What causes a wrongful conviction? Let us count the ways. Examining what went wrong in the first 250 DNA exonerations was a sobering occupation of mine, and I describe what I found in my book Convicting the Innocent, published in 2011. Still more haunting is the question of how many other wrongful convictions have not been uncovered and will never see the light of day. The New England Law Review has brought together a remarkable group of scholars who have each made leading contributions to the study of wrongful convictions from different disciplines and scholarly perspectives: Simon Cole, Deborah Davis, Gisli H. Gudjonsson, Richard Leo, and Elizabeth Loftus. Each has done groundbreaking work focusing on evidence in criminal investigations and prosecutions, looking beyond just what we know from the wrongful convictions that do come to light. This Symposium returns the focus to research that can tell us more about the causes of wrongful convictions.

Before turning to the contributors, I predictably start where I began: the cases of persons freed by DNA tests. Two cases can introduce and illustrate the broader goals of this Symposium. One case that provides, literally, the most remarkable illustration of how eyewitnesses can make mistakes is that of John Jerome White. A photograph of the live lineup in

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which he was identified is a startling image—and as a result it is readily available online—but its meaning is only apparent once one hears the whole story. The elderly victim had described a well-built man with a round face as the person who had sexually assaulted her. Only one man in the lineup seems to match that description—a man at the far right of the five-person lineup. John Jerome White was standing right in the middle, appearing quite nonchalant, perhaps because he knew he was an innocent man. He was skinny and could not possibly be called "well-built." At trial the victim came down from the witness stand, as the prosecutor asked her to do, and said "that's him," pointing to White. This was a central and powerful moment at the criminal trial. The jury most likely focused on that courtroom identification and not an exhibit with the photograph of the lineup conducted at the police station months before.

However, that photograph of the lineup at the station does not give the whole story. The victim had also been asked earlier to identify White in a prior photo array, even before the live lineup depicted in the photograph. She was not sure at that time, and the detective was concerned that the photo of White did not look like him. She was told before coming to the second live lineup that the police had "caught somebody," implying that the police had him in person this time. White was also the only person repeated from the first to the second procedure. Repeating just one person in a second identification procedure is suggestive—it signals which person the police care about, and it reinforces eyewitness confidence, even when the witness is wrong. She may have remembered his face from the first photo array, so at the live lineup she looked straight ahead and identified John Jerome White, as she later did again in court. At trial, White protested his innocence and testified, "I know I didn't rape that lady." He was convicted and sentenced to life in prison.

Post-conviction DNA testing showed not only that White was innocent but that the man on the right in the live lineup—the rounder-faced individual who best matched the victim’s original description—actually committed the rape that the police had convened this lineup to solve. That man, James Edward Parham, was not a suspect; he just happened to be in

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4 Id. at 80.
5 Id. at 152.
6 Id. at 80, 145.
7 Id.
8 Id. at 244.
jail and was selected as a “filler” to stand in the lineup. He was convicted of raping another woman six years later and eventually pled guilty to the crime for which White was convicted. Parham looked very different from White. Parham was older, was much stockier, and had a round face, just as the victim had initially described. He was not even a good choice for a “filler,” since the others in the lineup were all extremely skinny.

There is no evidence that the police engaged in misconduct; there is no evidence that they encouraged the victim to identify White or did anything that would cause a court to find the identification procedure unconstitutionally suggestive. Yet, having already identified White’s photograph and having been told the detective “had caught somebody,” the victim may have looked for White in the lineup and never carefully looked at anyone else. Those procedures were suggestive but perhaps well-intentioned and designed to reassure the victim and encourage her to come view the second lineup. Eyewitness memory is so malleable and fragile that the procedures were powerful enough that the victim identified White and did not identify the actual culprit who was standing there, just slightly to the right. The haunting photograph of that lineup illustrates the importance of adopting sound identification procedures so that the innocent are not punished and the guilty do not go free. Although some jurisdictions have over the years improved identification procedures based on a now-massive body of social science research, Georgia has not yet done so, although it has supported improved training for law enforcement.

Was the sole cause of White’s wrongful conviction the problems with the identification procedures? Perhaps the police never should have put him in a lineup; perhaps he was targeted as just one of the “usual suspects” even though he did not resemble the victim’s description. Also introduced at his trial was forensic evidence: comparison of White’s hairs with hairs from the crime scene. That forensic evidence was exaggerated—

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10 GARRETT, supra note 1, at 66.

11 Id.


13 Rankin, supra note 9, at C1.

14 Transcript of Record, supra note 3, at 165-66 (indicating that another agent investigating White in an unrelated burglary thought White looked like the composite drawing prepared with the victim).
the Georgia State Crime Laboratory analyst claimed the hairs "show[ed] sufficient similarity to say or conclude that the hairs were of the same origin." There is insufficient research to conclude that any hair characteristics can be uniquely linked to one individual. The testimony was invalid. The prosecutor exaggerated the evidence even further in his closing arguments, telling the jury: "Now, I ask you Ladies and Gentlemen, how could this hair coming from John Jerome White have gotten on that bedsheet if he wasn’t the perpetrator of the crime?" Moreover, the conclusion was, as we now know, wrong. The hairs taken from the crime scene could not have been White’s hair because those very hairs were later the evidence that was DNA tested and used to exonerate him. State law called for a severe sentence in a case with very weak evidence—White was sentenced to life in prison. Even in a case centering on eyewitness identification, there were other contributing factors that led to the misidentification.

Another well-known case that I discuss in the book is that of Earl Washington Jr. The central evidence at his trial was his false confession. As with other false confessions studied, it was the centerpiece of the prosecution’s case. It was alleged that he had repeated key facts that only the killer could have known. Although his trial transcript shows how powerful that false confession was in the case presented to the jury, it did not shed light on other key contributing causes to his wrongful conviction.

One could also look at the defense, the prosecution, judges, and the executive as contributing causes. Earl Washington so willingly repeated those key facts during his interrogation because of his borderline mental retardation. However, Washington’s mental retardation did not come out at trial because the defense lawyer did not hire an expert, and the judge might not have allowed the attorney to present one to the jury even if he had. In part due to the defense’s failure to develop the issue, combined with unfavorable judicial rulings in Virginia, that line of defense made no

15 Id. at 616-17.
16 GARRETT, supra note 1, at 86.
17 Id. at 722.
18 See Know the Cases: John Jerome White, supra note 9.
19 For a comprehensive summary of the arduous path of his case, see MARGARET EDDS, AN EXPENDABLE MAN: THE NEAR-EXECUTION OF EARL WASHINGTON JR. (2003).
21 See Brooke A. Masters, Missteps on Road to Injustice; In Va., Innocent Man Was Nearly Executed, WASH. POST, Dec. 1, 2000, at A1 (stating experts found Washington to be “extremely suggestible”).
22 Transcript of Record, supra note 20, at 132, 151.
appearance at trial.\textsuperscript{23} The defense did little else. Although it was a death penalty case, the guilt phase of the trial was only five hours long. The defense's case was only forty minutes long and consisted of two witnesses: Washington and his sister. The defense lawyer never even claimed that Earl Washington Jr. was an innocent man.\textsuperscript{24}

The forensic evidence, even using traditional serology available at the time, also excluded Earl Washington Jr. The jury never heard about that either, since the defense did not bring it up. Additional forensics were concealed at the time, and law enforcement ordered the crime lab not to compare hairs collected from the crime scene with Washington's.\textsuperscript{25} One of the officers only came forward years later to admit that those key facts were likely not volunteered by Washington, but rather by the police.\textsuperscript{26} Nor did anyone follow up with eyewitnesses who helped police prepare a composite of the person they saw fleeing the murder scene; we will never know if they would have identified Washington or made clear that a man had falsely confessed. Over many years, judges and governors had opportunities to reverse the conviction, including based on a 1993 DNA tests that excluded him, but it was not until 2000 that Earl Washington Jr. was finally freed.\textsuperscript{27} Due to the botched DNA tests that delayed his exoneration, Washington's case generated an audit into the Virginia crime lab,\textsuperscript{28} which in turn helped to generate reform that have made it easier to secure post-conviction DNA testing and relief in Virginia. That single exoneration, although it is absolutely a case highlighting the dangers of false confessions, is also a case about police tunnel vision, inadequate defense lawyering, prosecutorial misconduct, constrained judicial review, the death penalty, and flawed forensics. In any case, there may be big causes and little ones, proximate causes and attenuated causes. There may be factors that precipitated police involvement, caused prosecutorial action and inaction, judicial indifference and deference, defense involvement and

\textsuperscript{23} In contrast, Richard Leo testified at Washington's civil rights trial, brought after the DNA exoneration, regarding how a highly suggestible individual like Washington could easily comply with interrogators. Lisa Provence, Wrong(\textit{ed}) Man, HOOK, May 8-11, 2006, at 8, available at \url{www.readthehook.com/79342/news-wronged-man-earl-washington-awarded-225-million}.

\textsuperscript{24} Transcript of Record, \textit{supra} note 20, at 629-30, 718-20.


\textsuperscript{26} GARRETT, \textit{supra} note 1, at 30.

\textsuperscript{27} See generally \textit{EDDS}, \textit{supra} note 19, at 144-50, 191 (describing the 1993 proceedings regarding the DNA evidence).

inattention, all of which played into the decision of jurors to convict for reasons that they never had to specifically state. Closely examining just one case can bring out those complexities but at the cost of highlighting larger patterns. I chose to focus on the types of evidence that formed the core of the prosecution’s case—the confessions, the eyewitness identifications, the forensics, and the informants—before discussing the trials and the roles that lawyers, judges, and jurors may have played. I did so for exposition but also for analysis—we know something about each of those problems and may be able to draw larger lessons about them.

Appellate judges often express reluctance to revisit trial outcomes based on a cold written record. These cold records are worth reexamining. Each of the types of evidence implicated is commonly used in criminal cases. Countless cases revolve around non-DNA forensics, eyewitness identifications, informants or other cooperating witnesses, and confessions (indeed there is not adequate information about the extent of the prevalence of any type of evidence in criminal investigations and prosecutions). One often hears the skeptical questions: Do wrongful convictions suggest that all types of evidence are flawed? Do they leave us in a position of complete despair about the fallibility of our criminal justice system? The skeptic then suggests that it simply cannot be true that all evidence is flawed. Or, if it is true that so many leading types of evidence are so flawed, then there is nothing to be done about it. Regardless, the actors in our system can be trusted to do their best with the imperfect evidence and the system we live in. Why cast aspersion on the whole system?

That view of the big picture—by one turn despairing, by another turn skeptical, and finally outright cynical—relates to the particular data gathered about causes of these particular wrongful convictions. The unique features of these particular DNA exonerations should not cause us to ignore the big picture that they fit into—and on deeper reflection, one can paint that bigger picture in a still darker light. One often sees a misuse of DNA exoneration statistics. For example, it is typically reported that eyewitness identifications are the leading cause of wrongful convictions. It is true that more than seventy-five percent of the cases I examined involved eyewitness error, and my description of how those errors may have come about is at the heart of the book. Many tens or hundreds of thousands of cases each year depend on eyewitness identification evidence—a very large problem. But all of that said, other causes of

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31 Garrett, supra note 1, at 265.
wrongful convictions may be just as or more pervasive. There were so many eyewitness errors in the DNA exonerations because DNA could be used far more readily in cases involving a sexual assault, which in turn often involve a victim’s identification. However, the vast majority of criminal investigations do not involve DNA. Other types of evidence may contribute to errors in different types of criminal cases. For example, as Sam Gross has developed, perjury by informants plays a dominant role in non-DNA exonerations, which include comparatively more murder cases. (We do not, unfortunately, have a Symposium contributor discussing the role of informant testimony.) Causes of wrongful convictions that look “small” because fewer cases involve confessions, informants, or prosecutorial misconduct, may disguise far larger patterns of error in cases where DNA cannot be used to prove innocence.

These unresolved questions leave us in a far less dark and despairing place, so long as if we can improve the accuracy of evidence and improve criminal investigations. I am honored to be a part of this Symposium gathering scholars who have done some of the most influential work at the intersection of social science and criminal procedure. The Symposium contributors’ work has already heavily contributed to my understanding of the problem; their work is referenced throughout my book, although perhaps too often relegated to footnotes. That was not at all because of its lack of central importance but rather my focus on experiences of DNA exonerees themselves. Now I turn to larger questions raised by the contributors’ work.

I. How Many Wrongful Convictions Are Caused by False Confessions?

Richard Leo and Deborah Davis situate my work on contamination of false confessions in the broader literature on false confessions. This Symposium provides an opportunity to highlight the remarkable contributions of scholars who have been studying the causes of false confessions for some time—Gisli H. Gudjonsson, Richard Leo, Richard Ofshe, Saul Kassin, Steve Drizin, and others. Their work should be carefully examined, and it is starting to have a real impact as jurisdictions adopt requirements to videotape interrogations; as courts consider the problem of contaminated confessions and the problem of false confessions generally; and as investigators reconsider their approaches to conducting

32 Id. at 264-65.
33 See Samuel R. Gross et al., Exonerations in the United States 1989 Through 2003, 95 J. CRIM. L. & CRIMINOLOGY 523, 543-44 (2005); see also Andrew E. Taslitz, Prosecuting the Informant Culture, 109 MICH. L. REV. 1077, 1077 (2011) (stating that the benefits to informants, such as money, immunity, and sentence reductions, may entice informants to lie or exaggerate facts).
interrogations. I particularly recommend to readers the important AP-LS White Paper on false confessions, which provides a fine overview of this important work,34 Richard Leo’s book on police interrogations,35 and Gisli Gudjonsson’s book on the psychology of interrogations and confessions.36

In my research on DNA exoneree cases, I focused on why these false confessions did not look false to judges and jurors. The authors have done crucial work examining why false confessions happen in the first place. They rightly begin with the “black hole of missing evidence.”37 The authors discuss tunnel vision and “selective pursuit and use of evidence.” These are larger issues regarding accuracy and cognitive bias in police investigations, and other salient issues, such as police fixation on seemingly powerful evidence of guilt, perhaps in the form of a confession.38 Since the exoneree interrogations themselves were not recorded, except sometimes in select portions, we simply do not know about:

(1) the methods, techniques, and strategies police use to interrogate, especially lies about evidence, and implied or explicit promises and threats; (2) the length of the interrogation; (3) physical discomfort due to uncomfortable seating or temperature, deprivation of refreshments or toilet facilities; (4) physical abuse or coercion; and (5) demeanor of the interrogator(s).

What else contributed to these false confessions? This is not just a problem of feeding facts or police misconduct. Leo and Davis describe how “even if conducted ‘by the book’ modern interrogations are pervasively suggestive” particularly with regard to “theme development.”39 Other features may make a confession seem more reliable than it should—expressions of distress and remorse, for example. It may only be attorneys, if they are trained and effective, who will recognize “[c]hronic vulnerabilities such as mental illness, youth, or low intelligence” that might account for compliance, suggestibility, and displays of emotion (or lack thereof).40

Will any of this research affect practices of interrogators, who are confident in their abilities to secure true confessions? Leo and Davis note: “each of us has served as an expert witness in a number of cases involving

38 Id.
39 Id.
40 Id.
mentally retarded or mentally ill confessors whose confessions were not
suppressed by judges.”41 Those were cases with lawyers resourceful
even to secure leading experts and where judges allowed experts to
speak.

Gisli H. Gudjonsson has shed light on the question of how many
people falsely confess using a different method: conducting remarkable
large-scale epidemiological studies.42 His empirical work on varying rates
of confessions and false convictions by juveniles in different countries43
suggests a broader problem as to the frequency of false confessions. This
work also supports the unique vulnerability of juveniles (recently
acknowledged by the U.S. Supreme Court44) and how the problem may
change depending on the cultural value placed on confessions, attitudes of
the public and police, and police practices, all of which vary from
jurisdiction to jurisdiction.

Gudjonsson describes the theoretical frameworks for understanding
how false confessions may occur, and he also notes some types of
confessions little studied in literature—including confessions that do not
occur in custody—such as comments to an undercover officer or
volunteered statements in the field—as well as pressures to confess that do
not come from the police—including from, for example, jailhouse
informants).45 Moreover, Gudjonsson describes how “psychologically
manipulative” aspects of the interrogation technique dominant in the
United States—the Reid Technique—may make it “more susceptible to
inducing false confessions” than alternatives.46 His description of the
responses to the problem of false confessions in the United Kingdom
should call into question a more complacent approach in the United States.
Gudjonsson outlines a careful blueprint for reform.47

41 Id.
42 See, e.g., Gisli H. Gudjonsson et al., False Confessions and Individual Differences: The
Importance of Victimization Among Youth, 45 PERSONALITY & INDIVIDUAL DIFFERENCES 801
(2008).
43 See generally Gisli Hannes Gudjonsson et al., Interrogation and False Confessions Among
Adolescents in Seven European Countries: What Background and Psychological Variables Best
Discriminate Between False Confessors and Non-False Confessors?, 15 PSYCHOL. CRIME & L. 711,
713 (2009).
reality” that juveniles should be treated differently because “they ‘are more vulnerable’ [and]
susceptible to . . . outside pressures’ than adults” (quoting Roper v. Simmons, 543 U.S. 551,
569 (2005)));
45 Gisli H. Gudjonsson, False Confessions and Correcting Injustices, 46 New. Eng. L. Rev. 689
(2012).
46 Id.
47 Id.
Interrogations should be videotaped to prevent contamination—a reform that has been increasingly adopted in the United States—and judges should be more aware of the problem of confession contamination. However, Gudjonsson underscores that there is far more to be done. We should rethink the fundamental techniques used to interrogate suspects in the United States; make them more collaborative; improve screening of vulnerable individuals at the police station; educate interrogators on the risks of psychologically coercive interrogation techniques; and improve and test those interviewing techniques, as well as rethink how courts should regulate confession evidence.\textsuperscript{48}

To further highlight the importance of these improvements, Leo and Davis together with Gudjonsson pose a still more disturbing question: Is innocence a risk factor that causes false confessions? Saul Kassin and Rebecca Norwick and others, including Gudjonsson, have more recently examined that question. Their results suggest another type of disturbing link between confession evidence and other evidence in a criminal investigation: Not only might the innocent be more likely to falsely confess,\textsuperscript{49} but once there is a confession, investigators and jurors may think that the other evidence in the case is more reliable, including eyewitness identifications, the next subject of our Symposium.\textsuperscript{50}

II. How Many Wrongful Convictions Are Caused by Eyewitness Misidentifications?

No area of criminal procedure has benefited more from the contributions of so many social scientists than the field of eyewitness memory. Elizabeth Loftus pioneered the study of the problem of eyewitness-identification memory. For an introduction to this now substantial body of research, I recommend the AP-LS White Paper on the subject,\textsuperscript{51} Elizabeth Loftus's co-authored treatise on the subject, recent articles by Gary Wells, Nancy Steblay, and others, the New Jersey Supreme Court decision in \textit{New Jersey v. Henderson}, which provides an overview of

\textsuperscript{48} Id.


\textsuperscript{50} Lisa E. Hasel & Saul Kassin, \textit{On the Presumption of Evidentiary Independence: Can Confessions Corrupt Eyewitness Identifications?}, 20 PSYCHOL. SCI. 1, 4-5 (2009) ("Once informed of a confession, an eyewitness is forever tainted."); see also Saul M. Kassin et al., \textit{Confessions that Corrupt: Evidence from the DNA Exoneration Files}, 23 PSYCHOL. SCI. 41, 43 (2012) ("Confessions are not the only form of evidence persuasive enough to corrupt. Since the first wave of DNA exonerations, it has been clear that eyewitness mistakes constitute the most common problem.").

the research, as well as an important American Judicature Society study released in 2011.52

Elizabeth Loftus and Deborah Davis have written a wonderful essay exploring the scope of the larger problem: where eyewitness errors go unrecognized, the seriousness and nature of the problem go unappreciated, and judges in a special position to regulate the problem fail to engage with the social science research.53 Twin developments since I wrote Convicting the Innocent are both heartening and disheartening. The New Jersey Supreme Court issued its opinion in State v. Henderson, providing a social science framework for the regulation of eyewitness identifications, although its implementation is still untested.54 The U.S. Supreme Court, however, ruled in Perry v. New Hampshire that it would not extend due process regulation of reliability of eyewitness identifications to an identification that was not intentionally arranged by police.55 More constructive, the Perry majority highlighted the role that expert evidence and jury instructions can play given the "fallibility" of eyewitness evidence.56

Thus, Loftus and Davis describe how it is the best of times and the worst of times. First they provide a lucid and careful description of the


54 Henderson, 27 A.3d at 919-22 ("First . . . a defendant has the initial burden of showing some evidence of suggestiveness that could lead to a mistaken identification. . . . Second, the State must then offer proof to show that the proffered eyewitness identification is reliable. . . . Third, the ultimate burden remains on the defendant to prove a very substantial likelihood of irreparable misidentification. . . . Fourth, if after weighing the evidence presented a court finds from the totality of circumstances that defendant has demonstrated a very substantial likelihood of irreparable misidentification, the court should suppress the identification evidence.").


56 Id. at 728-29.
substantial social science research and just how counterintuitive some of the lessons are. Eyewitness memory is not just affected by how long one observed a person or the lighting conditions or stress at the time. The procedures police use to test one’s memory can have a powerful effect. Jurors do not appreciate how malleable the apparent confidence of an eyewitness can be, nor do judges appreciate how the standard tool used to examine the reliability of a witness—cross-examination—is highly ineffective, where the very memory of an eyewitness may have been contaminated or even altered by police procedures in a way that the eyewitness may have been completely unaware of. Indeed, suggestion will make the eyewitness more confident and more impermeable to cross-examination. Eyewitnesses are totally unlike witnesses whose credibility can be impeached on the stand.

Loftus and Davis’s account of the impact of social networking on criminal investigations was particularly fascinating. The memory of an eyewitness may be contaminated by viewing a person’s image on a social networking website—or a sex offender registry in which the state disseminates the images. Entirely new sources of eyewitness memory contamination now exist and have not yet been accounted for by the judicial system. Those sources do not necessarily involve police action, making the Supreme Court’s latest intervention in the area more relevant than it appears.

In Perry v. New Hampshire, the Court was not only unwilling to rethink the Manson v. Brathwaite criteria for admissibility of eyewitness identification evidence, but it was unwilling to engage the merits of those criteria. The case involved what the Court deemed an identification not “arranged” by police, although police certainly told a suspect to remain at the scene under suggestive circumstances. The Court’s most disturbing suggestion was that eyewitness evidence is no different than other evidence. Most promising were suggestions that given the “fallibility” of eyewitness evidence, safeguards such as expert testimony and careful jury instructions may better educate the jury. Hope lies with local jurisdictions and states that face the problem firsthand because it primarily harms police when unsound lineup procedures cause eyewitnesses to pick out innocent fillers, damaging the witnesses’ credibility.

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57 Davis & Loftus, supra note 53.
58 Id.
59 Id.
60 Id.
61 Id.
Although we do not know how many wrongful convictions result from eyewitness errors, we do know that in actual police lineups, eyewitnesses choose known innocent fillers an average of more than thirty percent of the time according to available archival and field studies. How often witnesses select innocent individuals who are suspects, not fillers, and how often those cases proceed to a conviction, is not known. The DNA exonerations, however, provide disturbing examples of the grave consequences of unsound eyewitness identification procedures. Improving lineups and regulation of eyewitness testimony will both dramatically improve the evidence that law enforcement relies upon and prevent convictions of the innocent.

III. How Many Wrongful Convictions Are Caused by Flawed Forensic Evidence?

The systemic problems with the use of forensics are a subject far beyond the chapter in my book; the National Academy of Sciences’ 2009 magisterial report comprehensively discussed a wide range of problems. For decades, scholars have examined the reliability and validity of various forensic techniques. More recently, however, scholars have focused more on how forensic analysts testify as to their conclusions.

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54 See Wells & Quinlivan, supra note 52, at 6; see also Report of the Special Master at 15-16, State v. Henderson, 27 A.3d 872 (N.J. 2011) (providing an overview of error rates found in archival studies, together with results from field studies and laboratory experiments).


56 I note that reliability and validity are not used interchangeably in law; Daubert, for example, made the difference clear. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 590 n.9 (1993). Nor does validity subsume the problem of reliability. I speak of validity of conclusions—whether they are based on sound inferences or evidence supporting the claim—which as Cole notes is a use in logic (although also used in science, where it often arises as to internal and external validity of conclusions reached in an experiment, for example). A bare conclusion cannot be “reliable” or not. A conclusion may be based, however, on an underlying method, which itself may have problems with reliability (ability to produce consistent results) or validity. A detailed discussion of this was not included in the book chapter but was reserved for the longer law review article I wrote with Peter Neufeld. See generally Garrett & Neufeld, supra note 25. There, we did not discuss reliability of techniques, nor did I do so in the book chapter. Instead I deferred to the NAS Report’s conclusion that, as Cole describes as well, an entire family of forensic techniques lacks sufficient research to adequately support or determine its reliability. GARRETT, supra note 1, at 90.

Simon Cole has led scholarly efforts to describe ways that fingerprint conclusions could be presented in a more accurate manner and has written, among his important work, a fascinating book on the history of fingerprinting. Cole highlights difficulties with approaching the problem, as I did, from the perspective of forensics used in cases of people later exonerated by DNA testing. On the one hand, they are a fascinating and unique subject of study. The cases involve a lot of forensics presented at a trial, all of which later had DNA-testable forensics. While we know something went wrong in the cases—these were innocent convictions after all—it does not necessarily follow that the forensics played a significant role. The forensics could have been presented and conducted accurately given the limitations of the technology available at the time (typically the 1980s). Unfortunately, that was not the case, and more often than not, the forensics were presented in a manner that was invalid or unscientific. Even so, real cases are complex. The role forensics play in a criminal trial is contextual, and while sometimes it may be obvious that flawed forensics were central or presented in a seemingly powerful way, the final impact on the jurors is unknowable. And what of cases (perhaps like Earl Washington Jr.’s), where no forensics were presented, but should have been, because the forensics could have excluded the defendant?

Simon Cole carefully (and charitably) describes a truly odd defense of the role forensics can play in convictions of the innocent that singled out the Ray Krone case. Cole points out that it was no vindication of the role forensics may play in wrongful convictions that the FBI analyst who initially looked at the bite mark evidence in the case concluded that it could not have come from Krone’s teeth. That expert conclusion was not provided to the defense—a separate problem of prosecutorial misconduct and expert shopping. But two other experts readily concluded that the marks could only have come from Krone’s teeth, testifying to that effect with great certainty at trial. One was a leading forensic dentist at the time (who also testified in another trial of an innocent man later freed by DNA testing). The bite mark evidence was “critical” to the case, as the Arizona Supreme Court later concluded. It was presented in a highly overstated way, and both experts were wrong; we now know that Krone was not the so-called “Snaggletooth killer.” In fact, DNA later inculpated another man


See GARRETT, supra note 1, at 90, 172, 175.

State v. Krone, 897 P.2d 621, 624 (Ariz. 1995) (“The bite marks on the victim were critical to the State’s case. Without them, there likely would have been no jury submissible case against Krone.”).
who did not have snaggled teeth at all. Still more disturbing was that even once DNA testing had excluded Krone, at a second trial at which the defense had experts to counter the bite mark evidence, he was convicted again. However, he was eventually freed a second time after additional DNA tests were done several years later. The case suggests that overstated forensics may play such a contaminating role, that jurors (and prosecutors and law enforcement) may credit it above exculpatory conclusions presented by others, including other forensic scientists.

Our lack of knowledge of the role forensics plays in criminal investigations is itself a problem, and Cole eloquently describes how forensics can instead be both an exposé and protector against wrongful convictions. Cole argues that we could know far more. I suggest collection of evidence on near-miss cases, such as those where DNA testing clears a suspect early on in an investigation—one might then see how police can successfully correct errors before there is any wrongful conviction. Cole similarly points out that when errors do come to light, there is often no audit, no follow-up, and no information about how forensics could be improved. Joseph Peterson has recently conducted a fascinating study of how forensics are used by law enforcement in investigations. We know far too little about what cases forensics play the most important role in, whether we collect or use forensics often enough, and how resources should be prioritized to produce the most accurate and just results. More importantly, basic research needs to be done to establish the reliability and validity of the array of forensics methods that lack an adequate scientific foundation—and more must be done to provide a sound foundation for its use in criminal cases and in the courtroom.

IV. How Many Wrongful Convictions Are There?

Each of the contributors has cited to work in different academic disciplines that sheds light on the question of how serious a wrongful conviction problem we have in America. That question has no known or knowable answer. We can only examine the wrongful convictions that we know about. It is often sheer happenstance that a particular case came to light; the prisoner kept asking for a DNA test, there was actually available evidence to test, prosecutors agreed to the test, it showed innocence, and a court granted relief. Non-DNA cases may follow an even more difficult road to exoneration. As Sam Gross and Barbara O'Brien put it: “The main


72 Id.

reason that we know so little about false convictions is that, by definition, they are hidden from view.”

There is not good data about convictions in the United States, much less exonerations, and much less wrongful convictions that never resulted in exoneration because evidence of innocence was never uncovered.

What we do know about wrongful convictions is not grounds for terrific optimism. To get at just how many cases might fall through the cracks in our system, legal scholars have provided empirical estimates based on information from known wrongful convictions. We know of large percentages of people cleared by DNA tests done before any conviction. We know of large numbers of DNA exonerations in jurisdictions that happened to preserve crime scene evidence in the 1980s and that have conducted retesting efforts. Even in those jurisdictions, DNA testing has sometimes been haphazard; we could be doing more DNA tests in cases where the results might clear the innocent. Despite sumptuous federal and state investment in ever-expanding programs of DNA testing to add profiles to DNA databanks, post-conviction DNA tests have been provided far more stingily.

Other scholars, including contributors to this Symposium, focus on error concerning particular types of evidence. For example, we know that high percentages of eyewitnesses make errors. They commonly pick fillers in lineups, and fortunately that type of error usually does not result in a wrongful conviction. They make errors in experimental settings that suggest picking innocent suspects is an omnipresent danger. While best practices such as blind lineups can reduce errors, most jurisdictions still do not adopt them. Surveys regarding false confessions provide one type of evidence of their incidence. Most jurisdictions do not record or document interrogations in a way that could detect contamination or coercion should it occur. My work on judges’ abilities to detect innocence post-conviction suggests another flaw in our system’s ability to screen wrongful convictions. The NAS Report and scholarship on unreliable and invalid

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76 See id. at 773 (stating that availability of DNA will result in exoneration of suspects before trial).

77 See Frank Green, Case Raises Question of Effort, RICH.-TIMES DISPATCH, Feb. 5, 2012, at A1, http://www2.timesdispatch.com/news/2012/feb/05/tdmain01-case-raises-questions-of-effort-ar-1665060/ (noting that at least seventy-six felons have been excluded in a DNA retesting project).

78 See GARRETT, supra note 1, at 193; Garrett & Neufeld, supra note 25, at 107-08.
forensic disciplines suggests still another pathway to error. Persistent underfunded and inadequate defense lawyering, revelations of prosecutorial misconduct, examples of police tunnel vision and misconduct, and studies of juror behavior all suggest other sources for error. The most serious cases, like murder and capital murder, may generate great pressures to convict and to falsely convict. Yet there may be far more minor cases where innocent defendants plead guilty because they cannot prove their innocence, and they would serve more time in detention than if they took the plea.

This Symposium highlights contributions of some of the superb scholars across disciplines who have dedicated themselves to studying the causes of wrongful convictions. Fortunately, scholars, lawyers, judges, and policymakers increasingly join those ranks and grapple with causes of wrongful convictions. This Symposium is an opportunity to turn from experiences of DNA exonerees back to the crucial academic work that has shed so much light on what causes error and what can be done to prevent it. There is a path forward. We live in an exciting time where it is possible to meaningfully improve the accuracy of key types of evidence commonly used in criminal cases. Developments in just the year since my book came out give cause for confidence in our criminal justice system’s ability to slowly but hopefully reorient itself. With a criminal justice system that incarcerates on a scale that dwarfs that of any other country, we have a problem worth our best effort.

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79 A Path Forward, supra note 65, at 4-6 (describing the factors influencing the forensic science system, such as the availability of skilled and well-trained personnel, funding, and oversight).

80 See supra Part I (describing the causes of false confessions).
