004) noted that since their initial research which highlighted the dearth of easily accessible compensation, only two states added compensation statutes in the intervening years. Nevertheless, these and other studies have no doubt contributed to an environment where the plight of exonerees has increasingly been recognized.

In the 21st century, many compensation studies have prescribed changes to the current system, arguing for additional compensation, social support services, and individualized compensation plans for exonerees while contrasting state statutes with federal civil rights and state tort lawsuits (Chunias & Aufgang, 2008; Lonergan, 2008; Mostaghel, 2011; Simms, 2016, among others). Norris (2012) examined statutes as they compared to the Innocence Project's (2009) model standard to determine where states measured up and where they fell short of adequate assistance to exonerees. Similar to the findings of Bernhard (2004), subsequent research provided updated looks at compensation statutes and found similarly slow but sure progress in the number and quality of state compensation statutes (Gutman, 2017; Gutman & Sun, 2019; Norris et al., 2020).

Throughout all of these compensation studies is a universal agreement that statutory awards are preferable to leaving an exoneree's fate up to litigation. Bernhard (2004) likened the pursuit of compensation without statutory remedies to a "lottery or popularity contest" (p. 708). Statutory remedies, when implemented without restrictions that can limit compensation only to individuals who didn't assist in their own conviction—meaning those who did not falsely confess—are important because they can grant compensation without subjecting exonerees to another trial and the whims of a judge or jury's determination of fair compensation. Securing compensation is particularly important as it can help predict whether an exoneree will engage in future criminality (Mandery et al., 2013). Mandery et al. (2013) found that exonerees receiving at least $500,000 in compensation were significantly less likely to have issues with future criminality and there was no statistical difference between individuals who received less than that amount and individuals who received no compensation whatsoever.

While statutory compensation is typically presented as a more inclusive option for exonerees, it is not without its limitations, at least currently. Gutman and Sun (2019) utilized the National Registry of Exonerations to analyze the likelihood that exonerees would apply for and receive statutory compensation as compared to lawsuits filings. They found that only ~53% of exonerees living in states with compensation statutes filed for compensation, and of those exonerees, only 73.5% received statutory compensation. By comparison, 45% of exonerees filed tort and civil rights lawsuits, but only 55% of those filers received compensation as a result. The average compensation per year of incarceration for exonerees who received money through a lawsuit totaled more than $300,000, an amount that far exceeds the average statutory compensation, which will be discussed more shortly (Gutman & Sun, 2019). Winning a lawsuit thus results in greater compensation for an exoneree, but the likelihood of winning the lawsuit is lower than if exonerees had instead opted for statutory compensation. Gutman and Sun (2019) found that exonerees were more likely to apply for and receive compensation in states with "no

fault" compensation statutes, meaning statutes that did not exclude exonerees who may have contributed to their wrongful conviction by false confession or other means (Scholand, 2019). Exonerees who were represented by innocence organizations or had been exonerated via DNA analysis were more likely to receive compensation. The takeaways from Gutman and Sun (2019) are twofold: barriers exist that prevent exonerees from filing for and/or receiving compensation, and statutory compensation is still the more reliable way to get compensation into the hands of deserving exonerees.

The problems associated with false confessions are well documented as far as causing wrongful convictions are concerned (see for example Kassin et al., 2010). As noted above, some existing compensation statutes limit or deny access to recompense if the exoneree contributed to their wrongful conviction by falsely confessing (Scholand, 2019). Though exonerees excluded from receiving compensation due to a false confession are able to file civil rights and torts lawsuits, research has highlighted that mock exonerees who falsely confessed were given less compensation by research participants than exonerees who were also declared legally innocent but had not confessed at any point (Kukucka & Evelo, 2019). Though this research was not the first to look at the impacts of false confessions on exonerees (Clow & Leach, 2015), it was the first to show how determinations of future compensation could be hamstrung by a false confession. A fair compensation statute that does not limit access to only certain exonerees would avoid the pitfalls of litigation by providing guaranteed assistance.

The goal of the current research is to identify the average compensation amount that exonerees could expect to receive from state statutes. When comparing this amount with opinions regarding "fair compensation" according to surveyed individuals, the current study seeks to explain how state statutes stack up to individual expectations of compensation in order to highlight the importance of continued progress toward universal access to generous statutory compensation.

B. Surveys of Wrongful Convictions

While the current research is the first to compare survey responses regarding fair compensation to existing state statutes, there have been several studies that have established public interest in wrongful convictions and support for exoneree compensation. The first few studies found that criminal justice students have knowledge about causes of wrongful convictions and attendant criminal justice issues that surpasses their peers (Bell et al., 2008; Ricciardelli et al., 2009). The current study seeks to determine whether this knowledge translates to determinations of fair compensation for exonerees. Ricciardelli and Clow (2012) found that students who hear directly from a wrongfully convicted exoneree were more likely to support government compensation for the wrongfully convicted than were peers who were not exposed to a personal story of exoneration. The public generally supports government compensation regardless of whether they are personally affected by hearing the story of an exoneree (Clow & Ricciardelli, 2014).

There are potentially expected differences in exactly who supports compensation for exonerees based on individuals' gender, minority status, age, and political affiliation (Karaffa et al., 2015; Hicks et al., 2021). There are few known studies that directly look at how much compensation exonerees deserve. One example asked 15 respondents to share their thoughts on how much compensation was deserved, with some supporting a case-by-case determination and others believing exonerees should receive millions in compensation (Clow et al., 2012). The

current research surveys a greater number of respondents to determine what the general sample and a student sample believes to be fair compensation.

C. Impact of Compensation on the Criminal Justice System

An exoneree who receives statutory compensation following their wrongful conviction, incarceration, and eventual exoneration benefits greatly, but they are not the only ones who benefit. The criminal justice system as a whole benefits from giving statutory compensation to exonerees. Receiving at least $500,000 in compensation limits the likelihood that exonerees will commit future crimes, and simply receiving any compensation is not enough to prevent future criminality (Mandery et al., 2013). Mungan and Klick (2016) argued that large exoneree compensation serves a secondary benefit of reducing innocent individuals' guilty pleas. By increasing potential benefits to exonerees, innocent people are less averse to going to trial to try to prove their innocence (Mungan & Klick, 2016). If this mechanism works as theorized, significant exoneree compensation would have a noticeable impact on other aspects of the criminal justice system. Reducing guilty pleas by innocent individuals would help to limit wrongful convictions and provide a benefit to the criminal justice system and society at large by lowering the number of guilty individuals that remain free to commit further crimes (Norris et al., 2019). Given the real cost in terms of money and security involved in allowing the guilty to go free, anything that can help prevent this is a positive to the system (Acker, 2013). A reduction in wrongful convictions overall would have positive effects on public opinion regarding the criminal justice system, as Norris and Mullinix (2019) highlighted that knowledge of wrongful convictions and exoneration numbers has a harmful effect on trust in the system along with diminished support for capital punishment. Lastly, public opinion helps shape governmental policy regarding exoneration and compensation such that positive public opinion regarding exonerations and compensation should lead to increases in compensation and trust in the criminal justice system (Hicks et al., 2021). When taken together, these studies highlight how exoneree compensation can have a positive impact on the criminal justice system as a whole.

D. Current Study

The current study builds upon previous research by examining the current state of compensation statutes and comparing them to estimations of fair compensation by individuals. As detailed below, three groups of data were collected. Students and members of the general population were surveyed to gather their opinions about what constituted fair compensation for a wrongfully convicted individual who served ten years in prison. These two groups are then compared to what each state would offer an individual who was wrongfully convicted and incarcerated for ten years according to current statutory compensation laws. The current study is exploratory in that it is the first known survey to gather opinions about fair compensation but does make several hypotheses about the expected results.

> H_1: Students educated about wrongful convictions will identify a higher dollar amount as "fair compensation" for 10 years served in prison than laypersons
> H_2: Both surveyed groups will determine fair compensation to be significantly higher than what is actually offered by state statutes

As the number of states offering statutory compensation continues to tick up, and original state statutes are amended and updated, the current study provides an updated and novel discussion of the current state of exoneree compensation and public expectations of fair compensation.

II Method

The data collected for this research come from three sources: students enrolled in an undergraduate course on wrongful convictions, members of the general population of U.S. adults recruited through Amazon Mechanical Turk, and an analysis of existing United States wrongful convictions compensation statutes.

A. Students

110 students enrolled in a wrongful convictions course were asked at the end of the course to answer, "If you were wrongfully convicted and served 10 years in prison, how much money do you think would be fair compensation?" The National Registry of Exonerations reports an average of 9.0 years lost due to wrongful imprisonment as of July 2021; participants were asked to determine a compensation amount for 10 years to use a round number for easier calculations. Instead of providing a range of possible compensation amounts to match Kukucka and Evelo (2019), participants were asked for a compensation amount as an open-ended question to ensure that participants were not limited or biased by the possible choices.

B. General Population

100 online survey respondents were recruited using Amazon Mechanical Turk. Potential respondents were offered $.05 for successful completion of a five-question survey, with the only exclusionary criterion being that respondents must be at least 18 years or older. Respondents were asked "If you were wrongfully convicted and served 10 years in prison, how much money do you think would be fair compensation?" They were also asked to provide their gender, race/ethnicity, age, and highest education level attained. The original respondent sample included 101 respondents; 1 person was rejected from the respondent pool due to answering "yes" when asked about how much compensation should be given. The average respondent completed the task in just under 60 seconds.

C. State Statutes

The final data component of this research was an analysis of the compensation statutes of Washington, D.C. and all 50 United States. As of July 2021, 36 states and the District of Columbia have compensation statutes; state rules for compensation were used to calculate what an exoneree in that jurisdiction would be expected to receive after serving exactly ten years in prison. The fictional exoneree for the purposes of this research was not considered to have served their time with any extraordinary conditions such as time on death row or a sex offender registry, nor did they receive any additional compensation for days spent on probation or parole. Dollar amounts earned via state statutes similarly did not add any money for legal fees, healthcare, job or housing assistance, education, etc. so as to calculate a single number for serving ten years as a comparison to the individual responses. State statutes vary in their construction, with some having ranges of compensation and others offering a maximum compensation possible no matter how much time

was served. Where relevant, the fictional exoneree in this research was awarded the maximum amount per year or in total. Additionally, several states award compensation based on annual household income or other statewide metrics as determined by the state, the U.S. Department of Housing and Urban Development, and the U.S. Census Bureau. The specific amounts for each state and explanations for choices made regarding individual state compensation amounts are summarized in Table 1. Of note, while New York and West Virginia have compensation statutes, compensation is determined through court filings. These states were excluded from analysis because their monetary award process is more similar to lawsuits filed by exonerees than state statutory compensation requirements.

Table 1. State Compensation Amounts for 10 Years of Incarceration

	Compensation for 10 years	Notes on Compensation Determinations
AK	$0	
AL	$500,000	$50,000/year
AR	$0	
AZ	$0	
CA	$511,280	$140/day
CO	$700,000	$70,000/year
CT	$1,598,000	Up to two hundred per cent of the median household income for the state/year. HUD estimate of annual household income FY 2021 is $79,900
DC	$2,000,000	$200,000/year
DE	$0	
FL	$500,000	$50,000/year
GA	$0	
HI	$500,000	$50,000/year
IA	$182,600	$50/day
ID	$620,000	$62,000/year
IL	$121,428	Prorated for 10 years based on "up to a total of $170,000 for imprisonment of 14 years or less but over 5 years"
IN	$500,000	$50,000/year
KS	$650,000	$65,000/year
KY	$0	
LA	$250,000	$25,000/year
MA	$1,000,000	Up to $1,000,000
MD	$848,050	Amount equal to U.S. Census Bureau estimate of Maryland's annual median household income in year of compensation order; $84,805 as of 2019
ME	$300,000	Up to $300,000
MI	$500,000	$50,000/year
MN	$1,000,000	At least $50,000 and not more than $100,000/year
MO	$182,600	$50/day

MS	$500,000	Up to $500,000
MT	$600,000	$60,000/year
NC	$500,000	$50,000/year
ND	$0	
NE	$500,000	Up to $500,000
NH	$20,000	Up to $20,000 total
NJ	$500,000	Greater of (a) twice the exoneree's income in the year prior to incarceration, or (b) $50,000 for each year of incarceration
NM	$0	
NV	$500,000	1-10 years= $50,000 per year of wrongful incarceration
NY	N/A	Determined by Court of Claims
OH	$567,524	As of 1/27/2021, $56,752.36/year; recalculated every two years
OK	$175,000	Up to $175,000
OR	$0	
PA	$0	
RI	$0	
SC	$0	
SD	$0	
TN	$1,000,000	Up to $1,000,000
TX	$800,000	$80,000/year
UT	$498,360	Average annual nonagricultural payroll wage in Utah at the time of release/year; $4,153/month as of 2019
VA	$353,502	90% of the inflation-adjusted Virginia per capita personal income/year; Per capita VA income as of 2019: $39,278
VT	$600,000	Between $30,000 and $60,000/year
WA	$500,000	$50,000/year
WI	$25,000	Maximum of $25,000
WV	N/A	Court determined
WY	$0	
Average (States with Compensation)	$574,381	
Average (All states)	$410,272	

III Results

A. Students

On average, students were the most generous with their determinations of fair compensation, as predicted by H_1. The average compensation for ten years in prison reported by students exceeded $15.3 million, a figure that is more similar to wrongful conviction payouts given by juries in successful compensation lawsuits than any state statutory compensation, as shown below. However, the average amount given by students was clearly affected by an outlier that awarded $1 billion; when this amount is removed, the average drops to just $6.35 million. The most popular responses clustered around large round numbers, with 62 of 110 respondents determining fair compensation to be either $1 million, $5 million, or $10 million. All responses are shown in Figure 1.

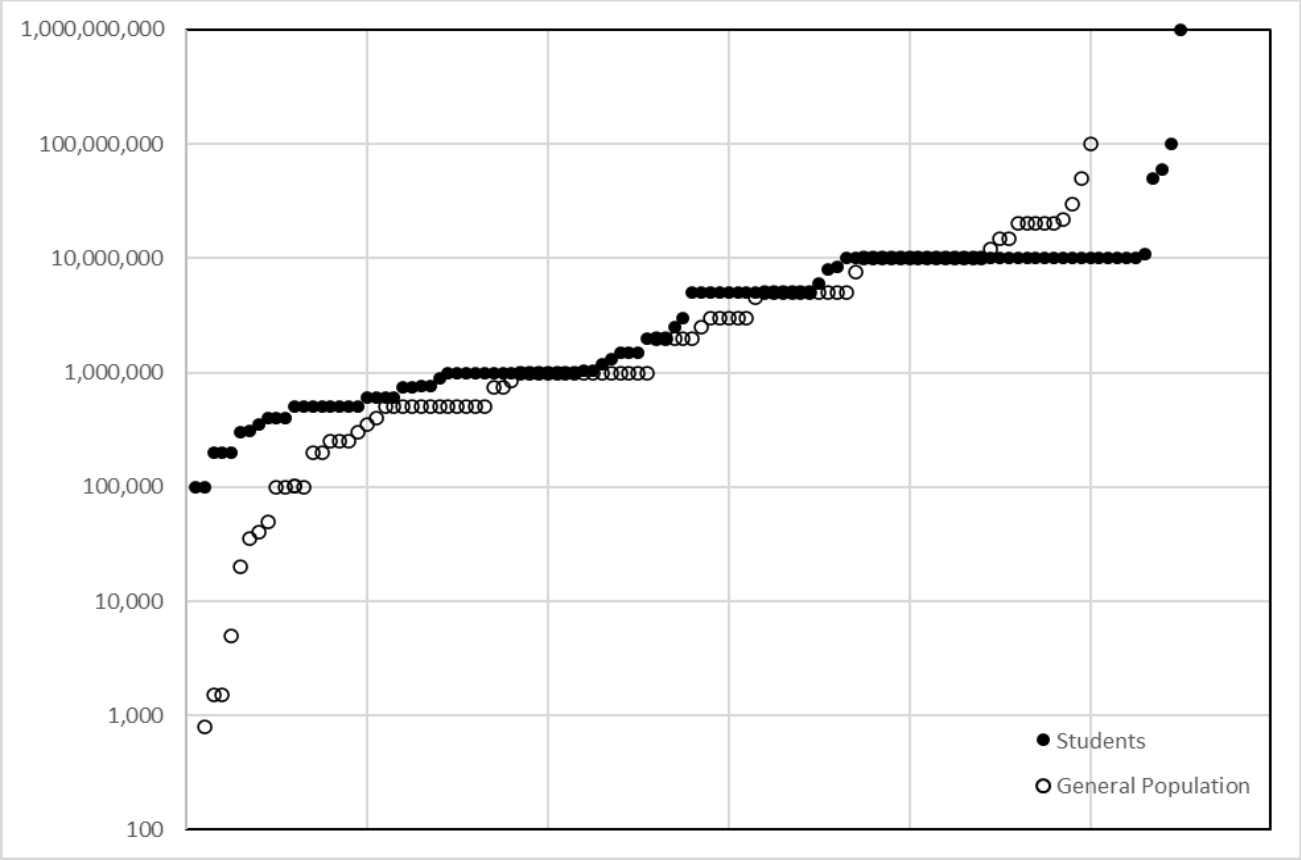
B. General Population

Compared with students, participants in the general population were more moderate in their determinations of fair compensation. The average compensation for serving ten years in prison due to a wrongful conviction was just under $6.0 million. Though this average amount included outliers at both ends of the continuum, as one respondent awarded $0 in compensation and another awarded $100 million, excluding the lowest and/or highest awards does not significantly impact the resulting average. As with student responses, the most popular responses clustered around large round numbers, with 51 of 100 respondents determining fair compensation to be either $500,000, $1 million, $5 million, or $10 million. All responses are shown in Figure 1.

C. State Statutes

As expected, even the most generous of state statutes pales in comparison to the numbers given by individual respondents. Among the 34 states and the District of Columbia which have monetary compensation statutes, the average compensation as calculated by the assumptions laid out in Table 1 was $574,381. When including the states that have no compensation statutes, which would represent the average compensation received by an exoneree anywhere in the U.S., the average drops to $410,272. As a reminder, New York and West Virginia are excluded from these numbers since their compensation statutes provide for court decisions rather than a determinable amount.

Figure 1. Compensation Amounts Specified by Respondents



D. Hypotheses and Other Considerations

A t-test (t = 2.287, p = .023) found that there was significant variation in compensation amounts determined by individual respondents and state statutes. However, a one-way ANOVA finds no significant difference of average compensation awarded between students, general population, and state statutes (F = 1.142, p = .321). As noted above, Hypothesis 1 predicted that students would specify the highest amount of fair compensation. This was supported by the current findings in terms of raw dollar amounts, whether outlying answers were included or not. However, Hypothesis 2 predicted a significant different in dollar amounts determined by individuals as compared with state statutes, but the amounts given by each group are not significant. While statistically this is the case, there is a figuratively significant difference in being awarded the student average of $15,383,768 and the state statute average of $573,893. The meaning of this finding will be discussed shortly.

It is worth briefly mentioning that nothing meaningful was found when calculating average compensation by race, age, gender, or education levels. Perhaps more respondents would return noteworthy results, but this is difficult to determine because asking for raw compensation numbers makes outlying values likely and difficult to determine their meaning (e.g., one female respondent answered $100 million; the inclusion of this amount changes the average female compensation by almost $2 million). Future research should explore whether there are gender, age, race, or education differences in compensation amounts deemed “fair”.

IV Discussion

The current research finds that there is no statistically significant difference between the average compensation given to exonerees who were wrongfully incarcerated for ten years via state statute, and the amounts that individuals thought was "fair compensation" for that same amount of time. This is unexpected, as Hypothesis 2 in this study anticipated finding significant differences between statutory compensation and perceptions of fair compensation. It is unlikely that an exoneree would willingly choose the smaller amount of compensation over the larger under the guise of the amounts not being statistically different, but exonerees are faced with a similar choice. Since many states require the waiver of the right to sue the state and criminal justice system actors as a condition of accepting statutory compensation, exonerees frequently must give up chances at large payouts for smaller, more guaranteed amounts.

The variability seen in perceptions of fair compensation by individual participants is likely comparable to the variability seen in exoneree compensation lawsuits. While respondents in this research were almost unanimously supportive of compensation for exonerees, this variability is something that states would no doubt find unwelcome. In the current research, only one respondent did not award any compensation, and only nine suggested anything less than six figures in compensation. Exonerees have a low success rate in securing compensation at trial (Bernhard, 1999; Lonergan, 2008). Though they are more likely to receive statutory compensation, the amounts given by juries, judges, and state compensation boards far exceeds the statutory norm (Gutman & Sun, 2019). That exonerees do not always apply for statutory compensation and all applicants do not receive compensation also must be addressed (Gutman & Sun, 2019). Universal access to statutory compensation would provide compensation to more exonerees while giving states a better chance at anticipating and budgeting for compensation costs.

In the near term, it is expected that exonerees will see increases in the number of states offering statutory compensation as well as the amount of compensation that those statutes provide. While 14 states as of July 2021 do not offer statutory compensation, Pennsylvania's 2021-2022 budget as proposed by the Governor included a request for compensation, so we should expect to see fewer states that wholly lack compensation statutes soon. As more states add compensation statutes that meet or exceed the Innocence Project's (2009) recommended model standard, the outlook for exonerees improves. This is especially important in light of Mandery et al.'s (2013) finding that future criminality significantly decreases as compensation to exonerees exceeds $500,000. If only states with current compensation statutes are examined, the average compensation for ten years of wrongful incarceration exceeds that $500,000 threshold.

A. Limitations and Future Research

The current research was intended as an exploratory study to determine whether there were significant differences between what individuals believed constituted fair compensation and what state statutes would provide to exonerees. The current study is limited in scope and would benefit from a replication using a greater sample size. Karaffa et al. (2015) found that males, minorities, and older individuals thought exonerees were more deserving of compensation; because of a limited sample size, the current study was unable to test whether these findings would also hold for individual award determinations. Future research should explore whether demographic factors such as gender, race or ethnicity, age, and education level impact perceptions of fair compensation.

The findings of Hicks et al. (2021) would predict that self-reported political ideology would similarly impact the magnitude of fair compensation, but this should be explored in future research.

Another weakness of the current research is that individual respondents were not asked additional questions or given material related to compensation, they were only asked to provide one number regarding fair compensation. A more complex questioning of individuals regarding compensation, their perceptions of current state statutes, how they would pay for compensation to exonerees, among other questions, would provide a more complete picture of an individual's views on compensation. It is reasonable to believe that individuals who are asked to report their feelings on fair compensation are not taking into account factors that government officials must. Prior research has suggested this may be the case, so further research should examine whether details about paying for compensation impacts the likelihood and amount of compensation given by individuals (Zalman et al., 2012). Finally, future research is planned to determine whether individuals would grant different compensation to a fictional exoneree than they would grant themselves if they were in the unenviable position of being wrongfully convicted.

B. Concluding Remarks

That compensation should be provided to exonerated individuals has been a common argument in the scientific literature and popular culture for more than two decades. The current research shows that progress has been made regarding the number of states offering statutory compensation, but that perceptions of fair compensation outpace what is actually available to exonerees. There has been progress in the number of state statutes regarding compensation, and the increases in the amounts exonerees can expect to see. Through advocacy by organizations like the Innocence Project and individuals, both exonerees and concerned citizens, future research will hopefully be discussing that all 50 states offer generous compensation to wrongfully convicted individuals. It is important that research, advocacy, and public pressure continues to press state governments to act to ensure that exonerees do not suffer further injustices at the hands of the criminal justice system.

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Racial Animus, Police Corruption, and a Wrongful Conviction of Murder: Complex PTSD and the Vestiges of Anguish

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It is one thing to faithfully report and investigate police corruption; it is another thing to effectively punish abusive officers and the institutions that support them. A third, arguably the most fundamental concern of all, is to understand why these officers, and the infrastructures that protect them, rarely face repercussions for their crimes and the catastrophic psychological traumas that they inflict. The case described herein – a wrongful conviction of murder (1991) that was eventually overturned (2010) and then successfully litigated for restitution (2021) – provides a vivid narrative of prosecutorial misconduct, and the consequent psychological anguish of a survivor, as informed and articulated by participant-observers. Our hope is that by discussing this case, we can facilitate an understanding for, and empathy with, the trials and tribulations of victims of color who have suffered tremendously from police corruption and wrongful convictions.

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I Introduction

It is one thing to faithfully report and investigate police corruption; it is another thing to effectively punish abusive officers and the institutions that support them. A third, arguably the most fundamental concern of all, is to understand why these officers, and the infrastructures that

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protect them, rarely face repercussions for their crimes and the catastrophic psychological traumas that they inflict (Johnson & Engstrom, 2020; Ralph, 2020; Reinhardt, 2015). The case described herein – a wrongful conviction of murder (1991) that was eventually overturned (2010) and then successfully litigated for restitution (2021) – provides a vivid narrative of racial animus, police corruption, prosecutorial misconduct, and the consequent psychological anguish of a survivor, as informed and articulated by two participant-observers. Our hope is that this portrayal, which ultimately highlights the psychological sequelae of unremitting trauma, can facilitate a better understanding for, and empathy with, the trials and tribulations of victims of color who have suffered tremendously from a wrongful conviction.

A. The Backstory

During the late 1980s and early 1990s, drive-by shootings were a foreseeable risk for residents living in the Alemany Housing Projects, a series of dilapidated apartment buildings in San Francisco, California. Young men who resided therein would occasionally take it upon themselves to eliminate nighttime visibility by shooting out the streetlights. That decision, in turn, increased the likelihood of police scrutiny and intervention.

On 24 January 1990 several police officers, one of whom was Sergeant Kitt Crenshaw, began chasing a group of young Black men who had allegedly been firing weapons at streetlights in the aforementioned housing project. One young man, Maurice Caldwell, was captured. Sergeant Crenshaw and a fellow officer then drove Mr. Caldwell to an isolated area, whereupon Sergeant Crenshaw put Mr. Caldwell in a chokehold, and subsequently threw him against a wall. When those tactics failed to yield a confession, Sergeant Crenshaw held Mr. Caldwell's head to the ground, and instructed his partner to drive over it. Fearing for his life, Mr. Caldwell conceded that he knew where the weapons used to fire at the streetlights were hidden.

Following that "confession", the officers then brought Mr. Caldwell back to the Alemany Housing Projects. Upon arrival, Mr. Caldwell immediately bolted from the back seat of the police car and began screaming "*He is trying to kill me! He is trying to kill m*e!" (Abramson, 2020a). The officers quickly vacated the scene.

Two days later, at the urging of his grandmother, Mr. Caldwell filed a civilian complaint against Sergeant Crenshaw. Though Sergeant Crenshaw denied the claims of brutality, he nonetheless admitted to threatening to kill Mr. Caldwell; acknowledging that he said, "*Sooner or later I'm going to catch you with a gun, and you and I are going to have it out. I'm going to kill you"* (*Caldwell v. City of San Francisco*, 2020).

Approximately five months later, on 30 June 1990, a murder was committed at 2:00 a.m. in Alemany Housing Projects. It happened slightly beyond the front of the apartment building where Mr. Caldwell periodically resided. A drug deal had evidently gone awry. A subsequent investigation, and related testimony, indicated that there were five sellers who were standing in the street and five buyers who entered the Projects by car. Two of the buyers got out of their car, and some form of negotiation ensued. Within minutes, however, a conflict emerged. One of the parties threw a punch, and one of the five sellers fired a handgun in response; hitting one of the buyers, Judy Acosta, who then collapsed in the street. The other armed seller fired a shotgun at the

buyers' car. Mr. Acosta was quickly dragged back into the vehicle, and the group of buyers made a hasty exit. Mr. Acosta died shortly thereafter.

The handgun shooter, Marritte Funches, eventually confessed to the crime. The shotgun shooter has never been definitively identified.

The photograph below was taken of Mr. Caldwell's apartment building in the Alemany Housing Projects on the morning after the 30 June 1990 murder. The murder, which happened in the street, was slightly beyond the closet apartment portrayed herein, purportedly under a streetlight.

San Francisco Police Department crime scene photograph. San Francisco, California, 1990.

An investigation immediately followed. Sergeant Crenshaw, who was not assigned to the homicide division, nonetheless volunteered to search the Alemany Projects for offenders. Unsurprisingly, Mr. Caldwell was his primary suspect. When Sergeant Crenshaw located Mr. Caldwell, approximately thirteen days after the murder was committed, he escorted Mr. Caldwell to the apartment of a potential eyewitness. When she opened her door, Sergeant Crenshaw spoke loudly enough so that the two homicide detectives, already inside her apartment, could hear him clearly announce, "*This is Maurice Caldwell… I need your keys to put him in the patrol car*." (*Caldwell v. City of San Francisco*, 2020). All of these proceedings were observed by this potential eyewitness.

After putting Mr. Caldwell in a police car, Sergeant Crenshaw then allegedly fabricated an interview with him; in which Mr. Caldwell purportedly admitted that he was also dealing drugs in this same housing project on the night of the murder. That fabricated interview was then relied upon by the homicide detectives as part of their ongoing investigation of the murder. When the potential eyewitness – the sole eyewitness at this point – eventually saw Mr. Caldwell in the line-up of suspects for the murder, she confirmed that Mr. Caldwell was indeed the shotgun shooter.

Based upon this sole eyewitness testimony, and the testimony of Sergeant Crenshaw and the two homicide detectives, the 22-year-old Mr. Caldwell was arrested on 20 September 1990 for murder and was incarcerated immediately thereafter. Represented by an incompetent attorney who was later disbarred (Gross, 2019), Mr. Caldwell was convicted on 20 March 1991 of second-degree murder and sentenced to 27 years to life in prison.

Mr. Caldwell, consequently, lost two pivotal decades of his life while incarcerated in manifestly dangerous California prisons (Garrison S. Johnson v California, 2005). On 28 March 2010, a Superior Court Judge overturned his conviction; therein formally exonerating him. Now freed from incarceration, Mr. Caldwell did not, however, experience a corresponding liberation from the catastrophic suffering he endured throughout his imprisonment. Compensatory restitution was not forthcoming, either. Mr. Caldwell's civil lawsuit, in fact, was dismissed on summary judgement in 2016 by United States Magistrate Judge Elizabeth Laporte. Judge Laporte ruled that although Mr. Caldwell's attorney, Monique Alonso, formally with the law firm of Gross, Belsky, and Alonso, provided strong evidence of Sergeant Crenshaw's motive to frame Mr. Caldwell for murder, the prosecutor in Mr. Caldwell's criminal trial *broke the chain of causation* by independently reviewing the evidence before charging Mr. Caldwell for murder. It wasn't, however, until 11 May 2018, that the United States Court of Appeals for the Ninth Circuit reversed the District Court's decision. Writing for the Appellate Court, Judge A. Wallace Tashima noted that:

> a prosecutor's judgement cannot be said to be independent where the prosecutor considers potentially fabricated evidence without knowing that the evidence might be fundamentally comprised and misleading.

He further noted that:

> in reversing the district court's grant of summary judgement in favor of the police sergeant [Kitt Crenshaw], [Mr. Caldwell did in fact establish] that the sergeant had a motive to retaliate against him. He further raised a genuine issue as to whether the sergeant arranged the show up, deliberately fabricated the statement and memorialized it in falsified notes. The panel further held that plaintiff rebutted any presumption of prosecutorial independence and established a triable issue as to whether the allegedly fabricated identification and falsified statements caused him harm (*Caldwell v. City of San Francisco et al.*, 2018).

Immediately following the Ninth Circuit Court of Appeal's decision, Mr. Caldwell's attorneys, Terry Gross of Gross & Belsky, P.C. and James Quadra of Quadra & Coll. LLP began actively preparing for an upcoming civil trial. Their claims included: Defendant Sergeant Kitt Crenshaw had ample motive to deliberately fabricate evidence to implicate Mr. Caldwell for the

murder of Judy Acosta; Sergeant Crenshaw conducted an illegal show-up with Mr. Caldwell at the door of a potential eyewitness; Sergeant Crenshaw's false report caused investigating homicide detectives to focus exclusively on Mr. Caldwell; and finally, the San Francisco Police Department maintained a system for citizens' complaints about police conduct that failed to comply with generally accepted police practices and procedures. They argued that this system was so ineffective that officers believed that they could act with impunity, whereby misconduct, including racial animus, would not be punished or condemned. The plaintiff's attorneys then retained experts to serve in this civil lawsuit.

Of particular interest was the decision to create a video reconstruction of the original crime scene. Paul Kayfetz, a high-definition video visibility expert, used drones to assess visual sightlines from the (now deceased) eyewitness' second story apartment window. Mr. Kayfetz's data, in the form of high-resolution images, clearly identified a protrusion from the first apartment that completely blocked all visibility for observing the proceedings of the crime that the eyewitness had claimed to have seen.

More challenging however, was substantiating the issue of racial animus. There is certainly evidence of routine discriminatory police practices throughout the United States, but the question herein was more restricted. Is there evidence of racial animus among officers of the San Francisco Police Department (SFPD)? If so, are there data that are specific to the late 1980s and the early 1990s? Sienna Bland-Abramson, the second author of this article, was then hired as the Senior Research Analyst to answer those questions – alongside countless other queries – that arose throughout the litigation. Ms. Bland-Abramson discovered that there was unmistakable documentation of police corruption, racial enmity, and racial profiling by officers of the SFPD, some of which was evident in quite notorious cases; the "Fajitagate" scandal of 2002 being one of them. On 20 November 2002, three intoxicated off-duty SFPD officers attacked two innocent civilians when they refused to surrender their takeout food. One of those off-duty police officers, Alex Fagan, Jr., was the son of the Assistant Chief of Police, Alex Fagan. The then current Chief of Police, Prentice E. Hall, along with Alex Fagan and nine other officers, quickly covered up the incident. Eventually, however, all of the officers involved in the cover-up were indicted by the San Francisco's District Attorney office.

Perhaps even more reprehensible was the 2011 "Textgate" scandal. Fourteen SFPD officers exchanged a series of shockingly bigoted and overtly offensive text messages (e.g. "Question: *Do you celebrate* [Kwanzaa] *at your school?* Reply: *Yeah, we burn the cross on the field! Then we celebrate Whitemas"* (Mark, 2018)). In response to this scandal, an advisory panel to the San Francisco District Attorney's Office was assembled to evaluate the SFPD. This panel determined that the SFPD maintained a systemic, widespread culture of bias (The Blue Ribbon Panel, 2016). Various other reports and assessments of the SFPD produced similar findings (COPS, 2016; Schlosberg, 2002).

Where the specific timeframe was concerned (i.e., the late 1980s and 1990s), though the evidence was less robust, it was by no means inaccessible. The American Civilian Liberties Union (ACLU) filings during this period also painted a very troubling picture of racial antipathy among officers of the SFPD. John M. Crew, a former ACLU attorney and Director of the Police Practices Project at the ACLU of Northern California during that timeframe, for example, led countless

efforts to identify bias, address racial profiling, and enforce accountability within the SFPD. In an impassioned plea to the Police Commission, he expressed grave concern over the longstanding (and largely unaddressed) practice of racial profiling and inadequate disciplinary systems to address such practices within the department spanning from the early 1990s to present day (Crew, 2016).

To augment the value of that data, Dr. Halford H. Fairchild – a Professor Emeritus in Psychology and Africana Studies at Pitzer College (Claremont, CA), and a former National President of the Association of Black Psychologists – was then retained to conduct an analysis of the relationship of the SFPD to the African American community in San Francisco during the corresponding time frame. Dr. Fairchild's principal conclusion was that in the period around 1990, young Black men in inner city projects of San Francisco, even if not involved in any criminal activity, were subject to aggressive policing and harassment by officers of the San Francisco Police Department.

I Assessing Psychological Harm

Since the ultimate goal for the plaintiff and his attorneys was to obtain restitution, the overriding objective of this litigation was to discover the basis of Maurice Caldwell's profound distress, and then provide the reasoning and evidence to substantiate whatever conclusion had been drawn. Paul Abramson, a professor of psychology at UCLA and the first author of this article, was retained for that purpose. He speaks directly of his experiences in the first person for the remainder of this section, and then once again in a latter section titled *Maurice Caldwell and Complex Post-Traumatic Stress Disorder.*

Why, one might ask, would a psychological damages expert be needed for a case in which a man lost twenty years of his life while incarcerated in maximum security prisons as a result of a wrongful conviction of murder? Documenting his suffering, one might confidently insist, should be effortless. True, perhaps, except for the fact that civil litigation is by nature adversarial. Challenges to causation are pronounced, even in cases with fact patterns like those described herein. Additionally, plaintiffs who have a vested interest in the financial outcome of civil litigation are not uniformly trusted: the same could be said of their attorneys and experts, too. Although defense attorneys and their experts often fare worse, the general rule of thumb in civil litigation is that whatever argument the plaintiff sets forth, the defense argues to the contrary.

With that in mind, I viewed my role as being restricted, certainly at first, to constructing a scientifically tenable rationale for assessing psychological harm. To operationalize that rationale, I relied on repeated sampling, exhaustive interviews, corroborative data collection, scrutiny of archival records, and the review of existing literature. For example, beginning on 8 April 2015 and ending on 6 November 2020, I conducted over twenty extensive interviews with Maurice Caldwell. To supplement those interviews, I received consent from Mr. Caldwell to speak with his psychotherapist, Dr. Stephen Tuttle, and to gain access to Dr. Tuttle's session notes. I also conducted an interview with Mr. Caldwell's Northern California Innocence Project attorney, Paige Kaneb. Ms. Kaneb had interacted with Mr. Caldwell toward the end of his incarceration, and then remained in touch with him thereafter. For a short period of time, in fact, Mr. Caldwell also resided

with Ms. Kaneb. As a backdrop to all of these interviews, I carefully reviewed Mr. Caldwell's vast archival record, which included court hearings and decisions, depositions, psychological testing results, expert reports and declarations, and so on.

I did not, however, want to rely solely on Mr. Caldwell's descriptions and disclosures, particularly in terms of the sustained and repetitive traumas he purportedly experienced while incarcerated. I thus reviewed the contemporary research literature on maximum-security prison environments, particularly the evidence on the psychological impact those environments had on both inmates and correctional officers (e.g., Anderson, Benjamin, & Bartholow, 1998; Benjamin & Bushman, 2016; Craik, 1973; Flanagan, 1995; Garland, Hogan & Lambert, 2012; Goffman, 1961; Gordon & Baker, 2017; Lyon, 2020; Sykes 2007; Walsh, Craik, & Price, 2001.). The literature on correctional officers was particularly important to me because I considered these officers to be observers and participants in the same environments where Mr. Caldwell was incarcerated; though of course, the most obvious difference between the two is that correctional officers can go home at night. That notwithstanding, a correctional officer is still, I believe, a reasonable barometer, and potentially a corroborating witness, for gauging the level of danger and mortal risk of residing therein.

As fate would have it, I also discovered a retired correctional officer, Chris Buckley, who knew and had supervised Mr. Caldwell while he was incarcerated in a Northern California Maximum-Security Prison. Officer Buckley, in fact, had written a laudatory appraisal of Mr. Caldwell a few years before Mr. Caldwell's conviction was overturned. After Officer Buckley retired, he was then re-hired to serve as an expert in prison classification for the Strategic Offender Management System (SOMS); a project that digitalized all prisoner records for the State of California.

Obtaining participant observer data from repeated interviews with Officer Buckley was important because it would allow me to explore the probative value of potentially corroborative evidence, particularly in the form of independent expert knowledge that might yield further insight into the physical and psychological dangers of the prisons in which Mr. Caldwell had been incarcerated. Those interviews, twelve in all, began on 27 June 2020 and continued until 27 September 2020.

Finally, I interviewed a second correctional officer, Robert Klingelhoets, who served in a Northern California Maximum-Security Prison during the same time frame in which Maurice Caldwell had been incarcerated. Besides confirming the mortal risks of residing therein, Mr. Klingelhoets had also taken countless, admittedly gruesome, photographs that I reviewed of prisoners who had been brutally stabbed (one of whom was almost decapitated) or had committed suicide. Those photographs were compiled by Officer Klingelhoets to serve as a forewarning to other prisoners, as well as at-risk adolescents, according to the rationale of the *scared-straight* ethos.

A. Severe Psychological Trauma

Severe psychological trauma is generally formulated according to the diagnosis of Post-Traumatic Stress Disorder (PTSD). The signature symptom of PTSD is the involuntary re-

experiencing of the anguish that accompanied the original trauma. The second identifying symptom is the avoidance of reminders, or cues, that might elicit the re-experiencing of the anguish of the original trauma. The last identifying symptom is the experience of increased psychological arousal, such as hypervigilance and sleeplessness. These three distinctive symptoms then build on chronic manifestations like depression and anxiety (Lewis, et al., 2019, Ozer, Best, & Lipsey, 2003; Ozer & Weiss, 2004).

This particular diagnostic conceptualization of PTSD is largely about depicting a psychological syndrome that resulted from a relatively circumscribed severely traumatic event: for example, a life-threatening car accident, or a particularly gruesome battle during war. The inability of PTSD to accurately describe the psychological impact to victims of *countless* severely traumatic experiences has been regularly expressed in the scientific literature for decades (Herman, 1992). Holocaust survivors, for example, do not easily fit into the PTSD framework, nor do prisoners of war (Krystal, 1968; Ursano, 2003); which for many reasons isn't surprising, given that relentless traumas accrued from years of enduring brutalized captivity are not easily encapsulated into the boundaries of a demarcated disorder. For that matter, the psychological repercussions of exposure to sustained, repeated, or multiple agonizing events that don't fit squarely within the diagnosis of PTSD are no less true for other victims; such as those who have experienced genocide campaigns, as well as victims of childhood abuse (sexual or otherwise), wrongful imprisonment, child soldiering, religious cults, pronounced domestic violence, torture, and slavery (Campbell & Denow, 2020; Cook, 2005; Gelinas, 1983; Goodwin, 1988; Grounds, 2014; Kroll, et al, 1989; Lubin, 2014; Newman, et al. 2020; Weigand, 2009; Williams & Merwe, 2013).

To signify the diagnostic differences between these two categories – individual versus manifold exposure to severely traumatic events – researchers and clinicians began using the terms *complex trauma* or *complex PTSD* to describe the psychological sequelae to victims who had experienced endless traumas. That diagnostic nomenclature was ultimately codified as *complex PTSD* in the World Health Organization's 2019 *International Classification of Diseases-11* (ICD-11) (World Health Organization, 2019). Unlike its American counterpart, the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-V) (American Psychiatric Association, 2013), the ICD-11 emphasizes a public health perspective, which is then organized around maximizing clinical utility for relevance to diagnostic categories and treatment worldwide (Brewin, 2017; Jowett et al, 2020).

It has also been evident that a very distinctive etiological characteristic stood out in each of these categories of repetitive trauma victims: they all suffered under complete coercive control. While potentially applicable to Mr. Caldwell, given his long-term incarceration, this determinative characteristic was true regardless of whether victims had been held captive by physical or institutional constraints or by a combination of physical, psychological, social, and economic factors. Coercive control, and the diversity and intensity of the psychological manifestations that emerged as a result of repetitive agony, was the common feature among survivors with *complex traumas* (Herman, 1992, 2015; Lawson & Akay-Sullivan, 2020; Hyland, et al, 2020; and Lubin, 2014).

The symptoms of complex trauma generally fall into six loosely formulated categories, three that bear some similarity to PTSD (re-experiencing of the traumas, avoidance and

hypervigilance) and three that are unique to complex trauma (e.g., disturbances in self-identity, emotions, and relationships) (Brewin, 2017; Herman, 1992; Jowett, et al. 2020; Lawson & Akay-Sullivan, 2020). Nevertheless, the differences between the two diagnoses are pronounced. In PTSD, as noted above, there is a circumscribed severely traumatic event in which the psychological sequalae has some prospect of abating. In complex trauma, however, it is an ongoing and deeply entrenched condition. The repetitive severely traumatic events in complex trauma markedly amplify, and then radiate, the psychological and physical consequences of those experiences. Though hypervigilance to one's internal and external environments is certainly evident in PTSD, in complex trauma hypervigilance is accompanied by chronic agitation and anxiety without any accompanying times of tranquility. Complaints about physical symptoms are also pronounced, such as insomnia, headaches, back pain, and a chronically upset stomach. Even tremors, choking sensations, and nausea can be present, and in some cases, complex trauma victims describe *all* of their symptoms in terms of somatic complaints (Herman, 1992, 2015).

Dissociation, the disconnecting within one's mental processes, is also very common in both PTSD and complex trauma; driven largely by the need to remove oneself, at least cognitively, from the traumas and their after-effects. More common among sufferers of complex trauma is the rupture in the continuity between the present and the past, as evidenced in disturbances in memory and concentration (Herman, 1992; Lawson & Akay-Sullivan, 2020). Emotional changes also dominate complex trauma: presumably the result of believing that one has been forsaken by all, for time immemorial. The indomitable psychological losses that these sufferers experience then result in an unyielding depression. The rage over having been imprisoned (psychologically or otherwise) for such a long period of time further heightens the torment of depression. Carrying that burden of unexpressed rage, for what may be decades, has many adverse psychological effects. Self-hatred is also a possible outcome when rage turns inward, as are suicidal feelings, too (Herman, 1992, 2015).

Lastly, prolonged captivity has the effect of undermining or destroying one's ordinary sense of safety, and worse yet, can make victims feel that the perpetrator is still ever-present, again alienating the survivor's relationship to the world (Campbell & Denov, 2020; Goffman, 1961; Herman, 1992, 2015; Flanagan, 1995; Newman, et al., 2020; Sykes, 2007; Ursano, 2003; Williams & Merwe, 2013).

B. Maurice Caldwell and Complex Post-Traumatic Stress Disorder

Based on the many interviews that I had conducted, plus the vast archives, records, and literatures that I had reviewed, I concluded that Mr. Caldwell could very well be an archetype for complex PTSD. As a wrongly convicted man, he spent over 20 years in captivity in coercively controlled environments where the threat of violence, and the realistic fear of death, were ever-present. Maximum-security prisons, by definition, are extremely dangerous institutions that maintain complete coercive control through 24-hour armed surveillance, locked cell blocks, 24 hour visibility of every aspect of a prisoner's life, routine strip searches, the elimination of discretionary choices, and thoroughly structured daily routines; all of which is encompassed within a fortress that is distinguished by outside perimeter barriers, and surrounded by razor wire with lethal electric fences designed to eliminate the possibility of escape. Maximum-security prisons are, in fact, exemplars of coercively controlled environments.

Beyond the physical structure, the armed surveillance, and the monotonous and humiliating routines, yet another form of duress to inmates in maximum-security prisons is the prospect of extraordinarily violent and perfidious individuals with little expectation to ever leave the confines of the surrounding walls. Consumed with rage and bereft of hope, the value of life can have little meaning to some, which in turn, can result in an environment that is constantly threatening to the safety of everyone; correctional officers, no less than other inmates (Garland, Hogan & Lambert, 2012; Gordon & Baker, 2017; Lincoln, et al, 2006). In combination, these elements make maximum-security prisons an intensely destructive world. The presence of countless weapons among inmates (e.g., bone crushers, shanks, etc.) is however what ultimately creates the tangible mortal danger therein: coupled of course with the 24-hour armed surveillance, whose officers have been trained to shoot to kill (Anderson, Benjamin & Bartholow, 1998; Benjamin & Bushman, 2016). Is it any wonder that maximum-security prisons are notorious for their riots, stabbings, murders, and suicides?

On 19 December 1993, approximately two and a half years after Mr. Caldwell entered the Northern California prison system, he was brutally stabbed in the head, shoulder, and chest by another inmate who used an improvised 6-inch-long knife made from a metal rod filed to a sharp point. That stabbing occurred while Mr. Caldwell was an inmate at California State Prison, Sacramento, which is also known as New Folsom's Level 4 Prison. Mr. Caldwell described his reaction to this stabbing as having "*changed my whole life. I knew at that very moment I could be killed at any time, on any day – without me even knowing it"* (Abramson, 2020a).

The events that preceded the stabbing are perhaps the best context for understanding and appreciating Mr. Caldwell's terrifying dismay, as his assailant was his co-worker in a dining facility. A month or so prior to the incident, the co-worker and Mr. Caldwell had an argument, though they eventually resolved their differences and continued to work effectively together. On the day of the stabbing, in fact, they had just engaged in a pleasant conversation. That notwithstanding, when Mr. Caldwell turned his back to walk away, he was brutally stabbed in the head, shoulder, and chest – the force and target of which could easily have proved fatal. It was that chronology of events, particularly the pleasant conversation, and then turning his back to his co-worker, that provided the indisputable evidence to Mr. Caldwell that he "*could be killed at any time, on any day – without me even knowing it"* (Abramson, 2020a).

On its surface, it certainly seemed understandable that a victim of a brutal stabbing, who resided in a very dangerous environment, would then continue to fear for his life as long as he remained confined within; particularly given the details underlying the interpersonal dynamics that preceded this vicious stabbing, and the fact that it could easily have been a lethal one. Nevertheless, I then asked Correctional Officer Buckley to comment on Mr. Caldwell's psychological reaction to this felony assault. As part of his extended commentary, which continued over several months, Officer Buckley also talked more generally about the risks and dangers in California's maximum-security prisons. Excerpts from those interviews are presented below.

> *A level 4 prison is like the worst neighborhood you could imagine.* [It's] *an awful place. A very bad neighborhood. You always have to watch what is going on. Something terrible always might happen. Besides all of the stabbings, there are so many sexual assaults. The sexual assaults rarely get reported. Level 4 prisons are extremely stressful. Just like Mr.*

> *Caldwell, I was always scared of dying in prison. Fear of dying in prison is a legitimate concern…*
>
> [With regard to Mr. Caldwell] "*you get stabbed early on it's going to have a profound effect on your mental health. He is going to worry about it during his entire time in the joint. And you think about it all the time because it already happened to you. And then you think about it again after you get out of prison. You can't escape it.* [But] *once you've been stabbed, you never let your guard down. You become hypervigilant outside of your cell. Constantly looking, because assaults, and stabbings, happen so fast, like in a flash.* [Also keep in mind that] *entering the prison system* [itself] *is a major shock to the system. You are handcuffed behind, stripped naked, searched. It's demeaning right out of the gate. It's a shock, a complete shock"* (Abramson, 2020b).

Besides being stabbed in the head, shoulder, and chest on 19 December 1993, Mr. Caldwell routinely observed countless violent struggles and riots throughout his incarceration, and he repeatedly witnessed lethal weapons being in the possession of both correctional staff and inmates; each of which made him feel that lethal assaults were an inescapable danger. Mr. Caldwell thus never felt safe anytime he walked outside of his cell, always fearing for his life, believing that anything could happen at any time, including being killed. In many respects, his entire experience in captivity can be reduced to two words; terror and uncertainty – the realistic fear of death, and the unpredictability of when it might happen to him again.

Mr. Caldwell also described the stress in prison as overwhelming, and correspondingly, he felt that there was never a moment when he could relax, certainly outside of his cell. His closest family members – his grandmother, mother, and brother – all died while he was in prison. He was prohibited from attending their funerals. Their deaths were particularly hard for him, and his immediate reaction to his grandmother's death was that he should kill himself; as he felt that he had nothing, and no one, left to live for. Though he was always terrified that he would be killed in prison, the only times he actually felt suicidal were when a family member died.

Rage was also bottled up inside of Maurice Caldwell. He was raging largely about the wrongful conviction, and the dangerous world he was sentenced to. But there was never a safe opportunity to express any of his all-consuming rage while incarcerated. Raging in prison, in fact, would have been extremely hazardous to this health and safety. Mr. Caldwell said:

> *Being in prison was like going to war every day. It's only when I was in my cell at night that I felt I was safe.* [I also] *felt so unstable in prison. I had to fight it, that feeling of defeat, all the way through prison. There is no end to it. There are no boundaries, no structure to* [that] *life. You have to create structure to survive. You just never give up.*
>
> [That said] *I was depressed every day in prison. What made it even worse* [was] *when I was talking on the phone with someone* [and I'd realize that] *I can't be there with them.* [I also] *felt so ashamed in prison* [and] *so afraid. Always dreaming about being saved. My life didn't mean nothing when I was there.*

> *In prison, people act real quick. They get bullied. They get raped. Or they feel guilty – not being able to live any more. That's where suicide* [in prison] *comes from. Even taking a shit in prison, like while you are on the yard, you still need protection. You need your people there. In prison, it's just a toilet sitting there – no bathroom with a door. When you take a shit in prison, it's a time of weakness. Guys were* [even] *shitting out knives (kee-su (sic), shanks, bone crushers) or drugs* [right next to me] *…You never know what is going to happen.* (Abramson, 2020a).

Northern California's Maximum-Security Prisons are clearly coercively controlled environments dominated by appalling and unquestionably formidable traumatic events, each of which often contains either a realistic threat of death, or a tangible risk to one's safety. Like every other survivor of sustained and repetitive traumas, that world thoroughly undermined Mr. Caldwell's sense of safety, even to this day. In fact, Mr. Caldwell still spontaneously re-experiences the anguish of being in prison (e.g., *All the time it makes me feel I'm in prison – in solitary confinement. Always feeling – in my mind that I'm back in prison*) and hyperarousal is a continuous problem (e.g., *I'm paranoid about being charged with another crime I didn't do…I don't sleep. Ever since I came home from prison, I can't go to sleep. Maybe I go to sleep 4 or 5am – and then only for 4-5 hours. And I can no longer focus on one thing.*). Chronic agitation and anxiety are evident (e.g., *I'm so stressed. I just keep to myself. So stressed about everything*) without any accompanying times of tranquility (e.g., *It's really hard here. I hurt every day. I can't relate to anything – they took that from me. I suffer every day. I can't do things because of all of the pain I experienced. My mind. My body.*) (Abramson, 2020a).

One of the most notable symptoms in Mr. Caldwell's psychological profile was the manifestation of rage. Besides his debilitating anxiety, it is rage that rules supreme in Mr. Caldwell's emotional life; a common fate, not surprisingly, of captives who have suffered repetitive traumas (e.g., *They took those years of my life. It all consumes me. I'm shut down so much. I don't trust people…Rage is bottled up in me. I can't accept this. I can understand how someone would go postal. I wouldn't do something like that, for my kids, for all kinds of reasons. But I can understand* (Abramson, 2020a)).

People who survive brutality and inhumanity often describe their experiences in highly emotional and fragmented ways. That manner of expression, however, certainly when combined with an incessant but essential need to recall those experiences and their psychological repercussions, can be understandably overwhelming to listeners. Sadly enough, this creates even more isolation for survivors. For Mr. Caldwell, it has been a no-win situation that characterizes his life. Reliving his trauma and the ceaseless symptoms that accrued therein have left Maurice Caldwell with few options for emotional escape, and little reason to hope for resolution. Rage and anxiety, certainly at this time in his life – as a 53-year-old man – are largely the factors that propel him forward.

As a wrongly convicted young man, there was no such thing as *getting used to* a maximum-security prison, especially after having been ruthlessly stabbed in his head, shoulder, and chest, as well as having been a witness to riots, stabbings, murders, and other terrifying events. The aggregate of countless traumas Mr. Caldwell experienced while in captivity inevitably imposed such an emotional burden on him that it would be unreasonable to expect him not to disintegrate

psychologically – as he most certainly has – under the intensity and duration of that level of disaster. To further suppose that his psychological disintegration would eventually resolve itself, even with psychotherapy, is illusory, too. Psychotherapeutic interventions for complex PTSD are hardly auspicious (Karatzias, et al, 2019, Liddell, et al, 2019), which comes as no surprise given the prodigious assortment of psychological symptoms of survivors who have experienced sustained and repetitive traumas, as well as the fact that the hypervigilance and terror routinely manifested in coercively controlled environments also inevitably becomes a dominant force in the survivor's psychological infrastructure long after release (Herman, 1992). Tragically, not even restitution obtained through civil litigation will ever rectify this dreadful captivity, nor magically remove the enduring psychological sequelae from it.

C. Institutional Racism

The egregious harms and interminable agonies described herein ultimately speak for themselves. There are, however, other forms of racial animus that Mr. Caldwell endured that are more subtle, but no less insidious: his incompetent legal representation being a case in point. Though we are primed, for good reason, to think of racial disparities in terms of arrests, sentencing, and imprisonment – which indeed took their toll on Mr. Caldwell – it would serve justice equally well to scrutinize the court proceedings themselves, and the client-attorney relationship in particular. Race and class drive those connections too; not simply in how they influence verdicts and sentences, but more notably, how such outcomes profoundly affect poor, Black individuals. Assertive defendants who are disadvantaged and of color are often perceived as problematic and disrespectful by their attorneys. If they have useful insights into criminal proceedings, such intuitions are usually dismissed as byproducts of repeat offending (Clair, 2020). Mr. Caldwell, regrettably, experienced each of those repercussions as well.

Complicating this picture is the fact that racism and police corruption are not topical constructs that influence a narrow band of victims of color, but instead, have been cultivated for centuries, and are thus built into our entire social fabric. Segregation and discrimination emanate primarily from historical ideologies bound up with race and class. Perhaps these longstanding problems will never be fully redressed, but these ideologies have nonetheless contributed greatly to the anguish Mr. Caldwell experienced, particularly in terms of the absence of equal justice and the debasement of his constitutional guarantees (Fairchild, 2021). Framed within this broader sociological context – which includes factors like segregation, immigration policy, inadequate schools and healthcare, limited employment opportunities, and so on – it is assuredly the combination of all of these elements that have led to the pernicious subjugation of people of color, Mr. Caldwell included (Alang et al, 2017; Gee & Ford, 2011; Fairchild, 2021; Obermeyer, et al, 2019; Serchen et al, 2020; and Tuckson, 2020).

III The Rocky Road to Restitution

We began this article with three concerns. The third of which, we noted, was the most fundamental of all. Why do police officers, and the infrastructures that protect them, rarely face repercussions for their crimes and the catastrophic psychological traumas they inflict?

The standard answer is the doctrine of qualified immunity. Qualified immunity shields government officials from constitutional claims for financial remedies as long as those officials did not clearly violate established law. The United States Supreme Court, in *Mullenix v Luna* (2015), simplified this principle by stating that qualified immunity protects all but plainly incompetent [government officials] or those who knowingly violate the law.

At first glance, that sounds reasonable enough, until one is faced with the prospect of proving that a police officer is incompetent or knowingly violated the law. As Ninth Circuit Judge Stephen Reinhardt (2015) recently wrote, the Supreme Court's qualified immunity decisions have "created such powerful shields for law enforcement that people whose rights are violated, even in egregious ways, often lack any means of enforcing those rights." That finding seems especially relevant to the case described herein, principally in terms of Mr. Caldwell's deprivations of justice and the tragic harms he endured.

Yet curiously enough, when Schwartz (2017) examined the data in 1,183 cases filed against state and local law enforcement defendants in five federal district courts over a two-year period, she discovered a very striking finding. The frequency of qualified immunity motions brought by law enforcement defendants and granted by courts prior to discovery and trial was just 3.9% of all of the cases she reviewed. Qualified immunity, despite constitutional claims to the contrary, apparently does little to provide protection for government officials. What it does, instead, is create a chilling effect on proposed litigation involving law enforcement defendants. The *threat* of qualified immunity motions, Schwartz reasoned, is likely to dissuade plaintiffs from even filing lawsuits, or alternatively, to settle them quickly, or even withdraw them entirely before discovery and trial. It may also dissuade plaintiff attorneys from representing such plaintiffs in the first place (Schwartz, 2017, 2020).

Qualified immunity was not, however, at the forefront of the civil litigation described herein. What ultimately made the difference in this particular case was the civilian complaint Mr. Caldwell made against Sergeant Crenshaw in January 1990. That complaint provided tangible evidence for the Court of Appeals to rule that Maurice Caldwell had definitively established that [Sergeant Crenshaw] had a motive to retaliate against him (*Caldwell v. City of San Francisco,* 2020). That ruling also undermined any possibility that Sergeant Crenshaw could hope to evade responsibility under the qualified immunity doctrine. Nevertheless, apropos to our fundamental concern raised above, Sergeant Crenshaw, like so many other police officers, never faced repercussions for an unscrupulous act: purportedly fabricating his notes to frame Mr. Caldwell for murder. When Sergeant Crenshaw finally retired from the San Francisco Police Department in 2011, he had risen to the level of Commander of Operations. That Sergeant Crenshaw had sixty-seven civilian complaints against him did not, apparently, jeopardize his career path.

On 4 April 2021, the case described herein (*Caldwell v. City of San Francisco*, 2020) settled approximately two weeks before the start of trial. That settlement included substantial compensation for Mr. Caldwell. Obtaining restitution, however, was by no means a happy resolution for this catastrophe. It was, at best, a reasonable outcome for the dreadful harm that was done to Maurice Caldwell. This case also does not provide a template for winning restitution for other wrongly convicted victims. What it does instead, is confirm the *potential* of obtaining restitution, but perhaps only if enough facts can be brought to the foreground by attorneys with the

requisite skills to succeed. Since the civilian complaint made a difference herein, it is a strategy worth emphasizing.

IV Conclusion

The objective of this case study was to describe the circumstances that underscored Mr. Caldwell's fate, and then provide a comprehensive overview of his subjective experiences and the horrific psychological ramifications that manifested. Our hope is that by presenting this material, we can facilitate an understanding for, and empathy with, the trials and tribulations of victims of color who have suffered tremendously from police corruption and wrongful convictions. If, indeed, empathic engagement is crucial to effective care (Halpern, 2003; Hirsch, 2007) case examples like this can go a long way towards facilitating support and treatment for victims of appalling injustice.

Though racial animus and police corruption are overwhelmingly destructive, their elimination primarily depends upon a fundamental transformation within society itself. Until equal protection under the law is sustained unequivocally, restorative justice for people of color will be grievously foreshortened.

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Panel Discussions on

Autopsy of a Crime Lab: Exposing the Flaws in Forensics

By Brandon L. Garrett | L. Neil Williams Professor of Law
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U.S.A.
(Oakland, California: University of California Press, 2020)

Panel Discussion One
Duke University
with Edward K. Cheng, Erin Murphy & and Dean Jennifer Mnookin [1]

Panel Discussion Two
Quattrone Center
University of Pennsylvania Carey Law School
with Paul Heaton, Itiel Dror & Maneka Sinha [2]

Introduction
Brandon L. Garrett

Scientific evidence has long been central to our understanding of wrongful convictions. The role of science has been two-edged: science has been used to exonerate innocent persons, but improper use of scientific evidence has also often contributed to their wrongful convictions. Forensic evidence, in which scientific or technical practices are used to collect, analyze, and interpret evidence in cases, has long been used in criminal investigations. There is growing public, legal, and scientific awareness, however, that a wide range of forensic practices lack adequate scientific foundations.

I am so grateful to the editors of the Wrongful Convictions Law Review for publishing transcripts of two wonderful panels convened following the publication of my book, *Autopsy of a Crime Lab: Exposing the Flaws in Forensics*, published by University of California Press in 2021. Each panel featured leading scholars whose work bears on how forensics goes wrong and how to get it right.

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[1] Edward K. Cheng, Hess Chair in Law, Vanderbilt Law School, Nashville, TN; Erin E. Murphy, Norman Dorsen Professor of Civil Liberties, NYU Law, New York, NY; Dean Jennifer L. Mnookin, Dean and Ralph and Shirley Shapiro Professor of Law, UCLA Law, Los Angeles, CA.

[2] Paul Heaton, Senior Fellow and Academic Director of the Quattrone Center for the Fair Administration of Justice, The University of Pennsylvania Carey Law School, Philadelphia, PA; Maneka Sinha, Assistant Professor of Law, University of Maryland School of Law, Baltimore, MD; Itiel Dror, Senior Cognitive Neuroscience Researcher, University College London, UK.

The first panel, hosted by the Wilson Center for Science and Justice at Duke Law School, which I direct, included Professors Edward Cheng, Erin Murphy, and Dean Jennifer Mnookin. Edward Cheng researches evidence law generally and scientific and expert evidence specifically. He is the co-author of *Modern Scientific Evidence* and he is the co-host of *Excited Utterance*, focusing on evidence law. Erin Murphy researches forensic evidence, technology issues, and forensic DNA typing, and wrote Inside *the Cell: The Dark Side of Forensics DNA* (Nation Books, 2015). Dean Jennifer Mnookin co-authors two scientific evidence treatises and has published leading work on the path forward for forensic science in this country.

The second panel, hosted by the Quattrone Center for the Fair Administration of Justice at the University of Pennsylvania Carey Law School, was moderated by Paul Heaton, the Center's Director. Included in the panel was Dr. Itiel Dror, an expert in the field of expert decision making and bias, with leading publications on the subject of cognitive bias among forensic examiners. Second, Professor Maneka Sinha participated, a longtime public defender at Public Defender Service of DC, where she led the agency's nationally recognized forensic practice group.

Panel Discussion One: Duke Law
25 March 2021

Brandon Garrett: Welcome, everyone. My name is Brandon Garrett. I teach here at Duke Law, I'm really honored to have comments on my new book, *Autopsy of a Crime Lab*. It's about forensic science. And I can't imagine three more exciting friends to have comment on the book, comment on their own work, and talk about how to solve these problems facing forensics evidence in our country and in the world.

The plan is that they're going to each reflect and talk. And I'll respond a little bit, but we really hope that you post questions in the chat because we like to have a panel conversation about these issues. For those of you who are lawyers, law professors, and care about scientific evidence, we hope this will be of interest. If you just like watching CSI shows and want to hear about how it's all fake, we can make sure we correct your misperceptions.

And so first we'll have Professor Ed Cheng sharing his thoughts with us. He's the Hess Chair in Law at Vanderbilt University. His research focuses on this topic—on scientific and expert evidence, the interaction between law and statistics. He's the co-author of *Modern Scientific Evidence*, which is a big, big, big treatise and remarkable resource for lawyers. And he's also the host of *Excited Utterance*, a podcast which I hope that you all tune into; it's a wonderful weekly podcast focusing on evidence.

We have Erin Murphy with us from NYU Law School. Her research also focuses on forensic evidence, but also on technology issues and forensic DNA typing. And speaking of books, Erin wrote a wonderful book back in 2015 called *Inside the Cell: The Dark Side of Forensics DNA*. So yes, even DNA evidence can go wrong. And Erin is also a co-editor of *Modern Scientific Evidence*. She's also working on a highly laborious project to revise a certain Article 213 of the Model Penal Code.

Finally, we also have Dean Jennifer Mnookin, Ralph and Shirley Shapiro Professor of Law and Dean at UCLA School of Law since 2015. Jennifer Mnookin has been working on two scientific evidence treatises, the modern scientific evidence treatise that our other speakers are part of, but also "The new Wigmore." Dean Mnookin is part of the American Academy of Arts and Sciences, is on the board of the Law School Admissions Council. Her work has been cited in I think every leading document on what to do about forensic science in this country, including the 2009 National Academy of Sciences report, which is a critical document in this area that you'll probably be hearing a little bit more about.

So, thank you all so much for tuning in and for watching the recording if you're not watching it live. We'd love to hear from you first. And I'll mute myself. And I'm really grateful again to all of you for your thinking about my book and for sharing your own ideas.

Ed Cheng: Thanks, Brandon. there's much that I agree with in the book. Many of the key reforms that Brandon outlines are part of my own wish list for the future of forensics and would bring forensics in line with modern scientific practice which is long overdue. So, for example, I too would like to see traditional "match" assertions replaced by probabilities and error rates. I'd like to see blind testing, where analysts don't know the desired result and, in fact, whether the sample is a real sample or a test sample. And I'd also like to see the quality controls and standards of our medical laboratories replicated in our crime laboratories.

What I want to focus on today, though, is how we get from today, where there's painfully slow and grudging acknowledgment of forensic science's problems, to somewhere better.

One question evidence scholars have asked a lot recently is why Daubert never quite fulfilled its promise in this area. Why, with so much criticism, have courts continued to admit forensics? The book notes that it might be a pro-prosecution bias or that courts might feel constrained by precedent. But I'm not sure I agree that, as a general matter, this is just a blind imitation of the past. I suspect judges here are often being practical rather than just narrow minded.

Evidence academics tend to naturally think about admissibility. But increasingly, I think this focus on admissibility is a mistake, at least as regard to forensics. Judges are going to be reluctant to flat-out exclude forensic evidence, and they may have good reason, because forensic evidence, even with all its flaws, can still potentially be highly relevant.

Microscopic hair comparison--one of the most maligned forensic methods out there--can exclude people. If you find a straight black hair, it could have come from my head. If it's blond, it didn't. While obviously hair examiners have gone way over the line in overselling their identifications, at the end of the day, a straight black hair rules me in. Now, it doesn't prove I did it, but it makes it somewhat more likely. We might not even know exactly by how much, but the hair comparison has significant evidentiary value. And I suspect courts won't exclude evidence with evidentiary value lightly, even if such evidence is missing things we'd want, like population statistics, error rates, and blinding.

Moreover, if you exclude the forensic evidence, then what? The trial will still happen, just without the forensic evidence. What's left will be a hodgepodge of eyewitness testimony and other

evidence, which might be even less reliable, depending on the case. So, getting judges to exclude forensic evidence will be a significant uphill battle.

That's probably why Daubert has been one gigantic disappointment in this area. If you imposed exclusion globally, forensic labs might produce better evidence. But judges usually rule based on a specific case. And faced with a specific case, judges won't want to throw out potentially useful information. What they will do and have done is try to rein in expert testimony and prevent egregious overselling.

So, on admissibility, I disagree a bit with the book. Exclusion isn't the most fruitful approach. But the book, to Brandon's credit, doesn't fall into the trap of focusing solely or even primarily on admissibility. The book takes a much broader, systemic view of the forensics problem, and there it really shines.

The book takes this systemic view in three ways. First, there's a thread throughout about institutional practices and reforms outside of courts. For example, Brandon talks about how TSA security screeners are subject to random proficiency testing through the introduction of test objects. Every once in a while, you put a gun or drugs in a bag, have it screened, and see whether the screeners detect it.

That makes me wonder--how did TSA get that implemented? I'll bet security screeners originally opposed such testing because it would expose them and it stress them out, much like forensic examiners who oppose testing today. But somehow, TSA made that standard practice.

Another example: Brandon recounts how medical testing laboratories in the '60s and '80s became subject to greater federal regulation when their results were discovered to be unreliable. Was that effort successful, and can we learn from those experiences? Understanding how to pull those regulatory and cultural levers might move us towards more effective reform in forensics.

The book's second important thread involves getting juries to understand the probative value, and perhaps more importantly, the limitations of various forensic techniques. Instead of waiting for judges to save us from bad science, Brandon's empirical research has asked how we can help juries help themselves. A significant finding unknown to me until reading the book was that manipulating experts' language matters little, while telling jurors the actual error rates or statistical results can matter much. So, juries can help themselves with the right information.

Third, Brandon concludes that "judges must rethink their role as gatekeepers." I interpret this as suggesting that judges should reconsider their role as gatekeeper and instead move towards becoming facilitators.

In my view, improved forensics are not necessarily going to come from gatekeeping. Instead, improvements may more fruitfully come from empowering defense attorneys to get needed information and to expose weaknesses in the techniques. The book recommends that judges require more than just bald conclusions, in line with standard evidence doctrine under Rule 705. We could go further. Judges could impose full discovery in criminal cases, and grant defense teams

access to forensic databases, lab procedures, and machines so the defense can effectively do its own testing, as we see with breathalyzers and in a few other places.

With such access, the adversarial process might more reliably do its work. If defense attorneys get this information, and forensic labs get beat up in case or two, they'll have to up their game. And then the defense attorneys will retool, and so on and so forth -- getting us closer to what we want. But none of this can occur if courts allow the forensic labs to basically black box themselves.

So, in sum, Autopsy of a Crime Lab is a delightful read. For those of you who haven't read it so far, it's a very easy read. It provides a lot of food for thought, and most importantly, I think it plots some promising new ways away from admissibility and away from Daubert that are more practical ways of pursuing forensic reform. So thanks a lot, Brandon.

Brandon Garrett: Thank you so much, Ed. So next, Jennifer?

Jennifer Mnookin: Sure. First of all, thanks so much to Brandon and to Duke and to the Wilson Center for the invitation to be here. It's just a delight to get to spend a little while talking about Brandon's terrific new book and also getting to see Erin and Ed and to get to talk turkey about evidence and forensic science. So, it's really a pleasure to be here.

I want to focus on a couple of things I really loved about the book and then also ask a couple of questions. I think one of the tremendous strengths of the book is its synthetic quality. It reviews the entire range of issues around crime labs and some of the challenges around them, from quality assurance limitations to the problems with insufficient focus on cognitive bias to the fact that there isn't proficiency testing or inadequate focus on error detection to the challenges of admissibility, the lack of discovery, the crime scene efforts and some of the problems there.

And so it really gives us the whole soup to nuts range of engagements. And in so doing, it's not just synthetic, but it tells a really powerful story of how this is a pretty systematic set of problems. It's not just an issue in one area, but rather, from beginning to end, forensic science doesn't appear to be operating with a serious focus about making sure that we're doing all that is reasonably possible to ensure both accuracy and validity and to ensure transparency about what we know and what we don't know. So, there's both questions about validity and accuracy, but also whether we're even just being candid systemically about these issues in these problems.

And so, I think its scope is terrific. It's extremely readable. It's got nice anecdotes while being substantially more than a series of stories.

And while there's some anger in it, it's not breathless anger. It's not overdone vitriol. It's frustration at the seriousness of what's at stake here and the limits to what we're doing right, given that there are so many realistic, plausible ways that we could do this better.

Like Ed, I take really no quarrel with the set of policy suggestions at the end. I think they're all not only valuable and important but quite feasible, which makes it even more frustrating that they haven't happened. I guess what I'll focus on here are a couple of places where Brandon's book

got me thinking in ways that were novel and interesting, and then in some places where I wish he might have gone a little bit further in the directions that he does begin to explore.

One of them is around Houston and the Houston crime lab. Houston, in some ways—if there is a hero in the story, the Houston crime lab is the heroic alternative, with Stout, the head of that crime lab, being willing to operate in an extremely different way than most other crime labs. This came out of a series of very significant scandals. And Brandon tells that story well.

And he also describes how the Houston crime lab is working to be substantially both more transparent, putting lots and lots of materials on the web that most labs keep pretty secret. They're also doing blind testing. They're inserting actual blinds into the flow of research. This is something that in the forensic science world many were saying was either impossible or just vastly too difficult or expensive to do in a variety of these areas. And Houston has found a way and has worked to make it part of their standard procedures.

And so, there's really an alternative story here of a crime lab that's taken a variety of these steps, from sequential unmasking to blinding and the like. And so, I was a little bit disappointed that the book didn't explore more whether this was making a difference, really, and how it was working and how it was being received by others. So, I want to both commend Brandon for the focus on this and for showing us a pathway.

But I wish he'd gone a little bit further and deeper there to help us understand, all right, is this actually-- what's different here? They're still, as far as I know, using all of the same forensic techniques that other labs are using. If they're inserting blinds, what kind of results are they giving? Are there errors? How often?

What are we finding there? How are the forensic scientists' sense of their own role changing? Do they do defense work? Do they take on—I assume that they do, but let's explore that a little bit more. And so I guess I would love to hear Brandon talk a little bit more about the Houston experiment, so to speak, how well it's working, what lessons we can draw from it, because if it's working very well. Then there's a very powerful story to say: this is feasible, folks. This is entirely doable, and here's why it matters.

If it's not actually leading to very many changes on the ground, what does that mean? Does that mean that actually they're inserting blinds into firearm identification and the investigators are getting them all right? If so, what do we do with that? So, I would I'd love to see Brandon explore that and tell us a little bit more about what we can learn from that experiment, its power, and its limits.

Two more places along similar lines that I both found the book to be a really thought provoking, but I also found myself eager to hear a little bit more about what he would say—one, and I agree with Ed that admissibility shouldn't be the primary focus. And I think, to Brandon's credit, it really isn't the primary focus in the book.

But there is some sort of puzzle here, which is, why in this forensic science space—why the authority of traditional scientific elites has been so resolutely ignored by other elite parts of the

system? We're in a moment right now where there's a lot of distrust of expertise, where there's a lot of anxiety about truth and whether we have any shared understandings. And so we're at a moment where one might understand distrust of certain kinds of frameworks.

But in the forensic science space, this goes a ways back. So, the National Academy of Sciences report in 2009 was a blockbuster, as Brandon suggests, and really did shock many. It also wasn't what people were initially expecting from the group. When the report first went forward, I think even the co-chairs really expected that they were going to find that there were some issues, there was a lot of underfunding, but they did not expect to find this substantial challenge around validity and the lack of scientific research undergirding techniques that have been used in courts for a very, very long time.

It surprised them. It surprised a great many observers. It didn't surprise a handful of academics who had been working on these issues for some years but had been kind of toiling in the wilderness. I was one among them. We were being ignored. And so it was sort of gratifying to see the National Academy of Sciences find that these were serious, serious concerns.

As Brandon details, the courts didn't do much with this report. Sometimes they ignored it altogether. Often, they gestured to it. They said, oh look, yes, this report. It suggests there's issues. But nonetheless, this evidence is good enough to let the jury hear it and decide what to do with it. So there was a move of a great many judges to vaguely gesture but not really take the import of the report seriously.

The same, largely, has happened with the report that came out years later from the President's Council of Advisors on Science and Technology (PCAST). One of the people who spearheaded that second report was Eric Lander, who now has been nominated to be President Biden's cabinet level science advisor. And Eric Lander really was, I think, quite offended by the degree to which scientific evidence that was being regularly used in court simply wasn't adequately scientific.

He has a history of involvement with these issues that goes back to early DNA cases where he played an influential role. But he was really one of those who spearheaded the PCAST report. The PCAST report, again, found, in essence, that not very much had changed. And Brandon details that, I think, very well, and describes the report and its findings.

The report found that a few kinds of forensic science had had just enough testing to meet foundational validity. That report found, for example, that there was just enough research on fingerprint evidence that actually, at that moment especially, was a contestable claim. But in any event, they put fingerprinting on the side of having just enough actual research to support foundational validity, while suggesting that many other kinds of forensic science that are regularly used did not yet have that and therefore really shouldn't be used, until they did.

Again, courts have largely deflected, sometimes ignoring, sometimes gesturing but explaining away. And other institutional locations where we might have expected people to have to take these reports seriously largely haven't. The Department of Justice didn't much take the report on board, even in the Obama Administration, much less in the Trump Administration that

followed it. Some of what other groups said about the report frankly were just hard to take with a straight face.

Brandon details one episode afterwards where a set of people, including folks within the DOJ, said that the report had failed to consider a great many studies, that if only they looked at them would have gotten them to different results. And so, they said, this report just didn't even look at the right things. And so, the members of PCAST—and I should note that I played a role in chairing a group of lawyers and judges and a couple of deans who were advisory to the PCAST report. So, I want to just note that I'm perhaps not a completely unbiased narrator of this.

But nonetheless, PCAST said, really? We've missed things? We're terribly sorry. Please share them. Tell us what they are. What did we not look at that we should have? We'd be delighted to take a look. And a bit shamefacedly, those who had made this claim had to come back and say, actually, upon a closer second look, there really weren't any studies that we can point to that arguably meet the criteria that you put forward and that you ignored.

And so, I guess what's interesting about this—Brandon compares at a couple of different times in his book—he compares the reception of the recognition of these issues in forensic science to other spaces, like hospitals, like quality assurance in the medical field, like some other National Academy reports that have gotten more attention. And so, I think there's an interesting puzzle about why, in this space, the findings of relatively neutral groups of elite scientists have been so deeply ignored. And I don't think we can just say, well, it's because a lot of judges were former prosecutors, or because some of these things have been used for a long time.

I don't know that I have a complete answer. I might have some ideas about it. I'd be happy to talk about it. But I'd really be interested in hearing what Brandon would say about how to explain why, in this space, there's been a particular ability to ignore these findings, even as the more general concerns about wrongful conviction, which Brandon has played such a leading role in bringing to light and exposing, have become more commonly understood.

So, the challenges with law enforcement more generally, the challenges with our system of justice, and the fact that we make mistakes-- that is so much better understood now, including by the public who watches shows on Netflix and listens to podcasts and reads New Yorker stories. And so, there's a much more deeply understood recognition of some of those limits. And yet in this crime lab forensic science space, there's been really remarkably-- I don't want to say no change because there has been some, but remarkably little change all things considered. And so, I'm curious to hear what Brandon would say about that.

Final question, and I'll conclude here. And this one gets maybe a little bit more technical or in the weeds. Brandon talks in a number of ways about wanting to open up the black box of forensic science and what's going on in crime labs.

And I'd like to press him a little bit on what he means by this because he's a little bit ambiguous in the book along two different dimensions. One of them is about whether there's adequate testing of forensic scientists' ability to reach conclusions accurately. And he argues quite clearly that we need better proficiency tests. He talks about how easy some of the proficiency tests

that we have are and how it's just a very serious problem if we're not giving juries and the public better information about how frequently mistakes are made. And I completely agree with him on that score. And that would be one way of thinking about what opening up the black box means.

On the other hand, sometimes that kind of engagement is still referred to as black box testing, where you're not—actually, you don't care how they're doing it. You just care if they're doing it well. And in forensic science, there's been a rather limited interest in some of these fields about either one, either looking at how well they do it, or looking at whether we can understand what it is that they are actually doing. And here I thought the book wasn't entirely clear.

So if we do imagine a world where we insert blinds into the normal forensic science workflow, and we do it in a sophisticated enough way that they don't know what the blinds are or whether they're being tested or not, if we do other studies, both testing that we know to be tests and inserted into the normal workflow that tests examiners and we find out that they're pretty darn good at what they're doing but they make mistakes but not that often, that we develop some kinds of both false positive and false negative rates for examiners with who've gone through adequate training and have a good deal of experience—but if we still have pretty subjective underlying methods, if these examiners are still really eyeballing things and reaching decisions based on their best judgment and experience, is that enough for you, Brandon? Or would you still have a set of concerns because of the subjectivity of the underlying methodologies that they're using and operating on? And so, I'd love to invite you to give us—to tell us a little bit more about that as well.

Overall, I think this book is much needed. I hope it gets very broad readership. I think it's thoughtful, synthetic, not overstated, a little bit angry but not breathless, and offers the opportunity to bring back greater attention to trying to create a broader national engagement with how to make improvements here that certainly we haven't been able to do since the NAS report and even before. So, congratulations.

Brandon Garrett: Thank you so much. And I hope I have time to talk about some of the questions and topics that you raised because they're really, really interesting ones. But first I want to turn things over to Erin.

Erin Murphy: … It is such a joy and an honor to be here, mainly because I get to celebrate Brandon and this incredible book. … So, I will start by heaping some compliments on the book in hopes that it draws in some of the listeners here to get their hands on it because I think it is important to read. And then I would like to raise a few questions.

So first, the compliments or what I like about this book. It turns out that, like the word compliment itself, all of my praise distills into three "c" words: the book is conversational, comprehensive, and compelling. Let me elaborate on each.

The first thing I really love about the book is its conversational tone. And this is something that is always true about Brandon's work. He is such a clear and a straightforward writer. He takes these complex topics that are very interdisciplinary in nature, and he makes them come alive and become something we are invested in as a real problem of humanity and not just an abstract legal

debate or scientific or doctrinal debate. He really invests his readers with a stake in the story and curiosity about the way forward.

So, for instance, he likens the struggles over including error rates to a child demanding a perfect score on a test, who argues that if you refuse to answer any of the questions you cannot technically have gotten any wrong – an argument I'm not going to tell my kids about. He uses the legendary '76 Judgment of Paris to make a point about a cognitive bias. And possibly my personal favorite—he describes Sandy Levick's work at PDS in the Special Litigation Division as the X-Files of a public defender's office. Which made me regret being a boring old trial lawyer when I could have worked in the X-Files division.

Brandon even builds up anticipation about the release of this 2009 report—this landmark study from the NAS that called into question all these forensic disciplines—by describing the gossipy scene at a AAFS meeting. He has the analysts scurrying around asking, "What does it say?" and "Have you seen it yet?" As though it were the end of The Undoing or the Mueller report or something like that. So, it is such a joy to read this book if for no other reason than because it takes these dry, sometimes even technical issues and makes them come alive.

The second thing I really loved about the book is how comprehensive it is. Many of us who work in forensics tend to specialize, especially because it often requires a scientific or statistical expertise that, for lawyers, can be hard to come by. So, we end up focusing on a single discipline or maybe even an era. Scholars define themselves as the AI person, or the DNA person, or the 1.0 tech person.

But Brandon holds expertise across time and subject, and that breadth and depth of mastery is really critical for the book, because it allows him to use what we've learned in the past to shed light on the future. Many people know his work uncovering the sources of wrongful convictions with respect to the 1.0 methods of pattern-matching discipline like bite, hair, and tool mark, and fire investigations. But this book does not stop there. Brandon is really, as I Jennifer said, doing a soup to nuts of forensics. He is talking about the 1.0 methods. He is bringing in the transition methods like DNA. But he is also looking forward to AI or facial recognition or big data, these other techniques on the horizon. And that's especially important in this moment of time because, as he notes in the book and is so important, databases have transformed forensics. Those are his exact words.

Databases have transformed forensics – *all* of forensics – and so we can no longer think about spent shell casings or latent prints as a 1.0 technology. Because they are also tapping into these big data interfaces, or they are using AI technologies, or they are interfacing with other programs like facial recognition and so on. So, the ability to trace the problems of the past through their revised implementation today, and then carry on to contemplate what this might mean for the future, is critical, and book does it so well.

Lastly, this book is so compelling. It is just a compelling read. And it is compelling in two ways. One is that it compellingly uses the voices of those wrongly accused and incarcerated as a center that holds the narrative. When he writes about Keith Harward or Joseph Buffey or George Rodriguez or Juan McPhaul, when he puts their words down on the page, it really makes the

urgency of these issues feel acute. It makes the problem and the injustices in this field feel very stark and very real and not abstract. And even some of the legal figures—like Judge Rakoff or Peter Stout or Peter Neufeld and Barry Scheck, who founded the Innocence Project—they come through as real people, as humans with ideas trying to fix this broken system and come up with solutions, not just legendary or supernatural figures. And so it makes the book less of an abstract indictment of a system and more of an account of the real challenges of how this system affects human beings and how those human beings can fix it with human tools.

Second, in addition to being narratively compelling, the book makes a compelling case. After cataloging the dire state of forensics from soup-to-nuts, Brandon lays out his blueprint for fixing forensics. Given that others have addressed the eight-point plan that he summarizes in the book, I will simply say that his arguments are convincing -- and move now from giving heaps of praise to raising some of the questions or comments I had so that we can make sure we have enough time for conversation with the group.

I'll start my comments with minor questions, and then move to the bigger picture. First: I couldn't tell exactly where you came out on the National Commission on Forensic Science. Your book addresses the Commission, and you criticize its shuttering at some level. You worry about NIST as a kind of alternative. You note the state commission model and the failure of that model to propagate or the unique success of Texas' commission. You talk about C-SAFE's work, obviously. But it wasn't quite clear whether, if you had President Biden's ear right now, or maybe Eric Lander's ear right now, would you advocate for a National Commission in its former form or in some new form, or would you in fact prefer supporting state commissions as a better model to think through reform, like try to duplicate the Texas Commission.

Second, I really loved how you talked about mass forensic error. I am not sure if this is a familiar term. I liked the framework of thinking of some of these situations, whether discipline-specific, like the hair example that you used throughout the book, or analyst-specific, like the Massachusetts lab or even a couple analysts, say, or a single lab—how to think about these mass failures and what it would mean to unwind them back, not just to prevent them going forward. I appreciate your discussion of laws that allow reopening of cases because of changed evidence, which for a particular discipline could be one solution. But addressing forensic error, not just preventing it prospectively but understanding how to correct it retrospectively, is going to be an increasingly important issue that requires attention.

The third is something that others have touched on, so I will not spend too much time. But I want to note how important it is that your book touches on more than legal interventions and judicial interventions, especially considering (as you do in an entire chapter) the failure of judges to date to do their job. Or the example you give FBI hair analysis manuals as far back as 1984 that said, "don't do this," and yet everyone still did it. So, this raises the question of how much we should just give up on courts. Should reformers admit that courts have not worked, whether through attorneys or judicial actors. And should we instead focus on other venues for reform, whether going straight to labs or straight to the legislative branch. After all, one benefit of the interdisciplinary nature of forensics is it does offer alternative points of intervention not available for more traditional legal issues.

Fourth, your book deftly manages the tension between the exculpatory and inculpatory use of forensic evidence. This is a tension that, as a DNA person, I feel very acutely. In the book, you quote an exoneree saying, "I thank God for DNA," yet the book criticizes the use of forensic techniques including DNA. You talk a lot about the false negative aspect of the Mayfield story, the fingerprint story, or the need to improve crime scene processing, or the need for jurors to hear not just about possibility of inclusion errors but also exclusion errors. In this way, it is hard to have a clear and consistent and comprehensible message about forensics when it can seem, at least to a layperson, that you are saying that it is junk unless it exonerates. It is a difficult line to walk, and to walk clearly: firmly criticizing forensic methods while also acknowledging their value for exculpatory purposes.

Lastly, I kept thinking as I read your book, is this a watershed moment in forensics or not? Is this a turning point? Is this a landmark? Is this something that we're going to look back on as a moment where forensics really changed?

There are a lot of arguments in favor of this moment being a truly transformational moment. Forensic critics have landed a string of blows, including the 2009 NAS report, the PCAST report, the output of the National Commission. We have a massive social uprising for the first time in decades over policing and racial and social justice issues. Policing is recognized as a more political enterprise than it has been for many years. We see legislative efforts to restrict police surveillance technologies like facial recognition or AI. We see greater judicial awareness, in cases like *Carpenter* or *Jones* in which the Court is starting to reckon with technology and how it interfaces with policing. We see a progressive prosecutor movement. Jennifer mentioned Eric Lander having a cabinet appointment. There are a lot of reasons to think we are in a watershed moment.

But then I get clawed back to reality by the fact that there was such sharp resistance to PCAST from Justice appointees—even Obama appointees, not just from Trump and Sessions who obviously kneecapped reform entirely. Or I consider that the *Breathe Act*, the signature platform of the Black Lives Matter movement, does not really say much about forensics. It demands post-conviction DNA access, but it doesn't talk about the stockpiling of 17 million people's DNA in a database. It actually supports more funding for forensics, which I think can be read ambiguously.

And then there is the general the distrust of science and expertise, as Jennifer discussed. We have examples of forensic technologies being used in this unchecked, quite frightening way -- like facial recognition systems, as you detail throughout the book. In these ways, this feels not like a watershed moment but like a familiar moment – the sense that we have been here before, such as when the 2009 report came out, and we thought, "It will all change now because the curtain's been lifted." And yet nothing changes. So, I am hopeful that your book is part of a moment of consequence, rather than a blip in the same old story.

To close, I just want to echo what everyone else has said: this book is an incredible read. It is an essential read for anyone who is practicing in the field of criminal justice in any way. And I thank you for giving us so much to think about as well as bringing us here to do that thinking together.

Brandon Garrett: Thank you. These are really, really great comments. I want to say just a few things about them and then turn to some of the great questions we've been getting on the chat. Thank you all. Thank you, Melissa and the folks at the Wilson Center for putting this event on.

I do have some real optimism about forensics. And maybe I shouldn't. And certainly, in the book I talk about how some new technologies are actually creating more problems and more dangers for error. And I do believe in the things I say in the book and the things I do in the book trying to humanize people. I think that people who work on forensics are really interesting, hard-working people who have challenging jobs. And I do think that there has been a real culture change.

There's a real interesting paper that I'm working on right now where Nick Scurich and I surveyed firearms and tool mark examiners around the country. And you see this cultural divide where there's a group of up-and-coming examiners who welcome statistical approaches, who welcome expressing their conclusions and probabilities and not just saying, it's a source ID or a match, like they used to in the past, and who think that black box studies of the type that Jennifer mentioned are a good thing and there should be more of them.

And you see another half of the group that says that this is all ridiculous. We've been doing this for decades: "These people don't understand what we do; There are a bunch of PhDs who don't understand what real firearms work is; This is all garbage; Leave us alone."

But that's within the community. And I think it is kind of exciting, actually, that there's a real diversity of approaches in some of these communities now. And you see you're starting to see more labs and more people in these communities talk about the need for real research to establish the foundations of their disciplines and a willingness to talk about it in their reports and in court. And that's exciting.

And that said, on the topic of firearms, there's a case my students are working on—an amicus brief where you have a sophisticated e-type examiner from a large lab who says, "Oh, I've read that PCAST report, but that was written by these supposed scientists who really weren't qualified. None of them were firearms examiners. They don't understand what we do. They talked about some study about error rates, which is totally made up. And it doesn't really matter that much because, let me tell you about me. My zero-error rate is my own. And I've never made a mistake. I have a personal error rate of zero. I get proficiency tested—these super easy joke tests. I've never made a mistake in my work. So, I'm sure it's possible for sloppy people to make errors, but I don't. And so, listen to me. And this firearm is a source of identification. It's a match."

And so, kind of the same old testimony but wrapped around some of the more important scientific statements and trying to smother them with personal confidence and self-satisfaction in one's work. So, you read something like that and think, oh God, nothing's changed.

I think that we could say more about the experience in the Houston lab. They're sharing data on their blinds with this group of researchers called CSAFE, the Center for Statistics and Applications of Forensic Evidence, that I'm a part of. They're actually expanding that work to look at the testimony of their examiners in court and reviewing that.

And there's a culture that, yeah, sometimes people make mistakes. To permit a quick answer to what Jennifer was asking about—is it OK to have a black box when we don't know exactly what the person is doing? They're using their experience, their training. They're not measuring anything in particular. They're just using their experience to reach conclusions about evidence.

My view is, if they're accurate—if the TSA person can't tell you what looks funny about some of the images and causes them to think that it's a bomb, but they always catch the bomb, great. We don't care what they're doing as long as they're accurate. However, if they make mistakes, then you have to open the black box. And you have to figure out, well, what was ambiguous about that image that caused you to miss the bomb or to mismatch the firearms or the fingerprint? Then you need to do some root cause [analysis] and figure out what's going on.

And that's the approach at a lab like the HFSC. They're not just testing everyone in the lab to see who makes more errors and report uncertainty. You need to do that. You need to report error rates.

But it's also to figure out, why did this person make mistakes? Are they poorly trained? Or is it more likely that people make errors if the evidence is of low quality and maybe you just don't want to be doing examinations of low-quality evidence? Or is there some other problem? Is the person looking at too many images in one day and they're getting burned out or whatever?

And so I think that—but I agree. There are lots of different uses of black box [studies]. And I talk about black box algorithms and lots of ways that we don't know what's going on. The need to just have work be documented, to have discovery—that's something that judges can do without excluding evidence. The fact that it's OK in many places for lawyers to get a one-page report that often has one line of relevant text which just says, this was identified as that. No documentation, no markings. You don't know how long the person did the work, who worked on it, what they did, what they found. Nothing. It's an embarrassment that that counts as adequate discovery in a criminal case.

I'll take on some of these great questions that have been submitted. One question has come up. Why doesn't the forensics community take on some of this stuff? It shouldn't be up to courts. It shouldn't be up to lawyers like us to solve these problems. You'd think crime labs would want to do something about it.

I don't know if you saw the news. The *Boston Globe* just reported a huge expansion of the inquiry into cases in Massachusetts, multiple times the number of tens of thousands of cases. It's now metastasized into reopening potentially many, many more tens of thousands of cases. So why aren't those labs doing top to bottom regulation and error detection now, now that they know how enormous these problems can become?

I'm curious what some of our guest's thoughts are on this. Why isn't there more self-regulation?

Erin Murphy: I would just jump in and say that it's also really important to recognize that the pressures on labs to process enormous volumes of cases lead to a lot of the type of shortcuts and incentives to cut corners, et cetera.

Brandon Garrett: Yes.

Erin Murphy: There is both a financial component to that, and there's a "how you get ahead by processing cases" component to it. There's a self-interest that "I want to go home" component. There's a lot of components to it.

And that way, I think we have to link forensics directly to mass incarceration. We have to link the volume of cases coming through and the kind of cases they are. Could a lab spend more time carefully looking at a capital case if they were not spending so much time processing cocaine samples? So, I think there is a connection that has not yet been drawn that is important to consider between how forensics are used in the huge volume of actual cases versus in the cases that people most care about.

Jennifer Mnookin: I'll add two quick points to Erin's thoughtful answers. I think one of them is something that you say in the book, Brandon, which is [that the labs are] overworked, [there's] not enough money, and [the personnel don't] even necessarily [have] the degrees or the background to do it themselves. So, it's easy to ignore when it doesn't seem like something that you can easily get hold of and solve when you've got 400-day backlogs, and not enough money, and, besides which, you have maybe an undergraduate science degree yourself, so how would you even go about studying it if you wanted to?

But [for] the second - I do think this is a place where the courts matter. And so even though all three of us in some sense said that we didn't think admissibility should be the focus, fundamentally, the courts have required remarkably little of these fields, maybe some slight language changes like, OK, don't say that you're 100% certain and can never make a mistake. Just say that you are almost completely certain and that it would be shocking if you made a mistake, like take the language down a little bit but really don't require much change.

And since the court is the ultimate audience for these findings—to be sure, 95% of cases plead. Most things don't ever get to the court. But still, the courtroom is kind of the outer boundary for these technologies and their purposes. If there's just no pressure to do something different coming from the courts combined with not really having the background knowledge or expertise to know how, and a shortage of funds, why try to do very hard research projects that, at best, will show that you're almost as good at doing what you do as you've been saying you are?

Ed Cheng: I'd like to highlight the point about how this is a cultural problem. Houston is the model, but the question is how you get from where you are to Houston?

One of the things that I thought was instructive was your historical discussion about medical laboratories. You said it was post-World War II when they started to realize that they had a problem with reliability. And you only get two sets of big legislation in the 1960s and in the 1980s. So, we're talking 40, 50 years before we got our act together on the medical laboratories.

And a lot of that may have a lot to do with generational changes. So actually, what's really interesting is your comment, Brandon, about how there's this new generation of forensic analysts that is comfortable with the statistics and wants to do it in the empirical way. In some ways you have to wait for them to take over and for that cultural change to occur. And the real question will be whether you can accelerate that process. We don't really have 50 years to wait for forensics to change. Here, I think some of the psychological literature, or some of the business literature on how you get an organization to pivot—those resources will provide ideas on how to accelerate institutional change.

Brandon Garrett: I talk about the Army crime lab and how they had a plane crash on an aircraft carrier. And they knew they had a problem. They knew that people on the aircraft carrier were using drugs, and their drug testing program wasn't catching it.

There's another piece of it, which I didn't get into in the book, on federalism and federal legislation and the like. Clinical laboratories and hospitals can't not comply with conditions of Medicaid. And there's so much federal money that goes into the health care system that it's just easier to regulate nationally.

And by the way, there is some work that's in press and coming out soon reporting on some of the Houston crime lab data. And some of it is really interesting. Some of it also speaks to, how often do these algorithms actually give you the print that is the true candidate print? Because that's part of the blind testing. They put the blind print, the one where they have a correct answer, in the database. And sometimes the database doesn't turn it up. That part of the blind testing program is also really interesting too because these labs have no idea how good these databases are.

But I can tell you quickly that what all these studies have been showing in fingerprinting and some of these other pattern disciplines even more so, is that most of the errors are false negatives, false inconclusives, which are really important. And the focus has very much mostly been on false positives. Do you pick an innocent person's print? But the bigger error rates are missing connections or deciding that evidence isn't good enough to work with when, in fact, you could have done something with it.

But there's a lot to be learned from these programs. And hopefully, that will start changing the culture if people realize, oh, this can help us do the work that we need to do in our lab, or it can help us avoid spending $30 million like they've spent so far in Massachusetts. And they're going to spend a lot more. We thought it was—it's already been the biggest audit in the country. It's about to get a lot, lot bigger.

I think we're kind of out of time. We're getting some great questions. Heidi's comment about mission and budget is a really, really important one —that Houston actually controls its budget too because it's an independent crime lab.

And there are a lot of ways [to fund labs]. You have labs where their budgets are tied to fees imposed on indigent people for their DNA testing and the like, but they often can't pay the fee. That's a whole other piece of this that I wish I had had more time to talk about in the book. That you have labs that are in part supported by fees which may be unconstitutional if you're

imposing them on criminal defendants that don't have ability to pay, and that's the funding structure.

And then you have federal grants, which are backlogged grants. And so, you kind of have an incentive to keep up the backlogs so you can keep getting those grants. It's all sorts of horrible problems with the way that we fund the work.

And when you talk to forensic examiners, they talk about the overwhelming pressure that they get from law enforcement to deliver results fast. And then if they get too far behind, then you have law enforcement turning to these really unreliable field kits so that they can do forensic tests themselves. And that's even worse, where you have untrained people trying to run forensics through problematic tools.

But I just am so grateful to be able to share this time with you. It was really great to see you, Erin and Ed and Jennifer. And I wish we could have gone all day.

Panel Discussion Two: Quattrone Center
14 April 2021

Paul Heaton: My name is Paul Heaton. I'm the Academic Director of the Quattrone Center for the Fair Administration of Justice at the University of Pennsylvania Carey Law School. The Quattrone Center is a multi-disciplinary center focused on preventing errors in the criminal justice system. To that end, we're delighted to have an opportunity today to highlight an important new book that was recently released, Autopsy *of a Crime Lab: Exposing the Flaws in Forensics*.

I'm just going to take a moment to introduce our three distinguished panelists. First, Brandon Garrett, the L. Neil Williams, Jr. Professor of Law at Duke University and founder and director of the Wilson Center for Science and Justice at Duke. Brandon also currently serves as the court appointed monitor for the Federal misdemeanor bail reform consent decree in Harris County Texas and is on the leadership team for the Center for Statistics and Applications in Forensic Science (CSAFE). He's a prolific scholar and author of six books, and his work has been cited by courts and legislators, including the US Supreme Court.

Brandon is joined by Dr. Itiel Dror, a senior researcher at University College, London and principal consultant and researcher for Cognitive Consultants International. A world-renowned authority in the field of expert decision making and bias, Itiel has published over 120 peer reviewed scientific articles and done foundational work on judgment and bias in expert decision making, including forensic examiners. He also serves as a court expert (for prosecution as well as defence) and provides training to forensic examiners, judges and lawyers on expert bias.

We're also delighted to welcome Maneka Sinha an assistant professor at the University of Maryland Carey School of Law and Director of Maryland Carey Criminal Defense Clinic. Prior to joining the law school, Maneka spent 10 years at the renowned Public Defender Service of DC, where she served as senior advisor to the agency's director on forensic science issues, led the

agency's nationally recognized forensic practice group, and represented indigent clients charged with serious crimes, including complex homicides and sexual assaults.

Alright, so you know let's turn the time over to you Brandon. Wonderful book; tell us more about it.

Brandon Garrett: Sure. It's great it's great to see you, Paul. Thank you and everyone at the Quattrone Center that made this possible.

I wanted to say a few things about what motivated the book and give everyone a quick tour of it. But I really want to hear from Itiel and Maneka to talk about all the different dimensions to this problem. And if there's anything I wanted the book to do, is to convey the idea that behind something as seemingly as simple as a fingerprint match or a firearms comparison, there are like 12 different ways that the analysis can and sometimes does go wrong. And it's not something I fully appreciated, even when I was studying forensic errors and the well-known cases of people who had been exonerated by DNA. Early on in my career, that was what I was focused on. I had represented DNA exoneration; I represented someone who was convicted based on faulty bite mark testimony; I represented the exonerated [Central Park] five. People didn't focus on it so much, but in the Central Park case there was both hair and soil comparison. And so, I'd certainly seen early on, even before I became an academic, cases where experts overstated evidence and reached totally wrong conclusions in cases of people who are flat-out innocent. But my focus was on what they said on the stand and on their testimony, and overstatement and how they exceeded the boundaries of science; and how they made errors and gave misimpressions to the jury.

But, over time, as I looked into these questions, and certainly, with the benefit of Itiel's work of others, I have a greater appreciation now for the accuracy challenges and serious problems with these disciplines. Not just in whether they have scientific foundations—whether they are reliable, even if done well. Not just with how good a particular expert is. Not just with whether an expert can be biased by all sorts of cognitive factors. But there are quality and scientific validity issues every step of the game, from the moment someone touches evidence at a crime scene to the laboratory to the court room, and that kind of picture of all the different ways, it can go wrong—and how poorly regulated the whole system is—and how little there is in the way of treating crime labs like real labs, like clinical labs—that's the goal of the book.

I think all of us have a much greater appreciation during these difficult times of the fact that false negatives, false positives, and the accuracy of testing really matters.

There was global investment in genetic research, and that's why DNA technology has lots of uses in criminal cases which can be, sometimes quite provocative, quite reliable. [But] no one ever invested in toolmark work, no one ever invested in fingerprints. And what's been so shocking is that there are just a handful of studies that have been reported, to look at how accurate these disciplines are even, though they're used in vast numbers of cases every year.

I start the book by talking about a fingerprint match gone wrong, which is well-known in the fingerprint world, but maybe not so much to the public. When I talk to and survey people, people will assume that fingerprinting is actually even more reliable than DNA. Because [people

think that] DNA reduces information to numbers, but fingerprints "they're just unique patterns; it's like even better than numbers, right?" Fingerprints are unique it's all like a metaphor for individuality: "our fingers are all over this."

But if you look at your fingertips there's tons of information there, but people don't fully appreciate—unless you've tried to unlock an iPhone that works on fingerprints and then you see how frustrating it is—people don't appreciate how little information can be left in a latent print left at a crime scene, because criminals are not trying to purposely leave a really good print.

And in the well-known Brandon Mayfield case, there was a latent print left the scene of a terror bombing in Madrid on a plastic bag that had some unexploded detonators in it in a white van. The police are right to search the suspicious white van. And they find a latent print on this bag, but it was a crinkly bag, and you can see that the from dusting the powder on it, that there's lots of marks from the dust. And there's tons of missing information there. Nevertheless, you can tell it's kind of an arch shape.

And the FBI, trying to assist in this terror investigation runs, it through a huge international database. And that alone is an interesting and important aspect of the case, because there is no way without a gigantic database, that an innocent person halfway across the world would have ever been a suspect. He'd never been to Spain!

And people assume that technology is making forensics more reliable—and it is, and it isn't. But you never would have an innocent person pulled unless you had a huge database with hundreds of millions of candidate prints, and the job of that algorithm is to pick the ones that look most like the latent print from this scene.

And lo and behold, it pulls candidates, and his actually wasn't the first one that the algorithm chose, but the FBI examiner sees his—fourth—and says, "I think that's the one." And [he] marks it up, side by side, which can create a sort of "matchy-matchy"—and looking for similarities creates a circular reasoning effect. More circular reasoning and reinforcement occurred because two other FBI analyst looked at it. One I think was retired, or maybe two were retired, but they're all extremely experienced and they'll agree with each other—they all reinforce each other's conclusions They all said hundred percent identification. And at a time when it wasn't just like CSI and people believed—it it's what FBI and other fingerprint examiners said and were required to say in court—that they were infallible that they had a zero-error rate that they did not make mistakes. That the only people who could ever make a mistake doing fingerprint work were incompetent people or malevolent people—people who are not following the method correctly.

These were three senior experienced people. They *were* following the method correctly. Having three people involved was also like a marker of a really high-profile case. On TV they may have teams of forensic analysts, but in real life you can't expend three people to look at one print. But no cost spared in the Madrid terror case, given its seriousness—and all three of them are wrong!

And Brandon Mayfield said in court, "that's not my print; I've never been to Spain." His lawyer wasn't a fool, and they hired their own defense fingerprint expert who looks over the

markings: "15 points in common" that the FBI had made and says yeah, it's his print. So even the defense expert was swayed by the authoritative weight of these three experience FBI dudes.

And so, four people got it completely wrong.

Spanish authorities linked the print to someone who is an actual known Algerian terrorist suspect, who was in the area. They were monitoring a cell of terrorists and they're like "Okay, we found the one." And even then, the FBI was like, "Oh, no, no; 15 points—we can't be wrong." They flew to Madrid they put up the pictures and they put on this whole dog and pony show for the Spanish authorities, who are kind of like, "what are you talking about—some lawyer in Portland? Doesn't make any sense." [The FBI] eventually drop the charges and apologize to Mayfield.

But no longer can one say that only incompetent, mistaken or malicious fingerprint examiners make mistakes. And it raises the question, how often does this happen. We're starting to learn more about how often this happens now that studies looking at error rates have started to be done.

And for some disciplines there are really quite terrifying error rates, raising the question whether their works ever be allowed in court. For others it's just highly variable, and very experienced people really may have something to their experience they really may make mistakes less. But when they are heavily biased, like in the circumstances in the Mayfield case, they may make terrible mistakes. When you have a lot of missing information, like with the poor print in the Mayfield case, you may make a lot of mistakes. And we don't know any of this, and our jurors are left in the dark.

And labs typically do not provide any meaningful documentation of their work. There's no way, as a lawyer, you can look at what they did and say, "Oh, this is what they marked; this is how long they spent on it, this is this was their process."

Instead, and this is, this is certainly true in Philadelphia, the home of our event today, you know the lab reports that defense lawyers and prosecutors get in Philadelphia are basically a page and a half long, with really only one line it that says, "this fingerprint or this firearm was identified as coming from the source." And the rest of the one and a half pages is the sign-offs and the names and the numbers associated with each piece of evidence. Nothing that is particularly useful—no real documentation of the work product or the process.

And so you have evidence that may or not may not be well collected you have poor documentation of what these people do.

They come into court claiming expertise, but they've never been tested in any meaningful way, so you don't know how good they are at the thing that they say that they are doing. The process they follow may be an ill-defined method, which requires some judgment. That's fine, people can be good at what they do, based on experience and training and judgment, but no one knows how good this particular person is at following their judgment.

And the labs themselves may not have any real testing or auditing or quality control like you would have in any hospital that does a strep test or a Covid test, where there are all sorts of quality controls in place to make sure that terrible tragic mistakes don't occur.

And finally, judges don't insist that any of this happen, even in states like North Carolina where there's a reliability rule, the Daubert rule in full force. Judges are supposed to be looking at whether an expert is doing something reliable and is following reliable method and is applying it reliably. But they don't ask any of these questions about where's the documentation? where's the data? And they've just given the prosecution side evidence a pass.

There's an article I wrote in the University of Pennsylvania Law Review with Greg Mitchell saying that expertise should be defined by proficiency. We shouldn't let someone be a self-professed expert. You just don't let someone come to court and say I'm an expert because what I do is expert. There should be objective evidence that the person is actually good at what they claim to be doing.

And we insist on that in all sorts of disciplines that really matter to us, but somehow, in criminal cases, where real life and liberty are at stake, there's rarely a battle of the experts. The Defense rarely has any resources from the Court to hire their own expert and you have a self-professed expert.

One last example of why it matters to actually know how good experts are and to test them outside of criminal cases. There are other people who have difficult jobs, who have to stare at screens all day and reach really important conclusions. One type of job, which is a little foreign to us right now, because it's been so long since most of us have been near an airport, is TSA screeners. They look at screens looking for patterns, just like fingerprint examiners and firearms and tool marks examiners. And it's tedious and people get angry if they take too long, because their luggage gets held up and they miss their flights, and so they don't have that much time to look at the screen. And it's really, really important.

Well, they do blind testing and when the TSA a ran bombs as a test that through the conveyors, maybe six or seven years ago, 95% of the bombs went undetected, and they realized they had a serious problem. They totally redid their training, but there was a leadership turnover at TSA. It was a scandal, like some of the lab scandals we're seeing across the country right now. But they didn't figure, “Okay, we caught a problem we're done.

They did repeat blind testing, and the next time they had more like 70% of the bombs detected, which was better, but still really concerning. And so, they didn't rest on their laurels; they've continued to try to make improvements and improve their training and to do this type of blind testing.

Our crime labs, for the most part, do not, with rare exceptions. One of the important rare exceptions, which I highlight in the book as a sort of global model, is the Houston Forensic Science Center, which actually does blind testing, so that you know something about how good the work is and you catch errors when it's a test and when no one's life is at stake and when you can fix the problem without any harm to individuals. So, I talked to them,

I really want to hear from you and hear your questions. But thank you all. It's a treat to get to share *Autopsy of a Crime Lab* with you all today.

Paul Heaton: Thanks. I know there's so much in the book, and so it's hard to compress it into a very short summary. Oof the things that I really appreciated about the book is it has a nice blend of discussing the development and the history of some of these techniques, some of the scholarship that has developed that helps us understand sources of error, and then also stories like the Brandon Mayfield case—individual cases of real people, and how you know these errors affect them, and so I want to take some time with our other panelists to just explore a few of those dimensions.

Maneka, you of course have had had an opportunity at PDS, to be able to see firsthand how some of the problems that Brandon writes about manifest in real cases. I'm wondering if you could describe for our audience a particularly memorable case where you see some forensics errors and maybe some of the lessons that we take about system design from that case.

Maneka Sinha: Oh absolutely. Paul. Before I get into the meat of the answer, I just want to thank Brandon and you and everyone at the Quattrone Center for having me and having this important discussion about these issues.

Absolutely, and I agree with you about the book. It does a really nice job of laying out, both the evolution and the research, but also the real practical impacts of faulty forensics in cases. And the point I want to emphasize is that it's real. I mean as a public defender, I saw it regularly; and everyone who is still practicing as a defense lawyer sees it regularly.

So, I have a few examples, but I actually want to focus on one that is it more optimistic, and ties in some of the recommendations that Brandon makes in the book, and shows us how, when implemented, you can actually have just results.

And so, the case I'm thinking of is a burglary case, that turned on fingerprint evidence. That was the key, if not the only, evidence in the case. The case was happening, I want to say in 2017 or 2018, so just a couple of years after the landmark PCAST [3] report was issued, highlighting flaws in a bunch of these different disciplines.

I was involved in the case, assisting the supervision of that issue. And what the lawyer who was trying the case was able to do was to expose a lot of the issues that Brandon describes, both as issues within the fingerprint discipline, but also as things that the jurors need to know to really understand the flaws with the discipline.

So, she cross-examined the examiner on what the PCAST report found, and in particular, error rates. And so, sort of dispelling the jurors' notion that fingerprint evidence is incredibly

[3] President's Council of Advisors on Science and Technology, *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods*. (Executive Office of the President, September, 2016), online: https://www.whitehouse.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf.

reliable. And sometimes jurors feel, as Brandon said, and it is in the book, that it's even more reliable than DNA. So, she really sort of was deliberately charting that out—charting out the subjectivity of the discipline; charting out all of the concerns raised in the report; charting out the lack of real scientific training of the examiner; charting out the bias that can infect the decision making.

And ultimately, what happened was that the client was acquitted, and it was primarily based on that very thorough deliberate cross-examination that exposed those flaws. And it gave the jury a real sense of what the fallibility was, and sort of dispelled the notion of infallibility.

And I really want to emphasize that had this happen in a different jurisdiction where all of the work that goes into that might not have happened, or had it happened in a situation where that cross-examination wasn't allowed, wasn't permitted, and that litigation hadn't been done beforehand, that client would absolutely have been convicted.

And so that's an example, about the real-world application of how not only these flaws really exist and they're happening on a daily basis, around the country, but also on how some of the things that that the book talks about really can improve the way people perceive that evidence and lead to more just outcomes. So that's a good example, although there are many more.

Paul Heaton: Yeah, thanks. I think that's a that's a really interesting example, and I think it kind of highlights the importance of research and education. I know Itiel, you've been very involved in serving as an expert and trying to educate lawyers and judges on these topics, and also doing some of the foundational research.

Brandon has this nice analogy in the book. As the Judgment of Paris was for the wine world, where it created a sea change and how we understand the kind of wine, experts, and the quality of wines,[4] so too with some of the work that you've done, a similar type thing, but with respect to forensic science and forensic examiners. I'm wondering if maybe you could just pick a favorite study that you've done. If you want to talk about fingerprints, or another discipline you just described the study for our audience and help us understand a little bit better how this research can feed into the sort of insights that Maneka is describing that ultimately can, hopefully, help better educate jurors and judges.

Dr. Itiel Dror: I can tell you very briefly about a new study, but first I want to set the background to the problems, because the problems are big and they are depressing.

If we look at error-rate studies that were mentioned, they [fingerprint analysts] used to say zero error rate and that they were infallible. And now they have new studies, giving in many domains very small error-rates, but all studies were faulty and bring misleading and inaccurate error rates. So, they moved from zero to 0.1 or whatever, but for example, they don't include the evidence that appears in a real casework. So, if you look at fingerprinting or other error rate studies, every examiner will tell you that in real casework they get latent prints that are low quality and the correct result of the comparison is inconclusive. So, you have a pair of fingerprint marks, where

[4] In a 1976 blind tasting, the wine world was shocked to find that California wines were preferred to French wines.

the correct result is inconclusive, but they don't include this type of inconclusive evidence in the error rate studies. And then, in the error rate studies if examiners say that the decision is inconclusive, they don't count it as an error (even though there are no inconclusive test items). They don't calculate their potential error. Some studies even count inconclusive decisions as a correct response.

And when do they say its inconclusive? It's when it's a difficult match or exclusion. So they say inconclusive and they can't be wrong. And if you compare the rate of "inconclusive" in these error rate studies, it is much, much higher than you get in real cases. And in some error studies you get 20, 30, 50, 80% of the time they say inconclusive…and I can go on and on. Nick Scurich and I have papers on this. [5]

So even the error rate studies that are used now, and it's good that we're having them rather than saying we have zero with no data, they are inaccurate and are misleading the courts. Now, you have to remember that we're lucky if we're even discussing error rates in court, because most of the cases are plea bargained. If 90 to 95% of cases are plea bargained, then the forensic experts are not questioned in court. The forensic experts—most of them work for the police or even for the D.A.'s office, although there are exceptions like the Houston Forensic Science Center, but most of them work for the police. They get a plea bargain. Some of them don't want to study error rates properly. And I don't blame them because it's an adversarial legal system, right? They don't want it used against them—"it will damage their reputation". They don't see their own bias, because of the bias blind spot. And I can go on and on, but I'll stop here and talk about the latest study, but this is some of the background of denial of the bias and fighting it.

You said in fingerprint and DNA [studies], yes, there is good news. Yes, Brandon, we need an autopsy of the crime lab. And things have moved forward in the fingerprinting and in many forensic domains. But you have to remember that in the forensic domain, we don't know the ground truth.

I'm now doing an autopsy of a plane crash; I'm a part of an international expert team; I'm looking at the pilot error and bias. I'm also investigating a number of police shootings [as to] whether the police were biased in their decisions. The point is that in the plane crash, we have a plane that crashed; in the police cases we have a dead body—they shot someone. When a forensic examiner makes a mistake, we don't know [that] she made a mistake, because we don't know the ground truth and it is most often plea bargained. We don't have that problem in aviation and police shooting or in the medical domain, where errors are more apparent.

Now the forensic science domain—I don't want to sound too depressing—it has moved forward. And the book, The Autopsy of a Crime Lab really exposes this.

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[5] Dror, I. E. & Scurich, N. (2020). (Mis)use of scientific measurements in forensic science. Forensic Science International: Synergy, 2, 333-338, online: https://reader.elsevier.com/reader/sd/pii/S2589871X20300553?token=BCEA8C75217D51B848DFAB19C92897C0492B3622EFAFEFA82FB1E0A9AED4C7423346C7E8D66D259876EB5D53A6011734&originRegion=eu-west-1&originCreation=20210917081133.

But one domain, and this is where I'm going to very briefly talk about a new study, about an important forensic domain that has managed to avoid all of this, is forensic pathology. The forensic pathologists said, "we are different, we are medical doctors, we need to know everything." And they have resisted taking measurements to acknowledge bias or accept bias. And I say to them, "okay, you are not like fingerprint or DNA examiners, you are medical doctors." But doctors acknowledge their bias. It's well documented in dozens and dozens of articles how biases impact medical decision making, even medical devices.

So they [forensic pathologists] have fought it and blocked me and others from collecting data. And now at last, a first paper has come out, just a few weeks ago, it's an open access available to everyone, in the Journal of Forensic Science,[6] and it has two very different data sets. Briefly, one is death certificates. We were able to get every death certificate in the state of Nevada for over 10 years. We have 200,000 death certificates.

We examined the children's death certificates and compared black and white kids, and found that [for] black kids, relative to white kids, the death certificate is going to determine homicide as manner of death much more, whereas white kids—accidental.

And, as we say in the paper, it could be that actually black children relative to white children, are more [likely to die from homicide] than white children.

But that gives you a base rate expectation, because this could have been in the past, or may change in the future, but when you see in case after case after case that black babies [die from] homicide and the white babies are associated with accident, it perpetuates a bias. So these data are about decisions in real cases.

But then we supplemented it. We did research with 133 experts, people who often signed death certificate. We gave them exactly the same case: a child; who supposedly died as a result of an accident; and all the medical information was identical between the two groups. In one group we said the child is black and was brought to the hospital by the mother's boyfriend. And for the group, we said the child was white and brought by the grandmother.

And you won't believe this *huge* effect. White kid, grandmother, they accept its an accident. Black kid, bought by the mother's boyfriend, no, it's homicide. You can read the paper.[7] So this new study is the first ever study and examine bias in pathology, but the big news is not the data, the big news is the response of the forensic pathology community and their professional organization, the National Association of Medical Examiners (NAME). They have had a campaign of complaints and letters attacking the paper and personally the authors (four of which are forensic pathologists). We got nine letters to the Editor; [8] one of them, signed by over 50

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[6] Dror, I. E., Melinek, J., Arden, J. L. Kukucka, J., Hawkins, S., Carter, J. & Atherton, D. S. (2021). Cognitive Bias in Forensic Pathology Decisions. Journal of Forensic Sciences, 66 (5), 1751-1757, online: https://onlinelibrary.wiley.com/doi/10.1111/1556-4029.14697.

[7] *Ibid.*

[8] See all the Letters & Responses, including a Preface by the Editor: Peat, M.A. (2021), JFS Editor-in-Chief Preface. Journal of Forensic Sciences, online:

forensic pathologists. They've requested that the paper be retracted. There are also complaints against my co-authors and also against me to my university, saying I'm a disgrace and embarrassment to science and the university.

And this is the problem. This is why the *Autopsy of a Crime Lab* book is so critical, because to solve the problem, we need to acknowledge bias, we need to put things on the table. And this is the biggest problem in forensic science and in the criminal justice system. The system has to acknowledge mistakes and improve. And if it doesn't do it, things don't get any better. And this, I think, is what is really important. And this last research is one more kind of nail in the coffin of forensic pathologists not willing to take it on.

And I do have to say that I am sympathetic. In the adversarial system, if you acknowledge error or bias, they're going to cross-examine you about it, and use it against you—you give ammunition to the other side. So the fundamental systemic problem [is that] an adversarial system is not scientific; it's anti scientific. I have much more to say but I'll shut up to give time for discussion.

Paul Heaton: Yeah. I'd like to just draw out this theme a little bit more. I appreciate you pointing to that maybe part of the solution here is just admitting there's a problem. But I think in the book in your comments, Maneka, you've actually written about how the DOJ continues to defend publicly things like pattern evidence that don't have scientific basis. So, I'd be interested in the panels' thoughts. Other than acknowledging the problem, how do we address the resistance, or the reluctance of experts and, in some cases, prosecutors to recognize the possibility of it. Is it the judges' responsibility? Should we be doing more research? Who ought to be acting here?

Maneka Sinha: I'm happy to start answering that question. I think the answer is all of those things, right? I think the judges have fallen over, and the judges need to step up, and Brandon talks about that in the book, about revisiting their role as gatekeepers.

I think the research that was never done needs to be done, and disciplines that have been deemed as unreliable or unvalidated, we need to stop using them until if and when there is research that supports their validity. In terms of the prosecutors, what has their reaction been, and we absolutely need to confront that problem. Because on their end, I would suspect that there's multiple reasons for the reticence to acknowledge the fallibility of some of these disciplines, and one is the obvious one that Itiel just mentioned, which is it's going to jeopardize their ability to secure convictions, as Brandon has laid out in the book.

Forensics has been a superb tool for prosecutors in law enforcement, for decades, if not much longer, and acknowledging the problems with the disciplines, is going to inhibit their ability to prosecute cases, and that's one of the main things that needs to be confronted.

But I do think that it's more than just that. I think that there's nuance to the problem with prosecutors. The reluctance to acknowledge some of this and Itiel can speak to this better, appears to be a cognitive dissonance. Like, it's hard to embrace the fact that you're using faulty evidence.

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https://onlinelibrary.wiley.com/doi/epdf/10.1111/1556-4029.14844.

It's hard to embrace that perhaps you're using unreliable evidence and data to put people in prison for a long time. That's a difficult thing for one to grapple with.

And I really want to just piggyback on the point he made earlier, that it really is a nuanced problem because it's a systems problem, a systemic problem. We have allowed the evolution, of not just a forensic system, but of a criminal legal system overall, that's hugely punitive and oppressive, and as he describes, adversarial. And until we reckon with that, until there's sort of recognition of that, we are desensitized to the ways in which it is punitive, and the way in which forensics increases the punitive nature of it, we're not going to see real solutions.

And that's why my initial answer to the question is all of those things—the research, the quality control, the proficiency testing, the judges as actors. I don't think it's one singular solution. It's all of those things and the regulation that Brandon describes.

And to just fold in the question that was in the Q and A, how have prosecutors responded—if the person who wrote the question hasn't read the book yet, I encourage you to do so, because it lays out their responses to the key moments in the evolution in history of forensics really well. And there's been a pattern of pushback, a pattern of unwillingness to acknowledge the research as it's being conducted, over and over again. And key moments being even before the 2009 report [9] came out. And then, when it came out, even before the 2016 PCAST report came out, and then after it came out. Unwillingness to acknowledge the findings, unwillingness to dig deeper, unwillingness to provide research. Just blanket pushback. So that's a starting point to my answer. But I do want to let other folks jump in and add other layers.

Dr. Itiel Dror: There are two problems. One of the criminal justice system and one is forensic science. So, I'm not going to solve the criminal justice system. I'll just say that the judges and the Department of Justice are mainly ex-prosecutors, so they have a huge bias in the system, because it's rare to have people who were public defenders work in the DOJ. So, (a) the system is very prosecution [oriented], and (b), we have massive plea bargaining, so how can we talk about justice in the system?

But let me focus very quickly on the forensic science domain. I think [we have to consider] two things. First of all, context management. We need to make sure that not only the forensic domains that are not valid don't get to court, but if a forensic examiner is exposed to task irrelevant biasing information, then they cannot testify, and they cannot do the case. That will end the problem. They cannot talk to the detectives and get the "background story" that they don't need to know.

Research shows that in 42% of the formal submission forms in fingerprinting the United States, tell the fingerprint examiner if the suspect has a criminal record.

The minute a forensic examiner is exposed whether a suspect confessed, had a criminal record—that's it—they cannot testify, and they cannot work on the evidence. That's number one—

[9] National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* (Washington, DC: National Academies Press, 2009) [*NAS*].

to make sure that [the system is] minimally biased by not allowing testimony of experts who are exposed to biasing, task irrelevant information.

And two, independence. We need to give the forensic examiners independence of mind. They need to work separate from the DA and the police. Rather than a tightly knit group of forensic examiners, police, the DA, the science needs to be as independent as possible from law enforcement and the DA. I believe we have in the United States a number of crime labs that are not part of the police but are part of the DA! This is totally not good for proper science. And we'll improve science, and we want science to be used in the criminal justice system, and not as it is now, [where] it's misused and abused.

Brandon Garrett: I don't want us to leave defense lawyers off the hook, either. Because when you read transcripts of forensic expert testimony, including in cases where mistakes were absolutely made and an innocent person went to prison—you know those transcripts are often not very long, because the defense lawyer asked no questions. And there are glaring mistakes just on the face of the trial record. And the defense lawyer says nothing. There cross-examination is like a page long, and you know. It's just an embarrassment.

Dr. Itiel Dror: Brandon, let me ask a question in the middle, it goes back to balance. I don't appear a lot in court, but in the USA, I have worked for the defence and the prosecution. The public defender had to argue for every cent of my hourly rate, and I had to wait six months to get paid. The prosecution—they just say a number— and a week later, I get paid. So, there are no equal resources for the defense and the prosecution. And that's hard for the defense to bring up a proper defense.

Brandon Garrett: It is. And I have a new paper with Chris Mitchell talking about how it is more effective—there's this myth that cross-examination, that's the way to test things out in the courtroom. But the defense needs access to its own expert.

And, and we know that it's not trivial, in some disciplines, the degree to which, [with] another set of eyes the person may form a conclusion entirely about the evidence. But even apart from someone looking at the evidence and saying, "Oh, wait a minute, I don't think these bullets or casings came from the same weapon" — we've had a lot of wait-a-minutes like that in the DC lab recently. We've had lots of different people come to completely different conclusions around the same evidence, so this is a pressing problem.

But even if the defense expert doesn't think anything different in terms of the evidence, to have someone else explain the method and the limitations is enormously impactful to jurors. It's not just cross, it's a separate expert saying, "Look, these are the boundaries of the discipline." And that's a methods-only expert. And that person doesn't have to be a retired latent fingerprint examiner. That person could be a statistician or cognitive neuroscientist like Itiel, explaining where there have been important trials. Where, for example, my friend Karen Kafadar, one of the leadership of CSAFE, has testified as a statistician, saying, like, "I've ever looked at hairs under a microscope—that's not really what we do as statisticians, but I can tell you something about how one can arrive at frequencies." And [she can] talk about probabilities. To do that, you have to have information about probabilities, and you can't make it up. It's no more basic than that. It's

sort of Statistics 101, but she did a wonderful job in a case in Massachusetts explaining Statistics 101 and the judge was like, "Oh really? So, like we actually don't know like how common or rare it is to have any particular characteristics in hairs?" But no, we don't – there have never been any statistics underlying this field and, therefore, like as a leading statistician I will tell you that you can't say stuff about probabilities if you have no statistics. And that was really, really powerful testimony, and it didn't take someone from within the discipline to do it.

But you know indigent defendants don't have good rights to get experts, and judges routinely deny funding for expert testimony. Defense lawyers are overworked and so maybe it's no surprise—it's not just laziness that they don't meet with the expert, and they don't ask for the discovery, even if it is available. Then again, when they ask, judges often say, "No—you can't get the records of this person's proficiency test that's not relevant. You can't get discovery regarding quality issues in the lab. How could that possibly be relevant, what's going on in the lab in general, and not in this person's case."

Then, when we have major scandals erupt like in Massachusetts—they are just reopening another 70,000 cases—and then it is almost seems like, "Oh wait a minute, maybe quality issues in the lab were relevant, maybe we should have let defense lawyers inquire into larger quality issues."

But when they have asked, they've been shut down by judges and they never have the resources to launch those type of inquiries.

And there's a larger problem, which is that in our courts like we don't do systemic, really, in criminal cases. It's very hard to bring a class action. But when labs have quality issues, when they don't block out task relevant information, like Itiel was talking about, when they don't do blind proficiency testing, when they don't insist on good documentation, when they have a method that's poorly defined and so it's not clear what any particular examiner is doing. You can have an accredited lab that has all those problems, because accreditation is just sort of a bare minimum of paperwork and procedure.

When we don't do good quality control in labs, it looks like a mass tort, and you know, there may be tens of thousands, hundreds of thousands of cases affected.

And yet in the labs, it's not like they even necessarily have a list. Like when the FBI did its audit of hair cases, it's not like they're like, "Oh, let's put the list of all the cases that our FBI analysts testified in, and pull all those cases." There was not even a list.

There isn't just basic information kept, going back, particularly: who worked on what cases, was the person convicted, what was the work done so that we can audit it, and so.

Even just that basic retrospective and, of course, so many labs have gone through changes, including due to scandals, so there may not be records of the prior incarnation of the lab, or the prior incarnation before that.

So, to have lists of cases, so that you can reopen them if there's a problem.

To have routine testing, so that you know when there's a problem.

So that you can have remedies in the courts that judges can look at the 10,000 cases, or the 1000 cases if there's a problem, and look at them as a group, and figure out, "Okay, we need to resentence everyone, because we can no longer convict them, based on the presence of drugs. The drug testing program in this lab was contaminated."

There's just no procedure for any of that. And so, even when errors come to light, there's often very little in the way of justice for people who are affected by forensic errors, because we just don't have a system that acts like a system.

Paul Heaton: Yeah, we've done some recent work at the Quattrone Center about roadside drug test and finding which cases have that type of evidence is very difficult.

I wanted to turn our attention to one of the audience questions which I think kind of connects with our discussion.

The audience member points out that despite the challenges that we've highlighted, there are some areas where DOJ has acknowledged problems (in the book you talk some about hair microscopy, fire and arson) where there's been some progress. Why is it that in some areas, it seems like we're able to go further in terms of advancing understanding and rejecting flawed forensics? Are there lessons that we might take from those experiences that we could apply to some of these other disciplines?

Brandon Garrett: A lot of positive things have happened. We've focused a lot on the negative, but I think it's a pretty exciting thing, Itiel, that you're talking to labs around the world that is no longer a taboo topic to talk about cognitive bias, and that there's this openness, there's this receptivity cases like maybe high-profile cases.

Cases like the Brandon Mayfield case may have cemented the idea that, "Oh wait a minute, cognitive bias matters, and we need to think about precautions," And in the UK, the forensic science regulators guidance on cognitive bias—no document like that existed a few years ago.

We do have more labs at least experimenting and trying out blinding or blind verification, if not blind proficiency testing like the program at the at the HFSC [Houston Forensic Science Center].

We have much more cautious language being rolled out in some of these disciplines, and the DOJ has issued these uniform standards. I think there are real problems with that uniform language, and it doesn't go very far, but it's a start to at least be thinking about what experts should be permitted to say in court, given the boundaries of their discipline.

You know, when I first started looking at the trial testimony of forensic experts who testified in DNA exoneration cases, I had labs calling me saying, "Oh, can you send me the transcript because we don't. We don't ever look at those things." Like it wasn't a routine part of supervision to read what your experts are saying in court.

And so there has been some really important cultural change. There are now some black box studies being done to look at accuracy issues in disciplines and there's an openness to even report on some of that as part of your reporting, for your work. Like, "Okay, like I'm an examiner, but the examiners in my discipline are not infallible; we're not superhuman; this is the uncertainty associated with the measurement."

It's sort of laughable that in the past there was no uncertainty associated with measurement. I mean there's uncertainty associated with using a tape measure. I'm certainly terrible with measuring furniture—like I never get it right. Like a ruler—there's uncertainty in any kind of instrument. There's uncertainty and you report it; you take it into account; you know that you better order a couch that's plus or minus a few inches because you're just not so great at eyeballing where you left the tape measure on the on the curved couch or whatever.

And so I really do think that there's much better efforts at scientific literacy at law schools and in the bar for continuing legal education. There are a lot of great people that have been working hard on these issues, and I don't want this to be a downer of an event, because there's a lot of really interesting important work being done.

Folks at PDS in DC have won important victories in the courtroom; we now have lengthy opinions from judges that are citing to Itiel's work; there are citing to black box studies; you have judges actually talking about methods and inconclusives, and false positives and negatives in their opinions, and it really does look different than it did a decade ago.

Paul Heaton: Other thoughts from the other panelists on that issue - lessons from the areas where we've made some progress?

Dr. Itiel Dror: I definitely agree there's been a huge progress in many forensic domains, an openness, so I agree with that. I would say that sometimes it's an old book with the new cover or putting lipstick on a pig. So they don't say I "individualize" the fingerprint but that it is a match. However, what is important is that the fingerprint examiner looks the juror in the eye and says, "I've been doing it for 20 years and I'm very confident." That's very persuasive.

Things have changed – but limited. Even the black box studies nowadays, they move from zero error rate to 0.01 error rate or stuff like that—ignoring the fact that if you give the *same* prints to the *same* examiner twice, 10% of the time they reach a different conclusion. [10]

However, I do agree, excluding the forensic pathologist that are in denial and fighting, that there has been a huge change. A paper by Brain Found and other looking back show basically no papers, no discussions, no conference presentations on error or bias, and starting around 2005, and then with the NAS,[11] the number of studies talking about error-rate management and bias is growing. Change is happening, yes it slow; it's painful, but this is the nature of change. [12] And let

[10] B.T. Ulery, R.A. Hicklin, J. Buscaglia, M.A. Roberts J. (2012). Repeatability and reproducibility of decisions by latent fingerprint examiners. PLoS, 7, e32800.

[11] *NAS, supra* at note 9.

[12] See the current debate about bias at *supra* at note 8.

me tell you, as someone who works in the military and medical domains, they also have a big, big problems to change, and it takes a long time to change the culture—and forensic science, if I had to rank it relative to the medical domain and the military, they are changing with the speed of light. With the change in the forensic science, there is still a way to go, but it has been great compared to the military and the medical where changes take more time. So, we're in a good trajectory, but I think we need to continue to push and everyone needs to contribute to move forward.

But I'm not optimistic in my nature, I'm not pessimistic either, I'm realistic. So, I think that cup really is half full and half empty right now.

Paul Heaton: Well, maybe to finish us off because we've mentioned a variety of issues and problems, I want to just do kind of a prioritization question for each of the panelists. So, let's imagine that someone was to hand you $5 million today and say spend it, however you want to, to improve validity of science in the courtroom. What would you want to do? Is it more foundational studies like what Itiel is doing? Is it better research to practice? Do we need more standard settings organizations? How would you think about deploying resources to improve the process? Where would your priorities be?

Maneka Sinha: I'm happy to start.

So, I think a couple of things. The first is to really take note of Itiel's first point, which is that when we look at progress, yeah, of course there's absolutely been progress. I think Mayfield was a watershed moment and it led to a lot of positive change.

But when we peel back the layers as we look at progress, we have to make sure it's substantive progress, not, as he described, lipstick on a pig. It has to be substantive, not band-aid fixes. And so as I started out by saying, I think we need to do all the things. But if you gave me all the money to do all the things, I would say immediately stop use and disallow use of unvalidated forensic disciplines in criminal cases, until foundational validity is established. That's a bare minimum. There are more and more wrongful convictions every year, and so for me that's a fundamental change that needs to be made.

Because all the other things we're talking about, things like standards bodies, things like quality control—those are back-end fixes, right? We need the front-end fix first. So that's where I would start. Those are good things—we do want standards, we do want quality control, we want all of those things as well. But before we have fundamental validity established in everything that we're trying to use to earn a conviction, we stop until we get there. That's what I would start by saying.

Brandon Garrett: I would spend the $5 million dollars on pilot programs to provide the resources to do blind validation testing.

But I don't know if I see that as retrospective. Catching errors as they happen in real time? That's really important, and in some ways, it addresses questions of validity better than black box studies. It's better to catch errors in the real case flow of people, that may reflect issues at multiple stages of what a lab is doing.

If I was going to be a federal grant program to crime labs, rather than backlog elimination grants, which also give labs incentives to keep up the backlog, so they can keep getting the grants, I'd rather have a quality and testing grant program. It could be the Brandon Mayfield Laboratory Improvement Grant program, that we could add to the Coverdale and Bloodsworth grants, we could have the Brandon Mayfield federal quality improvement Program.

Dr. Itiel Dror: Did you say 5 million or 50 million; I didn't hear. But, regardless of the amount of money, there is money out there. It's a matter of priority of what is important. And for that we need public and political pleasure, and the judges pressuring the forensic scientist to improve and to do a proper job.

So, it's a matter of pressure to cause forensic examiners and the forensic community to do a proper job. And many times, for forensic examiners, when you show them a problem, they say, "The court accepts it." And they don't care anymore, because with acceptance by the court they are happy. What we need is pressure by the courts, politician, and the public to improve the criminal justice system.

We all know the criminal justice system is not working well, or as well as it should, and forensic science is supposed to be the highlight, the bit of sunshine in the gray sky of the criminal justice system, to help put the criminal justice system on a better course. And science can do that, forensic science can do that. We need just to push this forward.

Brandon Garrett: Also, if you're talking about money, right now Massachusetts has spent over $30 million so far unwinding two horrific lab scandals that no one caught for years, because there was not even minimal quality control at their drug labs.

Drug testing involves chemical assays. There's certainly some interpretation, because you don't have pure cocaine that seized every time, but this is work that's in large part, involving equipment and chemical essays. And nevertheless, quality control was so poor at those labs that you had people who were using the drugs, and not even testing it, and no one knew any different. They thought they were really efficient lab chemists; their reports will come out so quickly. And it's been enormously expensive to unwind the tens and tens of thousands of cases that were tainted by lab misconduct. And people sometimes say it's a bad apple, but it was bad apples, and you know what they do to barrels. And that's what happened in Massachusetts.

We're seeing some of the same concerns in DC right now. Where you have a lab where people can be altering conclusions in firearms case, and saying "Oh well, maybe it's actually inconclusive; we can't be wrong if it's inconclusive." It may take some time, and some real expense, to unwind the number of cases that may have been affected by a culture where clearly, forensic conclusions are malleable and subject to influence, and that's not that's not science. There may have been terrible injustices. As a result, that's going to be expensive.

It's expensive when these problems metastasize, and an ounce of prevention can prevent millions and millions of dollars in cure. And many, many people who spend many years of their lives in prison for crimes they didn't commit.

Dr. Itiel Dror: Brandon, then you agree that what we need is an autopsy of a crime lab.

Maneka Sinha: I just want to add one thing to Brandon's point that he just made. The DC lab is theoretically an independent lab; it is an independent lab. And one thing that he touched upon that we haven't said explicitly, but that the thread that's woven through all of this, is culture change.

And it's a culture change on two fronts. One from what Itiel was talking about, from the crime lab being separated from law enforcement, but also from forensic scientists of getting into mainstream research, science culture, that sort of embraces the stake as part of science. Because, regardless of how independent a lab is, if the forensic scientists in the lab aren't bred with that culture from the ground up, we'll keep seeing the problems that Brandon's describing that are pervading the DC lab right now, which is an independent lab. So, I just wanted to flag that.

Paul Heaton: I actually think that idea of changing the culture is a great way to finish up.

The Causes of Wrongful Conviction and the Challenges Involved in Convincing Courts to Reopen Cases of Wrongful Conviction: A Case Study on the Wrongful Conviction of *Glen Eugene Assoun*

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Faculty Endorsement *– Alexandra V Orlova, Professor, Department of Criminology and Lincoln Alexander School of Law at Ryerson University. I endorse this case study for publication in the Wrongful Conviction Law Review*

I. The Decisions
II. The Problems: Factors Contributing to Wrongful Conviction in Canada and Their Application to Glen Eugene Assoun's Case
  A. Tunnel Vision in Police Investigations
  B. False or Unreliable Witness Testimony
    a. The Testimony of Margaret Hartrick
    b. The Testimony of MG
  C. Evidence Gathered from Jailhouse Informants
  D. Direct Police Misconduct
III. Conclusion

Although the factors leading to miscarriages of justice are well-known, wrongful convictions in Canada continue to occur.[1] The non-profit organization Innocence Canada has exonerated 24

[1] Kathryn Campbell & Myriam Denov, *Miscarriages of Justice: The Impact of Wrongful Imprisonment*, *Just Research* Edition no.13, online: <https://www.justice.gc.ca/eng/rp-pr/jr/jr13/p5a.html>; Alan Young, *Book Review: Convicting the Innocent: Where Criminal Prosecutions Go Wrong, by Brandon L Garrett*, (2012) 50:2 *Osgoode Hall Law Journal* 491, online: <https://digitalcommons.osgoode.yorku.ca/ohlj/vol50/iss2/8> [*Young*]; Dianne L Martin, *The Police Role in Wrongful Convictions: An International Comparative Study* in Saundra Westervelt and John Humphreys, eds, *Wrongfully Convicted: When Justice Fails,* (New Jersey, Rutgers University Press, 2001), online: <https://docplayer.net/65336345-The-police-role-in-wrongful-convictions-an-international-comparative-study.html> [*Martin*]; *The Path To Justice: Preventing Wrongful Convictions*, (2011), online: https://www.ppsc-sppc.gc.ca/eng/pub/ptj-spj/ptj-spj-eng.pdf [*Path to Justice*].

individuals since 1993 and is currently reviewing 90 cases of alleged wrongful convictions.[2] Glen Eugene Assoun ("Assoun") is one of their latest exonerated clients.[3] Assoun has recently entered into an agreement for compensation with the Government of Nova Scotia and the Federal Government of Canada.[4] Systemic factors contributing to wrongful convictions and their relevance to Assoun's case shall be discussed. This article was informed by Innocence Canada's report to the Criminal Conviction Review Group ("CCRG").[5]

I The Decisions

On 17 September 1999, Assoun was convicted of second-degree murder.[6] According to section 235 (1) of the Canadian *Criminal Code*, everyone who commits second-degree murder is sentenced to imprisonment for life.[7] The victim, Brenda Way ("Way"), was Assoun's estranged common-law spouse and a prostitute who engaged in said occupation to support her drug addiction.[8] Her body–throat cut and covered in stab wounds–was found behind a Halifax apartment building around 7:30 am on Sunday, 12 November 1995.[9] Assoun acted as a self-represented litigant at his trial, which ran for 36 days.[10] Since no one witnessed Way's murder, the main issue to be determined was the identity of the killer.[11] The Crown argued that the "volatile relationship between Mr. Assoun and Ms. Way had been deteriorating for several months" and that he was "motivated primarily by anger and jealousy … concerning her relationships with other men." [12] Four Crown witnesses testified against him. Assoun was found guilty despite having a witness testify that he was with her throughout the night. [13]

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[2] Innocence Canada, *Exonerations*, online: <https://www.innocencecanada.com/exonerations/>

[3] Innocence Canada, *Glen Assoun*, online: <https://www.innocencecanada.com/exonerations/glen-assoun/> [*Innocence Canada Assoun*].

[4] The Canadian Press, "Glen Assoun agrees to compensation deal for wrongful conviction, years in prison", *Canadian Broadcasting Corporation* (5 March 2021), online: <https://www.cbc.ca/news/canada/nova-scotia/glen-assoun-agrees-to-compensation-deal-for-wrongful-conviction-years-in-prison-1.5936781>; *Ibid*.

[5] *Innocence Canada Media Backgrounder*, online: <https://www.innocencecanada.com/assets/Uploads/PDFs/Press-backgrounder-into-the-wrongful-conviction-of-Glen-Assoun.pdf> at 1 [*Innocence Canada Media Backgrounder*].

[6] *R v Assoun*, [1999] NSJ No 479, 1999 CanLII 2819 (NS SC), online: <https://canlii.ca/t/1f15x> [*R v Assoun (1999)*].

[7] *Criminal Code*, RSC 1985, c C-46, s 235 (1) [*Code*].

[8] *Innocence Canada Media Backgrounder, supra* note 5 at 2.

[9] *R v Assoun*, [2006] NSJ No 154 (QL), 2006 NSCA 47 (CanLII), online: <https://canlii.ca/t/1n38p> at para 2 [*R v Assoun (2006)*].

[10] *Ibid* at para 6.

[11] *Ibid*.

[12] *Ibid*.

[13] *Ibid* at paras 6-7.

In *R v Assoun (1999)*, Justice Hood of the Supreme Court of Nova Scotia determined the length of Assoun's parole ineligibility by considering the factors listed in section 745.4 of the *Criminal Code*.[14] The court examined the character of the offender, the nature of the offence, and the circumstances of its commission.[15] Assoun was described in trial testimony as violent and abusive, with a "history of violent behaviour towards the victim and evidence about her fear of him". [16] He possessed previous convictions for several offences, including a 1995 assault conviction against Way.[17] Pursuant to section 718.2 of the *Criminal Code*, Justice Hood considered the fact that Assoun allegedly murdered his spouse to be an aggravating factor.

Determinations of parole ineligibility in comparable cases were also considered.[18] The court referred to ranges of parole ineligibility denoted by the Crown in prior cases, including *R v Baillie* [19], *R v Francis* [20], and *R v Picco.* [21] In *R v Baillie,* the offender received parole ineligibility for 17 years because he strangled his spouse with a rope and locked her in the basement, while in *R v Francis,* the offender beat and strangled their victim, receiving twenty years of parole ineligibility. In *R v Picco*, the offender beat and stabbed a victim who was not his spouse. The offender received 18 years of parole ineligibility on appeal. Considering this information as a whole, the Nova Scotia Supreme Court concluded Assoun would serve a sentence of 18 and one-half years without parole eligibility.[22]

In *R v Assoun (2000)*, the Nova Scotia Supreme Court considered whether the preliminary testimony and videotaped (KGB) statement of a key witness, Margaret Elizabeth Hartrick ("Hartrick"), could be entered into evidence at trial.[23] Hartrick provided a written statement to the police on 14 November 1996, had her KGB statement filmed in January 1998 and testified at the preliminary hearing on 18 August 1998.[24] Hartrick stated that she saw Mr. Assoun on Albro Lake Rd at 4:15 a.m. on the day of the murder and that Assoun told her that Way was dead.[25]

Hartrick died on 18 September 1998, before Assoun's trial.[26] She was "prone to relating her 'psychic visions' as evidence to the police" and was known to provide inconsistent

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[14] *Ibid* at para 10.

[15] *Ibid* at paras 2, 11-20; *Code,* s 745.4.

[16] *R v Assoun (1999), supra* note 6 at para 13; *R v Assoun (2006), supra* note 9 at para 6.

[17] *R v Assoun (1999), supra* note 6 at para 13.

[18] *R v Assoun (1999), supra* note 6 at para 27; *Code,* s 745.4.

[19] *R v Baillie*, [1991] NSJ No 511, 1991 NSCA 47 (CanLII), online: <https://www.canlii.org/en/ns/nsca/doc/1991/1991canlii2477/1991canlii2477.html>.

[20] *R v Francis*, [1994] NSJ No 14, 1994, 1994 CanLII 4164 (NSCA), online: <https://www.canlii.org/en/ns/nsca/doc/1994/1994canlii4164/1994canlii4164.html?autocompleteStr=R%20V%20FRANCIS%201994&autocompletePos=1>.

[21] *R v Picco*, [1987] NSJ No 232, 1987, (1987) 79 NSR (2d) 139 (CA).

[22] *R v Assoun (1999), supra* note 6 at para 29.

[23] *R v Assoun*, 2000 CanLII 14366 (NS SC), online: <https://canlii.ca/t/dth> at 1 [*R v Assoun (2000)*].

[24] *Ibid* at paras 58-59.

[25] *Ibid* at para 11.

[26] *R v Assoun (2000)*, *supra* note 23 at 2.

statements.[27] On 1 June 1999, prior to Assoun's trial, the court concluded that Hartrick's evidence passed the test of the principled exception to hearsay rule. [28] Thus, the court admitted her evidence.[29] The exception to hearsay rule was established in *R v Khan* and refined in *R v Smith.*[30] In *R v Smith,* the court stated that "hearsay evidence is now admissible on a principled basis, the governing principles being the [threshold] reliability of the evidence and its necessity."[31] Justice Hood concluded that the criteria of necessity were satisfied not only because she has passed away, but because her evidence was crucial to the case: "I conclude that in this case the evidence of Margaret Hartrick is necessary because without it the jury will not have information which it needs to carry out its function."[32] Police Constable Randy MacDonald of the Halifax Regional Police testified that only Hartrick could provide evidence about the whereabouts of Assoun at the time of Way's murder, that Assoun refers to himself as a suspect, and that Assoun was avidly searching for Way.[33]

Justice hood also concluded that the preliminary hearing evidence and the KGB statement met the requirements of threshold reliability set out in the exception to hearsay rule. In particular, several safeguards of reliability were present.[34] Although Hartrick could not attend the trial, her statement was taken under oath and was videotaped. [35] This allowed the jury to make an assessment of reliability based on her demeanour and voice as if she was present in the courtroom.[36] Concerning the KGB statement, Justice Hood stated that "although [the] safeguards in this case do not absolutely guarantee the trustworthiness of the KGB statement, they, in my view, give it a sufficient guarantee of trustworthiness such that it can be put before the jury for its assessment of its ultimate reliability."[37]

In 2004, Jerome Kennedy ("Kennedy"), a criminal lawyer from Newfoundland and Labrador, was appointed as Assoun's counsel and represented Assoun for the appeal of his conviction and sentence.[38] On 17 January 2006, the Halifax Nova Scotia Court of Appeal heard Assoun's case. [39] According to Innocence Canada, Kennedy had requested Crown disclosure of the criminal profiling information related to Way's murder. The criminal profiling was conducted by RCMP ViCLAS Unit criminal profiling specialist Constable David Moore ("Moore").[40] Kennedy also questioned the Crown about ViCLAS's work relating to Michael McGray, a suspect

[27] *Innocence Canada Media Backgrounder, supra* note 5 at 2; *R v Assoun (2000)*, *supra* note 23 at 2.
[28] *R v Assoun (2000)*, *supra* note 23 at 2.
[29] *Ibid.*
[30] *Ibid.*
[31] *Ibid.*
[32] *Ibid* at 10.
[33] *Ibid* at 9.
[34] Safeguards of reliability or "hearsay dangers" include: the lack of an oath, the lack of contemporaneous cross-examination, and the lack of presence of the witness in the courtroom testifying. *Ibid* at 11.
[35] *Ibid*.
[36] *Ibid.*
[37] *Ibid* at 12 & 16.
[38] *Innocence Canada Media Backgrounder, supra* note 5 at 2.
[39] *R v Assoun (2006)*, *supra* at note 9.
[40] *Innocence Canada Media Backgrounder, supra* note 5 at 2 & 4.

who was recently discovered to be a serial killer based in Nova Scotia.[41] Kennedy's requests for disclosure were returned with "incomplete and misleading answers", and it was clear that something suspicious was brewing behind the scenes.[42] At the appeal, Assoun requested that fresh evidence relating to the potential suspects Avery Greenough, Robert Poole, Ashley Herridge, and Michael McGray be considered.[43] In *R v Wolkins*, the court stated that "an appeal court may… accept fresh evidence in support of a ground of appeal that the accused was denied a fair trial."[44] Assoun alleged that if the trial judge advised him properly as a self-represented litigant, the evidence of these third-party suspects would have been provided to the jury.[45] The court stated that Assoun's evidence was not a basis to demonstrate that the trial was unfair because "nothing indicates that the trial judge knew of any third-party suspect evidence related to … Greenough, Poole, Herridge, or McGray. The trial judge "was not privy to the Crown's pre-trial disclosures to Mr. Assoun and his counsel" concerning these suspects, and the trial judge provided proper assistance respecting the rules of evidence on third party suspects.[46] Thus, if Assoun sought to tender fresh evidence related to the issues decided at trial, his only recourse would be to challenge the trial result. To do so, he must satisfy the criteria set out in *Palmer*:

> Fresh evidence on appeal which is directed to issues decided at trial generally must meet the so-called Palmer test. A key component of that test requires that the proposed fresh evidence could not have been available with due diligence at trial… the rule requiring due diligence at trial is therefore important because it helps ensure finality and order, two features which are essential to the integrity of the criminal process. [47]
>
> In Palmer, at p. 775, the Supreme Court said that the 'interests of justice' in s. 683 (1) (d) are governed by four factors:
> (1) The evidence should generally not be admitted if, by due diligence, it could have been adduced at trial provided that this general principle will not be applied as strictly in a criminal case as in civil cases. …
> (2) The evidence must be relevant in the sense that it bears upon a decisive or potentially decisive issue in the trial.
> (3) The evidence must be credible in the sense that it is reasonably capable of belief, and
> (4) It must be such that if believed it could reasonably, when taken with the other evidence adduced at trial, be expected to have affected the result.[48]

[41] *Ibid* at 2 & 3.

[42] *Ibid* at 3.

[43] *R v Assoun (2006), supra* note 9 at para 315.

[44] *R v Wolkins*, [2005] NSJ No 2, 2005 NSCA 2 (CanLII), online: < https://canlii.ca/t/1jkz9>; *R v Assoun (2006), supra* note 9 at para 316.

[45] *R v Assoun (2006), supra* note 9 at para 317.

[46] *Ibid* at paras 317-321.

[47] *Ibid* at para 59.

[48] *Ibid* at para 299.

Assoun's argument to tender fresh evidence did not satisfy the *Palmer* criteria.[49] According to *R v Macmillan*[50] and *R v Grandinetti*[51], demonstrating third party involvement requires a "sufficient connection between the third party and the crime … without this link, the third-party evidence is neither relevant nor probative. The evidence may be inferential, but the inferences must be reasonable, based on the evidence, and not amount to speculation."[52] The first reason why the court rejected the fresh evidence provided by Mr. Assoun is because of its inadmissible form; without a statement or confession from a suspect, their evidence would be considered "multi-tiered hearsay."[53] The mere opinions of a private investigator hired by Kennedy were also inadmissible.[54] Concerning the third factor, the credibility of the evidence could not be tested because cross-examination of the private investigator cannot be used to determine the credibility of the sources in his affidavit.[55] Finally, the tendered fresh evidence could not have affected the result of the trial because the connections between the four suspects and Ms. Way's murder were even weaker than the connections in *R v Grandinetti*.[56] Although these suspects were located in the same neighbourhood, the evidence would still be inadmissible and thus could not affect the result under the fourth Palmer factor.[57] For these reasons, Assoun's application to tender fresh evidence was rejected.[58] His appeal was dismissed on 20 April 2006.[59]

Despite exhausting his appeal options, Assoun never gave up on his innocence. On 14 April 2013, Innocence Canada submitted a memorandum and application record to the Minister of Justice, which detailed Innocence Canada's re-examination of the evidence and key witnesses.[60] According to Innocence Canada, two individuals who knew McGray in prison revealed that McGray confessed to killing Way.[61] The findings of their investigation were provided to lawyer Mark Green of the Minister's CCRG, who uncovered new information unknown to the Crown and Assoun's counsel. In September 2014, the CCRG completed their preliminary assessment, concluding that "there may be a reasonable basis to conclude that a miscarriage of justice likely occurred in [Assoun's] case", hence it became the basis for a full CCRG investigation.[62]

On 23 October 2014, the Nova Scotia Supreme Court granted Assoun's bail, albeit with strict conditions.[63] Five years later, Assoun was finally freed. The Federal Minister of Justice

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[49] *Ibid* at para 322.

[50] *R v McMillan*, (1975) 7 OR, (2d) 750, 1975 CanLII 43 (ON CA), online: <https://canlii.ca/t/1vlmv>.

[51] *R v Grandinetti*, [2005] 1 SCR 27, 2005 SCC 5 (CanLII), online: <https://canlii.ca/t/1jmfq>.

[52] *R v Assoun (2006), supra* note 9 at paras 301 & 312.

[53] *Ibid* at para 308.

[54] *Ibid* at para 309.

[55] *Ibid* at para 310.

[56] *Ibid* at para 314.

[57] *Ibid* at para 314.

[58] *Ibid* at para 323.

[59] Innocence Canada Media Backgrounder, supra note 5 at 3; *Ibid* at paras 308, 310, 314, 321 & 326.

[60] Innocence Canada Media Backgrounder, *supra* note 5 at 3.

[61] *Ibid*.

[62] *R v Assoun*, 2014 NSJ No 607, 2014 NSSC 419 (CanLII), online: <https://canlii.ca/t/gfd15> at para 3.

[63] *R v Assoun*, [2019] NSJ No 294, 2019 NSSC 220 (CanLII), online <https://canlii.ca/t/j1frv>, at para 7 [*R v Assoun (2019)*].

quashed Assoun's conviction and ordered a new trial pursuant to section 696.3(3) of the *Criminal Code*.[64] On 1 March 2019, just over 21 years after his conviction, Assoun was exonerated at the same Halifax courthouse that found him guilty.[65]

II The Problems: Factors Contributing to Wrongful Conviction in Canada and Their Application to Glen Eugene Assoun's Case

The systemic factors contributing to miscarriages of justice in Canada include tunnel vision, false or unreliable witness testimony, untrustworthy evidence gathered from jailhouse informants, and direct police misconduct.[66] These factors adversely affect the reliability of an investigation and are commonly found in high-profile cases of wrongful conviction.[67] When the factors that contribute to miscarriages of justice occur, it is often difficult to convince courts to reopen cases of wrongful conviction. This difficulty may occur because evidence gathered against an innocent accused is augmented, while evidence that could prove the accused's innocence is downplayed, not pursued, or destroyed. The causes of wrongful conviction present in Assoun's case and why they made Assoun's exoneration challenging is discussed below.

A. Tunnel Vision in Police Investigations

As stated by criminal law professor Dianne L. Martin, "the police investigation is inevitably at the heart of these miscarriages of justice because the police gather the evidence, identify the prime suspect and build the case for conviction."[68] Three predisposing circumstances may increase the occurrence of wrongful convictions. These circumstances include a high-profile case that places significant pressure on authorities to resolve a conviction, the marginalization of an outsider accused, and a case in which authorities rely on fundamentally unreliable evidence.[69] Tunnel vision refers to the occurrence of bias in police operations due to these predisposing circumstances.[70] Tunnel vision results in police authorities using preconceptions and heuristics to "select evidence to build a case for the conviction of their chosen suspect while suppressing or ignoring information and interpretations that point away from guilt."[71] According to Martin, "when the investigative process is distorted by tunnel vision, misconduct becomes prevalent in note and record keeping, witness interviews, the interrogation of suspects among other distortions."[72]

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[64] *Code*, s 696.3 (3).

[65] *R v Assoun (2019)*, *supra* note 63 at para 8.

[66] *Martin*, *supra* note 1; *Path to Justice, supra* note 1.

[67] *Martin*, *ibid.*

[68] *Ibid* at 77 & 78.

[69] *Ibid* at 83.

[70] Dianne L Martin, *Lessons about Justice from the 'Laboratory' of Wrongful Convictions: Tunnel Vision, the Construction of Guilt and Informer Evidence*, The Canadian Review of Policing Research, online: <http://crpr.icaap.org/index.php/crpr/article/view/18/17>.

[71] *Ibid.*

[72] *Ibid.*

In high-profile cases of murder, the pressure to convict could stem from a "highly-charged and politicized environment generated by high-profile cases" or the "willingness to prosecute and convict someone without real scrutiny of the evidence."[73] Miscarriages of justice also occur due to "institutional cynicism and neglect", in which biased investigators assume that suspects with similar circumstances, attributes, and offences, require little to no investigation.[74] Such is the case of Donald Marshall Jr. ("Marshall"), whose wrongful conviction led to the first public inquiry on wrongful convictions in Canada.[75] In *R v Marshall*, Sergeant John MacIntyre headed a police investigation in which biased decision-making and tunnel vision were evident. MacIntyre crafted his investigation in a manner that only sought out evidence to convict Marshal and disregarded evidence against his conviction.[76] The Royal Commission on the Donald Marshall, Jr. Prosecution found that MacIntyre failed to pursue the two men Marshall stated were involved in the murder.[77] In Assoun's case, it was discovered that Constable Macdonald also considered but failed to pursue other suspects.[78] McGray was not regarded as a suspect by MacDonald.[79]

However, tunnel vision doesn't stop at the initial police investigation; its effects overflow to other parts of the justice system, including the Crown and the RCMP. The RCMP refused proper disclosure of information that could have changed the outcome of Assoun's case.[80] Whether tunnel vision stems from bias or an overreliance on heuristics, it is a serious systemic issue that must be addressed at the initial police investigation and onward.

B. Unreliable Witness Testimony

Informer evidence, originating from individuals who freely report information about a crime or developed by the police, is often used by police authorities to determine information about a suspect.[81] However, even if tunnel vision isn't an issue, and the safeguards [82] ensuring threshold reliability of a witness's testimony are present, miscarriages of justice can still occur. A witness may lie under oath, be mistaken in what they saw, or be coerced into adopting another individual's version of the real story. [83] In *R v Hill*, the eyewitness testimonies of two bank tellers contributed

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[73] *Martin*, *supra* note 1 at 79.

[74] *Martin*, *supra* note 1.

[75] Donald Marshall, Jr (Hickman Commission) (Nova Scotia, 1989) *The Marshall Inquiry*), online: https://novascotia.ca/just/marshall_inquiry/_docs/Royal%20Commission%20on%20the%20Donald%20Marshall%20Jr%20Prosecution_findings.pdf.

[76] *Ibid* at 1 [*Marshall Inquiry*].

[77] *Ibid* at 20.

[78] Tattrie Jon & Tim Bousquet, "Why it took this man 20 years to prove he didn't murder his wife", *Canadian Broadcasting Corporation* (29 July 2020), online: <https://newsinteractives.cbc.ca/longform/glen-assoun-murder-wrongful-conviction>; *R v Assoun (2006), supra* note 9 at para 306.

[79] *Ibid.*

[80] *Innocence Canada Media Backgrounder, supra* note 5 at 3.

[81] *Young, supra* note 1 at para 3.

[82] *R v Assoun (2000)*, *supra* note 23 at 16

[83] *Marshall Inquiry*, supra note 76 at 3; *Hill v Hamilton-Wentworth Regional Police Services Board*, [2007] 3 SCR 129, 2007 SCC 41 (CanLII), online: <https://canlii.ca/t/1t3lv>, at paras 7-11 [*Hill*].

to the accused's wrongful imprisonment.[84] The two bank tellers were unwavering in their testimonies, although they were not shown photographs of the other suspects before the trial. [85] There is evidence that the unreliable witness testimony of Hartrick and MG also contributed to Assoun's wrongful conviction.

a. The Testimony of Margaret Hartrick

Hartrick possessed unstable qualities that placed her credibility as a witness into question. She had a habit of recounting events from psychic visions to the police, an addiction to drugs, and provided contradictory evidence.[86] Constable Peter Gallant testified about his experience taking Hartrick's November 1996 videotaped statement, asserting that she was not offered any favours nor coerced during the process. On cross-examination, he stated that Hartrick talked to the police differently while recounting her psychic visions compared to when she provided information about her encounter with Assoun on the day of Way's murder. [87] Peter Gallant also stated that it is possible she "had time to fabricate her evidence" as the interview occurred one year after the murder.[88] Moreover, Hartrick was well-acquainted with Way.[89] In the end, her testimony turned out to be a false and inconsistent tale.[90] Hartrick's false testimony exemplifies the danger of relying on contradictory information provided by witnesses of questionable credibility.

b. The Testimony of MG

MG was a young prostitute who testified at trial. She alleged that Assoun picked her up in his car, slit her breast with a knife and raped her. She stated that he repeatedly said Way's nickname while committing the act, and said that Assoun admitted he would kill Way.[91] Approximately 18 months after her alleged encounter with Assoun, she provided this information to police authorities.[92] According to Innocence Canada's 2019 report on Assoun's case, MG no longer believed Assoun assaulted her.[93] In a subsequent interview, she stated that Assoun was smaller than her assailant.[94] A man of larger stature, like McGray, was better suited to be her attacker.[95] One of the key pieces of information identifying McGray as the killer was also found in MG's original testimony. She referred to her attacker as wearing socks and sandals in the middle of winter, a characteristic of McGray that was confirmed by several witnesses.[96] The testimony of

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[84] Malini Vijaykumar, *A Crisis of Conscience: Miscarriages of Justice and Indigenous Defendants in Canada*, (2018) 51 UBC L Rev 161- 223; *Hill, ibid* at paras 9, 17 & 32.

[85] *Ibid.*

[86] *R v Assoun (2006), supra* note 9 at para 66.

[87] *Ibid* at para 82.

[88] *Ibid.*

[89] *Innocence Canada Media Backgrounder, supra* note 5 at 2.

[90] *Ibid.*

[91] *R v Assoun (2006), supra* note 9 at para 25.

[92] *Ibid.*

[93] *Innocence Canada Media Backgrounder, supra* note 5 at 3.

[94] *Ibid.*

[95] *Ibid.*

[96] *Ibid.*

MG demonstrates the ease at which wrongful convictions may occur due to evidence provided by a mistaken witness.

C. Evidence Gathered from Jailhouse Informants

Another type of informant to consider is jailhouse informants. Jailhouse informants are prisoners who allege that they heard a suspect or fellow prisoner confess to a crime.[97] They are known to be unreliable as they oftentimes provide testimony in exchange for a benefit such as a lesser sentence or earlier release.[98] Unfortunately, their evidence may be resorted to because their "unique position" allows them to acquire a confession directly from an accused.[99]

David Carvery, a jailhouse informant convicted of murdering his cellmate, provided testimony against Assoun at trial.[100] Carvery's testimony stated that he conversed with Mr. Assoun at the Halifax County Correctional Centre.[101] According to Carvery, Assoun admitted to killing Way by slitting her throat and throwing her body into a dumpster.[102] Innocence Canada's reports stated David Carvery indeed received a benefit for his testimony, in which his sentence was reduced.[103] Such circumstances beg the question of what *justice* is done when weak[104] and inherently biased evidence is put forth to "help" a jury make the least biased decision possible.

D. Direct Police Misconduct

Police authorities are the first individuals to gather evidence related to criminal investigations, and they have several opportunities to either destroy or exclude potentially exculpatory evidence.[105] Police authorities are also capable of managing their "paper trail" to ensure that their actions go undetectable.[106] Direct police misconduct was one of the reasons why Assoun's exoneration took years to achieve. The CCRG's Preliminary Assessment pointed to the fact that Kennedy made several requests for disclosure to the Crown in order to prepare for Assoun's 2006 appeal.[107] The Preliminary Assessment also included information on internal discussions of the RCMP and Halifax Regional Police's plan to never provide all the relevant information.[108] It was revealed that Moore's viCLAS work on McGray was ordered destroyed by RCMP seniors.[109] Had the RCMP provided proper disclosure of Moore's viCLAS profiling on

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[97] *Path to Justice, supra* note 1 at 98.

[98] *Ibid* at 97; *R v Assoun (2006), supra* note *9* at para 148.

[99] *Path to Justice, supra* note 1 at 97.

[100] *R v Assoun (2019), supra* note 59 at para 57.

[101] *R v Assoun (2006), supra* note *9* at paras 148 & 157.

[102] *Ibid* at paras 24, 148 & 155.

[103] *Innocence Canada Media Backgrounder, supra* note *5* at 2; *ibid* at para 24.

[104] "Jailhouse informant evidence is almost a hallmark of the weak prosecution case" per Dianne Martin in *Martin, supra* note 1 at 88.

[105] *Ibid* at 90.

[106] *Ibid.*

[107] *Innocence Canada Media Backgrounder, supra* note *5* at 4.

[108] *Ibid.*

[109] *Ibid* at 5.

McGray to Kennedy, it is possible that the fresh evidence provided in Assoun's 2006 appeal would have satisfied the *Palmer* criteria.[110] This could have led to a new trial, and presumably, Assoun's eventual acquittal, 13 years earlier than it occurred in reality. The RCMP's destruction of Moore's viCLAS work shows how direct police misconduct makes it difficult to convince courts to reopen cases of wrongful conviction.

III Conclusion

Tunnel vision, unreliable testimony of witnesses and jailhouse informants, and direct police misconduct make it harder to discover the truth behind miscarriages of justice. According to a 2011 report by the Federal/Provincial/Territorial Heads of Prosecutions Subcommittee on the Prevention of Wrongful Convictions, efforts should focus on ensuring that Prosecution Committees, the Canadian government, and the Canadian police force are educated about the causes of wrongful convictions and that they are held accountable when wrongful convictions occur.[111] Assoun's wrongful conviction shows that there is a desperate need for police accountability at local and national levels. Although the justice system, as a "human endeavour" will never be perfect, that doesn't mean its actors, especially police authorities, shouldn't be disciplined when they are at fault.[112] The freedom of a wrongfully convicted individual is priceless, and its deprivation is avoidable.

[110] *R v Assoun (2006), supra* note 9 at para 59.

[111] *Path to Justice, supra* note 1 at 211.

[112] *Ibid* at xii.

Until I Could Be Sure: How I Stopped the Death Penalty in Illinois

By George H. Ryan Sr with Maurice Possley
(New York, Rowman & Littlefield, 2020)

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George H Ryan Sr served as Governor of the State of Illinois from 1999 to 2003. A Republican who held multiple elected offices over a political career that began in the late 1960s, Ryan voted to reinstate Illinois' death penalty in 1977 as a member of the state House of Representatives after the previous capital-sentencing law was declared unconstitutional. He supported the death penalty during his gubernatorial campaign and following his election he allowed the execution of Andrew Kokoraleis to go forward in 1999. Kokoraleis' execution would be the last one carried out in Illinois. Lawmakers repealed the state's death-penalty legislation in 2011. Ryan's decision as Governor to impose a moratorium on future executions in January 2000, and his subsequent action before leaving office in January 2003 to issue a blanket commutation to 167 inhabitants of the state's death row and pardon four others, were of singular importance in fortifying and stimulating anti-capital punishment movements within the United States. *Until I Could Be Sure*, written with Maurice Possley, formerly a reporter with the *Chicago Tribune* and now a researcher for the National Registry of Exonerations, chronicles Ryan's evolving thinking about the death penalty and explains how and why he reached his epic decisions to halt executions and ultimately to clear Illinois' death row. No issue weighed more heavily on Ryan than the ever-looming threat that the death penalty would claim the life of an innocent person.

Ryan had good reason to be concerned that innocents were at risk of wrongful execution. When he announced his moratorium decision in early 2000, 13 death-sentenced individuals had been exonerated in Illinois following the death penalty's reinstatement in 1977, while 12 executions had taken place. "I have grave concerns about our state's shameful record of convicting innocent people and putting them on death row," Ryan declared. "Until I can be sure that everyone sentenced to death in Illinois is truly guilty, until I can be sure with moral certainty that no innocent man or woman is facing a lethal injection, no one will meet that fate" (p 68).

Ryan's resolve to suspend executions and later to clear the state's death row was hardened by Anthony Porter's exoneration, which by Ryan's admission "caused something inside me to shift" (p 21). Porter's case was particularly instrumental because it prompted Ryan to "put a human face on the issue of wrongfully convicted death row inmates" (p 26). Porter had been sentenced to death in 1983 following his conviction for a double murder in Chicago. He came within two days of dying by lethal injection when his lawyer convinced the Illinois Supreme Court to issue a stay to have Porter, whose IQ reportedly was 51, undergo a mental competency exam. The reprieve enabled journalism students working under the supervision of Northwestern University Professor David Protess to investigate Porter's claim of innocence. A private investigator working with them secured a confession from another man, Alstory Simon, that he committed the killings for which

Porter was sentenced to death. Porter was exonerated in March 1999, just two months after Ryan assumed office. "How does this happen in America?" Ryan wondered:

> What is going on that journalism students—not the courts, not a jury, not a prosecutor—got to the bottom of this? What is wrong with a system that allows somebody to get sentenced to death and spend sixteen years on death row and then someone finds out that they are innocent? (p 20).

Spurred by Porter's case and other developments, including the powerful November 1998 Northwestern University Law School conference which brought to a single stage 31 death row exonerees from across the country, and investigative reporting by the *Chicago Tribune* that exposed problems plaguing scores of the state's capital cases, in March 2000 Ryan appointed a 14-member Death Penalty Moratorium Commission to study Illinois' capital-punishment system. He asked the Commission to make recommendations "designed to further ensure the application and administration of the death penalty in Illinois is just, fair, and accurate" (p 77). The Commission issued its report following two years of study, setting forth 85 recommendations pursuant to its charge. Ryan gleaned two key conclusions from the report: that the Commission believed that "the death penalty system in Illinois was broken and they couldn't find a way to make absolutely certain that everyone sentenced to death actually was guilty beyond any doubt" (p 150). Ryan chafed as the Illinois legislature not only failed to act on the Commission's recommendations but even passed a bill expanding the reach of the state's death-penalty law, which Ryan vetoed. Deeming these developments unacceptable, his commitment grew to take matters into his own hands.

As time passed, Ryan became a sought-after participant and speaker in death-penalty forums across the country. He maintained for some time at these events that he remained uncertain about the fate of those awaiting execution in Illinois, and in particular whether his ongoing review of individual cases would be sufficient to ensure that no innocents were put to death, or whether he would instead have to act more broadly and commute the sentences of all then on the state's death row. Ryan had announced that he would be a one-term governor, meaning that he would leave office in January 2003. Mindful that his tenure was drawing to a close, a team of lawyers organized a campaign to file clemency petitions on behalf of all of the 171 individuals on Illinois' death row with the state Prisoner Review Board by the end of August 2002. The Board was responsible for making non-binding recommendations to the Governor about whether clemency should be granted. The glut of filings led the Board to conduct abbreviated hearings—denounced by a Cook County state attorney as a "Reader's Digest form of justice" (p 170)—in mid-October. The hearings dramatically highlighted the pain endured by murder victims' family members as many of them recounted the horrific deaths their loved ones had suffered. Their moving testimonies were portrayed sympathetically in media outlets and Ryan perceived that public sentiment had decisively shifted away from the plight of those on death row. He announced that: "I've pretty much ruled out blanket commutation based on the hearings and the information I've gathered so far" (p 187).

Ryan later scheduled two private meetings with victims' family members, one in Chicago and one in Springfield. He acknowledged stating during those meetings that "a blanket commutation was not a likely occurrence" (p 193). He also met with family members of the

condemned, who shared their own emotionally powerful stories with him. A former high school classmate whose mentally ill son was sentenced to death for murdering a police officer asked a nonplussed Ryan point-blank, "Are you going to kill my son?" (p 200). Racked with conflicting sentiments, Ryan's thoughts continued to return to his conviction that Illinois' death-penalty system was broken and could not be trusted to guard against the awful prospect of causing an innocent person to be executed.

Ryan ultimately reached his decision to pardon four and commute the death sentences of the remaining 167 individuals under sentence of death—164 to life imprisonment without parole, and three to 40 years imprisonment—as "a matter of conscience" (p 212). He based the decision in part on his religious values, and also on his belief that the state's death-penalty system "did not serve justice but violated justice" (p 212). He announced that he was taking this action on January 11, 2003, in a speech delivered at Northwestern University Law School. His remarks, substantially reprinted in *Until I Could Be Sure* (pp 218-232), are punctuated by his ringing declaration: "I must act. Our capital system is haunted by the demon of error, error in determining guilt, and error in determining who among the guilty deserves to die" (p 231). A scant 48 hours later, George Ryan's term as Governor of Illinois came to an end.

The principal strength of *Until I Could Be Sure* is its intimate portrait of how Ryan's private thoughts about the death penalty evolved over time, sometimes agonizingly, shaping his sense of public responsibility and leading him to halt executions in 2000 and spare the lives of all persons on Illinois' death row as he exited office in 2003. His actions dramatically energized death-penalty abolitionists and significantly altered the landscape of capital punishment nationwide. Ryan's conviction that his decisions were both necessary and justified, and his sense of satisfaction in contributing to the death penalty's demise, ring clearly throughout the volume's pages.

Ryan's reminiscences overlook, or only briefly address, other issues that warrant greater attention. One glaring oversight in light of the importance Ryan attributes to Anthony Porter's narrow escape from execution and later exoneration in arriving at his conclusion that Illinois' death penalty system was broken, is his failure to discuss the controversy surrounding the aftermath of Porter's release from death row. Alstory Simon's confession that he committed the killings for which Porter was sentenced to death led to Porter's exoneration and Simon's pleading guilty to the crimes and being sentenced to 37 years prison. As previously noted, Simon's confession was secured by a private investigator assisting Northwestern University journalism students as they sought information to upset Porter's conviction. An investigation by the Cook County prosecutor's Conviction Integrity Unit led the State's Attorney to conclude that Simon's confession was induced by improper tactics and was unreliable. Simon's convictions were vacated on the prosecution's motion, and he was released from prison in 2014 after serving 15 years of his sentence. Simon subsequently filed a $40 million civil suit against Northwestern journalism professor David Protess and Paul Ciolino, the investigator who obtained his confession. The case eventually was settled for an undisclosed amount. In the meantime, Ciolino filed a counterclaim for defamation against Simon and his attorneys, a suit which currently remains pending.[1] Ryan's

[1] See *Ciolino v Simon*, 2021 IL 126024; Sam Charles, "Defamation Suit Stemming from Alstory Simon, Anthony Porter Case Should Proceed: Appeals Court*", Chicago Sun Times* (16 January 2020), online:

failure to comment on these developments, which bear directly on the foundation of Anthony Porter's exoneration, is mystifying. Their significance is such that the *Chicago Tribune* described them as "[r]ewriting a key chapter in Illinois' death penalty history," and "forever alter[ing] the narrative arc of Illinois' history with capital punishment." [2]

Another issue deserving additional attention concerns Ryan's views about life imprisonment without parole (LWOP), and the implications for all prisoners, and not just those sentenced to death, of his understanding that Illinois' justice system was badly misfiring. While announcing his blanket commutation decision, Ryan touted LWOP as an alternative to capital punishment. He mentioned a letter he received from a death row prisoner "who told me he didn't want me to do him any favors because he didn't want to face a prospect of a life in prison without parole" (p223). He envisioned a grim future confronting those whose sentences he was commuting:

> They will be confined in a cell that is about five-feet-by-twelve feet, usually double-bunked. [para] Our prisons have no air-conditioning, except at our supermax facility where inmates are kept in their cell twenty-three hours a day. In summer months, temperatures in these prisons exceed one hundred degrees. It is a stark and dreary existence. They can think about their crimes. Life without parole has even, at times, been described by prosecutors as a fate worse than death. (p 223)

Characterizing LWOP as a punishment that is draconian in its own right and in some respects as harsh or even harsher than execution is a rhetorical device often employed by death-penalty abolitionists. Yet, if problems, including the conviction of innocent persons, plagued Illinois capital cases, there is every reason to believe that miscarriages of justice were prevalent in LWOP and other considerably more routine criminal prosecutions as well. Indeed, the Commission that Ryan convened to study Illinois' death penalty system observed:

> As the Commission discussed many of its proposals for capital cases, it became apparent that some issues also applied with equal force to non-capital cases. . .The Commission strongly urges consideration of ways to broaden the application of many of the

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<https://chicago.suntimes.com/crime/2020/1/16/21069277/defamation-suit-alstory-simon-anthony-porter-case-should-proceed-appeals-court>; Michael K McIntyre, "Alstory Simon, Freed from Prison after Wrongful Conviction, Spends His Time in Greater Cleveland Working to Free Others", *Cleveland Plain Dealer* (28 April 2017, updated 11 January 2019), online: <https://www.cleveland.com/tipoff/2017/04/alstory_simon_freed_from_priso.html>; Aamer Madhani, "Northwestern University Settles Suit with Man Imprisoned After Journalism School Probe", *USA Today* (1 June 2018),online: <https://www.usatoday.com/story/news/2018/06/01/northwestern-wrongful-conviction-alstory-simon-david-protess/664090002/>; Steve Mills, Steve Schmadeke & Dan Hinkel, "Prosecutors Free Inmate in Pivotal Illinois Death Penalty Case", *Chicago Tribune* (30 October 2014), online: <https://www.chicagotribune.com/news/ct-anthony-porter-murder-investigation-met-1031-2-20141030-story.html> [*Mills*].

[2] *Mills*, *supra* at note 1.

recommendations made by the Commission to improve the criminal justice system as a whole. [3]

Ryan's nearly exclusive focus on errors in the administration of the death penalty unfortunately neglects what measures can and should be implemented to prevent and correct injustices, including the conviction of innocents, in the non-capital cases that make up the overwhelming business of the criminal courts.

Before Ryan was elected Governor, he served as Illinois' Secretary of State. In the epilogue to *Until I Could Be Sure*, Ryan acknowledges that he was under investigation during his gubernatorial administration for corruption during his tenure as Secretary of State, and that he was convicted after he left the governor's office[4] and served six and one-half years in federal prison. Ryan concedes that "some people in Illinois saw my opposition to the death penalty as my attempt to divert attention away from my legal troubles" (p 241). He obliquely refutes such insinuations by observing that "there were even more people who realized that my work to clean up the death penalty system and the federal investigation were two completely separate things" (*id*). In his foreword to the book, author and attorney Scott Turow, who served on the Illinois Death Penalty Moratorium Commission, offers a related assurance: "I have never comprehended the arguments of people who think George Ryan's response to the problems of capital punishment was driven by ulterior motives" (p xiii). While Ryan's own legal troubles and his conduct leading up to and culminating in his commutation decision could very well be utterly unrelated, it is unusual for the 237 pages sandwiched between the foreword and the epilogue to ignore the issue, and for Ryan to dismiss it without more vigor and elaboration than he did.

Until I Can Be Sure is a book without plot twists or a surprise ending. Governor Ryan's imposition of a moratorium on executions and his issuing a blanket commutation to 167 individuals on Illinois' death row and pardoning four others are among the most well-known, and in some camps, most celebrated actions taken in the modern history of capital punishment. Ryan's reports about what concerned him regarding the death penalty's administration, particularly the unimaginable horror of executing an innocent person, and how he struggled with and finally arrived at his decision to clear the state's death row, evolve in linear fashion and offer insights into the makings of these momentous personal and political decisions. While additional issues could have been addressed more fully as Ryan chronicled his thinking, the book is a worthwhile read as a first-person account of the path that led the former governor to take his truly consequential actions to focus attention on wrongful convictions and halt future executions in Illinois.

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[3] George H Ryan, *State of Illinois, Report of the Governor's Commission on Capital Punishment* (April 2002) at Chapter 14 and Recommendation 83, online: <http://jthomasniu.org/class/Stuff/PDF/creport.pdf>.

[4] See *United States v Warner*, (2007) 498 F 3d 666, rehearing *en banc* denied, (2007) 506 F 3d 517 (7th Cir), cert denied, (2008) 553 US 1064.