Deoxyribonucleic acid (DNA) testing enables scientists to determine the genetic source of biological material with unparalleled accuracy. Since its development in the 1980s, this technology has affected our society in countless ways; it has helped answer questions of paternity, pinpoint hereditary diseases, and create novel biological products. It has also altered the course of criminal law through its capacity to identify biological evidence left by a culprit at a crime scene. DNA is a tool to catch the “bad guy” and free the “wrong guy.”

That second attribute of DNA in the criminal justice context – the potential to vindicate the innocent – is the focus of this book. The first use of DNA technology to free an innocent defendant in the United States occurred in 1989, yet scholars are split on which of two cases best deserves to be called the nation’s inaugural DNA exoneration. On August 14, 1989, an Illinois state court overturned Gary Dotson’s 1979 rape conviction after DNA tests performed on the biological evidence retained from the rape kit excluded him as the perpetrator. This event marked the first time that a court relied directly on DNA results to free a wrongfully convicted defendant. Earlier that year, DNA played a key, if indirect, role in reversing David Vasquez’s 1985 rape-murder conviction in Virginia. The results of DNA tests on hairs preserved from the crime scene in that case proved inconclusive. But tests conducted on biological evidence related to other, strikingly similar crimes identified a different man as the perpetrator in those incidents. Law enforcement authorities became convinced the same man had committed all of these acts and that Vasquez did not commit the crime for which he was convicted. The prosecution then joined the defense in asking the Governor of Virginia to pardon Vasquez. That request was granted on January 4, 1989.

Part of the debate over whether the Dotson or Vasquez case counts as the first DNA exoneration involves terminology. What is a post-conviction “DNA exoneration”? It could be construed broadly: any case in which DNA
results somehow assist a criminal defendant in overturning their conviction (e.g., Vasquez) and clearing their name. Or one could interpret the phrase more stringently: cases where exculpatory DNA test results directly convince a court or executive branch official to reverse a defendant’s conviction on the basis of innocence (e.g., Dotson). The definition could even fall in the middle, say, when DNA significantly helps in toppling a conviction.

This book takes no universal stance on the most appropriate and precise definition of exoneration. It is fair to say that when the contributors to this volume use the term “exoneration,” they are referring to a criminal conviction overturned to a large extent on the grounds of actual innocence, namely evidence the defendant did not commit the crime. Yet scholars differ in their views about how much evidence is required to claim a particular case is one of actual innocence, how emphatic a court or executive official must be in declaring the reversal as one predicated on innocence, and even how official the declaration must be. Some cases leave no doubt they qualify as exonerations; the paradigmatic example is a judicial decision formally proclaiming the defendant’s innocence. Others are more difficult to classify. Does a judge’s decision to order a new trial because there is newly discovered DNA evidence that calls into question the original result, followed by a prosecutor’s decision not to pursue a retrial, constitute an exoneration? What if the prosecutor and the defense team disagree over how to characterize the case?

Likewise, what about the phrase “wrongful conviction”? The plain meaning and common usage of the term cover the conviction of actually innocent defendants. But what about other flawed convictions, including those secured because of grave procedural or constitutional errors where the defendant might be factually guilty? Are they not wrongful too? And how should we categorize cases of so-called “legal innocence” where guilt remains uncertain and insufficient evidence exists to prove it beyond a reasonable doubt? For the most part, the contributors to this volume use the phrase “wrongful conviction” narrowly as a synonym for the conviction of the actually innocent. Both the spirit and vision of the book are consistent with this treatment. Some contributors offer slightly different interpretations; others neglect to define it at all.

The ambiguity and uncertainty of the terms “exoneration” and “wrongful conviction” in the ensuing chapters mirror the ambiguity and uncertainty of those terms throughout the literature. Questions about how to classify a case as an exoneration, or to brand a conviction as wrongful, could comprise an entire book. This is not that book.

Instead, this is a book about what we have learned from the use of DNA technology to remedy individual cases and reform the criminal justice system over the past twenty-five years. Putting aside the debate over definitions, it seems

Talking about a Revolution
clear that 1989 is the year of birth for the DNA revolution in the United States. Before the emergence of DNA testing, the issue of wrongful convictions was largely a matter of speculation. Without scientific proof of a defendant’s innocence, even notorious miscarriages of justice could be subject to second-guessing by skeptics. But DNA added scientific certainty to the scholar’s theoretical claim; for the first time scholars could point definitively to cases where actually innocent defendants had been convicted. According to the Innocence Project in New York City, DNA evidence contributed to the reversal of more than 300 wrongful convictions in the United States between 1989 and 2014. Because biological evidence is seldom available in criminal cases, DNA exonerations were soon perceived as the tip of the iceberg: a smattering of errors now exposed that suggested the presence of a much bigger problem beneath the surface.

The twenty-fifth anniversary of the Dotson and Vasquez cases provided the ideal opportunity to take stock of the DNA era, and prompted me to host a conference on this topic at my home institution of Northeastern University School of Law in Boston. This book, which has its origins in papers that I solicited for that conference, homes in on two critical questions: (1) what have we learned from a quarter century of documented DNA exonerations, and (2) given what we have learned, how can we prevent wrongful convictions in the years ahead? It addresses those two questions through the lens of a series of essays authored by more than a dozen of the nation’s leading scholars and advocates in the field.

At the outset, an introductory chapter (Chapter 2) by Michael Meltsner offers the perspective of a leading civil rights lawyer who engaged in test litigation to reform the criminal justice system in the mid-twentieth century. With emphasis on the efforts of the NAACP Legal Defense Fund, Meltsner canvases the conventional ways that claims of innocence were recognized (or not recognized), asserted, and resolved. In the process, Meltsner touches on the question of whether the DNA era is more evolution than revolution. With this background in place, the volume then turns to the two vital questions that lie at its heart.

PART I: A LOOK BACK: WHAT HAVE WE LEARNED FROM TWENTY-FIVE YEARS OF DNA EXONERATIONS?

The Big Picture

Part I of the book evaluates what we have discovered over the past quarter century. The opening chapter (Chapter 3), by Brandon L. Garrett, examines
the dataset of DNA exonerations as a whole, including updated information reflecting the more than sixty DNA exonerations accumulated since Garrett wrote his renowned book *Convicting the Innocent* in 2011. In many respects, the patterns remain the same. Similarly high percentages of cases contain eyewitness misidentifications and faulty forensics. More of the recent cases involve DNA test results that were either downplayed (although they excluded the defendant) or botched. But a second wave of false confessions raised somewhat distinct issues from the earlier exonerations involving false confessions. New death row exonerations highlight the role of false confessions as well, and the judicial and prosecutorial reluctance to revisit a case with a confession. All of these data show that, although DNA exonerations may fade with time, the underlying sources of error remain.

Next, Richard A. Leo discusses the history of innocence scholarship from the 1930s to the present (Chapter 4). Most scholars and advocates – including DNA pioneers Barry Scheck and Peter Neufeld – have constructed a narrow definition of innocence, framing it in terms of “actual” or “factual” innocence. This construction was crucial to the DNA revolution. As Leo notes, however, conceptions of wrongful conviction have changed in recent years, as some innocence scholars and critics alike have sought to expand the meaning of wrongful conviction to include erasures of convictions, due process errors, and other types of injustice more broadly. Leo reviews these debates, highlighting the analytic costs, benefits, and trade-offs involved with different visions of wrongful conviction. Ultimately, in Leo’s view, if innocence scholars’ vision of wrongful conviction becomes too expansive, imprecise, or removed from factual innocence, they run the risk of being perceived as engaging in what sociologists have called “domain expansion” – trying to enlarge the domain of a social problem in order to attract more resources or attention – and thus undermining the source of their unique moral claims in academic and policy debates. But if the vision of wrongful conviction is too limited, then many legitimate cases fall outside its net and deprive scholars of a prime opportunity to evaluate the full extent of the problem.

**A Closer Look at Specific Lessons**

The next three chapters all look at how the lessons learned from the DNA era have affected our understanding of specific areas of criminal justice. The nation’s foremost scholar on the topic of criminal informants, Alexandra Natapoff, explores what the DNA revolution has taught us – or not taught us – about the dangers inherent in plea bargaining (Chapter 5). Natapoff acknowledges that the advent of DNA testing and other forensic advances
have blown the criminal justice system wide open, demonstrating that on occasion we wrongfully convict the innocent based on evidentiary inaccuracies: weak science, mistaken eyewitness identification, and false confessions. And yet at the same time, the focus on DNA (and forensics more generally) has obscured another massive source of wrongful conviction: the plea bargaining process itself. More than 90 percent of all U.S. convictions are the result of a deal, not a trial, in which accuracy is a commodity that often gets lost in negotiation. At some point, Natapoff insists, the master list of wrongful conviction sources should include the criminal deal – whether it is the deal cut by a jailhouse snitch or an innocent defendant who pleads guilty to avoid a longer sentence. Only then will the true scope of the wrongful conviction problem be apparent.

Following Natapoff’s offering, journalist and innocence advocate Rob Warden examines how the DNA revolution has illuminated the roles played by false trial testimony in producing wrongful convictions and by recantations of those statements in overturning them (Chapter 6). The dataset of DNA exonerations has shattered many of the myths surrounding recantations, specifically, that someone who claims to have lied at trial should not be trusted in coming forward now. Largely for that reason, courts and observers historically dismissed recantations as unreliable. But the DNA cases prove that many recantations are credible and should be taken seriously. In fact, the effort to exonerate Gary Dotson in Illinois gained traction after the alleged victim recanted her trial testimony. After showing the significance of recantation evidence in wrongful conviction cases, Warden addresses a disturbing development from Chicago where prosecutors have pursued perjury charges against recanting witnesses based on their original lies. This icy blast of prosecutorial wind could have a chilling effect on the willingness of recalcitrant witnesses to ever come clean, and Warden offers some suggestions about how to prevent it from sweeping across the nation.

Next, Jacqueline McMurtrie looks at a key lesson learned by the litigation of DNA exoneration cases since 1989: that law school clinics are vital to the Innocence Movement. Most innocence organizations focus upon providing direct pro bono litigation and investigation services to individuals seeking to prove their innocence of crimes for which they have been convicted. A substantial majority of those organizations are housed within, or affiliated with, law schools. As McMurtrie shows, students have helped reverse wrongful convictions by investigating and litigating cases under the supervision of faculty as part of “innocence clinics” at law schools. This direct client representation model has numerous benefits, as reflected by McMurtrie’s own experience running the Innocence Project Northwest (IPNW) at the
University of Washington. Her clinic has freed fourteen innocent people through the use of DNA and non-DNA evidence. But McMurtrie contends this model does not go far enough. The innocence agenda also includes working to redress the causes of wrongful conviction, thereby preventing future miscarriages of justice. In order to promote criminal justice reform measures, McMurtrie touts the virtues of “legislative advocacy” clinics to complement the traditional direct representation innocence clinic and to push for statewide policy reforms. IPNW formed just such a clinic in 2011. It is the only project in the country with two separate clinics; one devoted to client representation and the other committed to accomplishing innocence-related policy reforms. In Chapter 7, McMurtrie discusses how the legislative advocacy clinic has worked symbiotically, and effectively, as a companion to the original, client-based course.

The DNA Era and Changing Views of the Death Penalty

In the next two chapters, some of the nation’s leading capital punishment researchers set their keen sights on the contemporary death penalty debate and its relationship to the DNA revolution. In Chapter 8, Michael L. Radelet acknowledges that the publicity surrounding the exoneration of many death row inmates through post-conviction DNA testing over the past twenty-five years has contributed to the decline in support for capital punishment in the United States. But he notes that the “innocence card” is just one among many being played by activists in the complex, multifaceted deck of the current death penalty discourse. Concerns about racial discrimination and financial costs, in Radelet’s view, may be equally (if not more) powerful pressure points in the discussion about whether to abandon the ultimate penalty.

In a chapter that nicely complements Radelet’s piece, a trio of top-notch scholars – Robert J. Smith, G. Ben Cohen, and Zoë Robinson – appraise the impact of the DNA revolution on the Supreme Court’s Eighth Amendment jurisprudence in regard to the death penalty. They tackle the foundational question: should innocence matter in determining whether capital punishment violates the prohibition against “cruel and unusual punishment”? Even more, does it matter to the Court? After canvassing recent cases with compelling evidence that states have executed innocent people, Chapter 9 traces the development of the Court’s doctrine in this area, showing a link between the rising attention on innocence and Justice Breyer’s bold call for abolition in his 2015 dissent in Glossip v. Gross.7 They conclude that innocence has emerged as an increasingly key factor in how the Supreme Court views the penalty phase of capital cases.
PART II: A GLANCE AHEAD: WHAT CAN BE DONE TO AVOID WRONGFUL CONVICTIONS IN THE FUTURE?

The goal of Part I of the book is retrospective: to reflect on a quarter century of DNA exonerations and gauge what we have discovered. Part II takes a prospective approach. Considering what we know, how can we change the criminal justice system to safeguard against future errors?

Substantive Reform

The first three chapters in Part II explore substantive areas of the criminal justice system that remain problematic – and that are worthy of reform. Keith A. Findley leads off with a chapter that looks at the “next wave” of actual innocence cases now that DNA has landed ashore and brought wrongful convictions to the surface. In his view, DNA exonerations will decline over time as pretrial testing becomes commonplace and old cases with unexamined biological evidence become fewer and farther between. Even more, DNA simply does not exist in most cases; focusing only on clear DNA exonerations overlooks and hides the vast majority of false convictions. The next generation of innocence cases, then, will have to embrace a broader definition of innocence: one that recognizes innocence where the bases for prosecution have been undermined, but ground truth is fundamentally ambiguous or inaccessible. Science-dependent prosecutions – most notably, arson and Shaken Baby Syndrome cases – exemplify this new claim of innocence. In both types of cases, the prosecution rests almost entirely upon scientific or expert opinions. But the science that the system has relied upon has subsequently been either disproved or undermined in significant ways. Chapter 10 analyzes both examples (1) to demonstrate the ways that law can depend only uncomfortably and perilously on science for proof of guilt and (2) to show that when the law does depend on science so extensively, it must expand its notion of innocence to incorporate shifting understandings of the underlying science.

George C. Thomas III then scrutinizes an institutional barrier to the correction of wrongful convictions: prosecutors themselves. As Thomas points out, many prosecutors view “winning” cases as more important than unmasking fundamental errors, and therefore provide a meager last line of defense to prevent injustices. Nowhere is this phenomenon more visible than in the failure to turn over potentially exculpatory evidence pursuant to the seminal Supreme Court case of Brady v. Maryland. Indeed, Thomas analyzes a random sample of cases from the National Registry of Exonerations and...
concludes that prosecutorial misconduct, especially *Brady* missteps, comprises a major factor in the conviction of the innocent in non-DNA as well as DNA cases. According to Thomas, part of the failure is our system for appointing or electing prosecutors. When political variables drive selection of these ministers of justice, we should not be surprised that they view winning cases as extremely important. Many European countries, by contrast, impose merit-based requirements on which individuals can be candidates for jobs as prosecutors and then require rigorous training of at least two years before candidates become full-fledged prosecutors. Chapter 11 contends that American jurisdictions should follow the Europeans and, by statute, impose training requirements for prosecutors. The training could be broad-based, making them more effective prosecutors in general, but a large component would seek to enhance their awareness of the risks to innocent defendants. That would improve the last line of defense for innocent persons caught up in the American criminal justice system.

While Thomas looks at the future of the prosecutorial function, Chapter 12 by Adele Bernhard considers the role played by defense counsel in causing wrongful convictions and how courts might boost defense attorney performance. Bernhard discusses how the publicity surrounding DNA exonerations has influenced the willingness of appellate courts to overturn cases on ineffective assistance of defense counsel (IAC) grounds, but not to the extent that is warranted. Bernhard’s empirical research reveals that, as the Innocence Movement has matured, courts have reversed cases on the basis of IAC with greater frequency when it comes to failures during the sentencing phase, especially in capital cases. This trend, however, has not surfaced with respect to IAC claims stemming from the investigative or trial phase of the case – precisely the stage where woeful lawyering is most likely to contribute to a miscarriage of justice. In Bernhard’s eyes, even if judges become more circumspect in assessing IAC claims, the doctrinal test for ineffectiveness under *Strickland* v. *Washington* remains too subjective and too hard to satisfy; it allows even egregious pretrial and trial missteps to go uncorrected if an appellate court believes the deficient performance did not affect the outcome. Bernhard urges jurisdictions to adopt a standards-based approach in gauging how an attorney fared in a particular case, replete with concrete checklists that would allow for a more objective evaluation.

Procedural Changes

Changing particular substantive aspects of the American criminal justice system could reduce wrongful convictions in the future. But without allowing for
procedural opportunities to take aim at those substantive concerns – at Shaken Baby Syndrome cases, at prosecutorial misconduct, at IAC claims – then successes will be infrequent in the post-DNA era. With that in mind, the next five chapters try to harness the power of procedure and offer ideas about how to improve the mechanisms through which innocence claims are litigated.

In Chapter 13, Stephanie Roberts Hartung makes the case for the creation of a distinct “innocence track” in our federal courts to litigate matters where the ground truth about guilt is called into question. Just 14 percent of the first 250 DNA exonerations involved defendants who succeeded in reversing their convictions through appellate or post-conviction procedures. This figure is nearly identical to the reversal rate in a control group of (presumably guilty) convicted prisoners. While innocence advocates have made great strides in altering pretrial and trial procedures to minimize the impact of the underlying causes of wrongful convictions, including modifying eyewitness identification and police interrogation procedures, these reforms offer cold comfort to the innocent prisoners whose trials occurred long before these reforms took effect. According to Hartung, the time has come to implement similar reforms in the post-conviction context, most notably by recalibrating the balance between finality and fairness to produce a mechanism to pursue freestanding innocence claims in the federal system.

Paul G. Cassell’s chapter is a fine companion to that of Hartung. Cassell also believes that innocence claims should be privileged in the post-conviction context. But he takes his argument much further, contending that scholars must acknowledge the trade-offs inherent in any reform measures and account for their impact on prosecuting factually guilty defendants. In Cassell’s eyes, preventing wrongful conviction of the innocent is a fundamental priority of our criminal justice system, yet not the system’s only goal. Efforts to minimize conviction of the innocent should not undermine the overarching need to convict the guilty, keep dangerous criminals behind bars, and avoid the suffering of future crime victims. Cassell asserts that some reforms are true “win-win” measures that simultaneously reduce the number of innocents wrongfully convicted while increasing (or at least not decreasing) the number of violent criminals sent to prison. Chapter 14 lays out a few such possibilities, including (1) confining habeas relief to those with claims of factual innocence, (2) replacing the exclusionary rule with a civil damage remedy, (3) moving confession law away from 
Miranda procedures, and (4) requiring defense attorneys to explore their clients’ guilt or innocence.

In Chapter 15, Margaret Burnham advocates for a particular type of procedural mechanism to exonerate wrongfully convicted defendants posthumously, especially in racially charged cases from the Deep South. The dataset of DNA
More than just one case of a person cleared of a crime after his death – Timothy Cole, who died in a Texas prison ten years before DNA testing established his innocence of rape. The paltry number of posthumous exonerations is tragic given mounting evidence of pervasive historical injustices in the United States. Recent studies have examined the failures of the criminal justice systems operating in the states of the Deep South during the Jim Crow years between 1930 and 1965. Numerous African-Americans were wrongfully convicted and sentenced to severe terms of incarceration; many were executed by the state based on flimsy evidence. Under current legal norms there is no adequate judicial or executive remedy to redress this history, and undoubtedly no remaining biological material suitable for DNA testing. Posthumous exonerations are disfavored by courts and rarely available in executive pardon proceedings. Chapter 15 looks abroad to countries that have confronted past miscarriages of justice and contemplates possible avenues for relief in the United States for long-past wrongful convictions, particularly those that resulted in execution.

Sandra Guerra Thompson and Robert Wicoff focus not on procedures aimed at correcting individual injustices, but rather on creating procedures to address the problems caused by systemic irregularities that affect scores of convicted people. Such irregularities often involve widespread crime lab fraud or flaws in certain forensic scientific tests. As Thompson and Wicoff point out, there are usually no established procedures to ensure that affected defendants have the resources to adequately investigate cases in which possible error is detected on a large scale. Convicted persons may receive notices from the prosecuting authority about the potential problem in their cases, but they do not have a right to counsel to investigate whether the error affected their case and could form the basis of a post-conviction habeas application. Nor is it true that most lawyers can effectively perform the review function. Ideally, the review should be undertaken by a defense attorney familiar with habeas law, assisted by an investigator. The law of habeas corpus is beyond the experience of most criminal defense attorneys, much less that of pro se applicants. Chapter 16 explores these issues in detail, and proposes that states pass laws providing for the assignment of post-conviction counsel in such instances. In particular, Thompson and Wicoff recommend the assignment of a centralized organization to handle many of these cases and develop expertise on the topic.

Justin Marceau and Steven Wise examine another glaring hole in the criminal justice system’s post-conviction regime: the absence of a clear mechanism to free nonhuman animals. In Chapter 17, Marceau and Wise discuss how animal control statutes not infrequently punish, and sometimes execute, dangerous animals without proper procedures to overturn those penalties.