


June 2016

Post-Conviction Access to DNA Testing: Why Massachusetts's 278A Statute Should Be the Model for the Future

Theodore Tibbits

Boston College Law School, theodore.tibbits@bc.edu

Follow this and additional works at: <http://lawdigitalcommons.bc.edu/jlsj>

 Part of the [Criminal Law Commons](#), and the [Criminal Procedure Commons](#)

Recommended Citation

Theodore Tibbits, *Post-Conviction Access to DNA Testing: Why Massachusetts's 278A Statute Should Be the Model for the Future*, 36 B.C.J.L. & Soc. Just. 355 (2016), <http://lawdigitalcommons.bc.edu/jlsj/vol36/iss2/6>

This Note is brought to you for free and open access by the Law Journals at Digital Commons @ Boston College Law School. It has been accepted for inclusion in Boston College Journal of Law & Social Justice by an authorized administrator of Digital Commons @ Boston College Law School. For more information, please contact nick.szydowski@bc.edu.

POST-CONVICTION ACCESS TO DNA TESTING: WHY MASSACHUSETTS'S 278A STATUTE SHOULD BE THE MODEL FOR THE FUTURE

THEODORE TIBBITTS*

Abstract: With the recent rise of the Innocence Movement, many traditional police tools for evaluating forensic evidence have been called into question. Increasingly, science has proven that certain outdated forensic analyses are unreliable or invalid, shedding light on how these faulty analyses have contributed to numerous unjust convictions of innocent people. Deoxyribonucleic acid (DNA) technology, a subset of forensic analysis, has performed the counterpoint to this trend by exonerating many wrongfully convicted individuals. Access to DNA testing, however, is inconsistent from state to state. Massachusetts's new 278A motion is a strong model for the correct implementation of a statute providing post-conviction access to DNA testing. States such as Pennsylvania, which has a plethora of barriers to post-conviction relief through DNA testing, should look to Massachusetts's 278A statute as an example on which to base updated post-conviction statutes in order to provide the necessary justice to those who have been wrongfully convicted.

INTRODUCTION

In midsummer 1977, the police of Homewood, Illinois encountered a dismal scene.¹ A young woman with clothes and hair in a state of disarray was walking by the side of the road, claiming to have been raped.² She was rushed to a hospital, where doctors combed her pubic hair and swabbed her vaginal area for samples.³ Her underwear was packaged and saved as possible evidence.⁴ The young woman was also asked to help with the formation of a composite drawing of her attacker and identify his photo from a collection of mug shots.⁵ She chose the mug shot of Gary Dotson.⁶ On this evidence, Gary Dotson was charged and

* Managing Editor, BOSTON COLLEGE JOURNAL OF LAW & SOCIAL JUSTICE, 2014–2015.

¹ BRANDON L. GARRETT, CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG 84 (2011).

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *See id.* She would later identify him in a line-up as well. *Id.*

brought to trial, and was ultimately sentenced to twenty-five to fifty years in prison.⁷

Aside from the alleged victim, the only witness that the State of Illinois brought against Dotson at trial was a forensic analyst.⁸ Unfortunately for Dotson, the analyst's testimony was rife with inaccuracies and easily misinterpreted statements.⁹ For instance, he stated that he had found several pubic hairs on the victim that did not belong to her, but were "'microscopically consistent' with Dotson" and that could have come from "the same source," implying they both came from Dotson.¹⁰ The analyst made no statements clarifying how likely such a match was, nor could he have, as there is no scientific definition or standard of what "consistent" means in hair microscopy.¹¹

The analyst also utilized a second technique known as ABO blood-typing, or serology, in an attempt to link Dotson to the crime.¹² Unlike hair microscopy, serology is reliable and more definitive, allowing a technician or analyst to scientifically surmise whether an individual is included as a possible source of a sample.¹³ This technique is used in attempts to identify individuals based on whether their blood or other bodily fluids contain one of the markers—A, B, both (type AB), or none (type O)—and thereby links them to particular samples found at crime scenes.¹⁴ In Dotson's case, the sample taken at the scene was Type B, the same blood type as Dotson, and a type shared by only eleven percent of Caucasians.¹⁵ However, the analyst overlooked that the victim was also Type B, and thus the samples, containing a mix of fluids from the victim and a possible perpetrator, would be expected to contain some Type B substances.¹⁶ In ef-

⁷ *Id.* at 88.

⁸ *Id.* at 84–85. Forensic science, in theory, is the application of scientific knowledge and scientific methodology to help answer legal questions. *See id.* at 85. The term, however, encompasses a wide range of different fields, each with their own distinct standards and practices, some of which may not be truly scientific in nature, and ultimately harm more than they help to discern the truth. *See* COMMITTEE ON IDENTIFYING THE NEEDS OF THE FORENSIC SCIENCES CMTY., NAT'L RESEARCH COUNCIL, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 38–39 (Aug. 2009), <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf> [<https://perma.cc/RW9A-U2XB>] [hereinafter NAT'L RESEARCH COUNCIL].

⁹ *See* GARRETT, *supra* note 1, at 85–88. The forensic analyst also began by making the misleading claim that he had done "graduate work" at the University of California at Berkeley, when in fact he had only taken a two-day extension course. *Id.* at 84.

¹⁰ *Id.* at 85.

¹¹ *Id.* at 86. Hair microscopy is the examination and comparison of hairs under microscopes in an attempt to find a "match," the definition of which is entirely subjective. *See id.* at 95–96.

¹² *Id.* at 86.

¹³ *Id.* at 87.

¹⁴ *Id.* at 86.

¹⁵ *Id.* at 87. Gary Dotson was Caucasian. *Id.* at 84. He was just twenty-two years old when convicted. *First DNA Exoneration: Gary Dotson*, BLUHM LEGAL CLINIC, CTR. ON WRONGFUL CONVICTIONS, NORTHWESTERN UNIV. SCH. OF LAW, <http://www.law.northwestern.edu/legalclinic/wrongfulconvictions/exonerations/il/gary-dotson.html> [<http://perma.cc/9XRM-5DJU>].

¹⁶ GARRETT, *supra* note 1, at 87.

fect, the fluids of the victim “masked” and overwhelmed that of the perpetrator, and the evidence was meaningless.¹⁷ Any man could have been the one who raped the victim, not solely eleven percent of the population carrying Type B markers.¹⁸

Analysis of the young woman’s underwear presented another problem.¹⁹ Many of the stains on the underwear were found to contain Type A material, whereas neither the victim nor Dotson had Type A blood.²⁰ As such, the stains could not have originated from either of them.²¹ The analyst speculated that contamination from another source, such as “dust, wood, leather, certain kinds of clothes, different cloth materials, [or] detergents in materials,” could have caused the detection of Type A substances.²² But this conclusion is illogical given that the purpose of serology is to either include or exclude individuals from a sample.²³ If that kind of contamination were possible in serology, then it would be an “inherently unreliable” type of analysis to begin with, unable to accurately include or exclude individuals.²⁴

Dotson was convicted of rape in 1979 and sentenced to twenty-five to fifty years in prison.²⁵ Had the circumstances been different, one might have praised the efficiency of the criminal justice system in so quickly finding a guilty man.²⁶ But there was one problem: no crime had been committed.²⁷ The young woman confessed after Dotson’s conviction that she had fabricated the story, the injuries, and her accusation of Dotson in an attempt to hide her consensual intercourse with her boyfriend from her parents.²⁸ There was no rape at all, but that made little difference to the continued incarceration of Gary Dotson.²⁹

Despite the subsequent recantation of the victim, the governor of Illinois refused to pardon Dotson after a three-day clemency hearing recommended against it.³⁰ In 1987, prominent defense lawyer Thomas M. Breen agreed to take

¹⁷ *Id.*

¹⁸ *See id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *See id.*

²³ *Id.*

²⁴ *See id.* at 88. Dotson’s defense attorney did not object to the inaccurate and false testimony, nor did he obtain his own counter expert. *Id.* The defense attorney did object to the use of the term “match” by the prosecutor in his closing statement when referencing the hair microscopy evidence. *Id.* The analyst had not used the term “match,” but rather said the hairs were “similar.” *Id.* This objection was overruled by the judge. *Id.*

²⁵ *Id.*

²⁶ *See id.*

²⁷ *See id.*

²⁸ *See id.* at 87. The accuser was concerned that she might be pregnant. Sharon Cobb, Comment, *Gary Dotson as Victim: The Legal Response to Recanting Testimony*, 35 EMORY L.J. 969, 969 (1986).

²⁹ *See* GARRETT, *supra* note 1, at 84, 88.

³⁰ *Id.* at 88–89.

Dotson's case and lobbied for the use of deoxyribonucleic acid (DNA) testing, which in 1988 conclusively excluded Dotson as the source of the male genetic profile found at the crime scene, and instead matched the source to the victim's boyfriend.³¹ Gary Dotson's conviction was finally vacated by the Cook County Criminal Court in 1989 and he was released, becoming the first person to be exonerated by DNA testing.³²

Dotson's case was a turning point in how our criminal justice system is viewed.³³ The rise of DNA testing introduced a revolution in the forensic sciences, leading to more reliable forensic results for law enforcement.³⁴ More importantly, DNA testing made exoneration possible for numerous wrongfully convicted individuals.³⁵ Many other fields of forensics have proven dubious in identifying perpetrators of crimes, and the conclusions of experts in these fields are often overstated, which can lead to wrongful convictions.³⁶ Thus, DNA testing provides hope of justice for many, but only if it is adequately available.³⁷

* * *

On July 5, 1975 John Dolenc was out barhopping with his uncle in Bridgeville, Pennsylvania.³⁸ He was supposed to meet his wife, from whom he had been estranged for a week, but she never showed up.³⁹ His wife's body was found three days later behind her apartment in Mt. Lebanon.⁴⁰ Her clothes were shredded and removed, and her face was covered with a bloodstained slab of concrete.⁴¹ Dolenc was the police's immediate suspect, despite his alibi.⁴² The

³¹ *Id.* at 88; Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1, 4 (2009).

³² GARRETT, *supra* note 1, at 88–89; EDWARD CONNORS ET AL., NAT'L INST. OF JUSTICE, CONVICTED BY JURIES, EXONERATED BY SCIENCE: CASE STUDIES IN THE USE OF DNA EVIDENCE TO ESTABLISH INNOCENCE AFTER TRIAL 52 (1996), <https://www.ncjrs.gov/pdffiles/dnaevid.pdf> [<https://perma.cc/9TCA-R26V>]; *The Cases: Gary Dotson*, THE INNOCENCE PROJECT, <http://www.innocenceproject.org/cases-false-imprisonment/gary-dotson> [<http://perma.cc/3DKR-5JT9>] [hereinafter *Gary Dotson Case Profile*]; *Gary Dotson*, UNIV. OF MICH. LAW SCH., THE NAT'L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3186> [<https://perma.cc/EF5V-7UG6>].

³³ See GARRETT, *supra* note 1, at 5–6.

³⁴ See *id.*

³⁵ See *id.*

³⁶ See NAT'L RESEARCH COUNCIL, *supra* note 8, at 4. This includes practically every other field of forensic science, from hair microscopy, to serology, arson investigation, and ballistics analysis. See *id.*

³⁷ See *id.* at 12. Many jurisdictions still deny access to testing to inmates who could potentially prove their innocence through DNA testing. *Id.*

³⁸ Bill Moushey, *DNA Evidence: Man Seeks DNA Test to Clear Him in Killing*, PITTSBURGH POST-GAZETTE (Dec. 19, 2005), <http://www.post-gazette.com/frontpage/2005/12/19/DNA-Evidence-Man-seeks-DNA-test-to-clear-him-in-killing/stories/200512190236> [<http://perma.cc/U7DM-AWB6>].

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

investigation pattered away for six years, during which several other individuals were charged, yet ultimately their charges were dismissed.⁴³ In 1981, however, Dolenc was finally charged and put on trial for the murder of his wife.⁴⁴

Because DNA testing did not exist at the time, the many bloodstains on the victim's body and the cement block were tested only for blood type using serology.⁴⁵ All the blood tested was Type A—the same type as John Dolenc—but also the same type as the victim.⁴⁶ Because John had a cut on his finger at the time, the prosecutor successfully argued that the blood could have been his, since a Band-Aid that may have been used to cover his finger was found at the scene.⁴⁷ It was on this forensic evidence alone, supplemented only slightly by evidence of the couple's marital problems, on which Dolenc was convicted.⁴⁸

Pennsylvania passed a law allowing for post-conviction access to DNA testing in 2002 as an amendment to the Post-Conviction Recovery Act ("PCRA"), first passed in 1995.⁴⁹ When John Dolenc filed for testing under this law, however, his request was denied by both the Superior Court and the Supreme Court of Pennsylvania on the basis of a requirement in the statute that the petitioner establish a prima facie case that the testing would prove the actual innocence of the defendant.⁵⁰ The Commonwealth argued that excluding the defendant's blood from the scene of the crime did not prove his innocence, thus DNA testing would be futile.⁵¹ John Dolenc died in prison in 2007, never gaining access to the testing that could have proven his innocence.⁵²

Although DNA technology has provided a possible beacon of hope for those who have been wrongfully convicted, it is not a panacea.⁵³ Without access to DNA testing, the errors of many past wrongful convictions can never be cor-

⁴² *Id.* Although Dolenc was able to prove he was at several bars that night, the police did not check his alibi themselves, and at trial the prosecutor argued that Dolenc would have had time to kill his wife between stops at bars. *Id.*

⁴³ *Id.*

⁴⁴ *Id.* The police were not even sure of the specific day the victim was killed, which made it difficult to build a case against a suspect. *Id.* One individual, a former boyfriend who claimed to be conducting an investigation of his own, was arrested, charged, and released all in one day, six months after the murder. *Id.* Eventually the police settled on charging Dolenc. *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ 42 PA. CONS. STAT. § 9543.1 (2014); Thomas G. Saylor, *Post Conviction Relief in Pennsylvania*, 69 PA. B. ASS'N Q. 1, 1 (1998).

⁵⁰ Moushey, *supra* note 38.

⁵¹ *See id.*

⁵² Jim McKinnon, *Murderer Dies in Prison as DNA Appeal Continues*, PITTSBURGH POST-GAZETTE (Dec. 17, 2007), <http://www.post-gazette.com/frontpage/2007/12/15/Murderer-dies-in-prison-as-DNA-appeal-continues/stories/200712150139> [<http://perma.cc/3GHZ-FE5U>].

⁵³ *See* GARRETT, *supra* note 1, at 101. DNA testing is just as susceptible to flawed interpretation as other forensic methodologies. *See id.*

rected.⁵⁴ Moreover, although outdated, flawed technologies have been widely criticized in academia for their errors, unreliability, and lack of standardization, they are still broadly used today, thus continuing to compound mistakes.⁵⁵ As such, it is more important than ever that access to better, more reliable technologies such as DNA testing be made easily available to those who may be languishing under a false conviction.⁵⁶

This Note discusses the history of forensic science, wrongful convictions, and the Innocence Movement, and analyzes statutes in certain states that provide for post-conviction access to DNA testing on claims of innocence. Part I explores what forensic science and DNA testing are, how the flaws in forensic science have led to wrongful convictions, and the subsequent development of the Innocence Movement. Part II examines Pennsylvania's statute limiting post-conviction access to DNA testing, thus improperly addressing the problems caused by faulty forensics and wrongful convictions. Part III argues that the Massachusetts General Law c. 278A should be used as a model for future post-conviction forensic testing statutes because the legislation is notable for recognizing two concepts critical to the fair administration of justice for wrongfully convicted individuals: (1) the repair of many of the problems endemic to older statutes, like that in Pennsylvania, and, (2) the forward-looking focus on the availability of DNA testing and on challenging the very foundations of forensic studies.

I. FORENSIC SCIENCE AND ITS ROLE IN WRONGFUL CONVICTIONS

Forensic science is a flawed tool that has led to thousands of wrongful convictions, and only in recent decades has access to deoxyribonucleic acid (DNA) testing begun to undo the damage.⁵⁷ Forensic science has been used in the United States for decades to aid criminal convictions.⁵⁸ Experts have claimed that it is able to identify "matches" accurately for evidence as diverse as fingerprints, handwriting, tire tracks, shoe tracks, tool marks, bite marks, bullet casing marks, hair, and even lip prints.⁵⁹ But recent technological advances, notably DNA testing, have led to the questioning of many other fields of forensic science and in

⁵⁴ See *id.*

⁵⁵ See *id.* at 90, 114; *infra* notes 97–154 (discussing other popular methods of forensic science and their inherent flaws).

⁵⁶ See GARRETT, *supra* note 1, at 11–12.

⁵⁷ See *id.* at 6–7.

⁵⁸ Jane Campbell Moriarty, *Will History Be Servitude?: The NAS Report on Forensic Science and the Role of the Judiciary*, 2010 UTAH L. REV. 299, 299–300.

⁵⁹ *Id.*

turn sparked the Innocence Movement, an organization aimed at exonerating wrongfully convicted individuals.⁶⁰

A. Forensic Science: Fundamentals and Origins

Forensic science is routinely described as “the application of science to problems of law.”⁶¹ It is comprised of a wide variety of fields, each with their own distinct techniques and methodologies.⁶² The National Institute of Justice names twelve broad categories of forensic science each as their own individual category of study.⁶³ Some of these, such as DNA testing and serology, have sound scientific bases.⁶⁴ Others, such as latent fingerprints, firearms, tool marks, bite marks, hair microscopy, arson analysis, and pathology are based not on scientific research, but on “experience-based” subjective judgments.⁶⁵ They have been referred to as the “anecdotal” forensic sciences as well as the “nonscience” forensic sciences.⁶⁶

One primary type of anecdotal forensic science is identification.⁶⁷ Identification science includes “the comparison of fingerprints, handwriting, bite marks, voiceprints, tool marks, firearms, tire prints, shoe prints, and so on.”⁶⁸ The goal of these fields of forensic science is individualization: the ability to place a particular object in a category unto itself, where one can theoretically conclude that a sample comes from a single source and excludes every other possible source in the world.⁶⁹ For example, a forensic analyst might claim to be able to tell that a hair found at a crime scene is identical to one taken from a particular suspect, or

⁶⁰ See GARRETT, *supra* note 1, at 6. The Innocence Movement is an umbrella term that refers to the societal recognition that wrongful convictions are a critical problem and to the legal push to both exonerate individuals through DNA or other testing and expand legal reform to minimize wrongful convictions or maximize the ability of such individuals to seek redress, for instance through post-conviction access to forensic or DNA testing and re-testing. *See id.*; *infra* notes 156–177.

⁶¹ Michael J. Saks & David L. Faigman, *Failed Forensics: How Forensic Science Lost Its Way and How It Might Yet Find It*, 4 ANN. REV. L. & SOC. SCI. 149, 152 (2008). Law Professor Brandon L. Garrett describes it similarly as “the use of science to help answer legal questions.” GARRETT, *supra* note 1, at 85.

⁶² NAT’L RESEARCH COUNCIL, *supra* note 8, at 38.

⁶³ *See id.* The categories recognized by the National Institute of Justice are: general toxicology, firearms/tool marks, questioned documents, trace evidence, controlled substances, biological/serological screening (which includes DNA analysis), fire debris/arson analysis, impression evidence, blood pattern analysis, crime scene investigation, medicolegal death investigation, and digital evidence. *Id.*

⁶⁴ GARRETT, *supra* note 1, at 94; NAT’L RESEARCH COUNCIL, *supra* note 8, at 40.

⁶⁵ David L. Faigman, *Anecdotal Forensics, Phrenology, and Other Abject Lessons from the History of Science*, 59 HASTINGS L.J. 979, 980 (2008).

⁶⁶ *Id.*; Saks & Faigman, *supra* note 61, at 150. Law Professor David Faigman has compared these fields and their methodologies to phrenology, a discredited nineteenth century science that posited the possibility of predicting someone’s personality, mental illness, or other features from the shape of his or her skull. *See* Faigman, *supra* note 65, at 980–83.

⁶⁷ Saks & Faigman, *supra* note 61, at 150. These are also broadly known as “criminalistics.” *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

that a shoe print could only have been left by a particular brand of shoes, or even a particular shoe.⁷⁰

There are also several forensic science fields beyond those concerned with identification, which similarly posit conclusions neither based on existing scientific research nor rigorously tested by other experts before being presented in court.⁷¹ These include the fields of fire, arson, explosives, firearms residue, comparative bullet lead analysis, and aspects of forensic pathology.⁷² The common ground between the identification sciences and these fields is their reliance upon experience or anecdotes coupled with plausible, common-sense arguments to support their conclusions, rather than systematic, rational scientific inquiry.⁷³ For example, arson experts usually point to various known signs of fires set with an accelerant, such as a low burning fire or certain burn patterns, but subsequent scientific tests have found that these signs are not reliable indicators of accelerant use, despite conventional wisdom.⁷⁴

Due to the weak or nonexistent scientific bases for most forensic sciences, the paths of science and forensics have diverged.⁷⁵ Whereas science promotes constant questioning of prior assumptions, the main goal of the forensic sciences is to preserve the status quo: the criminal justice system affirms old methods as accurate to preserve authority.⁷⁶ Forensic sciences were not sourced in an open

⁷⁰ *See id.*

⁷¹ *Id.* Rather than relying on evidence from scientific research or derived through testing, these fields rely primarily on knowledge passed down from previous generations of experts. *See id.*

⁷² *Id.*

⁷³ Saks & Faigman, *supra* note 61, at 150.

⁷⁴ *See* Paul C. Giannelli, *Junk Science and the Execution of an Innocent Man*, 7 N.Y.U. J.L. & LIBERTY 221, 225–26 (2013).

⁷⁵ *See* Faigman, *supra* note 65, at 988. In the nineteenth century, the university system had yet to take hold in the United States. *See* Saks & Faigman, *supra* note 61, at 150, 152. Because of this, as much science was practiced outside the academic setting as inside it; wealthy amateurs, including Thomas Jefferson and Benjamin Franklin, often were significant contributors to the general scientific knowledge. *See* Faigman, *supra* note 65, at 988. Over time, however, science was institutionalized, with universities teaching the scientific method and proper methods of scientific inquiry, as well as policing scientific standards. *See id.* The nonscience forensic sciences, however, did not join these academic institutions. *See id.* Instead, they became included as part of the police state and, therefore, the standards and practices they had were dictated by police needs rather than objective pursuit of knowledge. *See id.*

⁷⁶ *See* Faigman, *supra* note 65, at 988–89. Forensic scientists themselves are, in fact, not generally scientists at all as the word is typically meant, but rather are technicians. *Id.* at 987. They neither propose nor test theories, nor investigate the world around them to increase the general pool of knowledge, but rather apply a technique to a sample. *Id.* The majority have no graduate training in research, statistics, or any scientific field, even their own area of study. *Id.* Therefore, the lack of testing of forensic hypotheses may be attributed to a lack of appropriately situated actors to test them, as the forensic scientists themselves do not have that capability. *Id.* A survey found that only one percent of forensic scientists had a doctoral degree or equivalent, and three percent had a master's level degree. *Id.* Therefore, even if forensic scientists had the inclination to test their hypotheses, they are not qualified to do so. *See id.* Forensic science also typically lacks appropriate funding for any such research. *Id.* Moreover, the fields of forensics have been largely ignored by academics. *Id.* It is unlikely

scientific inquiry, but rather a closed process of inheritance over the past century, with succeeding generations adopting the practices of former generations without testing them.⁷⁷

B. The Development and Power of DNA Technology

The advent of DNA technology has had the paradoxical effect of both exalting and undermining the position of the forensic sciences and their use in law enforcement.⁷⁸ Prior to the discovery of DNA in the late 1980s, no other forensic technique could discriminate with great reliability between different possible perpetrators—at least not validly.⁷⁹ The field of forensic science was altered dramatically in 1989 when Gary Dotson was exonerated by post-conviction DNA testing.⁸⁰ For the first time, it was possible to not only determine who had committed a crime, but who had not.⁸¹

The first method of DNA testing was developed in 1985 by a team of British scientists led by Alec Jeffries.⁸² This method, Restriction Fragment Length Polymorphism (RFLP) was useful because it produced a high degree of certainty of a positive match and thus could conclusively exclude someone as the source of a DNA sample.⁸³ The use of RFLP became widespread during the 1990s, but was less useful in a criminal setting because it required a large sample of DNA and it was not suitable for use on the degraded samples typically found at crime scenes.⁸⁴ Therefore, it is no longer a common methodology in forensic analyses.⁸⁵

Gary Dotson was exonerated by a second type of DNA testing: polymerase chain reaction (PCR) DNA testing.⁸⁶ PCR is a technique that can amplify small

that this will change soon unless academics can be convinced that forensics bear some relevance to their own fields of study. *See id.* at 988.

⁷⁷ *See id.*

⁷⁸ *See* Garrett & Neufeld, *supra* note 31, at 3.

⁷⁹ *See id.*; NAT'L RESEARCH COUNCIL, *supra* note 8, at 7.

⁸⁰ *See* Garrett & Neufeld, *supra* note 31, at 4.

⁸¹ *See id.* at 3. Of course, in Dotson's case, a perpetrator could not be determined because the claim of the attack was fabricated. *See* GARRETT, *supra* note 1, at 88. The scenario proved, however, that, had there been a victim, her perpetrator may have been identified through DNA. *See id.*

⁸² Michael P. Luongo, Case Note, *Post-Conviction Due Process Right to Access DNA Evidence*: Dist. Attorney's Office v. Osborne, 129 S. Ct. 2308 (2009), 29 TEMP. J. SCI. TECH. & ENVTL. L. 127, 130 (2010).

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ Garrett & Neufeld, *supra* note 31, at 4. A third method of DNA testing known as mitochondrial DNA typing (mtDNA) uses DNA drawn from mitochondria within a cell instead of the nucleus. Luongo, *supra* note 80, at 131. Mitochondria are intracellular bodies, or organelles, within human cells that provide cells with energy; they possess their own DNA separate from nuclear DNA. *See* Paluck *ex rel.* Paluck v. Sec'y of Health & Human Servs., 104 Fed. Cl. 457, 471 n.18 (2012); Luongo, *supra* note 82, at 131. The primary advantage of mtDNA typing is that it can be applied to biological samples that

quantities of DNA into testable amounts.⁸⁷ PCR's advantage over RFLP is that it only requires a short segment of DNA, and thus is effective on small or degraded DNA samples.⁸⁸ When initially developed in 1985, PCR only examined a single locus, or area of DNA.⁸⁹ As such, it could only produce a ninety-five percent likelihood that a sample came from a given suspect because some people have the same DNA in one particular gene, but it could conclusively *exclude* someone if he or she failed to match that locus, since a given individual's DNA is always the same.⁹⁰ The modern standard for PCR DNA testing, known as Short Tandem Repeat ("STR"), typically utilizes thirteen loci, or STR segments.⁹¹ This allows for an extremely discriminating test because it is very unlikely that two people would have identical DNA across thirteen different areas of the genome, and it is capable of producing matches in the statistical range of one in trillions.⁹² Any mismatches resulting from this test, therefore, are more likely than not due to human error.⁹³

Although initially developed as a method for determining paternity, DNA testing was quickly adopted by police and prosecutors for its potential to aid in criminal investigations.⁹⁴ In 1987, DNA evidence was used to convict Tommy Lee Andrews of rape, the first such DNA-based conviction in the United States.⁹⁵ Since then, courts have regularly admitted all forms of DNA evidence into trial as long as the DNA was properly collected and analyzed.⁹⁶

do not contain nuclei, such as hair and bone, and thus cannot otherwise be tested by traditional methods. Luongo, *supra* note 82, at 131. As with primitive PCR, however, mtDNA currently only uses a single locus, and thus is too imprecise to match a specific person to a sample. *Id.* Despite this limitation, it can conclusively exclude a person and may sometimes be the only test available because of the DNA source, and thus has its use in law enforcement and post-conviction relief, including exonerations. *See id.*

⁸⁷ Luongo, *supra* note 82, at 130.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.* A gene is a unit of DNA comprised of 1000 to 100,000 base pairs that codes for a specific function. *Id.* at 129. Each gene resides at a specific position on a chromosome; that position is known as a locus. *Id.* Human DNA is organized into forty-six separate chromosomes contained within the nucleus of our cells. *Id.*

⁹¹ *Id.* at 130.

⁹² *Id.*

⁹³ *See id.* at 131 n.40.

⁹⁴ *See id.* DNA was first used in England in 1986 to confirm the confession of a seventeen-year-old boy charged with a double rape-murder. *Id.* The test, however, cleared the teenager and later led to the identification and conviction of the real perpetrator. *Id.*

⁹⁵ *Id.* Whether DNA testing was sufficiently reliable to be admitted in court was the major issue on appeal, and the court found that DNA "printing," like serology, was scientifically reliable. *See Andrews v. State*, 533 So. 2d 841, 851 (Fla. Dist. Ct. App. 1988).

⁹⁶ *See Luongo, supra* note 82, at 132.

C. Flaws in Forensic Science Revealed

For decades, forensic science has played a central role in producing evidence used to convict those accused of crimes.⁹⁷ As DNA testing has become increasingly dominant, the lack of firm scientific foundations for other forms of forensic science has become clearer.⁹⁸ Faulty forensic science has played a prominent role in the initial convictions of most of the innocent individuals who have now been exonerated by DNA evidence.⁹⁹ In fact, a persistent problem in the criminal justice system has been determining whether certain forensic science is truly scientific at all.¹⁰⁰ For instance, even if a scientific methodology is supported by empirical evidence, there is the further hurdle of ensuring that the testimony of experts at trial does not misrepresent what the science implies.¹⁰¹

In 2009, the National Academy of Science released the report *Strengthening Forensic Science in the United States: A Path Forward* (“NAS report”) in an attempt to evaluate these issues based on the findings of the congressionally authorized Committee on Identifying the Needs of the Forensic Sciences Community (the “Committee”).¹⁰² Its release ignited a mainstream policy discussion that had been stewing amongst academics: what to do about the problem of flawed forensics?¹⁰³ The problems with forensic analysis extend beyond individual laboratory failures or errors.¹⁰⁴ Rather, they reflect deep structural flaws in the criminal justice and forensics systems themselves.¹⁰⁵ Flawed forensics result from a combination of shaky scientific bases, systematic underfunding, undue influence by police and prosecution on crime lab protocols, lack of access to and effective use of experts by defense counsel, and loose scrutiny of the admission of scientific evidence by courts.¹⁰⁶ The Committee noted that, aside from DNA,

⁹⁷ NAT’L RESEARCH COUNCIL, *supra* note 8, at 4. For the past fifty years, science has moved towards taking a central role in both the investigation and prosecution of crimes. Jennifer E. Laurin, *Re-mapping the Path Forward: Toward a Systemic View of Forensic Science Reform and Oversight*, 91 TEX. L. REV. 1051, 1052 (2013).

⁹⁸ See NAT’L RESEARCH COUNCIL, *supra* note 8, at 7–8. The authors note that forensic science protocols are not always based on valid scientific studies. See *id.* at 8.

⁹⁹ See GARRETT, *supra* note 1, at 89.

¹⁰⁰ See NAT’L RESEARCH COUNCIL, *supra* note 8, at 9 (noting that “[t]he law’s greatest dilemma in its heavy reliance on forensic evidence, however, concerns the question of whether—and to what extent—there is *science* in any given forensic science discipline”).

¹⁰¹ See GARRETT, *supra* note 1, at 90.

¹⁰² See NAT’L RESEARCH COUNCIL, *supra* note 8, at 1–2. The Committee was charged with the task of assessing the present and future needs of the forensic communities, making recommendations for maximizing the use of forensics to solve crimes, identifying scientific advances useful to law enforcement, making recommendations for programs to increase the number of qualified employees working in crime labs, and disseminating best practices for forensic technologies, as well as a general mandate to examine issues related to forensic science. See *id.*

¹⁰³ See Laurin, *supra* note 97, at 1054.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 1052–53.

¹⁰⁶ *Id.* at 1053.

no forensic methodology can reliably or consistently link a piece of evidence with a specific source or person, and that many of them lack a fundamental scientific basis for the conclusions they draw.¹⁰⁷

Law professor Brandon L. Garrett categorizes two main types of faulty forensics: unreliable and invalid.¹⁰⁸ Unreliable forensics are those that are not supported by rigorous science to validate their fundamental premises and methodologies.¹⁰⁹ This category is roughly parallel to those referred to as “anecdotal” or “nonscience” forensic sciences by other authors.¹¹⁰ Examples of unreliable forensics include microscopic hair comparison, bite mark comparison, shoe print comparison, voice comparison, and fingerprint comparison.¹¹¹ On the other hand, invalid forensics are those where the examiner—through negligence or actual fraud—misstates, overstates, or falsifies conclusions, no matter whether the underlying forensics are themselves reliable or not.¹¹²

1. Unreliable Forensic Science

Unreliable forensic science is predicated on the concept of a “match”—meaning an expert evaluates a piece of evidence against a known sample and determines, based on a subjective, but detailed comparison, whether the two objects are deemed “similar” or “consistent.”¹¹³ The basic assumption underlying this field is that it is possible to claim, through subjective analysis, that a particular piece of trace evidence, for example a hair or a shoe print, was produced from a particular source, to the exclusion of all other potential sources.¹¹⁴ Precise individualization, however, is impossible.¹¹⁵

¹⁰⁷ See NAT’L RESEARCH COUNCIL, *supra* note 8, at 7–8. Although criticizing the lack of validation for practically every forensic field, lamenting the deficiencies in funding, training, and standardization, and blaming courts for relying on forensic science without understanding its limitations, the NAS report nevertheless envisions that the future of criminal justice is inextricably linked to that of forensic science. See Laurin, *supra* note 97, at 1054. In making thirteen recommendations to reform the field, the NAS report did not reject forensics entirely, but instead attempted to reform its use in the court system. *See id.*

¹⁰⁸ GARRETT, *supra* note 1, at 89. These categories are not mutually exclusive; forensics can be both unreliable and invalid, such as when a practitioner of hair microscopy misstates his or her conclusion or insists there is no error rate in his or her findings. *See id.* at 97.

¹⁰⁹ *See id.* at 90.

¹¹⁰ See Faigman, *supra* note 65, at 980; Saks & Faigman, *supra* note 61, at 150.

¹¹¹ See GARRETT, *supra* note 1, at 90, 93–107; NAT’L RESEARCH COUNCIL, *supra* note 8, at 7–8. Simply because these fields have not been studied *scientifically* does not mean they cannot be; in particular, the NAS report is optimistic about improving the scientific reliability of many questionable fields, and includes many recommendations to that effect. See NAT’L RESEARCH COUNCIL, *supra* note 8, at 8, 14–33.

¹¹² See GARRETT, *supra* note 1, at 89.

¹¹³ *Id.* at 90.

¹¹⁴ Saks & Faigman, *supra* note 65, at 154.

¹¹⁵ *See id.* To illustrate this, law professors Michael Saks and David Faigman reference a classic demonstration of the limitations of inductive reasoning, conclusions, or expertise based on experience or

The concept of individualization is unique to the forensic sciences.¹¹⁶ It is not a concept that has been tested or addressed by other, non-forensic scientific disciplines.¹¹⁷ It was developed using the components of the criminal justice system to further criminal justice ends by discovering the identification of individuals who have committed crimes.¹¹⁸ Unfortunately, individualization has no theoretical or empirical basis and is a methodology no scientific field has ever tested, affirmed, or discovered.¹¹⁹ Even many forensic scientists concede that there is no scientific basis for believing precise individualization is possible, and that analysts are making a leap of faith when they testify to such in court.¹²⁰

The majority of identification sciences adhere to the concept that if an object leaves a mark indistinguishable from a mark left on a crime scene, the two must be identical.¹²¹ Rather than attempt to measure the variability and the degree to which various objects could have created an individual piece of evidence, the identification procedure assumes, without certainty, that if two marks match, they come from the same source.¹²² This method, however, does not have consistent standards or bases of comparison to determine what, in fact, constitutes a match.¹²³ Thus, individualization has fairly significant or nearly incalculable

observation through the “white swan” problem. *See id.* Inductive reasoning is the foundation of science. *See id.* If one attempted to prove that all swans are white, one might observe swans; after seeing one thousand white swans, one could be reasonably certain that this hypothesis is correct. *See id.* But there is always a chance of a non-white swan, and one cannot completely eliminate that chance merely through future observation. *See id.* If the thousand-and-first swan is black, one could change the hypothesis to only one out of a thousand swans is black, and could continue to test that new hypothesis through observation, but could never conclusively prove it; this is in essence what scientists do every day. *See id.* The flaw in the hypothesis of individualization is that, even after evidence of the failure to match a print, mark, or hair to a specific source, forensic scientists have failed to revise their hypotheses and instead continue to minimize or ignore contradictory evidence or explain away the false matches in order to continue claiming the possibility of a perfect match. *See id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.* This unproven and untested hypothesis was proposed in the nineteenth century by the Belgian astronomer Adolphe Quetelet, who theorized that “nature never repeats.” *Id.* at 155; Garabed Eknoyan, *Adolphe Quetelet (1796–1874)—The Average Man and Indices of Obesity*, 23 NEPHROLOGY DIALYSIS TRANSPLANTATION 47, 47 (2008). Bertillion, a French police records clerk, then applied this hypothesis to prisoner classification and it was soon adopted by generations of forensic scientists. Saks & Faigman, *supra* note 61, at 155.

¹²⁰ Saks & Faigman, *supra* note 61, at 154.

¹²¹ *See id.* The exceptions are DNA testing, which, arguably, is a forensic identification science although it is generally conducted in a scientific rather than anecdotal manner, and hair microscopy. *See id.* Hair microscopy usually intimates an ability to match a sample to a general population type rather than an individual, but, as with most other identification sciences, it fails to provide any statistical research to identify the prevalence of any particular type or feature of the hairs being compared. *See* GARRETT, *supra* note 1, at 95–96.

¹²² *See* Saks & Faigman, *supra* note 61, at 154.

¹²³ *See* GARRETT, *supra* note 1, at 95–107.

error rates.¹²⁴ Exacerbating this issue is the problem that error rates for most fields of forensic sciences are unknown, and to the extent errors are detected, they are linked to the individual practitioners rather than the techniques themselves.¹²⁵ Moreover, there has been significant reluctance on the part of forensic examiners to subject their techniques to error rate research.¹²⁶

Despite widespread criticism of these fields due to high error rates, general unreliability, ambiguous conclusory terms, and lack of scientific evidence, most of these methods are still used and represented as scientific evidence in criminal trials today.¹²⁷ Courts have proven ineffective at screening out unscientific methodologies and techniques.¹²⁸ This is primarily due to the fact that lawyers and judges, outside of those involved in patent prosecution and other specialized fields, tend to have very little training in science or statistics, and are thereby not the best adjudicators of scientific validity.¹²⁹ Additionally, the standards for admitting expert evidence have historically been low, and have not fluctuated much despite more insistence for scientific rigor.¹³⁰ The traditional forensic sciences

¹²⁴ *See id.* For example, in the case of hair microscopy, no scientist has actually documented what proportion of the population possesses individual microscopic characteristics. *Id.* at 96. Studies have found error rates for hair microscopy to be between twenty-eight percent and sixty-eight percent. *See id.* Additionally, forensic odontology, the study of bites and the prints left behind when things are bitten, is not based on objective criteria but rather on the faulty assumption that no two people leave the same bite marks. *See id.* at 102. Forensic odontology has a false positive error rate of almost sixty-four percent, and a false negative rate of about twenty-two percent. *See* Craig M. Cooley, *Reforming the Forensic Science Community to Avert the Ultimate Injustice*, 15 STAN. L. & POL'Y REV. 381, 394, 394 n.66 (2004). Shoe print analysis also suffers because shoes are mass-produced commodities, and no research has suggested that an individual's gait has a unique effect on how the shoes are worn. *See* GARRETT, *supra* note 1, at 105. When attempting to conclusively prove that no two people leave the same fingerprints, researchers in fact conceded the opposite: that complete correspondence between prints was possible. *See* Saks & Faigman, *supra* note 65, at 155. Studies of handwriting analysis likewise showed many individuals with the same name signed their names indistinguishably from one another, undermining the basic premise of the field. *See id.*

¹²⁵ Cooley, *supra* note 124, at 397.

¹²⁶ Craig M. Cooley, *Forensic Science and Capital Punishment Reform: An "Intellectually Honest" Assessment*, 17 GEO. MASON U. CIV. RTS. L.J. 299, 342 (2007). Forensic scientists first began offering their evidence at the turn of the century as incontrovertible proof to aid in the conviction of crimes, in contrast to the tempered theories of academic science. *See* Cooley, *supra* note 124, at 393–94. Because forensic sciences developed to serve prosecutors' offices, there was naturally a strong tendency to minimize the perception of error and fallibility. *See id.* at 394. The error rates that may be acceptable in academic sciences could prove disastrous for a prosecutor charged with proving something beyond a reasonable doubt to a jury. *See id.* If a sixty-four percent false positive error rate was admitted to a jury by a forensic odontologist, as mentioned above, that alone would likely create reasonable doubt if the bite mark analysis was a key part of a prosecutor's case. *See id.* Simply claiming there is no error rate, or even that the error rate is not known, cannot be known, or has not been studied is more likely to produce a favorable result for the prosecutor, thus creating disincentive to study such rates. *See id.*

¹²⁷ GARRETT, *supra* note 1, at 90.

¹²⁸ *See* Saks & Faigman, *supra* note 61, at 161.

¹²⁹ *See id.* Despite this, the judge is the final arbiter on whether someone is qualified as an expert. *See id.* at 162.

¹³⁰ *See id.* at 161.

appear to have largely been grandfathered in as admissible despite lack of support for their reliability.¹³¹ The confluence of these factors makes it very difficult for courts to adequately adjudicate the reliability of forensic science.¹³²

2. Invalid Forensic Science

Even if a forensic scientific method is reliable, it may still be invalid and possibly lead to a wrongful conviction if the expert testimony is inaccurate or problematic.¹³³ Invalid testimony is defined as a general misstatement of conclusions that make the forensic evidence of guilt seem stronger than it actually is.¹³⁴ Invalid testimony is a common problem across both reliable and unreliable fields of forensic science.¹³⁵ Unsurprisingly, experts in unreliable fields may sometimes overstate their conclusions, but even in scientifically-grounded disciplines, such as serology and DNA analysis, forensic practitioners may also occasionally misrepresent their conclusions.¹³⁶ Although technology improves over time and becomes more accurate, the humans conducting the analytical inquiry may still make mistakes.¹³⁷ Invalid testimony is not necessarily the result of intentional or reckless acts, but possibly the result of a lack of experience, inadequate training, or poor oversight.¹³⁸

¹³¹ *See id.* There are not many people qualified to debunk forensics, as actual scientists do not study forensics, generally, whereas forensic technicians are not interested in debunking their own field. *See id.* Very few scientists know enough about forensics to evaluate them, and very few forensic technicians are interested in, or even capable of, self-evaluation. *See id.*

¹³² *See id.*

¹³³ GARRETT, *supra* note 1, at 90.

¹³⁴ *See id.*

¹³⁵ *See id.* Overall, in sixty-one percent of the exoneree cases that Garrett examined in which a forensic expert testified for the prosecution, the conclusions of the expert were invalid. *See id.* Broken down, the error rates for specific fields ranged from fifty-eight percent for serology, to thirty-nine percent for hair comparison, seventy-one percent for bite mark comparison, seventeen percent for shoe print comparison, and five percent for fingerprint comparison. *See id.* Even experts testifying to DNA evidence came to invalid conclusions seventeen percent of the time. *See id.*

¹³⁶ *See id.* Garrett's study exposed the depth of these flaws in the cases of the first three hundred DNA exonerees. *See id.* In the case of Neil Miller, who was exonerated by DNA testing, a serologist had failed to account for the effects of masking in his analysis. *Id.* at 94. Masking occurs when a victim's DNA overwhelms the perpetrators and thus prevents any meaningful result from being measured by testing. *Id.* As a result, he incorrectly stated that only forty-five percent of the general male population could have been the rapist, including Miller, when in fact, because the victim and Miller shared a blood type, anyone could have been the perpetrator. *See id.* In the case of Marvin Mitchell, analysts made minor mathematical errors and erroneously divided statistics in half when stating the likelihood of a match. *Id.* at 95. As for DNA testing, during the trial of Gilbert Alejandro, one analyst, Fred Zain, who had not conducted the DNA test at all, claimed DNA could lead to "a hundred percent certainty," rather than stating the actual likelihood of a match, whereas in the trial of Josiah Sutton, Zain falsely claimed only identical twins could be a match. *Id.* at 101.

¹³⁷ *See* Garrett & Neufeld, *supra* note 31, at 97.

¹³⁸ *See id.* at 24.

As noted previously, very few forensic analysts are trained scientists or statisticians.¹³⁹ Generally, they do not have the training nor the time to perform the kind of error analysis required to ensure that their work is reliable and valid.¹⁴⁰ Most forensic analysts are overburdened simply when processing their typical workloads.¹⁴¹ And an undertrained or overworked analyst is more prone to making mistakes.¹⁴² Because most crime labs do not employ more than a dozen or so analysts, however, each analyst usually has to testify in numerous cases.¹⁴³ As such, one poorly trained analyst can potentially taint countless cases through poor testing and invalid testimony.¹⁴⁴

Although the majority of invalid testimony is likely the result of poor training or oversight, some is, unfortunately, of a more malicious variety.¹⁴⁵ The scientific community in general typically does not tolerate fraud.¹⁴⁶ Nevertheless, scientific fraud has become a problem of increasing importance and visibility among academic scientists and the general media.¹⁴⁷ Until recent decades, forensic science has seemed mostly immune to such issues, due to skewed reporting focusing primarily on traditional science.¹⁴⁸ Over the past twenty years, however, instances of forensic fraud have become more widely known and publicized.¹⁴⁹ For instance, in the early 1990s, Ralph Erdmann, a forensic pathologist from Texas, fabricated false autopsy reports, which contributed to at least twenty death penalty convictions; he himself was later convicted of falsifying autopsies.¹⁵⁰ Pamela Fish, a forensic technician who worked for the Chicago Police, on the other hand, simply failed to report exculpatory findings, resulting in the overturning of seven convictions once the misconduct was detected.¹⁵¹ More

¹³⁹ Faigman, *supra* note 65, at 987.

¹⁴⁰ *See id.*

¹⁴¹ *See id.* An audit of a Houston lab found that it used “shoddy science” and “undertrained employees,” that it was “overwhelmed and underfunded,” and that it was unable to perform the needed forensic tests on every sample. *See* H. Patrick Furman, *Wrongful Convictions and the Accuracy of the Criminal Justice System*, 32 *COLO. LAW.* 11, 23 (2003). Similar issues plague labs across the country, from Fort Worth, to Oklahoma City, to West Virginia, and even the Federal Bureau of Investigation Crime Lab. *See id.* at 22–23.

¹⁴² *See* Garrett & Neufeld, *supra* note 31, at 24.

¹⁴³ *See id.*; JOSEPH L. PETERSON & MATTHEW J. HICKMAN, BUREAU OF JUSTICE STATISTICS, CENSUS OF PUBLICLY FUNDED FORENSIC CRIME LABORATORIES 3, 6 (2002), <http://www.bjs.gov/content/pub/pdf/cpffcl02.pdf> [<http://perma.cc/97L8-8CAC>].

¹⁴⁴ *See* Garrett & Neufeld, *supra* note 31, at 24.

¹⁴⁵ *See* Cooley, *supra* note 124, at 399.

¹⁴⁶ *See id.*

¹⁴⁷ *See id.*

¹⁴⁸ *See id.*

¹⁴⁹ *See id.*

¹⁵⁰ *See id.* at 401.

¹⁵¹ *See id.* at 402. Fish was ultimately moved to a new position that did not involve criminal casework rather than face any criminal charges. *See* Steve Mills, *Crime Lab Analyst Moved*, *CHI. TRIB.* (Aug. 16, 2001), <http://www.chicagotribune.com/news/watchdog/chi-010816roschetti-story.html> [<http://perma.cc/6G9Q-SJ9G>].

recently, Annie Dookhan, a former chemist at the Massachusetts State Police Crime Laboratory, was found to have falsified thousands of test results over the course of nearly a decade.¹⁵² She testified in more than one hundred and fifty cases before her transgressions were discovered, and was involved in more than thirty-four thousand cases at the laboratory from 2003 until 2012.¹⁵³ As Massachusetts Attorney General Martha Coakley, whose office prosecuted Dookhan, stated, “[c]ertainly one of the victims in this case, and the actions of Annie Dookhan, is the public trust.”¹⁵⁴

D. The Innocence Movement

Although DNA technology is a major tool for the exoneration of innocents, it would have accomplished very little if not for the efforts of those who recognized its promise and began pushing for change through the Innocence Movement.¹⁵⁵ The exoneration of Gary Dotson through DNA analysis sent tidal waves through the criminal justice system and spurred the societal development now referred to as the Innocence Movement.¹⁵⁶ Dotson’s exoneration had not only uncovered the realities of wrongful convictions, but it illustrated how these convictions destroyed the lives of innocent individuals.¹⁵⁷ Moreover, it spawned a host of ideas for potential reforms to improve the primary function of the criminal justice system: determining who is guilty and who is innocent.¹⁵⁸ The Innocence Movement refers broadly to the societal realization that innocent people are convicted of crimes, and that something must be done to rectify that, as well

¹⁵² Sean K. Driscoll, “*I Messed Up Bad*”: Lessons on the Confrontation Clause from the Annie Dookhan Scandal, 56 ARIZ. L. REV. 707, 708–09 (2014).

¹⁵³ See *id.* Dookhan eventually pleaded guilty and was sentenced to three to five years in state prison. See Milton J. Valencia & John R. Element, *Annie Dookhan Pleads Guilty in Drug Lab Scandal*, BOS. GLOBE (Nov. 22, 2013), <http://www.bostonglobe.com/metro/2013/11/22/annie-dookhan-former-state-chemist-who-mishandled-drug-evidence-agrees-plead-guilty/7UU3hfZUof4DFJGoNUfXGO/story.html> [<http://perma.cc/GN2S-2FLN>]; Katharine Q. Seelye & Jess Bidgood, *Prison for a State Chemist Who Faked Drug Evidence*, N.Y. TIMES (Nov. 22, 2013), http://www.nytimes.com/2013/11/23/us/prison-for-state-chemist-who-faked-drug-evidence.html?_r=0 [<http://perma.cc/6C5C-TUV5>].

¹⁵⁴ Valencia & Element, *supra* note 153. Beyond the lack of the public’s trust, the Commonwealth of Massachusetts has had to deal with the fallout of defendants whose cases were affected by Dookhan’s participation. *Id.* As a *Boston Globe* article reported, as of November 2013, Massachusetts has spent \$8.5 million reviewing the drug cases and holding special hearings for these defendants. *Id.* The Commonwealth has set aside \$30 million to reinvestigate and prosecute affected cases. Seelye & Bidgood, *supra* note 153. Attorney General Coakley summarized the additional work that Dookhan’s transgressions created, stating, “The total costs to rectify Dookhan’s actions have climbed into the millions with no end in sight, and the financial aspect does not even address the loss of liberty of affected individuals, the significant deleterious effect on the safety of the public or the breakdown of public trust in the system.” *Id.*

¹⁵⁵ See GARRETT, *supra* note 1, at 5–6.

¹⁵⁶ See Keith A. Findley, *Defining Innocence*, 74 ALA. L. REV. 1157, 1157 (2011).

¹⁵⁷ *Id.* at 1158.

¹⁵⁸ See *id.*

as to those who work to further that mission by seeking criminal exonerations through DNA and other methodologies.¹⁵⁹ In 1923, Judge Learned Hand stated non-ironically that:

Our dangers do not lie in too little tenderness to the accused. Our procedure has been always haunted by the ghost of the innocent man convicted. It is an unreal dream. What we need to fear is the archaic formalism and the watery sentiment that obstructs, delays, and defeats the prosecution of crime.¹⁶⁰

Much less famously, a Worcester County, Massachusetts prosecutor once proclaimed that “[i]nnocent men are never convicted. Don’t worry about it . . . It is a physical impossibility.”¹⁶¹ Through the efforts of the Innocence Movement, the statements of the Worcester County prosecutor have been proven wrong.¹⁶²

Through the work of the Innocence Movement, 1577 individuals have been exonerated since Gary Dotson served as the first exoneration.¹⁶³ Of these innocent individuals, the use of DNA testing has contributed to 329 exonerations.¹⁶⁴ This exoneration rate based on DNA evidence—about twenty percent—seems low, yet DNA testing remains an influential part of the Innocence Movement¹⁶⁵ and has been cited by a National Academy of Sciences report as an instigating factor in its call for reform.¹⁶⁶

The Innocence Movement derived its initial momentum from the creation, through DNA exoneration, of a special class of cases in which there was little to no doubt as to the innocence of the exoneree.¹⁶⁷ The Innocence Project, a prominent pioneering institute of the Innocence Movement, founded in 1992 by Barry Scheck and Peter J. Neufeld at the Benjamin N. Cardozo School of Law, continues to focus the vast majority of its efforts on post-conviction exonerations based on DNA testing.¹⁶⁸ The Innocence Project stresses how DNA testing can provide

¹⁵⁹ *See id.*

¹⁶⁰ *United States v. Garsson*, 291 F. 646, 649 (S.D.N.Y. 1923).

¹⁶¹ Findley, *supra* note 156, at 1165.

¹⁶² *See id.* at 1157 (quoting EDWIN M. BORCHARD & E. RUSSELL LUTZ, *CONVICTING THE INNOCENT: ERRORS OF CRIMINAL JUSTICE*, at vii (1970)).

¹⁶³ *The Cases: DNA Exoneree Case Profiles*, THE INNOCENCE PROJECT, <http://www.innocenceproject.org/cases-false-imprisonment> [<http://perma.cc/89EB-C8H7>] [hereinafter *DNA Exoneree Case Profiles*].

¹⁶⁴ *Id.*

¹⁶⁵ *About the Registry*, UNIV. OF MICH. LAW SCH., THE NAT’L REGISTRY OF EXONERATIONS, <http://www.law.umich.edu/special/exoneration/Pages/about.aspx> [<http://perma.cc/2DK4-CVE5>].

¹⁶⁶ *See* NAT’L RESEARCH COUNCIL, *supra* note 8, at 37. The National Academy of Sciences issued this report at the behest of Congress to re-evaluate the current state of forensic sciences and recommend changes based on the revolution that was sparked by DNA and the Innocence Movement. *See id.* at 1, 4, 37.

¹⁶⁷ Findley, *supra* note 156, at 1160.

¹⁶⁸ *Our Work*, THE INNOCENCE PROJECT, <http://www.innocenceproject.org/free-innocent> [<http://perma.cc/WZ9U-H7GG>].

irrefutable proof of the possibility of wrongful convictions.¹⁶⁹ Many other Innocence Projects at other law schools and law firms are similarly narrow in focus.¹⁷⁰

The Innocence Movement has butted up against pushback from those wedded to traditional notions of the finality of justice.¹⁷¹ Some question whether wrongful convictions are truly systemic, or whether those exonerated are simply an anomaly.¹⁷² There is also significant resistance from numerous judges and prosecutors that are skeptical of the movement.¹⁷³ Despite this skepticism, exonerations have continued apace; at the time of the publication of law professor Brandon L. Garrett's 2011 book *Convicting the Innocent: Where Criminal Prosecutions Go Wrong*, a comprehensive study of the existing DNA exonerations at the time, there were only 250 exonerations;¹⁷⁴ as of April 2015, there have been 329.¹⁷⁵

DNA exonerations are, as mentioned, not the whole story, and the Innocence Movement has pursued other avenues as well in seeking exonerations.¹⁷⁶ Other forms of evidence can potentially exonerate a wrongfully convicted individual.¹⁷⁷ For instance, much of the traditional analysis and “rules of thumb” currently used by arson investigators lack a scientific basis.¹⁷⁸ In the 1991 case of Cameron Todd Willingham, experts derided the methodologies used to convict him as “junk science.”¹⁷⁹ Five such experts criticized the indicators of arson

¹⁶⁹ See *id.*

¹⁷⁰ See Furman, *supra* note 141, at 25; see also *Innocence Program*, BOS. COLL. LAW SCH., http://www.bc.edu/schools/law/center-experiential-learning/clinical-programs/innocence_program_clinic.html [<https://perma.cc/K685-8V8D>] (describing students' work in the Boston College Law School Innocence Program clinic); *Bluhm Legal Clinic: Center on Wrongful Convictions*, NORTHWESTERN LAW, <http://www.law.northwestern.edu/legalclinic/wrongfulconvictions/aboutus/> [<http://perma.cc/3NNW-DTDW>] (outlining the National Center for Wrongful Convictions Program at Northwestern Law); *Innocence and Justice Clinic*, WAKE FOREST UNIV. SCH. OF LAW (2013), <http://innocence-clinic.law.wfu.edu/about/> [<http://perma.cc/F7TS-NKFF>] (outlining Wake Forest University School of Law's innocence clinic).

¹⁷¹ See Findley, *supra* note 156, at 1158.

¹⁷² See *id.* Garrett and many other scholars argue that these exonerations represent just the “tip of an iceberg” of a much larger pool of potential exonerees who were wrongfully convicted but have yet to be exonerated. See GARRETT, *supra* note 1, at 11–13.

¹⁷³ See Findley, *supra* note 156, at 1158. In Gary Dotson's case, his initial appeal of his conviction, based solely on the victim recantation, was denied on the basis that her earlier testimony was more reliable. See *Gary Dotson Case Profile*, *supra* note 32. It took DNA evidence to convince the court that the appeal was worth pursuing. See *id.*

¹⁷⁴ See GARRETT, *supra* note 1, at 5.

¹⁷⁵ *DNA Exoneree Case Profiles*, *supra* note 163.

¹⁷⁶ See *About the Registry*, *supra* note 165. As noted above, there have been 1576 exonerations as of April 2015, approximately eighty-percent of them as the result of relief other than DNA testing. See *id.*

¹⁷⁷ See Paul C. Giannelli, *supra* note 74, at 242–44.

¹⁷⁸ See NAT'L RESEARCH COUNCIL, *supra* note 8, at 173.

¹⁷⁹ See Giannelli, *supra* note 74, at 221–22. Willingham and his three daughters, Amber, Karmon, and Kameron, were caught in a fire on December 23, 1991. *Id.* at 221. Willingham escaped the fire;

identified by the fire marshal in his determination that arson caused the fire, noting specifically that “each and every one of the indicators relied upon have since been scientifically proven to be invalid.”¹⁸⁰ Despite the evidence arguably proving his innocence, and the efforts of attorneys working in the Innocence Movement, Willingham was never exonerated during his lifetime and was executed.¹⁸¹ Other arson cases, such as that of Victor Rosario in Lowell, Massachusetts, have been overturned due to their reliance on faulty arson evidence and subsequent re-examination by modern experts with modern techniques and insights.¹⁸²

II. THE POST-CONVICTION RELIEF ACT: A FAILED SOLUTION

As a result of the Innocence Movement, and to address concerns over the failure of forensic science to protect the innocent, as of 2015, all fifty states have passed post-conviction relief statutes providing access to deoxyribonucleic acid (DNA) testing.¹⁸³ Broadly speaking, these statutes allow convicted individuals to test biological evidence and, if the results are favorable, use that evidence to appeal their convictions.¹⁸⁴ The extent of access to post-conviction testing varies greatly depending on the particulars of the individual statutes that authorize it, and Pennsylvania’s Post-Conviction Relief Act (“PCRA”) demonstrates that not all solutions to the problem of faulty forensics are adequate.¹⁸⁵ First passed in

however, his three daughters did not. *Id.* He was tried and eventually executed for murder for the deaths of his children. *Id.* The investigator relied on twenty points of evidence supposedly indicating that the fire was caused by arson. *Id.* at 226. A later report by the Innocence Project, however, discredited the indicators as being based on invalid science. *Id.* at 242–43. Ultimately, every independent expert, including those at the top of the field in the United States, determined that there were no signs of arson, thereby demonstrating Willingham’s innocence. *See id.* at 250.

¹⁸⁰ *See id.* at 242–43 (quoting DOUGLAS CARPENTER ET AL., REPORT ON THE PEER REVIEW OF THE EXPERT TESTIMONY IN THE CASES OF *STATE OF TEXAS V. CAMERON TODD WILLINGHAM* AND *STATE OF TEXAS V. EARNEST RAY WILLIS* 11–12 (2006)).

¹⁸¹ *See id.* at 221–22.

¹⁸² *Commonwealth v. Rosario*, No. 82-2399-2407 at *2 (Mass. Super. Ct. 2014). Rosario was convicted of arson and eight counts of murder in 1983. *Id.* at *34. In 2014, he was granted a new trial in Massachusetts Superior Court on the grounds that there was insufficient evidence of arson, and new evidence was found that indicated that his confession may have been involuntary. *Id.* at *2.

¹⁸³ *Access to Post-Conviction DNA Testing*, THE INNOCENCE PROJECT (June 4, 2015, 10:40 AM), <http://www.innocenceproject.org/free-innocent/improve-the-law/fact-sheets/access-to-post-conviction-dna-testing> [<http://perma.cc/HYD5-YK48>].

¹⁸⁴ *See id.*

¹⁸⁵ 42 PA. CONS. STAT. § 9543.1 (2014); *see* Justin Brooks & Alexander Simpson, *Blood Sugar Sex Magik: A Review of Postconviction DNA Testing Statutes and Legislative Recommendations*, 59 *DRAKE L. REV.* 799, 845, 861, 864 n.415 (2011); Saylor, *supra* note 49, at 1. Although every state has implemented some form of access to post-conviction DNA testing, the statutes in question do not all provide equitable access to justice. *See Access to Post-Conviction DNA Testing*, *supra* note 183. The required burden on the wrongfully convicted is often extremely high, essentially requiring him or her to solve the crime themselves and show that the DNA will implicate someone else before they even get access to the testing meant to help build their case towards exoneration. *See* Rebecca Stephens, *Disparities in Postconviction Remedies for Those Who Plead Guilty and Those Convicted at Trial: A Survey of State Statutes and Recommendations for Reform*, 103 *J. CRIM. L. & CRIMINOLOGY* 309,

1995, the PCRA is the only statute in Pennsylvania offering collateral review of a petition for post-conviction relief in state court.¹⁸⁶ The PCRA provides access to all post-conviction relief avenues, including DNA testing, which was added through a provision passed in 2002.¹⁸⁷ There are numerous cognizable issues one might debate regarding what a proper statute for access to post-conviction DNA testing might contain.¹⁸⁸ Because there is so much variance from state to state regarding these statutes, no single state necessarily represents the best or worst model regarding a potential post-conviction DNA access statute.¹⁸⁹ Despite this, some states, such as Pennsylvania, have clearly recognizable flaws in their post-conviction DNA access statutes and could benefit from revising them to more closely conform to the exigencies of justice.¹⁹⁰

There are several major problems in the PCRA that prevent its just application in regards to post-conviction access to DNA testing.¹⁹¹ One of the most severe issues is that, to even gain access to testing, the convicted individual must be able to establish a *prima facie* case that the results of the testing will prove

323–24 (2013); Daina Borteck, Note, *Pleas for DNA Testing: Why Lawmakers Should Amend State Post-Conviction DNA Testing Statutes to Apply to Prisoners Who Pled Guilty*, 25 CARDOZO L. REV. 1429, 1430 (2004). The laws are often either more restrictive or bar access to testing if the defendant pled guilty. See Borteck, *supra*, at 1430. This is despite the fact that it is well accepted that innocent people can and do plead guilty. See *id.* at 1431. Thirty percent of the wrongful convictions overturned by DNA testing in the United States involved a guilty plea, a false confession, or other admission. *Access to Post-Conviction DNA Testing*, *supra* note 183. Many laws also do not adequately require states to preserve potential sources of DNA, which undermines the efficacy of the relevant testing statutes. See *id.* Some states do not allow for appeals of denial of testing, whereas others do not require a prompt hearing after a petition is made, allowing the court system to drag the process out interminably while the wrongfully convicted waits imprisoned. See *id.* The federal government does not provide an appropriate solution to these issues either. See David A. Schumacher, Note, *Post-Conviction Access to DNA Testing: The Federal Government Does Not Offer an Adequate Solution, Leaving the States to Remedy the Situation*, 57 CATH. U. L. REV. 1245, 1249 (2008). Both potential federal avenues for post-conviction access to DNA testing are dead-ends, according to Schumacher. See *id.*

¹⁸⁶ Saylor, *supra* note 49, at 1.

¹⁸⁷ See *id.*

¹⁸⁸ Brooks & Simpson, *supra* note 185, at 805–06. For example, the question of whether or not testing should be limited only to certain crimes. *Id.* at 806. What should the relevant standards be? *Id.* at 811. Who should perform the tests? *Id.* at 824. Who should pay for the tests? *Id.* at 829. Should the petitioner have a right to counsel? *Id.* at 833. Should there be time limits on access to testing? *Id.* at 840. What requirements should the state have to meet regarding preservation of evidence? *Id.* at 846. Should appeals be available for those seeking access to testing? *Id.* at 858. Should inmates who have previously pled guilty have access to testing? *Id.* at 860. Should those who are no longer incarcerated have access to testing? *Id.* at 862.

¹⁸⁹ See *id.* at 805.

¹⁹⁰ See *id.* As discussed further *infra*, Pennsylvania, for example, has a high threshold of entry, unreasonable statutory time limits, as well as an overall bar preventing those on parole, sex offenders, and others with continuing restrictions on their freedoms as a result of their convictions from challenging those convictions. See *id.* at 845, 861, 864 n.415.

¹⁹¹ 42 PA. CONS. STAT. § 9543.1 (2014); see Brooks & Simpson, *supra* note 185, at 845, 861, 864 n.415.

actual innocence.¹⁹² Additionally, the statute includes an unfair procedural time constraint that blocks many meritorious cases from relief.¹⁹³ Also, petitioners who previously pled guilty, confessed, or otherwise admitted to the crime they were convicted of are altogether precluded from accessing any sort of post-conviction relief, including DNA testing.¹⁹⁴ Finally, those who have served their time but are still required to register as sex offenders are prohibited from further challenging their convictions despite the continued limitations on their freedom that result from registration.¹⁹⁵

A. Requiring Proof of “Actual Innocence”

By requiring the petitioner to prove a prima facie case that the results of the DNA test, if favorable, would establish actual innocence, Pennsylvania is erecting a nearly impossible standard to meet for those seeking post-conviction testing.¹⁹⁶ This threshold requirement is the one that proved insurmountable to John Dolenc, as discussed in the Introduction of this Note.¹⁹⁷

In Pennsylvania, the courts have clarified that, if a test could potentially show that a convicted individual’s DNA was not found at the crime scene, either because no DNA was found at all or because another individual’s DNA was found instead, it is *insufficient* to establish actual innocence as required under the PCRA in order to be granted access to testing.¹⁹⁸ In Dolenc’s case, his wife was found covered in a bloodstained slab of concrete.¹⁹⁹ Because it would have been theoretically possible for him to commit the murder without bleeding himself, the prosecution successfully argued that even the absence of Dolenc’s DNA—or the presence of a third party’s DNA—would not have proven him innocent.²⁰⁰ During trial, mere reasonable doubt is required for a defendant to be declared not guilty; in the context of post-conviction DNA testing, however, Pennsylvania

¹⁹² Eleanor Grossman, *Postconviction Proceedings*, in 29 STANDARD PA. PRACTICE 2d § 138:130 (2015).

¹⁹³ See Brooks & Simpson, *supra* note 185, at 845. Pennsylvania requires inmates to file a collateral relief petition within one year of conviction unless they discover new evidence. Saylor, *supra* note 49, at 3. In that instance, they have only sixty days to file a new petition from the date that the evidence was discovered. *Id.*

¹⁹⁴ See Brooks & Simpson, *supra* note 185, at 861; PENNSYLVANIA INNOCENCE PROJECT, WHITE PAPER ON CONVICTION INTEGRITY PROPOSALS IN PENNSYLVANIA 7 (2014), <http://innocenceprojectpa.org/wp-content/uploads/2014/08/White-Paper-on-Conviction-Integrity-Proposals-in-Pennsylvania.pdf> [<http://perma.cc/C56L-DDK7>] [hereinafter CONVICTION INTEGRITY IN PENNSYLVANIA].

¹⁹⁵ See Brooks & Simpson, *supra* note 185, at 864 n.415; CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 8. Consequences for sex offender registration are numerous and varied, ranging from public shaming, inability to work, find housing, or even being targeted by vigilantes. See *infra* notes 270–92.

¹⁹⁶ See *Access to Post Conviction DNA Testing*, *supra* note 183.

¹⁹⁷ Moushey, *supra* note 38.

¹⁹⁸ Grossman, *supra* note 192, § 138:130.

¹⁹⁹ See *supra* notes 37–51 and accompanying text.

²⁰⁰ See Moushey, *supra* note 37.

requires a petitioner to disprove *every* conceivable hypothetical before access to DNA testing is even permitted.²⁰¹

This standard certainly bars access to post-conviction DNA testing in cases where no clear third-party culprit is obvious because it is always possible that someone committed a crime but left no DNA, as posited by prosecutors in Dolenc's case.²⁰² But even in Dolenc's case, where there was the possibility of a third party culprit, and other people had been charged with the crime prior to Dolenc, the court held that the fact that testing might find other individuals' DNA at the crime scene was insufficient proof of actual innocence to allow for access to testing.²⁰³ It becomes difficult to craft a scenario in which DNA evidence could more clearly point to actual innocence than in the situation of a third party culprit, yet the actual innocence standard of the PCRA demands something even more cogent.²⁰⁴

This standard is notably more stringent than those found in most states.²⁰⁵ Generally, all that other states require is for the defendant to prove that the evidence produced through DNA testing will have a reasonable possibility of affecting the verdict in the case.²⁰⁶ This is a substantially lower bar, allowing a defendant to proceed on alternate theories of the case, rather than essentially requiring the unraveling of the entirety of the prosecution's case before even being provided access to testing.²⁰⁷ By setting the bar so high, Pennsylvania guarantees that many innocent individuals who have been wrongfully convicted will languish in prison, unable to access even the most basic tools to prove their innocence.²⁰⁸

Not only does Pennsylvania effectively deny access to justice through this standard, it also ensures that potential third party culprits will go free.²⁰⁹ In Dolenc's case, there were numerous other potential culprits; had the DNA test implicated one of them, the actual guilty individual could have been put behind bars.²¹⁰ In fact, in forty-five percent of the first 250 exonerations conducted through DNA testing, the results identified a third party culprit, most often by a "cold hit" to a database; that is, these individuals were not implicated in the crime until the DNA testing was conducted.²¹¹ As such, it is vitally important to

²⁰¹ Grossman, *supra* note 192, § 138:130.

²⁰² See Moushey, *supra* note 38.

²⁰³ See *id.*

²⁰⁴ Grossman, *supra* note 192, § 138:130.

²⁰⁵ See Brooks & Simpson, *supra* note 185, at 811–19. South Dakota also requires "actual innocence" to be shown. *Id.*

²⁰⁶ See *id.* at 815–18.

²⁰⁷ See *id.*

²⁰⁸ See *id.*

²⁰⁹ See GARRETT, *supra* note 1, at 5.

²¹⁰ See Moushey, *supra* note 38.

²¹¹ See GARRETT, *supra* note 1, at 5.

allow for testing even in cases where there is not a clear, identifiable third-party culprit; more than a hundred murderers and rapists would still be free if access to DNA testing was denied as a result of restrictive standards such as those currently in place in Pennsylvania under the PCRA.²¹² Cases like John Dolenc's, and those of many other exonerees, make clear that the stakes are not only individual, but impact society as a whole when innocents are forced behind bars and the guilty are allowed to remain free.²¹³

B. Unreasonable Statutory Time Constraints

The PCRA has two major time constraints incorporated in it.²¹⁴ First, all collateral appeals must occur within one year of the date of the judgment.²¹⁵ This limitation even applies to subsequent petitions.²¹⁶ This 365-day period is the only window available in which individuals may raise certain issues, including new evidence.²¹⁷ The only exceptions for untimely petitions are if the petitioner can show that there was unconstitutional government interference, that new facts were discovered that could not have been ascertained with due diligence, or that there was a newly identified constitutional right that delayed the petition.²¹⁸ Thus, a petition filed *after* the 365-day window is unlikely to be granted access unless the petitioner can show not only new evidence, but that said new evidence could not have been discovered by him or her within the time limit.²¹⁹ As such, if, for example, DNA evidence was discovered thirty years after a crime was committed, the PCRA might allow a new motion to be filed, but only if that evidence *could not have been* discovered at the time of the crime—not merely if it *had not* been discovered.²²⁰

Assuming satisfaction of these initial high barriers—namely, that a petitioner has found newly discovered evidence and that evidence could not have been found earlier even with due diligence—there is one more temporal barrier the PCRA imposes upon potential exonerees.²²¹ Petitions based in one of the aforementioned exceptions must be filed within sixty days of the first date the claim *could have* been presented.²²² Thus, within sixty days of discovering the evidence requiring DNA testing, a potential exoneree must file his or her

²¹² *See id.*

²¹³ *See id.*

²¹⁴ Saylor, *supra* note 49, at 3.

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *See* CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 8.

²¹⁸ Saylor, *supra* note 49, at 3.

²¹⁹ *See id.*

²²⁰ *See id.*

²²¹ *See id.*

²²² *Id.*

claim.²²³ This requires the individual to either find counsel or gain the requisite skills needed to proceed *pro se*, which includes gathering all relevant evidence, and preparing and filing a petition for collateral relief.²²⁴ Failure to do either waives any further right to litigate the issue.²²⁵ Any petitions that fail to meet this stringent timeliness requirement are dismissed as untimely.²²⁶

Taken together, these time constraints pose an almost insurmountable barrier for effective access to post-conviction DNA testing.²²⁷ The sixty-day deadline is one of the shortest in the nation and precludes many otherwise valid claims from being brought.²²⁸ Similarly, the one-year time limit for collateral relief is found within only one other state statute in the United States.²²⁹ The vast majority of states either expressly allow collateral relief at any time or implicitly allow access to relief by failing to specify a time limit.²³⁰ There is no justifiable reason, aside from an appeal to cost-saving, for such draconian restrictions in the PCRA.²³¹ Innocent inmates already have an incentive to submit timely petitions because any delay means more time spent in prison.²³² There are many reasons why an inmate may be unable to meet the stringent time requirement under the PCRA.²³³ The inmate may lack knowledge of the relevant law or the available evidence, and thus fail to muster a defense within the allotted timeframe.²³⁴ He or she may be unable to secure legal assistance, as the availability of post-conviction defense for the indigent is limited, and innocence projects necessarily must limit those they grant their pro bono aid to.²³⁵ Securing such aid can also take many years, which would run out the meager one-year and/or sixty-day tolls.²³⁶ From the confines of a cell, most inmates can do little more than write

²²³ *Id.*

²²⁴ *Id.* at 3.

²²⁵ *See id.*

²²⁶ *See* CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 8.

²²⁷ *See id.*

²²⁸ *See id.* The Pennsylvania Innocence Project refers to the deadline as “virtually impossible.” *See id.* Only one state, Arkansas, has a shorter deadline, at thirty days. *See* Daniel S. Medwed, *Up the River Without a Procedure: Innocent Prisoners and Newly Discovered Non-DNA Evidence in State Courts*, 47 ARIZ. L. REV. 655, 676 n.157 (2005) (quoting George C. Thomas III et al., *Is It Ever Too Late for Innocence? Finality, Efficiency, and Claims of Innocence*, 64 U. PITT. L. REV. 263, 279 (2003)).

²²⁹ Brooks & Simpson, *supra* note 185, at 845. The other state with a one-year time limit is Alabama. *See id.* Some other states, as well as the federal government, impose two or three year limits. *Id.* at 844. The federal time limit acts as a presumption that the appeal is timely; after three years, there is a rebuttable presumption that it is untimely, rather than a mandatory finding of untimeliness. *Id.*

²³⁰ *Id.* at 841–43.

²³¹ *See id.* at 845. Because frivolous requests are unlikely, the cost-saving argument is, at best, token. *See* Borteck, *supra* note 185, at 1466–67.

²³² *See* CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 8.

²³³ *See* Brooks & Simpson, *supra* note 185, at 841.

²³⁴ *See id.*

²³⁵ *See id.*

²³⁶ *See id.*

letters, most of which will go unanswered.²³⁷ Depriving them of any serious opportunity to challenge their convictions runs counter to the purpose of offering post-conviction relief.²³⁸

Similarly, appeals to finality as justification for these time restrictions are unconvincing.²³⁹ When an innocent person is imprisoned, the justice system has not truly solved the crime because the real perpetrator is still at large.²⁴⁰ There is no value in allowing a criminal to continue wreaking havoc.²⁴¹ Post-conviction relief statutes were created for the very reason that innocent individuals wrongfully convicted deserve justice, a need that trumps false finality.²⁴² If these time restrictions are relaxed, concerns about numerous frivolous requests by guilty prisoners seeking access to DNA testing are unlikely to materialize because guilty prisoners typically do not seek confirmation of their guilt.²⁴³ Pennsylvania's time limits on access to post-conviction DNA testing are unreasonable and should be abolished.²⁴⁴

C. Restrictions on Guilty Pleas, Confessions, and Admissions

Initially, Pennsylvania's post-conviction relief statute was thought to extend access to relief to those who pled guilty or confessed to the crime of which they were convicted.²⁴⁵ Subsequent case law, however, has drastically narrowed this proposition.²⁴⁶ In *Williams v. Erie County District Attorney's Office*, the Supreme Court of Pennsylvania ruled that inmates only have access to collateral relief if they prove that their guilty plea or confession was extracted involuntarily.²⁴⁷ The Pennsylvania Superior Court likewise ruled in *Commonwealth v. Martinez* that if someone had pled guilty, the only available justiciable issues on appeal are whether the plea was voluntary and whether the sentence was legal.²⁴⁸ As such, access to post-conviction DNA testing in a case in which the defendant pled guilty is extremely difficult, if not impossible, in Pennsylvania.²⁴⁹

²³⁷ See *id.*

²³⁸ See Borteck, *supra* note 185, at 1466–67.

²³⁹ See *id.*

²⁴⁰ See *id.* at 1467. When Jerry Frank Townsend, an eventual exoneree, was imprisoned for the crimes of Eddie Lee Mosley, Mosley committed numerous additional rapes and murders, which only ceased after Townsend was exonerated and Mosley was apprehended. See *id.* Similarly, in the Central Park jogger case, the real perpetrator, Matias Reyes, raped four additional women and killed one of them prior to being identified. See *id.*

²⁴¹ See *id.*

²⁴² See *id.*

²⁴³ *Id.*

²⁴⁴ See CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 8.

²⁴⁵ See *id.* at 6.

²⁴⁶ See *id.*; Brooks & Simpson, *supra* note 185, at 861.

²⁴⁷ See 848 A.2d 967, 972 (Pa. Super. Ct. 2004).

²⁴⁸ See 539 A.2d 399, 401 (Pa. Super. Ct. 1988).

²⁴⁹ CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 6.

Treating those who plead guilty differently from those who do not in post-conviction relief must necessarily be predicated on one of two assumptions: either innocent people do not plead guilty, or constitutional violations do not occur during plea-bargaining.²⁵⁰ Neither assumption, however, is accurate in these contexts.²⁵¹ About ten percent of the first three hundred individuals exonerated by DNA testing chose to plead guilty in lieu of going to trial.²⁵²

Innocent people may choose to plead guilty despite their innocence for many different reasons.²⁵³ It has become increasingly apparent that the rate of police-induced false confessions, often resulting in guilty pleas, is quite high.²⁵⁴ Some researchers believe that the very nature of modern interrogation techniques lead directly to false confessions.²⁵⁵ Interrogations can last long hours and involve constant leading questions and the undermining of a suspect's story.²⁵⁶ Individuals who falsely confess under interrogation pressure may have lost confidence in their own recollections or hope of the interrogation ever ending, and may agree to anything that will make the questioning cease.²⁵⁷ Some defense attorneys even believe that it is beneficial for innocent defendants to plead guilty, and may improperly counsel their defendants to accept plea bargains that are particularly enticing despite their belief in the actual innocence of their client.²⁵⁸ Studies have shown that individuals who maintain their innocence, but go to trial and are convicted, are given harsher penalties due to a perception of lack of remorse, thus further pressuring innocent individuals to plead guilty to crimes they did not commit in order to receive leniency.²⁵⁹

Unfortunately, the exact rate of false confessions is unknown, but it is apparent from exonerations that they are common.²⁶⁰ Marcellius Bradford served

²⁵⁰ See Stephens, *supra* note 185, at 328.

²⁵¹ See *id.* at 328–33.

²⁵² *Id.* at 328.

²⁵³ *Id.* at 329. Possible reasons why an individual may choose to plead guilty include a lack of compelling evidence of innocence, a false confession, more lenient sentencing, improper pressure from the prosecutor or his or her own counsel, mental incapacity, or lack of another option. *Id.* It may even be possible for the accused to be so overwhelmed and confused that he or she begins to believe that he or she did commit the crime, despite his or her actual innocence. *Id.*

²⁵⁴ See Borteck, *supra* note 185, at 1432 n.15. This high incidence rate may be the result of police training, which typically instructs police officers that innocent people will not confess to crimes they did not commit. See *id.*

²⁵⁵ See *id.*

²⁵⁶ See *id.*

²⁵⁷ See *id.*

²⁵⁸ See Stephens, *supra* note 185, at 330. A study found that defense attorneys counseled clients that they believed to be innocent or who had claimed innocence to accept plea deals if the deals happened to be unusually generous or coercive. *Id.* One attorney admitted to always recommending guilty pleas if probation was offered in a felony case. *Id.*

²⁵⁹ See *id.*

²⁶⁰ See Borteck, *supra* note 185, at 1432 nn.15 & 16. There are four reasons that this is the case: (1) interrogations are often not taped or not taped in full, (2) no one has gathered statistics on the frequency of interrogations in the United States, (3) media outlets are unlikely to report on false confes-

six years in prison in Illinois for a murder he did not commit after he plead guilty in exchange for a twelve-year sentence and for providing testimony against his co-defendants; ultimately, DNA evidence exonerated not only him but his co-defendants as well, and implicated two other individuals.²⁶¹ In a case involving the murder of a jogger in Central Park, five young men of color were wrongfully imprisoned for ten years on the basis of false confessions before the actual perpetrator confessed and was confirmed through DNA testing to have committed the crime.²⁶² Innocent people plead guilty with regularity, and a system that ignores this concept and prevents these individuals from accessing post-conviction relief is inherently unjust.²⁶³

D. Restrictions on Relief for Sex Offender Convictions

Access to DNA testing under the PCRA is restricted only to individuals who are incarcerated at the time of petitioning.²⁶⁴ As a result, those who have been released from prison but are subject to sex offender registration or similar restrictions on their freedom as a result of their convictions are unable to avail themselves of the statute's remedies.²⁶⁵ With the rise of sexually violent predator laws, notification laws, and registration requirements for sexual offenders, the freedoms of those convicted of such crimes are continually infringed upon long after their sentence has been served.²⁶⁶ Even lesser punishments, such as parole and probation, carry certain social stigmas that brand convicted individuals for the remainder of their lives.²⁶⁷ If these individuals are in fact innocent and are incorrectly forced to enter the sex offender registry, they cannot seek relief in Pennsylvania and have no choice but to live under the stigma of a sex offender.²⁶⁸

Samuel Scott and Douglas Echols were convicted of rape, robbery, and kidnapping in 1987 in Georgia based on faulty eyewitness identification, despite corroborated alibis.²⁶⁹ They maintained their innocence and, ultimately, DNA testing excluded them from the crime scene fifteen years later; prior to their exoneration, however, they were paroled and forced to register as sex offenders.²⁷⁰

sions even if discovered, and (4) so few cases contain the sort of biological evidence necessary to decisively exonerate someone. *See id.*

²⁶¹ *See* Stephens, *supra* note 185, at 331–32.

²⁶² *See* Bortock, *supra* note 185, at 1447–50.

²⁶³ *See* Stephens, *supra* note 185, at 313.

²⁶⁴ Saylor, *supra* note 49, at 2.

²⁶⁵ *See id.*

²⁶⁶ *See* Brooks & Simpson, *supra* note 185, at 862.

²⁶⁷ *See id.*

²⁶⁸ *See id.*

²⁶⁹ Shawndra Jones, Note, *Setting the Record Straight: Granting Wrongfully Branded Individuals Relief from Sex Offender Registration*, 41 COLUM. J.L. & SOC. PROBS. 479, 479 (2008).

²⁷⁰ *See id.*

During their time on parole, the prosecution continued to defend their convictions, and the men were forced to continue to register as sex offenders until their convictions were vacated due to DNA evidence that exonerated them.²⁷¹ Scott had great difficulty finding employment during this time due to his registration status, and remembers it as “the most horrific thing I ever had to do in my life.”²⁷² Had Scott or Echols been convicted in Pennsylvania, however, they never would have been granted access to DNA testing, could never have exonerated themselves, and would have been forced to register as sex offenders to this day.²⁷³

Pennsylvania is one of at least nineteen states requiring those seeking post-conviction access to DNA testing to be incarcerated at the time they seek relief.²⁷⁴ This requirement effectively ignores the serious consequences of sex offender registration on a no longer incarcerated, innocent individual’s freedoms.²⁷⁵ Sex offenders are seen as the most repugnant types of offenders and are widely ostracized as a result.²⁷⁶ Public disclosure of the identities of sex offenders can lead to vigilantism, public shame, or various forms of legal action, including loss of employment and eviction.²⁷⁷ Many landlords refuse to rent to sex offenders and residency “buffer-zone” laws often further restrict their housing.²⁷⁸ The extraordinarily harsh consequences of sex offender registrations are cogent arguments that these individuals deserve redress under the law and should have equal access to post-conviction testing even after release from prison.²⁷⁹ A criminal justice system that continues to violate the freedoms of innocent individuals beyond incarceration and leaves them with no redress is inherently unjust and must be reformed.²⁸⁰

²⁷¹ See *id.*

²⁷² See *id.*

²⁷³ Grossman, *supra* note 192, § 138:130.

²⁷⁴ See Brooks & Simpson, *supra* note 185, at 862–63. Four additional states have conflicting language in their post-conviction relief statutes and twenty-one more are silent on the issue. *Id.* at 863, 864 n.415.

²⁷⁵ See *id.*

²⁷⁶ See Phoebe Geer, *Justice Served? The High Cost of Juvenile Sex Offender Registration*, 27 DEV. MENTAL HEALTH L. 34, 37 (2008).

²⁷⁷ See *id.* at 49.

²⁷⁸ See *id.* at 50; see also Gina Puls, *No Place to Call Home: Rethinking Residency Restrictions for Sex Offenders*, 36 B.C. J. L. & SOC. JUST. 319 (2016).

²⁷⁹ See Brooks & Simpson, *supra* note 185, at 864. The only countervailing argument is the concern of frivolous appeals racking up court costs. See *id.* As a sensible counter-measure, the Pennsylvania Innocence Project recommends, that if a court finds an intentionally false affidavit claiming innocence filed along with a petition for testing, costs of the testing be assigned to the defendant as a disincentive, which should adequately account for any such cost-saving concerns. See CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 7–8.

²⁸⁰ See CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 7–8.

III. MASSACHUSETTS: A MODEL FOR OTHER STATES

Massachusetts was unusually late in attempting to solve the problems of faulty forensics and wrongful convictions.²⁸¹ Prior to 2012, Massachusetts did not have a statute devoted to post-conviction access to deoxyribonucleic acid (DNA) testing.²⁸² Unlike many states, which delayed in implementing such statutes due to strong conservative cultures of law and order, Massachusetts experienced such extreme delay in constructing a solution because the existing law and courts allowed for access to testing despite the lack of a specific statute granting access.²⁸³ Defense lawyers and courts carved alternative avenues for such access, allowing nine DNA exonerations to occur between 1997 and 2007 despite no applicable statute granting access to testing.²⁸⁴ Thus, when change finally did occur in 2012, the environment was hospitable to creating a just, fair provision that allowed equitable access to DNA testing for those claiming actual innocence.²⁸⁵

A. Establishing a Fair Baseline: No Barriers to Entry in Standards, Time, or Offender Status

Massachusetts, due in part to its tardiness in enacting a post-conviction DNA access statute and its close relationship with various Innocence Projects, should serve as a strong model for other states, such as Pennsylvania, that wish to patch the unjust gaps in their statutory laws.²⁸⁶ Massachusetts General Law 278A, Post Conviction Access to Forensic and Scientific Analysis (“278A”), does not include the most common issues that are part of statutes like the Post Conviction Relief Act of Pennsylvania (PCRA), thus allowing for more just adjudication of innocent convicts’ cases.²⁸⁷

²⁸¹ Rachel Steinback, *The Fight for Post-Conviction DNA Testing Is Not Yet Over: An Analysis of the Eight Remaining “Holdout States” and Suggestions for Strategies to Bring Vital Relief to the Wrongfully Convicted*, 98 J. CRIM. L. & CRIMINOLOGY 329, 345 (2007).

²⁸² *See id.*; *Chapter 278A Working Group*, MASS. PRIVATE COUNSEL DIVISION, <https://www.publiccounsel.net/pc/innocence-program/chapter-278a-working-group> [http://perma.cc/BP8W-RWUY].

²⁸³ *See* Steinback, *supra* note 281, at 345, 347. Massachusetts was one of two states referred to by Steinback as “uniquely situated,” along with Alaska, although the two states’ reasons for delay were not similar. *See id.*

²⁸⁴ *See id.* at 346–47. The most common avenue was so-called “Rule 30” motions, the general post-conviction relief pathway. *See id.* at 347 n.96.

²⁸⁵ *See* Steinback, *supra* note 281, at 346.

²⁸⁶ *See Chapter 278A Working Group*, *supra* note 282. The New England Innocence Project and the Committee for Public Counsel Services Innocence Program are both involved in ongoing work to refine and implement the mandates of 278A. *See id.* Massachusetts passed its post-conviction DNA testing access statute in 2012. *See id.*

²⁸⁷ *See* 42 PA. CONS. STAT. § 9543.1 (2014); MASS. GEN. LAWS ch. 278A, §§ 1, 2 (2012). The law specifically defines a conviction to include guilty pleas and allows anyone convicted of a crime who asserts factual innocence to file a motion. *See* MASS. GEN. LAWS ch. 278A, §§ 1, 2. It also allows

The standard a petitioner in Massachusetts is required to meet in order to gain access to DNA testing is considerably lower than that in Pennsylvania.²⁸⁸ Rather than having to prove “actual innocence,” all a petitioner must show is that the results of a forensic test would be material to the identity of the perpetrator of the crime.²⁸⁹ The Massachusetts Supreme Court has further clarified that the standard of admittance for these motions is very permissive.²⁹⁰ The petitioner is not required to establish a prima facie case of innocence, nor establish that, if the results had been obtained at the time of trial, they would have impacted the verdict.²⁹¹ Rather, a petitioner must merely show that the evidence may be relevant to identify who committed the crime.²⁹² This standard is similar to those in Maine and Michigan, which require that the results of the DNA testing be “material.”²⁹³ It raises concerns, however, that this standard might be essentially the same as requiring a high likelihood of a favorable test result, essentially allowing the court to reject any testing request it deems unlikely to be favorable because of other evidence of guilt.²⁹⁴ The Supreme Judicial Court of Massachusetts, however, has eliminated any such ambiguity in 278A: a petitioner must only show that the testing results would bear on the identity of the perpetrator, not that the result will be favorable to the defendant or that the results would have made any difference at trial.²⁹⁵

Furthermore, unlike the PCRA in Pennsylvania, 278A has no time limits on when a motion for access to relief may be filed.²⁹⁶ This allows for free and just access to collateral relief no matter how long the innocent individual has remained unjustly incarcerated.²⁹⁷ Allowing access to these avenues of relief at any time removes the onerous requirements of timeliness that have rendered Pennsylvania’s post-conviction relief almost impossible to exercise.²⁹⁸ Coupled with being free from having to establish a prima facie case for innocence prior to applying for testing, this allows a defendant to slowly build a case for innocence

anyone whose freedom is still restrained to file said motions even if they are not incarcerated at the time of filing. *See id.* There is no time limit on filing in Massachusetts. *Id.*

²⁸⁸ *See* MASS. GEN. LAWS ch. 278A, §§ 1, 2.

²⁸⁹ *See id.*

²⁹⁰ *See* Commonwealth v. Wade, 5 N.E.3d 816, 819 (Mass. 2014). The Massachusetts Supreme Judicial Court ruled that the standard on whether to grant a 278A motion is whether it bears on the identity of the perpetrator, not whether it would have made a difference at a theoretical new trial. *See id.* at 826.

²⁹¹ MASS. GEN. LAWS ch. 278A, §§ 1, 2.

²⁹² *See id.*

²⁹³ *See* Brooks & Simpson, *supra* note 185, at 818.

²⁹⁴ *See id.*

²⁹⁵ *See* Wade, 5 N.E.3d at 826.

²⁹⁶ *See* MASS. GEN. LAWS ch. 278A, §§ 1, 2.

²⁹⁷ *See* Brooks & Simpson, *supra* note 185, at 845.

²⁹⁸ *See* CONVICTION INTEGRITY IN PENNSYLVANIA, *supra* note 194, at 8.

through numerous testing orders, and ultimately, if he or she is indeed innocent, prove it through accurate scientific methods.²⁹⁹

Also in contrast to the PCRA, 278A explicitly allows those who previously pled guilty to the crime they were convicted of to file 278A motions without restriction.³⁰⁰ As such, the statute recognizes the coercive pressures in the criminal justice system and the flaws in human nature that may cause an innocent person to plead guilty. Unlike the PCRA, 278A allows these individuals legal redress if they are, in fact, innocent.³⁰¹ A whole class of wrongly convicted individuals who have been victimized and processed by the system, or coerced into pleading guilty or accepting a plea deal, are thus allowed a chance to fight back, albeit only once they have uncovered evidence that might clear their name.³⁰²

Finally, unlike the PCRA, which is explicitly restricted to those who are incarcerated at the time they seek relief, 278A allows both those who are incarcerated at the time they seek relief and those “on parole or probation or whose liberty has been otherwise restrained as a result of a conviction” to pursue relief.³⁰³ 278A is open to any who have had their freedom constrained by the criminal justice system, be it through probation, parole, or sex offender registration laws.³⁰⁴ Under Pennsylvania law there is no redress for those so burdened. Thus, Pennsylvania should follow the Massachusetts model so that those who have been wrongfully convicted have a clear avenue for correcting the unjust restrictions on their personal freedom.³⁰⁵

B. Further Advantages to the Massachusetts Model

Massachusetts’s statute for post-conviction access to DNA testing contains several key features that make it an ideal model in contrast to the Pennsylvania statute.³⁰⁶ As discussed above, 278A has removed many of the barriers to post conviction relief that Pennsylvania imposes upon those wrongfully convicted.³⁰⁷ Apart from avoiding the mistakes of the PCRA, 278A also has its own unique strengths that make it an ideal model for states like Pennsylvania that should revise their unjust post-conviction relief statutes.³⁰⁸

²⁹⁹ See MASS. GEN. LAWS ch. 278A, §§ 1, 2.

³⁰⁰ See *id.* § 3d.

³⁰¹ See Stephens, *supra* note 185, at 329.

³⁰² See *id.* at 328–33.

³⁰³ See MASS. GEN. LAWS ch. 278A, § 2.

³⁰⁴ See *id.*

³⁰⁵ See *id.*

³⁰⁶ See MASS. GEN. LAWS ch. 278A.

³⁰⁷ See *id.* §§ 1, 2.

³⁰⁸ See *id.*

1. Preserving Evidence

Many states include provisions in their post-conviction relief statutes related to the proper handling of evidence that may potentially contain testable material.³⁰⁹ Pennsylvania is one of the few states that does not require evidence to be preserved at all until a motion for testing has been filed.³¹⁰ In essence, the state is not on notice that it may need to preserve evidence until an innocent individual files a motion, by which time the evidence may already have been destroyed.³¹¹ Although this is a flawed and circular implementation, most states are little better, with no real remedy if the state fails to live up to its obligation.³¹² Massachusetts, on the other hand, now requires all biological evidence to be preserved during the entire period of incarceration.³¹³ Moreover, Massachusetts adds a punitive element to 278A, sanctioning government officials who act in a reckless manner that results in the destruction of evidence with charges of contempt.³¹⁴ Thus, in Massachusetts, the requirement of preserving evidence is effectively enforced against potential reckless actors.³¹⁵

By establishing criminal sanctions for those who recklessly destroy evidence, Massachusetts ensures that there will be clear accountability for those responsible for safeguarding evidence that may potentially exonerate innocent people.³¹⁶ This could be improved in the future, perhaps, by instituting a lesser degree of punishment for those who destroy evidence through negligence, thereby allowing some justice for those harmed in the destruction of evidence when a crime lab was not criminally reckless, but nevertheless did not live up to the standard of care expected of forensic analysts.³¹⁷ Luckily, Massachusetts has also established a 278A working group that collaborates between law enforcement and the Innocence Movement to help promulgate proper standards for evidence preservation, which will help to ensure proper preservation of evidence, provide a clearer way to distinguish reckless conduct versus negligent conduct, and represent a powerful step toward the affirmation of the power of the Innocence Movement.³¹⁸

³⁰⁹ Brooks & Simpson, *supra* note 185, at 846–50.

³¹⁰ *Id.* at 849.

³¹¹ *See id.*

³¹² *See id.* at 850.

³¹³ MASS. GEN. LAWS ch. 278A, §§ 1, 2.

³¹⁴ *See id.*

³¹⁵ *See id.* § 17; Brooks & Simpson, *supra* note 185, at 850–51. Nine other jurisdictions prescribe criminal penalties for violating evidence preservation laws. Brooks & Simpson, *supra* note 185, at 850–51. These are Arkansas, Kentucky, South Carolina, Wyoming, the District of Columbia, North Carolina, Louisiana, Tennessee, and the federal government. *Id.*

³¹⁶ *See* Brooks & Simpson, *supra* note 185, at 850–51.

³¹⁷ *See* Driscoll, *supra* note 152, at 708–09; Brooks & Simpson, *supra* note 185, at 850–51.

³¹⁸ *See Chapter 278A Working Group, supra* note 282.

2. The Massachusetts Model as an All-Purpose Forensic Testing Statute

The Massachusetts solution is an important model for additional reasons as well.³¹⁹ Unlike the PCRA and many other state laws, whose statutes governing access to post-conviction DNA testing is limited to DNA testing rather than other forensic methodologies, 278A is phrased in broad terminology.³²⁰ The chapter under which the DNA testing provisions are found is titled “Post Conviction Access to Forensic and Scientific Analysis.”³²¹ Within this chapter, the statute states that “[a] person may file a motion for forensic or scientific analysis under this chapter,” which expands the possibilities of testing other types of forensic evidence beyond just DNA.³²² The statute also helpfully defines the term “analysis” to mean “the process by which a forensic or scientific technique is applied to evidence or biological material to identify the perpetrator of a crime.”³²³ Because of this intentional generality, 278A is not merely a statute for access to post-conviction DNA testing.³²⁴ Rather, it is an open allowance for the wrongfully convicted to challenge any and all previous forensic and scientific analyses that may have been conducted incorrectly in the past due to lack of knowledge or scientific rigor, so long as said analysis is relevant to the identity of the perpetrator.³²⁵ Thus, whereas statutes like the PCRA are limited to remedying only those cases in which flaws were caused by a lack of access to DNA testing or undiscovered evidence that can now utilize DNA testing, 278A allows for reevaluation in a broad range of cases where prior, otherwise incorrect analysis may now be re-tested using modern, more accurate techniques.³²⁶

C. Areas for Further Improvement: The Appointment of Counsel

In addition to provisions governing access to testing, 278A allows for the discretionary appointment of counsel if a petitioner is indigent.³²⁷ For contextual reference, many states allow discretionary appointment, some states require appointment, and others explicitly disavow the right to counsel at the post-conviction stage.³²⁸ But discretionary appointment of counsel is problematic for several reasons.³²⁹ The difficulty of litigating a post-conviction forensic testing

³¹⁹ See MASS. GEN. LAWS ch. 278A.

³²⁰ See *id.* The PCRA covers all post-conviction relief avenues in Pennsylvania, but similar to most states, does not allow for any post-conviction forensic testing aside from DNA testing. See 42 PA. CONS. STAT. § 9543.1 (2014).

³²¹ MASS. GEN. LAWS ch. 278A.

³²² See *id.* § 2.

³²³ See *id.* § 1.

³²⁴ See *id.*

³²⁵ See *id.*

³²⁶ See *id.*

³²⁷ See MASS. GEN. LAWS ch. 278A.

³²⁸ See Brooks & Simpson, *supra* note 185, at 833–40.

³²⁹ See *id.*

request varies from state to state; Massachusetts, with its relatively permissive standards, would likely be considered one of the easier states in which to do so.³³⁰ Nevertheless, it is universally difficult to pursue these motions without counsel.³³¹ In order to succeed on a 278A motion, an inmate must be able to investigate the evidence, draft the testing motion, submit affidavits, litigate the testing motion, negotiate and oversee the lab testing, interpret and apply the test results, and then draft and litigate any resulting motions, petitions, or appeals that would be required based on the results.³³² Absent counsel, all of this must be accomplished from a jail cell, unless the prospective exoneree is on probation or otherwise released.³³³

It may not be feasible to appoint counsel to assist with every single motion for forensic testing, especially under a statute such as 278A in which the standard for allowing motions is fairly forgiving and more applications are likely to be filed.³³⁴ The current statute, however, leaves appointment entirely discretionary to the judge, which potentially allows meritorious claims to fail on procedural grounds if an innocent inmate is unable to draft the motions his or herself or convince a judge that his or her case deserves special attention not afforded to others.³³⁵ It would be beneficial to establish a standard dictating when counsel should be appointed; although fears of frivolous applications are likely unfounded, any such problems would only be exacerbated by attaching a lawyer to each and every claim made for testing.³³⁶ A finding that the evidence to be tested is not only material to the identity of the perpetrator, but has a reasonable likelihood of returning a favorable result for the petitioner, could serve as a reasonable standard by which a petitioner may be appointed counsel for the purposes of drafting a 278A motion.³³⁷ Importantly, petitioners who could not meet this standard could still proceed *pro se*; this standard might prove beneficial in allowing assistance for the most meritorious of cases and thus streamline the first step on the road to exoneration.³³⁸ It should not be viewed as further limiting the ability of a litigant to pursue testing, but merely to clarify when a litigant must be afforded counsel to aid him or her.³³⁹

³³⁰ See *id.* at 833.

³³¹ See *id.*

³³² See *id.* at 833–34. These may encompass re-testing of the same or other materials or a subsequent motion for a new trial. See *id.*

³³³ See *id.*

³³⁴ See MASS. GEN. LAWS ch. 278A, § 17.

³³⁵ See *id.*

³³⁶ See Brooks & Simpson, *supra* note 185, at 833–40.

³³⁷ See *id.*

³³⁸ See *id.*

³³⁹ See *id.*

CONCLUSION

Forensic science is currently undergoing a difficult transitional process. It is now known that many of the old techniques for evaluating evidence are lacking scientific basis or justification. Consequently, new techniques are quickly eclipsing old methods in utility. Like a phoenix, forensic science must be destroyed so it can be reborn anew in a more socially functional form.

Post-conviction access to DNA testing plays a vital role in both the tearing down of the old, inaccurate, and invalid regime of identification-centric forensic procedures and in exonerating the wrongfully convicted. As such, the more accessible post-conviction procedures are, the faster the wrongs of the past will be made right and the sooner those techniques which are proven unscientific by the superior DNA technology will be properly abandoned. Although the PCRA was enacted in hopes of granting access to reparative DNA testing, that promise has failed due to the statute's overly restrictive requirements and onerous standards. In contrast, the Massachusetts version of these statutes, 278A, should serve as a model to others because, not only does it make it easier for the convicted to access and make use of testing, but it is uniquely forward thinking in its implementation, allowing access to any sort of testing which might allow for the identification of the perpetrator. Thus, it is an especially powerful tool for challenging outdated procedures that have been replaced by new ones, further burning the old bird of forensic analyses to fuel the rebirth of better, stronger, and more accurate forensic techniques of the future. DNA technology has already established that the advent of new scientific methods can revolutionize how we perceive justice. By allowing for any and all convictions to be tested by the rigors of advancing science, 278A has embraced the future and the scientific method as it applies to criminal justice.