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The Right Honourable Beverley McLachlin

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Wrongful convictions occur in every country in the world. Canada, despite its claim to be a just society, is no exception.

For a very long time, people accepted wrongful convictions as an inevitable by-product of the criminal justice system. The solution, admittedly imperfect, was thought to lie in the common law principles of fair trial, cross-examination, burden of proof, and the requirement that guilt be proved beyond a reasonable doubt.

This has changed. We no longer accept the occasional wrongful conviction as inevitable. We know that every wrongful conviction represents a failure in our justice system. Such failures exact a huge price, both in terms of the suffering they impose on the person wrongfully convicted and families, and the disrepute they bring on the administration of justice.

And we no longer believe that the traditional common law and constitutional safeguards, vital as they remain, are sufficient by themselves to deal with the complex problem of wrongful convictions. With research, we have come to understand that despite differences in justice systems and domestic criminal laws, the causes of wrongful convictions are distressingly similar - tunnel vision, eyewitness misidentification, unreliable science, prosecutorial and police misconduct, false confession, reliance on disreputable witnesses and inadequate disclosure.

With this understanding of the complex causes of wrongful convictions, has come the conviction that we can and should do better. More research and deeper shared understandings of best practices are required if we are to diminish the number of wrongful convictions and make proper restitution when they occur. Prosecutors, defence lawyers, judges and justice officials find themselves dealing with the scourge of wrongful convictions on a daily basis; they desperately need access to research and thinking on the causes and consequences of wrongful convictions.

The Wrongful Conviction Law Review will provide this support, by creating a forum for the publication of research and insights into the causes of wrongful convictions and how to prevent them and deal with their aftermath when they occur. I believe this new publication will be a powerful tool in addressing the injustice of wrongful convictions and miscarriages of justice throughout the world.

Thirty Years of Innocence:

Wrongful Convictions and Exonerations in the United States, 1989-2018

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Systematic reporting of data about wrongful conviction cases in the United States typically begins with 1989, the year of the country's first post-conviction, DNA-based exonerations. Year-end 2018 thus concludes a full thirty years of information and marks a propitious time to take stock. In this article, we provide an overview of known exonerations, innocence advocacy, and wrongful conviction-related policy reforms in the U.S. during these three decades. First, we provide a brief history of wrongful convictions in the U.S. before turning to the modern era of innocence. We describe the key sources of data pertaining to wrongful convictions and exonerations. Then, using case data from the National Registry of Exonerations, we offer a detailed analysis of national and state-by-state trends in exonerations, including annual totals, DNA- and non-DNA-exonerations, and capital case exonerations. Our examination includes factors corresponding to sources of error, state death-penalty status, and regional differences. We then discuss innocence advocacy organizations, with a particular focus on Centurion Ministries and members of the Innocence Network. This is followed by an examination of state-by-state trends in innocence-related policy reforms on key issues as identified by the Innocence Project. The final section of the article discusses the many important matters we do not yet know about wrongful convictions and poses thoughts, questions, and ideas for continued scholarship focusing on miscarriages of justice. The Appendix provides state-by-state summaries of select information relating to wrongful convictions and innocence reforms.

I Introduction

Mistakes are inevitable in all human endeavors. The discovery of errors that have haunted the investigation, prosecution, and adjudication of crimes has been at the center of an advocacy and reform movement that has altered discourse and practice, and has the potential to fundamentally transform how we think about guilt and innocence, and law and justice.[1] Wrongful convictions—the convictions of people who are factually innocent of charged crimes—have taken the legal world by storm. Not only have thousands of people been exonerated, but a national (and international), organized advocacy movement has developed,[2] policies and practices have been reformed at all levels from local agencies to the federal government,[3] and miscarriages of justice

[1] See generally, Robert J Norris, *Exonerated: A History of the Innocence Movement* (New York: NYU Press, 2017 [*Norris 1*]; Marvin Zalman, "An Integrated Justice Model of Wrongful Convictions" (2010/2011) 74 Alb L Rev 1465.

[2] See generally, Norris 1, *ibid*; see also, Keith A Findley & Larry Golden, "The Innocence Movement, the Innocence Network, and Policy Reform" in Marvin Zalman & Julia Carrano, eds, (New York: Routledge, 2016) 93-110.

[3] For examples, see Robert J Norris, et al "Than That One Innocent Suffer': Evaluating State Safeguards Against Wrongful Convictions" (2010/2011) 74 Alb L Rev 1301 [*Norris 2*]; Michael Leo Owens & Elizabeth Griffiths, "Uneven Reparations for Wrongful Convictions: Examining the State Politics of Statutory Compensation Legislation" (2011/2012) 75 Alb L Rev 1283 [*Owens & Griffiths*]; Stephanie L Kent & Jason T Carmichael, "Legislative Responses to Wrongful Conviction: Do Partisan Principals and Advocacy Efforts Influence State-Level Criminal Justice Policy?" (2015) 52 Soc Sci Res 147 [*Kent & Carmichael*]; Robert J Norris, et al, "Preventing Wrongful Convictions: An Analysis of State Investigation Reforms" (2019) 30 Crim Just Pol'y Rev 597 [*Norris 3*].

have penetrated mainstream popular culture.[4] Indeed, the "innocence movement" is a powerful force for change in the 21st century.

In this article our goals are to combine various sources of wrongful conviction information and systematically describe exonerations and innocence-related advocacy and reforms in the United States over the last thirty years. In short, we are "taking stock of innocence"[5] in a detailed fashion. Systematic reporting of data about wrongful conviction cases in the United States typically begins with 1989, the year of the country's first post-conviction, DNA-based exonerations. Year-end 2018 thus concludes a full thirty years of information and marks a propitious time to pause and comprehensively examine what has happened, what we know, and what we do not know about matters important to the innocence movement.

We begin with a short version of the long history of wrongful convictions in the United States, dating back to the first documented wrongful convictions in the early 1800s,[6] and the beginning of innocence scholarship in the early 1900s. We then move to our main focus: the modern era of innocence. We discuss how this era began with the first DNA exonerations in 1989, and we describe the key sources of data pertaining to wrongful convictions and exonerations (including their similarities and differences). We next offer a detailed breakdown of innocence-related information in the United States over the last thirty years, separated into three sections. We initially summarize national and state-by-state trends in exonerations, including annual totals, DNA- and non-DNA-exonerations, and capital case exonerations. Our examination includes factors corresponding to sources of error, state death-penalty status, and regional differences. Second, we discuss innocence advocacy organizations, with a particular focus on Centurion Ministries and members of the Innocence Network. Third, we examine state-by-state trends in innocence-related policy reforms on key issues as identified by the Innocence Project. The final section of the article discusses the many important matters we do not yet know about wrongful convictions and poses thoughts, questions, and ideas for continued scholarship focusing on

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[4] For example, popular author John Grisham has written both fictional and non-fictional books centered on wrongful convictions. See John Grisham, *The Innocent Man: Murder and Injustice in a Small Town* (New York: Doubleday, 2006); John Grisham, *The Confession* (New York: Doubleday, 2010); John Grisham, *The Guardians* (New York: Doubleday, 2019). Furthermore, wrongful or other questionable convictions remain among the most popular topics for film, television, and podcasts. See for example, Jethro Nededog, "Here's How Popular Netflix's 'Making a Murderer' Really was According to a Research Company" Business Insider, (12 February 2016), online: <https://www.businessinsider.com.au/netflix-making-a-murderer-ratings-2016-2?r=US&IR=T>;Shane Nyman, "Just How Popular is Making a Murderer? *Appleton Post-Crescent*, (14 January 2016), online: <https://www.postcrescent.com/story/news/local/2016/01/12/just-how-popular-making-murderer/78507664/>; Todd Spangler, "Netflix Says 'When They See Us' Has Been Most-Watched Show in U.S. Since Premier" *Variety*, (12 June 2019) [*Spangler*], online: <https://variety.com/2019/digital/news/netflix-when-they-see-us-most-watched-show-premiere-1203241480/>.

[5] James R Acker, "Taking Stock of Innocence: Movements, Mountains, and Wrongful Convictions" (2017) 33 J Contemp Crim Just 8.

[6] There were, of course, documented errors before the establishment of the United States. Most notably, the Witch Trials in Salem, Massachusetts in the 1690's. See generally, Mary Beth Norton, *In the Devil's Snare: The Salem Witchcraft Trials of 1692* (New York: Vintage, 2002). Still, the Boorn case is generally considered the first wrongful conviction in the US. See Northwestern Center on Wrongful Conviction, "First Wrongful Conviction", online: <http://www.law.northwestern.edu/legalclinic/wrongfulconvictions/exonerations/vt/boorn-brothers.html> (nd).

miscarriages of justice. The Appendix provides state-by-state summaries of select information relating to wrongful convictions and innocence reforms.

Although we focus in this article on exonerations and the innocence movement in the United States, it is clear that wrongful convictions are not unique to the U.S., nor are they restricted to adversarial systems of justice. Many errors of justice have been uncovered around the globe and have been the subject of international scholarship.[7] The Innocence Network (discussed in later sections) has member-organizations that work worldwide, covering North and South America, Europe, Asia, and Australia.[8] We focus on the United States not only because the task of taking on the entire world is beyond us, but because we are able to rely on the large body of systematic data on wrongful convictions from the American states.

II An Abridged History of Innocence in the United States

The first documented wrongful conviction in the United States is generally dated to the early nineteenth century, involving the case of the brothers Stephen and Jesse Boorn. In 1812, the Boorns' brother-in-law, Russell Colvin, disappeared from Manchester, Vermont following a family squabble. Seven years later, with Colvin's whereabouts still unknown, the Boorns' uncle, Amos, dreamed that Colvin visited him in his sleep and said that he had been murdered. Skeletal remains, which quickly (but erroneously) were assumed to be those of Colvin, were found buried in a field. Following false confessions from the Boorns and the testimony of a jailhouse snitch, the Boorns were convicted and sentenced to death. Months later, in December 1819, a description of Colvin was published in New York's *Evening Post*, and a man who overheard its reading in a hotel recognized the description as matching a man he knew from Manchester. That man turned out to be the supposed murder victim, Colvin, who was alive and well. After Colvin was enticed to return to Vermont, the Boorns were exonerated.[9]

The Boorn case was certainly not the only error of justice that occurred during the nineteenth and early twentieth centuries, although nonexistent and spotty records make it impossible to know the true frequency of wrongful convictions.[10] However, the first scholarly writing on the subject emerged in the early 1900s, highlighting the types of errors that can lead to wrongful convictions. Edwin Borchard, a law professor at Yale University, first wrote about

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[7] There is a large body of international scholarship on wrongful convictions and related issues; far too much to list here. As a good starting point, we refer interested readers to two edited volumes produced by Huff and Killias, both of which emphasized international perspectives on miscarriages of justice. See C Ronald Huff & Martin Killias, eds, *Wrongful Convictions & Miscarriages of Justice: Causes and Remedies in North American and European Criminal Justice Systems* (New York: Routledge, 2013) [*Huff & Killias*]; C Ronald Huff & Martin Killias, eds, *Wrongful Conviction: International Perspectives on Miscarriages of Justice* (Philadelphia: Temple University Press, 2010).

[8] For a list of current Network members, see online: <https://innocencenetwork.org/members/>.

[9] For more on the Boorn case, see Northwestern Center on Wrongful Conviction, First Wrongful Conviction, *supra* note 6.

[10] For example, many early errors of justice occurred in Europe. For a brief historical account of wrongful convictions both in the US and in Europe, see Martin Yant, "The Media's Muddled Message on Wrongful Convictions" [*Yant*] in Allison Redlich, et al, *Examining Wrongful Convictions: Stepping Back, Moving Forward* (Durham: Carolina Academic Press, 2014) 71-89 [*Redlich*].

compensation for the wrongly convicted in 1913,[11] and later published his seminal book, *Convicting the Innocent,* in 1932. This volume catalogued sixty-five cases of what Borchard believed were false convictions and the reasons for those errors.[12] The key sources of error described by Borchard will be familiar to current innocence scholars and advocates—witness misidentification, perjury, false confessions, unreliable expert evidence, and inadequate defense.[13] He proposed several procedural reforms designed to mitigate such errors.[14]

The ensuing decades saw numerous attempts to capture the essence of wrongful convictions in written form. Books, written largely by jurists, journalists, and popular writers, often followed Borchard's general format, documenting the plight of innocent individuals who had been erroneously convicted and punished.[15] They typically followed a "familiar structure" that has been described elsewhere.[16] Three observations are particularly noteworthy concerning the later expanded coverage of wrongful convictions.

First, one of the popular writers to delve into wrongful convictions was Erle Stanley Gardner, creator of famed fictional detective, Perry Mason. An author and lawyer, Gardner merged his fiction with reality by creating the Court of Last Resort. This panel, made up of legal experts and investigators, uncovered and reviewed potential errors and was instrumental in exonerating at least eighteen people. Gardner wrote a popular book in 1952 bearing the same name;[17] he and his Court of Last Resort represent what is perhaps the first organized attempt to uncover wrongful convictions.

Second, most of these early books were intended for popular audiences, rather than academic ones. This focus is neither inherently good nor bad, but the primary purpose of these works was to entertain and inform an interested lay audience, rather than to estimate the prevalence of wrongful convictions, systematically analyze their causes, or posit and test theories to explain them. Thus, when social scientists turned their attention to wrongful convictions beginning in the 1980s, the subject area was ripe for empirical research and scholarship.

Third, although writings about wrongful convictions before the late 1980s generally lacked an academic perspective, and particularly one offered by social scientists, it is noteworthy that some of the most important foundations for modern innocence work are rooted in psychological research from this era. For instance, psychologists such as Elizabeth Loftus and Gary Wells

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[11] Edwin M Borchard, "European Systems of State Indemnity for Errors of Criminal Justice" (1913) 3 J Am Inst Crim L & Criminol 684.

[12] Edwin M Borchard, *Convicting the Innocent: Errors of Criminal Justice* (New Haven: Yale University Press, 1932) [*Borchard 1*].

[13] Borchard 1, *ibid*; James R Acker, "Wrongful Convictions Then and Now: Lessons to be Learned" (2010) 73 Alb L Rev 1207 at 1207-1208.

[14] See generally, Borchard 1, *supra* note 12 at 14-15.

[15] See for example, Erle Stanley Gardner, *The Court of Last Resort* (New York: William Sloane Associates, 1952) [*Gardner*]; Jerome Frank & Barbara Frank, *Not Guilty* (New York: Da Capo, 1957); Edward D Radin, *The Innocents* (New York: William Morrow, 1964).

[16] Richard A Leo, "Rethinking the Study of Miscarriages of Justice: Developing a Criminology of Wrongful Conviction" (2005) 21 J Contemp Crim Just 201 at 203 [*Leo 1*].

[17] Gardner, *supra* note 15; for more on Gardner's efforts, see Yant, *supra* note 10.

highlighted the fallibility of witness memory and testimony, and Saul Kassin and Lawrence Wrightsman examined coerced confessions, thus forming a basis for psychological research in the decades that followed.[18]

Despite the work throughout the twentieth century, when exonerations "were newsworthy"[19] and made for interesting stories, momentum in the field was not sustained until the 1980s. In 1983, Jim McCloskey, a veteran who left a successful corporate career to earn a divinity degree, founded Centurion Ministries after stumbling unexpectedly on the case of Jorge De Los Santos, who had been wrongly convicted of murder in New Jersey.[20] Centurion was the first non-profit organization dedicated to innocence work, laying the foundation upon which the Innocence Project and others were later developed.[21] Exonerations won by McCloskey and others gained the attention of major media outlets, and public attention became further focused on innocence with the release in 1988 of Errol Morris's *The Thin Blue Line*, which portrayed the case of Randall Dale Adams, who was wrongly convicted of murder and sentenced to death in Texas in the 1970s.[22]

This period also saw the birth of modern innocence scholarship, as academics began to analyze wrongful convictions in new ways. C. Ronald Huff and Arye Rattner were among the first social scientists to study wrongful convictions, with their 1986 report which analyzed a dataset of cases and presented the opinions of criminal justice officials about the frequency with which errors of justice occurred.[23] The following year, Hugo Adam Bedau and Michael Radelet published one of the most important articles in the history of innocence scholarship in the *Stanford Law Review.*[24] Documenting 350 cases of what they believed to be wrongful convictions in capital or potentially-

[18] See for example, Hugo Munsterberg, *On the Witness Stand* (New York: McClure, 1908); Elizabeth F Loftus, "Reconstructing Memory: The Incredible Eyewitness" (1975) 15 Jurimetrics J 188; Elizabeth F Loftus, *Eyewitness Testimony* (Cambridge: Harvard University Press, 1979); Gary L Wells & Elizabeth F Loftus, *Eyewitness Testimony: Psychological Perspectives* (Cambridge: Cambridge University Press, 1984); Gary L Wells, "Applied Eyewitness Testimony Research: System Variables and Estimator Variables" (1978) 36 J Pers Soc Psychol 1546; Gary L Wells, Michael R Leippe & Thomas M Ostrom, "Guidelines for Empirically Assessing the Fairness of a Lineup" (1979) 3 L & Hum Behav 85; Saul M Kassin & Lawrence S Wrightsman, "Prior Confessions and Mock Juror Verdicts" (1980) 10 J Appl Soc Psychol 133; Saul M Kassin & Lawrence S Wrightsman, "Coerced Confessions, Judicial Instruction, and Mock Juror Verdicts" (1981) 11 J Appl Soc Psychol 489.

[19] Marvin Zalman, "Edwin Borchard and the Limits of Innocence Reform" in Huff & Killias, *supra* note 7 at 332; Prominent examples of well-known cases of questionable or wrongful conviction include those of Sacco and Vanzetti in Massachusetts and Rubin "Hurricane" Carter in New Jersey. See Bruce Watson, *Sacco & Vanzetti: The Men, the Murders, and the Judgment of Mankind* (New York: Viking, 2007); Rubin Carter & Ken Klonsky, *Eye of the Hurricane: My Path from Darkness to Freedom* (Chicago: Lawrence Hill Books, 2001).

[20] Centurion Ministries, "1980-1989", online: <https://centurion.org/about-us/at-a-glance/>(nd); Norris 1, *supra* note 1 at 17-21.

[21] Norris, *ibid* at 125-126; see also, Robert J Norris, "Framing DNA: Social Movement Theory and the Foundations of the Innocence Movement" (2017) 33 J Contemp Crim Just 26 [*Norris 4*].

[22] "The Thin Blue Line: Synopsis", online:<http://www.errolmorris.com/film/tbl.html> (nd); see also, Roger Ebert, "The Thin Blue Line", online:<https://www.errolmorris.com/content/review/tbl_ebert.html>; Bennett L Gershman, "The Thin Blue Line: Art or Trial in the Fact-Finding Process?" (1989) 9 Pace L Rev 275.

[23] C Ronald Huff, et al, "Guilty Until Proved Innocent: Wrongful Conviction and Public Policy" (1986) 32 Crime & Delinq 518.

[24] Hugo Adam Bedau & Michael L Radelet, "Miscarriages of Justice in Potentially Capital Cases" (1987) 40 Stan L Rev 21.

capital cases, Bedau and Radelet's article received widespread attention and prompted a critical response from a pair of United States Attorneys and a fiery rejoinder from the original authors.[25] These important scholarly works represent the first systematic attempts by scholars to catalog and analyze wrongful convictions and provided new insights into the nature and potential scope of such errors.

Perhaps the most significant development of this era was the discovery of the "DNA fingerprint" in 1984 and its emergent use in the legal system.[26] Initially touted as a near-infallible tool for law enforcement, it soon became clear that DNA evidence could be equally powerful to uncover erroneous convictions. In 1989, two individuals were exonerated in the United States with the help of DNA testing: David Vasquez was exonerated in January 1989 of a rape-murder in Virginia, and Gary Dotson was exonerated of a rape in Illinois in August 1989.[27]

These developments throughout the 1980s and into the 1990s—the organizational foundation, increasing popular attention to wrongful convictions, scholarly research, and the development of DNA technology and its framing as a powerful tool to free the innocent—laid the groundwork for what we now refer to as the "innocence movement."[28] In the time since, more than 2,500 people are known to have been exonerated throughout the United States,[29] innocence advocacy has become organized into a movement with dozens of organizations carrying out work in virtually every state,[30] related changes in policy and practice have swept the nation,[31] and the public has demonstrated a seemingly-insatiable desire for stories recounting injustices.[32] In short, wrongful conviction work has grown into an organized legal reform movement, arguably a social movement,[33] prompting some leading legal scholars to declare the innocence movement a

[25] Stephen J Markman & Paul G Cassell, "Protecting the Innocent: A Response to the Bedau-Radelet Study " (1988) 41 Stan L Rev 121; Hugo Adam Bedau & Michael L Radelet, "Myth of Infallibility: A Reply to Markman and Cassell " (1988) 41 Stan L Rev 161.

[26] See generally, Jay D Aronson, *Genetic Witness: Science, Law and Controversy in the Making of DNA Profiling* (New Brunswick: Rutgers University Press, 2007) [*Aronson*].

[27] Aronson, *ibid*; Norris 1, *supra* note 1 at 30-52.

[28] Norris 1, *ibid* at 115-139; Norris 4, *supra* note 21.

[29] The National Registry of Exonerations, currently the largest and most oft-cited collection of known exoneration cases lists 2,548 exonerations since 1989 (as of 29 January 2020), online: <https://www.law.umich.edu/special/exoneration/Pages/about.aspx>.

[30] Most notable is the Innocence Network, an "affiliation of organizations dedicated to providing pro bono legal and investigative services to individuals seeking to prove innocence of crimes for which they have been convicted, working to redress the causes of wrongful convictions, and supporting the exonerated after they are freed." See online: <www.innocencenetwork.org>.

[31] Norris 2, *supra* note 3; Owens & Griffiths, *supra* note 3; Kent & Carmichael, *supra* note 3; Norris 3, *supra* note 3.

[32] Topics related to wrongful convictions have been among the most popular across film and podcasts. For example, *Serial* was downloaded more than 100 million times and *Making a Murderer* was estimated to rival *20/20* in terms of viewership numbers. More recently, *When They See Us*, a Netflix mini-series based on the Central Park Five case, may have been the most watched show in history. See Norris 1, *supra* note 1 at 109-110; Spangler, *supra* note 4.

[33] For a discussion of the innocence movement in relation to broader social movements, including definitions of such movements, see Norris 1, *supra* note 1 at 163-177.

"revolution"[34] and describe it as "the most dramatic development in the criminal justice world since the Warren Court's due process revolution of the 1960s."[35]

It has been a full thirty years DNA was first used to show, with scientific near-certainty, that the legal system can and does err by convicting innocent people. What have we learned during this time? What has happened and now is happening throughout the United States? And what remains unknown and under-explored? In the following section, we provide a detailed breakdown of exoneration cases collected by the National Registry of Exonerations, describe innocence advocacy organizations that are members of the Innocence Network, and identify state-level policy reforms in priority areas as catalogued by the Innocence Project. Although the collected data for the most part are publicly available, they are scattered and most often inconveniently organized. We hope that by combining information from various sources and compiling it in a detailed and systematic fashion, we can help paint a picture of what is known about wrongful convictions and related reforms in the contemporary United States, and thus provide a useful tool for scholars, practitioners, and others interested in crime, law, and justice.

III Innocence in the Modern Era, 1989-2018

A. Exonerations

Two major lists of exonerations have been compiled, one by the Innocence Project and the other by the National Registry of Exonerations. It is important to note that these databases report known *exonerations*, and do not purport to encompass the much broader domain of *wrongful convictions*. We understand "wrongful convictions" to include all cases in which individuals were convicted of a crime or crimes they did not commit. In contrast, "exonerations" refer only to the much smaller set of cases in which individuals have formally been recognized as not being responsible for the crimes of conviction. In short, exonerations do not represent all wrongful convictions, but rather, as is commonly stated, only the "tip of the iceberg"[36] of the considerably larger class of miscarriages of justice. It has been suggested that the true rate of wrongful convictions is "not merely unknown but unknowable."[37] Of course, while all exonerations are associated with a known wrongful conviction, the information about exoneration we present may indicate more about states' willingness to recognize and overturn errors (as well as the presence of an innocence organization, as discussed below) than the true prevalence of wrongful convictions in those states.

Although both the Innocence Project (IP) and National Registry of Exonerations (NRE) maintain lists of exoneration cases, the information reported by the two organizations differs in important ways. The IP maintains a list of DNA-based exonerations, beginning in 1989, whether

[34] Lawrence C Marshall, "The Innocence Revolution and the Death Penalty" (2004) 1 Ohio St J Crim L 1573 [*Marshall*].

[35] Keith A Findley, "Innocence Found: The New Revolution in American Criminal Justice" in Sarah Lucy Cooper, ed, *Controversies in Innocence Cases in America* (New York: Routledge, 2014) 1 at 1.

[36] Brandon L Garrett, "The Banality of Wrongful Executions" (2014) 112 Mich L Rev 979 at 980.

[37] Samuel R Gross, et al, "Rate of False Conviction of Criminal Defendants who are Sentenced to Death" (2014) 111 Proc Nat'l Acad Sci USA 7230 at 7230.

or not their organization directly handled the cases. At year-end 2018, the Innocence Project's list included 362 DNA exonerations.[38] Because the list includes only DNA-based exonerations, it is heavily skewed toward cases involving rape and sexual assault. In an analysis of the first 325 cases, West and Meterko reported that more than 90% of the cases involved sexual assault, including 27% that included sexual assault and homicide.[39]

A more comprehensive list of exoneration cases is provided by the NRE, launched as a collaboration between the University of Michigan Law School and Northwestern University Law School's Center on Wrongful Convictions. With the goal of tracking all known exonerations in the United States since 1989, the database was first published in 2012 with 891 cases identified. Now a joint-project of the University of Michigan, the University of California Irvine, and Michigan State University, the NRE catalogued 2,410 exonerations through year-end 2018.[40] Because the NRE includes both DNA and non-DNA cases, the represented crimes are more varied than those on the Innocence Project's list. Still, serious crimes are overrepresented; murder was the most serious conviction crime in 911 cases and sexual assault was the most serious crime in 324 cases. However, cases on the NRE correspond to other crimes of violence, property offenses, and drug-related crimes as well. Although not an exhaustive database,[41] the NRE provides the most comprehensive information currently available about exoneration cases.

Because the IP and NRE databases include different types of cases and use different definitions and coding schemes, they reflect different patterns regarding the factors that contribute to wrongful convictions. Table 1 presents summaries of the findings from reports on the first 325 DNA exonerations (1989-2014) from the IP and the first 1,600 exonerations (1989-2015) listed by the NRE, including crime types and contributing factors.

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[38] Figure was current on the Innocence Project's website as of January 2019. See online: <www.innocenceproject.org>.

[39] Emily West & Vanessa Meterko, "Innocence Project: DNA Exonerations, 1989-2014: Review of Data and Findings from the First 25 Years" (2015/2016) 79 Alb L Rev 717 [*West & Meterko*].

[40] Figure was current as of January 2020, but it is important to note that the NRE website is regularly updated as cases are reported or discovered. Thus, the numbers may fluctuate, even for previous years, as cases get added to the database. See online:<https://www.law.umich.edu/special/exoneration/Pages/about.aspx>.

[41] There are, without doubt, some wrongful conviction cases that are not captured in the NRE. For example, Kerry Max Cook was convicted of a 1977 murder in Texas. He was released in 1997 following a plea agreement. DNA soon showed that he did not commit the crime, and in 2016 he was legally exonerated (though not declared actually innocent). His case is not included in the NRE. See Michael Hall, "The Trouble with Innocence," *Texas Monthly* (March 2017), online:<https://features.texasmonthly.com/editorial/the-trouble-with-innocence/>; Michael Hall, "Reversal of Fortune" *Texas Monthly* (6 June 2016), online:<https://www.texasmonthly.com/the-daily-post/kerry-max-cook-exonerated/>. It is impossible to know with certainty how many wrongful convictions occur, or even how many exonerations are not captured in the NRE. Anecdotally, a friend of one of the authors of this article was wrongly convicted and exonerated—he received his bill of innocence—yet is not included on the NRE for legal reasons stemming from the sealing of his record.

Table 1. Summary of Crime Types and Contributing Factors: IP vs. NRE[a]

	Innocence Project – First 325 DNA Exonerations[42]	National Registry – First 1,600 Exonerations[43]
Crime Type		
Homicide	34%	44%
Sexual Assault	91%	28%
Other Violent Crime	2%	13%
Non-violent Crime	N/A	14%
Contributing Factor		
Eyewitness misidentification	72%	34%
Forensic errors[b]	47%	23%
False confessions	27%	13%
Use of informants	15%	N/A
Perjury / False Accusation[c]	N/A	55%
Official Misconduct	N/A	45%

[a] Percentages may add up to more than 100% because many cases involve multiple crime-types and multiple contributing factors.

[b] In describing the IP cases, West and Meterko (2015/2016) refer to this category as "Misapplication of Forensic Science," while the NRE calls it "False or Misleading Forensic Evidence."

[c] The NRE's category of "Perjury or False Accusation" likely captures what the IP would categorize as "Use of Informants," but seems to be a slightly broader definition. Thus, it makes sense to list these as separate contributing factors.

The differences between the two datasets in the factors contributing to wrongful convictions are immediately apparent. In the IP cases, which exclusively involve DNA exonerations, the leading contributing factor is eyewitness misidentification, followed by forensic errors. The NRE database, in contrast, reflects that perjury/false accusation and official misconduct are the leading contributing factors. These discrepancies are largely explained by the different distribution of offenses captured by the lists. Nearly all of the IP cases (91%) involved sexual assault, which often have DNA evidence to test. Most of these cases also had a surviving victim at the center of the investigation who was likely to have attempted to identify the apparent perpetrator of the offense. In light of what is known about witnesses and the accuracy of memories and identification,[44] it is not surprising that eyewitness misidentification occurs so commonly in this subset of cases. However, when crimes in addition to rape and sexual assault are more heavily represented, the prevalence of contributing factors begins to shift, as reflected in the NRE figures. These explanations are straightforward but must be kept in mind when the IP and NRE databases are relied upon to draw conclusions about sources of justice system errors.

[42] West & Meterko, *supra* note 39.

[43]National Registry of Exonerations, "The First 1,600 Exonerations" (May 2015), online: <https://www.law.umich.edu/special/exoneration/Documents/1600_Exonerations.pdf>.

[44] For an overview of eyewitness identification findings, see the scientific consensus or "white" papers from the American Psychology-Law Society: Gary L Wells, et al, "Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads" (1998) 22 L & Hum Behav 603 [*Wells 1*]. An updated scientific consensus paper was published recently. See Gary L Wells, et al, "Policy and Procedure Recommendations for the Collection and Preservation of Eyewitness Identification Evidence" (2020) 44 L & Hum Behav 3 [*Wells 2*].

The lists maintained by the Innocence Project and the National Registry of Exonerations are both valuable and contain important information for scholars, advocates, and policymakers. However, it is important to consider not only the different offense types captured in the lists but also differences in the language and categories used to report the information. Consider, for instance, the definitions used in Table 1 and the criteria employed for identifying "DNA exonerations" in the respective lists. The IP defines a "DNA exoneration" as "a case in which post-conviction DNA testing results were central to establishing the innocence of the wrongfully convicted individual, *i.e.*, the DNA testing results were dispositive of actual innocence and central to vacating the conviction and/or dismissing the indictment."[45] Using this definition, they included in their database 362 cases from 1989 through 2018.[46] All of those cases appear to be captured in the NRE database, but the latter also flags a number of others with a code for DNA. In total, through 2018, the NRE reported 485 cases that involved DNA,[47] indicating with an asterisk those cases that are "not included in the Innocence Project's list of DNA exonerations because post-conviction DNA evidence was not central to establishing innocence, and other non-DNA factors were essential to the exoneration."[48]

Differences of this nature reinforce that care must be taken when interpreting, analyzing, and presenting information from these lists, and that important differences in data collection and coding must be accounted for. Because our primary aim in this article is to be descriptive, we rely on the National Registry of Exonerations database, and its larger, more comprehensive collection of cases than those compiled by the Innocence Project.[49]

a. The National Picture

As of mid-January 2020, the NRE reported 2,410 exonerations between 1989 and year-end 2018, including cases from the federal courts (114), Puerto Rico (6), and Guam (1).

For the purposes of this article, we restricted our analyses to cases from the states and Washington, DC, leaving a total of 2,289 exonerations. Of these, 481 (21%) involved DNA, and 121 defendants (5.3%) were sentenced to death. Of the death-sentenced defendants, 28 (23.1% of capital exonerations, and 1.2% overall) were exonerated with the assistance of DNA. The general trend has been toward increasing numbers of exonerations over time, with 165 total exonerations in both 2017 and 2018.[50] The total number of exonerations peaked in 2016 (177), while DNA exonerations were highest in 2009 (30).

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[45] Innocence Project, "Exoneration Statistics and Databases" (last accessed 5 February 2020), online: <https://www.innocenceproject.org/exoneration-statistics-and-databases/>.

[46] Based on the Innocence Project's website as of January 2019.

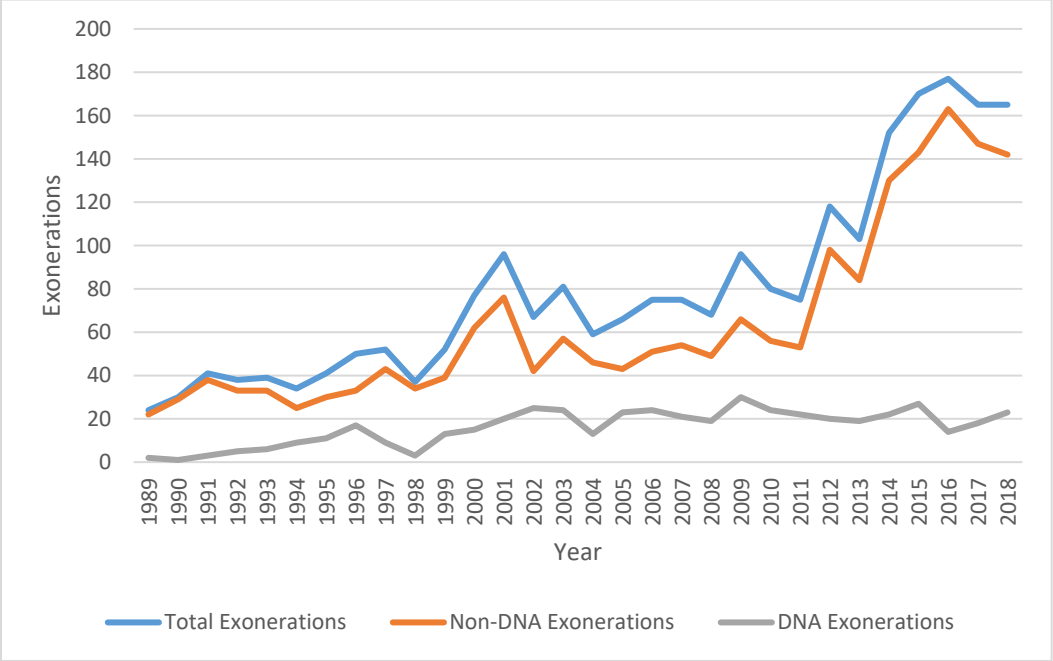
[47] Based on NRE cases as of 29 January 2020.

[48] The National Registry of Exonerations, "Detailed View" (last accessed 5 February 2020), online: <https://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx>.

[49] The NRE provides their definition of "exoneration" on their website: "In general, an exoneration occurs when a person who has been convicted of a crime is officially cleared based on new evidence of innocence." They then provide a much more detailed definition and inclusion criteria. This is available in the glossary on their website, online: <https://www.law.umich.edu/special/exoneration/Pages/glossary.aspx>.

[50] While, as of this writing, the NRE database currently includes fewer exonerations in 2017 and 2018 than it does for 2016, it is likely that these numbers will shift as more cases are discovered. Indeed, older exoneration cases are

Figure 1. Exonerations over Time, 1989-2018



One item of note is the trend concerning DNA exonerations. There has been speculation that the DNA exoneration era would wind down as DNA became an integral part of the investigative process and was more regularly used on the front-end of cases (pre-conviction) when available.[51] The case data can be examined differently, and lend to different interpretations.

When we examine DNA exonerations over time, there does not appear to be an obvious downward trend. Table 2 reports the number of DNA exonerations each year and the percentage of all exonerations that were secured through DNA. Although the proportion of exonerations secured through DNA has dropped from more than one-third in the mid-2000s to as low as 8% in recent years, this decrease appears to be attributable to an increase in the number of non-DNA exonerations, rather than a decrease in the number of DNA exonerations.

regularly added to the NRE database as they are shared with the NRE team. Thus, the 2017 and 2018 numbers are likely to increase. The modest downturn currently reflected in the exoneration totals for those years consequently may change with time, and in any event, the general trend is still toward increasing exonerations over time when the full range of years is taken into account.

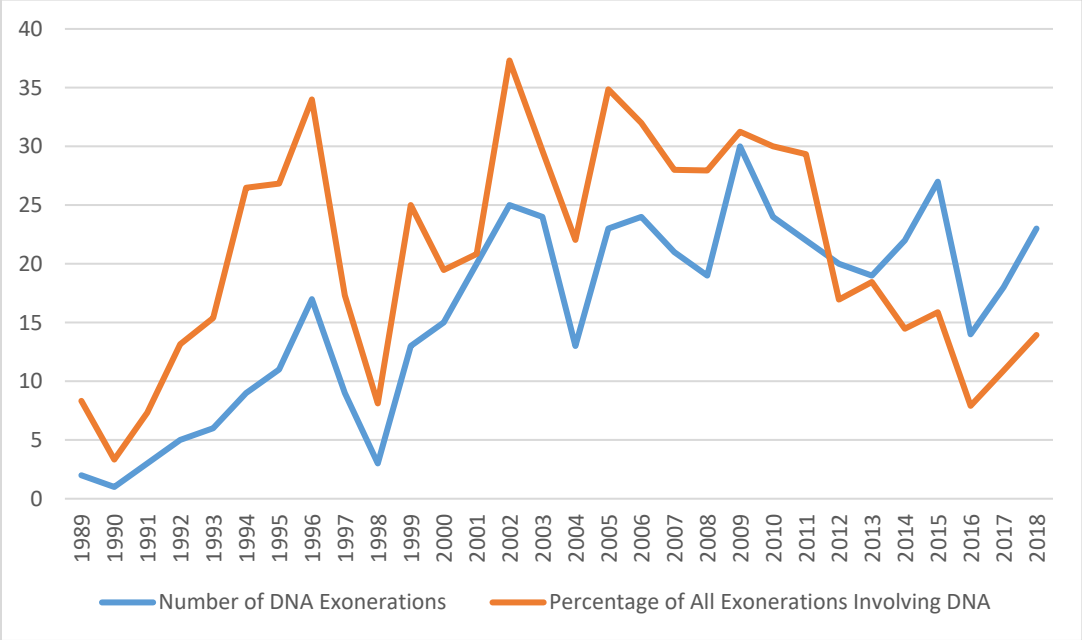
[51] For a brief discussion of this issue, see Norris 1, *supra* note 1 at 206-211.

Table 2. DNA Exonerations by Year of Exoneration, 1989-2018

Year	Number of DNA Exonerations	Percentage of All Exonerations Involving DNA
1989	2	8.3
1990	1	3.3
1991	3	7.3
1992	5	13.1
1993	6	15.4
1994	9	26.5
1995	11	26.8
1996	17	34.0
1997	9	17.3
1998	3	8.1
1999	13	25.0
2000	15	19.5
2001	20	20.8
2002	25	37.3
2003	24	29.6
2004	13	22.0
2005	23	34.8
2006	24	32.0
2007	21	28.0
2008	19	27.5
2009	30	30.9
2010	24	30.0
2011	22	29.3
2012	20	16.8
2013	19	18.4
2014	22	14.5
2015	27	15.8
2016	14	7.9
2017	18	10.9
2018	23	13.9

Figure 2 shows these patterns in a different form. At a glance, it would appear that reports of the demise of the DNA exoneration era may be premature.

Figure 2. DNA Exonerations over Time (National), 1989-2018



However, when we examine DNA and non-DNA by year of *conviction* (rather than year of exoneration), we discern an interesting pattern. More than 40% of the 481 DNA exonerations (n=230) correspond to convictions from the 1980s. Arranged by year of conviction, the proportion of exonerations involving DNA has decreased dramatically since the 1980s. This trend is shown in Table 3.

Table 3. DNA Exonerations by Year of Conviction

Year of Conviction	Total Number of Exonerations	Number of DNA Exonerations	Percentage of Exonerations Involving DNA
Before 1970	13	0	0
1970-1979	81	19	23.5
1980-1989	537	230	42.8
1990-1999	768	172	22.4
2000-2009	542	55	10.1
2010-2018	348	5	1.4

One interpretation of these data is that the DNA exoneration era will decline, because DNA is often used during the investigative process (when available) and there is necessarily a limit on the number of older convictions that may be reinvestigated and overturned based on viable biological evidence. On the other hand, in light of the considerable delay between conviction and exoneration, it is also possible that the currently known exonerations from more recent convictions are not representative, and the proportion of DNA exonerations among post-2000 convictions may

increase. Only time will tell. In any event, what is almost certain is that the use of DNA to exonerate individuals has also influenced the likelihood of exoneration in non-DNA cases.[52]

b. State Cases and Regional Variation

Table 4 shows exonerations by Census region and division. Wrongful convictions occur nationwide, although Southern states have had the most exonerations. Without additional data, we cannot make any causal inferences or identify the source of regional disparities, but it is worth noting that measures of punitiveness, such as incarceration rates and death penalty usage, also are generally higher in Southern states.[53] It is also likely (as discussed below) that state-to-state differences in exonerations are related to the presence of innocence advocacy groups.

Table 4. Exonerations by Census Regions and Divisions

	Number of Exonerations	Percentage of Exonerations
Region		
Northeast	460	20.1
South	815	35.6
Midwest	652	28.5
West	362	15.8
Division		
New England	99	4.3
Mid-Atlantic	361	15.8
East North Central	547	23.9
West North Central	105	4.6
South Atlantic	280	12.2
East South Central	83	3.6
West South Central	452	19.7
Mountain	91	4.0
Pacific	271	11.8

Among individual states, the leaders in total number of exonerations are Texas (351), Illinois (280), New York (256), and California (193); no other state reached 100 total exonerations by year-end 2018. These four states maintained their positions with respect to DNA exonerations.

[52] Several innocence movement participants have suggested as much. For example, Rob Warden, co-founder and former director of Northwestern University's Center on Wrongful Convictions, noted that DNA "gave credence to the non-DNA cases where there was persuasive evidence of innocence. Similarly, former Innocence Project executive director Maddy deLone suggested that "DNA cases created a little pathway through which people could start to really bring forth all of these other exonerations." See Norris 1, *supra* note 1 at 122-123.

[53]The Sentencing Project, "State-by-State Data" (accessed 15 January 2020), online: <https://www.sentencingproject.org/the-facts/#rankings?dataset-option=SIR>.

As of January 2020, of the first 1,512 executions (since 1976) catalogued by the Death Penalty Information Center, 1,237 of them–more than 80%–occurred in the South. See Death Penalty Information Center, "Executions by State and Region Since 1976" (accessed 15 January 2020), online:<https://deathpenaltyinfo.org/executions/executions-overview/number-of-executions-by-state-and-region-since-1976>.

Illinois had the most capital case exonerations (19), followed by Texas and Louisiana (11 each). At the other end of the spectrum, New Hampshire had only one known exoneration, Vermont had two, and Delaware, Hawaii, and Maine each had three. The numbers of total exonerations, DNA exonerations, and capital case exonerations for each state are provided in Table 5, in descending order of total exonerations.

Table 5. Exonerations by State, 1989-2018

State	Total Exonerations	DNA Exonerations	Capital Exonerations
TX	351	61	11
IL*	280	60	19
NY*	256	44	0
CA	193	24	4
MI*	93	8	0
OH	82	15	8
FL	67	18	9
PA	67	16	5
MA*	64	11	4
NC	60	21	7
WI*	57	16	0
LA	56	17	11
VA	51	19	1
WA*	48	6	1
MO	46	14	4
NJ*	38	12	0
OK	36	13	7
GA	35	10	2
IN	35	11	1
MD*	31	7	1
AL	27	3	6
CT*	23	7	0
AZ	21	3	8
MS	21	6	3
TN	21	5	3
OR	19	3	0
DC	16	6	0
IA*	16	0	0
UT	16	3	0
MN*	15	1	0
KY	14	6	1
MT	14	5	0
NV	13	2	1

KS	11	3	0
CO	10	3	0
WV*	10	6	0
AR	9	3	1
NE	9	6	0
AK*	8	0	0
NM*	8	0	0
SC	7	3	0
RI*	6	0	0
ID	5	1	2
ND*	4	0	0
SD	4	0	0
WY	4	1	0
DE*	3	0	1
HI*	3	1	0
ME*	3	0	0
VT*	2	1	0
NH*	1	0	0

*Indicates abolitionist states. For more information on when and how capital punishment was abolished in each state, see the Death Penalty Information Center, "State by State," https://deathpenaltyinfo.org/state-and-federal-info/state-by-state.

Graphs depicting exonerations over time from 1989 through 2018 for each state are presented in the Appendix. It is interesting to observe how each state's exoneration timeline has developed. This information allows us to more fully appreciate how the states leading in total exonerations—Texas, Illinois, New York, and California—have exceeded others. For instance, multiple exonerations occurred in California and New York every year (with the lone exception of California in 1989, when no exonerations occurred). Illinois and Texas were the only states to exceed 30 exonerations within a single year. Illinois had 39 and 53 exonerations in 2017 and 2018, respectively, while Texas had 43 exonerations in 2014, and nearly 60 in both 2015 and 2016.

One interesting and potentially fruitful task for researchers going forward is to explore geographical variation in exonerations; to investigate, for example, whether regional and/or state factors—legal, political, social, economic—help explain differences in exoneration rates.

B. Advocacy Organizations and the Innocence Network

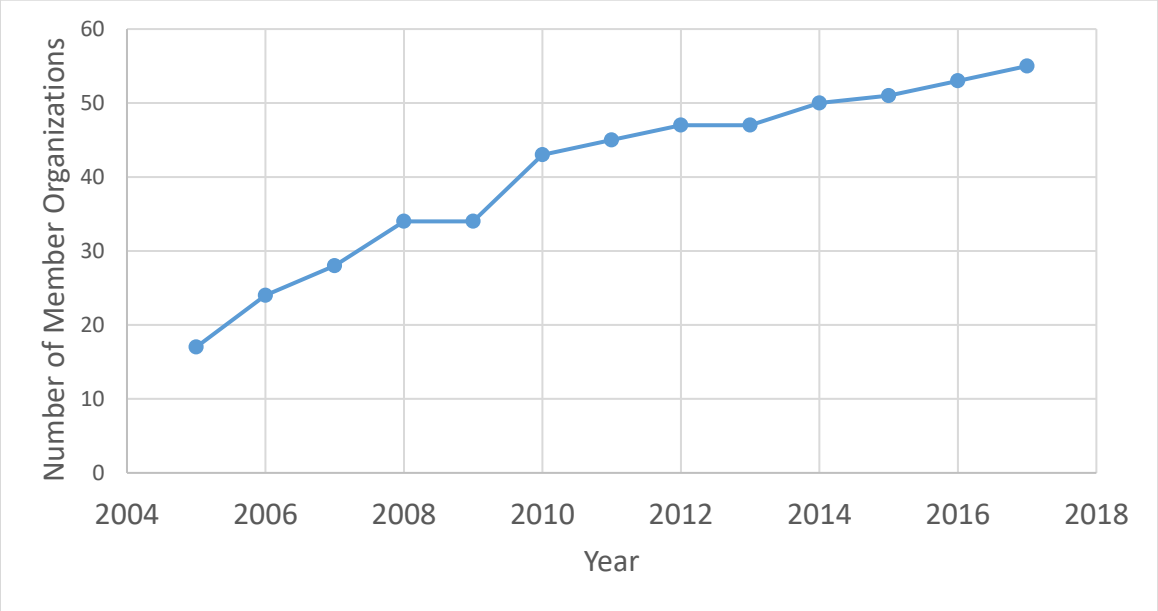
Exonerations tend to capture headlines and serve as the object of popular documentaries and fiction, and for good reason: they are intriguing, captivating human stories that make engrossing movies, shows, and books. However, they are but one element of the larger innocence movement, which relies heavily on organizations devoted to the work of uncovering and attempting to rectify wrongful convictions. We earlier described how Jim McCloskey founded Centurion Ministries in 1983 as the first non-profit organization dedicated to freeing innocent persons from wrongful incarceration and miscarriages of justice. His work has proven to be

visionary, inspiring others and helping to lay the organizational foundation for the innocence movement.[54]

A decade after McCloskey began his work, Barry Scheck and Peter Neufeld founded the Innocence Project.[55] Now the largest and most well-known organization of its kind, the group began as a clinical legal program at Cardozo Law School in New York. Scheck and Neufeld made the decision to focus exclusively on DNA exoneration cases and envisioned a widespread network of advocates to work on wrongful conviction issues. Indeed, at the 1998 *National Conference on Wrongful Convictions and the Death Penalty*, Scheck issued the first call to establish an "innocence network," a collective of organizations and advocates dedicated to this issue.[56] Several years later, this vision came to fruition.

The Innocence Network was officially established and initiated its first member organizations in 2005. According to data provided by the Network, 18 member organizations were operating by year-end 2005, with all but one in the United States.[57] By 2018, the number of member organizations had grown to 69, including 55 based in the United States and 14 in other nations. Figure 3 reflects the rise in the number of Innocence Network member organizations in the United States over time.

Figure 3. Size of Innocence Network in the U. S., 2005-2017



[54] Norris 1, *supra* note 1, Norris 4, *supra* note 21.

[55] Scheck and Neufeld's story has been recounted in multiple outlets. See for example, Elisabeth Salemme," Innocence Project Marks 15th Year", *Time* (5 June 2007), online: <http://content.time.com/time/nation/article/0,8599,1628477,00.html>. Norris 1, *supra* note 1 at 52-57; Aronson, *supra* note 26 at 195-196.

[56] Norris 1, *supra* note 1 at 73-78, 88-98.

[57] The figures reported are based on a data file shared with one of the authors by a representative of the Innocence Network. The Griffith University Innocence Project, housed at the Australian university, joined in 2005.

Innocence Network organizations were active in all 50 states, but they were geographically located in 35 states and Washington, DC.[58] The number of Network organizations present in each state and the years those organizations joined the Network are shown in Table 6.

Table 6. States with Innocence Network Member Organizations

State	Number of Organizations	Year(s) Joined
AK	1	2007
AL	0	
AR	0	
AZ	1	2006
CA	3	2005 (x2), 2014
CO	2	2017 (x2)
CT	1	2007
DC	1	2005
DE	0	
FL	2	2006, 2010
GA	1	2005
HI	1	2010
IA	1	2007
ID	1	2005
IL	3	2005, 2006, 2017
IN	1	2005
KS	0	
KY	1	2005
LA	1	2005
MA	3	2005, 2010, 2016
MD	1	2010
ME	0	
MI	3	2005, 2008, 2014
MN	1	2005
MO	1	2005
MS	1	2008
MT	1	2008
NC	3	2006, 2010 (x2)
ND	0	

[58] Several organizations have a single office or hub, but handle cases across multiple jurisdictions; hence, the difference between organizations being active in a state and being geographically located in a state. It is also worth noting that one of the states without a Network member is New Jersey, but that state is home to Centurion Ministries. Centurion is not a member of the Innocence Network, despite being the longest-standing non-profit working in this area.

NE	1	2006
NH	0	
NJa	0	
NM	1	2011
NV	0	
NY	4	2005, 2008, 2010, 2014
OH	2	2005, 2010
OK	1	2011
OR	1	2015
PA	2	2008, 2012
RI	0	
SC	0	
SD	0	
TN	0	
TX	3	2006, 2007, 2010
UT	1	2006
VA	1	2008
VT	0	
WA	1	2005
WI	1	2005
WV	1	2012
WY	0	

[a] Centurion Ministries is located in New Jersey, however, it is not a member of the Innocence Network.

Examining the years in which member organizations joined the Innocence Network is interesting when combined with the state exoneration figures. For example, in the 15 states in which a Network member was *not* present, the average number of exonerations per year was 0.29. The only such state that averaged more than one exoneration a year was New Jersey (1.2), which is home to the major non-Network innocence organization, Centurion Ministries. On the other hand, the states in which an Innocence Network organization was located averaged 1.98 exonerations per year.

Perhaps more interestingly, the number of exonerations within jurisdictions that house a Network organization can be examined before and after the first such organization was established. For the 36 jurisdictions with an Innocence Network organization (35 states and DC), the average number of annual exonerations before their first Network member was established was 1.28; thereafter, the average exonerations per year jumped to 3.02. These figures are presented in Table

Table 7. Exonerations x Innocence Network Member Organizations

	Total Average Exonerations per Year (1989-2018)	Average Exonerations per Year before First Network Member	Average Exonerations per Year after First Network Member
States without an Innocence Network Member Organization	0.29	N/A	N/A
States with an Innocence Network Member Organization	1.98	1.28	3.02

To be clear, these differences do not establish a causal relationship. That is, we cannot conclude that the establishment of an Innocence Network member organization in a state was responsible for the increase in the number of exonerations because a multitude of factors influence exonerations and we lack the data to control for and assess them. Furthermore, without extensive, longitudinal state-level data, we cannot assess any potential temporal issues. Yet, the possibility that the presence of a Network organization within a jurisdiction may increase the number of exonerations is an interesting one and it deserves more extensive investigation.[59]

C. Policy Reform: Changing Practices to Improve the System

In addition to case work and assisting exonerees after release, one of the priorities for many innocence advocates is policy reform. Each failure of the justice system represents an opportunity for learning and improvement. Understanding the factors that contribute to wrongful convictions can help identify measures to increase systemic accuracy. While the root causes of wrongful convictions are many and often not well-understood from a social scientific perspective,[60] the leading factors that are commonly accepted as contributing directly to erroneous convictions have

[59] It is worth noting that, according to the NRE, innocence organizations have been involved in many exonerations in recent years, and the number has increased. One report noted that 75/154 exonerations from 2009-2011 involved an innocence organization, while a more recent report found that such organizations were involved in 70 exonerations in 2017 and 86 (out of 151; 57%) in 2018. See National Registry of Exonerations, "Exonerations in the United States, 1989-2012, (June 2012), online: <https://www.law.umich.edu/special/exoneration/Documents/exonerations_us_1989_2012_full_report.pdf>. National Registry of Exonerations, "Exonerations in 2018" (9 April 2019), online: <https://www.law.umich.edu/special/exoneration/Documents/Exonerations%20in%202018.pdf>.

[60] See generally, Leo 1, *supra* note 16; Richard A Leo, "The Criminology of Wrongful Conviction: A Decade Later" (2017) 33 J Contemp Crim Just 82 [*Leo 2*]; Richard A Leo and Jon B Gould, "Studying Wrongful Convictions: Learning from Social Science" (2009) 7 Ohio St J Crim L 7; Robert J Norris and Catherine L Bonventre "Advancing Wrongful Conviction Scholarship: Toward New Conceptual Frameworks" (2015) 32 Just Q 929 [*Norris & Bonventre*].

been subjected to extensive research that has generated recommended best practices.[61] Additionally, other important initiatives to help identify wrongful convictions and provide redress in the wake of exoneration have been targets for policy reform.

a. State Policy Initiatives

The Innocence Project tracks state policy developments across five key areas: eyewitness identification reform, recording of interrogations, access to post-conviction DNA testing, evidence preservation, and compensation statutes. While these do not represent the full breadth of policies that are important for preventing, detecting, and responding to miscarriages of justice, they are high-priority areas for innocence advocates.

Detailed analyses of such policy reforms and initiatives have been provided elsewhere.[62] Suffice it to say that the quality of reform efforts and their implementation varies wildly, and thus having a policy on the books does not necessarily mean it is well-developed or effective in practice. Documenting which states have and have not adopted reforms is nevertheless of interest. Table 8 indicates whether a state has adopted a reform in each of these five key areas; the rightmost column provides a count of the number of areas addressed by each state. All 50 states have some form of DNA access law. Four states – Delaware, Idaho, North Dakota, and Wyoming – have failed to address any of the additional reform areas. On the other hand, twelve states – California, Colorado, Connecticut, Illinois, Maryland, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Texas, and Wisconsin – have addressed all five areas to some degree, with the caveat that the quality and scope of specific reforms vary tremendously.

Table 8. Priority Area Policy Reforms in Each State

State	Eyewitness ID	Interrogation Recording	DNA Access	Preservation of Evidence	Compensation	Total Areas Addressed
AL	0	0	1	1	1	3
AK	0	1	1	1	0	3
AZ	0	0	1	1	0	2
AR	0	0	1	1	0	2
CA	1	1	1	1	1	5
CO	1	1	1	1	1	5
CT	1	1	1	1	1	5
DE	0	0	1	0	0	1

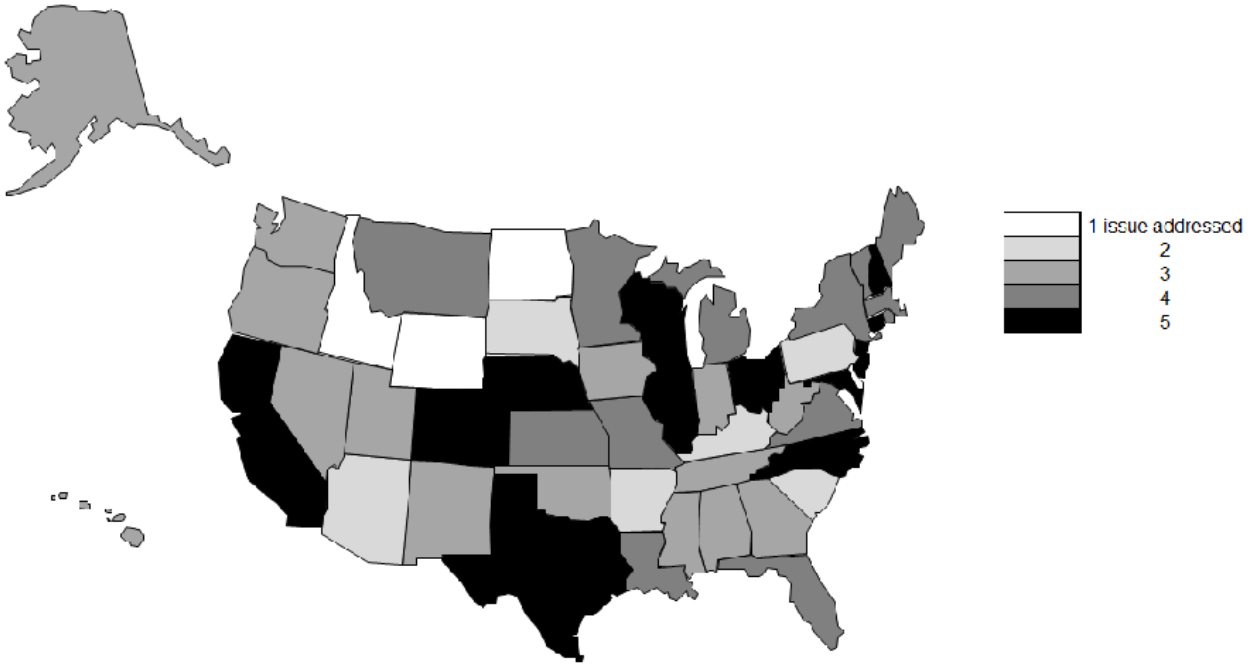
[61] See for examples, the scientific consensus papers on eyewitness practices and police-induced confessions: Wells 1, *supra* note 44; Wells 2, *supra* note 44; Saul M Kassin, et al, "Police-Induced Confessions: Risk Factors and Recommendations" (2010) 34 L & Hum Behav 3 [*Kassin*]. For a general study of wrongful convictions, see Brandon Garrett, *Convicting the Innocent: Where Criminal Prosecutions Go Wrong* (Cambridge: Harvard University Press, 2012) [*Garratt*].

[62] Norris 2, *supra* note 3; Kent & Carmichael, *supra* note 3; Norris 3, *supra* note 3; Adele Bernhard, "A Short Overview of the Statutory Remedies for the Wrongly Convicted: What Works, What Doesn't, and Why" (2009) 18 Pub Int LJ 403 [*Bernhard*]; Robert J Norris, "Assessing Compensation Statutes for the Wrongly Convicted" (2012) 23 Crim Just Pol'y Rev 352 [*Norris 5*].

FL	1	0	1	1	1	4
GA	1	0	1	1	0	3
HI	0	0	1	1	1	3
ID	0	0	1	0	0	1
IL	1	1	1	1	1	5
IN	0	1	1	1	0	3
IA	0	0	1	1	1	3
KS	0	1	1	1	1	4
KY	0	0	1	1	0	2
LA	1	0	1	1	1	4
ME	0	1	1	1	1	4
MD	1	1	1	1	1	5
MA	0	1	1	1	1	4
MI	0	1	1	1	1	4
MN	0	1	1	1	1	4
MS	0	0	1	1	1	3
MO	0	1	1	1	1	4
MT	0	1	1	1	1	4
NE	1	1	1	1	1	5
NV	1	0	1	1	0	3
NH	1	1	1	1	1	5
NJ	1	1	1	1	1	5
NM	0	1	1	1	0	3
NY	1	1	1	0	1	4
NC	1	1	1	1	1	5
ND	0	0	1	0	0	1
OH	1	1	1	1	1	5
OK	0	0	1	1	1	3
OR	0	1	1	1	0	3
PA	0	0	1	1	0	2
RI	1	1	1	1	0	4
SC	0	0	1	1	0	2
SD	0	0	1	1	0	2
TN	0	0	1	1	1	3
TX	1	1	1	1	1	5
UT	0	0	1	1	1	3
VT	1	1	1	0	1	4
VA	1	0	1	1	1	4
WA	0	0	1	1	1	3
WV	1	0	1	0	1	3
WI	1	1	1	1	1	5
WY	0	0	1	0	0	1

Figure 4 is a map of the United States, highlighting states by the number of policy areas they have addressed.

Figure 4. Map of Reform Areas

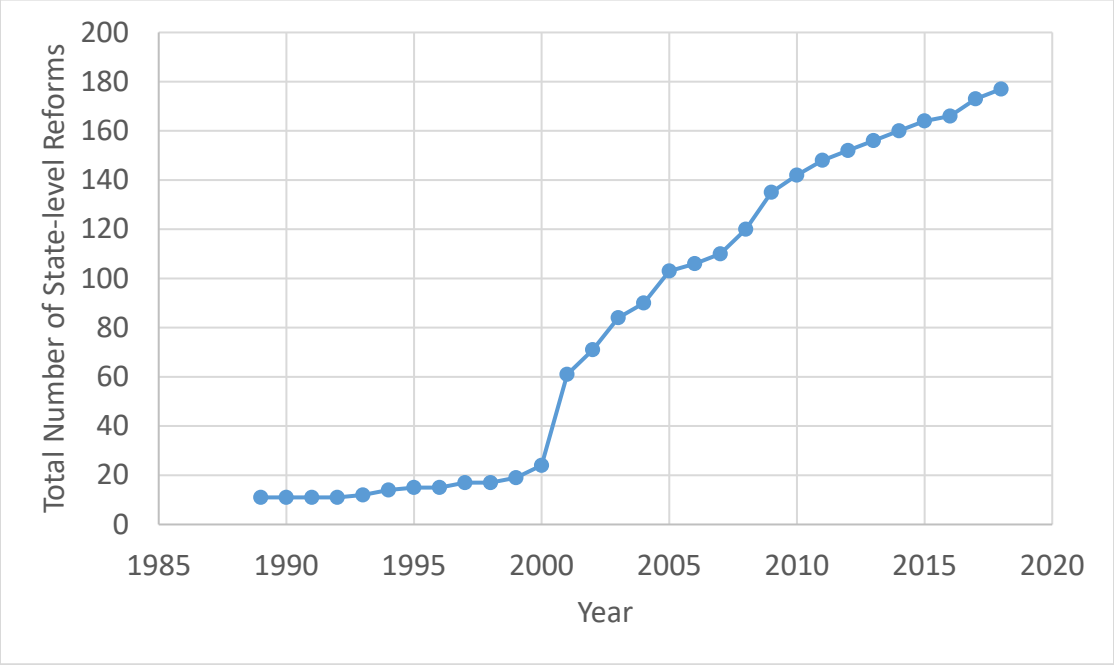


Examining the adoption of reforms over time is revealing about how wrongful convictions have emerged and developed as an important policy issue. Within all of the states, a total of 177 of the reforms catalogued by the Innocence Project have been enacted. While some of the enacted policies have long histories,[63] the early rate of adoption was slow; by the end of the 1990s, a total of only 19 state reforms were in effect. Since the turn of the twenty-first century, however, 158 more state reforms have been enacted, or more than eight per year on average. And while a precise measure is lacking, many policies have been subject to legislative action in recent years, as lawmakers work to revise and improve previously enacted provisions.[64] The cumulative number of polices adopted across the United States is shown in Figure 5.

[63] For example, Wisconsin was the first state to pass a compensation law in 1913. However, the overwhelming majority of reforms on the innocence policy agenda have been enacted much more recently. See Bernhard, *ibid.*

[64] For example, compensation laws have often been adjusted years after initial passage. See Robert J Norris, "Assessing Compensation Statutes for the Wrongly Convicted" (2013) 23 Crim Just Pol'y Rev 352 [*Norris 6*].

Figure 5. Cumulative Policy Adoption Curve, 1989-2018



Although the data do not allow for causal analysis, it is worth noting that the states with an Innocence Network member organization have addressed, on average, 3.7 of the five policy reform areas discussed, while those without such an organization have addressed an average of 2.9 areas. These figures are consistent with findings from one published and one ongoing study of states' adoption of wrongful conviction-related policies, both of which suggest that the presence of an advocacy organization does have a significant effect on the likelihood of policy adoption.[65] Moving forward, scholars can and should examine state-level policy adoption to better understand the many social, cultural, and political factors that may influence states to enact wrongful conviction-related reforms.

One additional state initiative that is not captured here is North Carolina's Innocence Inquiry Commission (IIC). Created by the North Carolina General Assembly in 2006, the IIC is designed to investigate claims of innocence in designated felony cases. In contrast to appellate courts, the IIC does not review procedural or sentencing errors, but rather only investigates claims of actual innocence. North Carolina's IIC is the only body of its type in the United States. Although it lacks the authority to invalidate convictions, its recommendations and findings are referred to a court which is empowered to do so. The IIC focuses on cases of actual innocence, rather than cases

[65] See Kent & Carmichael, *supra* note 3; One co-author of this article is currently working on a project exploring the determinants of states' adoption of wrongful conviction reforms: William D Hicks, Kevin J Mullinix & Robert J Norris, "The Politics of Wrongful Conviction Legislation" under review (unpublished manuscript on file with author). We believe more sophisticated analyses of the trends revealed by our figures is an important task for future scholars.

in which there is insufficient evidence to support guilty verdicts, which is more in keeping with the traditional business of the courts. [66]

b. Federal and Local Initiatives

While state policy initiatives have been a priority area for innocence advocates, the federal government also has addressed issues related to wrongful convictions, both directly and indirectly.

Perhaps most notable was the 2004 *Justice for All Act*, which included the *Innocence Protection Act* (*IPA*). Originally introduced in 2000 by Vermont Senator Patrick Leahy in response to the "national crisis" over the death penalty,[67] the 2004 *IPA* provided standards for access to post-conviction DNA testing, quality capital defense counsel, and exoneree compensation.[68] A portion of the bill named after Kirk Bloodsworth—the first person in the United States to be cleared using post-conviction DNA testing after being sentenced to death—provided funding to states for DNA testing.[69]

Federal lawmakers again addressed wrongful convictions at the end of 2015, when President Barack Obama signed the *Wrongful Convictions Tax Relief Act*, which provided that compensation awards for wrongful incarceration are not subject to federal taxes.[70] While the law

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[66] For more information about the NCIIC, including their process and cases they have reviewed thus far, see online: <https://innocencecommission-nc.gov/>. It is important to note that a similar, though not functionally identical, body exists in the United Kingdom's Criminal Cases Review Commission. See online: <https://ccrc.gov.uk/>.

[67] "The Innocence Protection Act," United States Senate, 19 October 2000, see online: <https://www.nytimes.com/2000/02/19/opinion/new-looks-at-the-death-penalty.html>; Norris 1, *supra* note 1 at 87

[68] In addition, the Justice for All Act required that laboratories that receive certain federal funds certify that "a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results committed by employees or contractors of any forensic laboratory system, medical examiner's office, coroner's office, law enforcement storage facility, or medical facility in the State that will receive a portion of the grant amount. *Justice for All Act of 2004,* Public Law 108-405, s.311b, United States Congress, online: <https://www.congress.gov/108/plaws/publ405/PLAW-108publ405.pdf>. The incorporation of this provision was motivated by concerns over the role that forensic science evidence played in wrongful convictions: Norris 2, *supra* note 3 at 88.

[69] *Justice for All Act of 2004*; *ibid*. This portion of the bill was reauthorized in 2016 as part of 2016's *Justice for All Reauthorization Act of 2016*, Public Law 114-4, United States Congress, online: <https://www.congress.gov/bill/114th-congress/senate-bill/2577>. See Innocence Staff, "Innocence Project Praises U.S. Senate for Passing Justice for All Reauthorization Act" (16 June 2016), online: <https://www.innocenceproject.org/innocence-project-praises-u-s-senate-passage-justice-reauthorization-act/>.For more on the Kirk Bloodsworth case, see Tim Junkin, *Bloodsworth*, (Chapel Hill: Algonquin Books, 2005).

[70] See "Innocence Project Applauds Congress for Passage of the Wrongful Convictions Tax Relief Act of 2015" (18 December 2015), online:<https://www.innocenceproject.org/innocence-project-applauds-congress-for-passage-of-the-wrongful-convictions-tax-relief-act-of-2015/>.

was imperfect,[71] it helped clarify an oft-confusing issue that created another layer of uncertainty for exonerees, who already must navigate a sea of challenges upon release.[72]

In addition to legislative policy initiatives, federal agencies have given attention to wrongful convictions. The National Institute of Justice (NIJ) responded more than two decades ago, when U.S. Attorney General Janet Reno, intrigued by DNA exonerations, called on then-NIJ director Jeremy Travis to examine the issue. In June 1996, NIJ released its report, *Convicted by Juries, Exonerated by Science*, in which the research team described twenty-eight DNA exonerations and some basic patterns found in the cases.[73] The case analysis was followed by several pages of policy implications and commentary by practitioners and advocates, including Barry Scheck and Peter Neufeld.[74] Under the same regime, the NIJ also produced a report on eyewitness identification, seemingly inspired by the discovery of the widespread misidentification of defendants who were exonerated by later DNA analysis.[75]

The NIJ's continuing interest in wrongful convictions[76] is evidenced by its website, which provides several resources relevant to the innocence movement, including additional information and reports about eyewitness identification[77] and forensics, among other issues.[78] In recent years,

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[71] For example, the law provided a one-year period for those who had previously received compensation that was taxed to retroactively recoup the taxes paid. However, they were not notified, and many eligible exonerees were not aware of this possibility. See Matt Ferner, "For the Wrongfully Convicted, Time Runs Short to Get Tax Relief", *HuffPost* (21 November 2016), online: <https://www.huffpost.com/entry/wrongful-convictions-taxes-compensation_n_583365d7e4b058ce7aac88ab> [*Ferner*].

[72] Ferner, *ibid*; Gillian B. White, "Taxing the Wrongfully Convicted", *The Atlantic* (22 February 2016), online: <https://www.theatlantic.com/business/archive/2016/02/taxing-the-wrongfully-convicted/470397/>. For more on the struggles faced by exonerees upon release, see generally, Saundra D Westervelt & Kimberly J Cook, *Life After Death Row: Exonerees' Search for Community and Identity* (New Brunswick: Rutgers University Press, 2012) [*Westervelt & Cook*].

[73] Edward Connors, et al, *Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence after Trial* (Washington, DC: National Institute of Justice, June 1996) [*Connors*].

[74] Connors, *ibid*. For more on the development and impact of the NIJ report, see Norris 1, *supra* note 1 at 66-70.

[75] National Institute of Justice, "Eyewitness Evidence: A Guide for Law Enforcement," (October 1999), online: <https://www.ncjrs.gov/pdffiles1/nij/178240.pdf>.
In the opening message, Attorney General Janet Reno wrote: "Recent cases in which DNA evidence has been used to exonerate individuals convicted primarily on the basis of eyewitness testimony have shown us that eyewitness evidence is not infallible" at iii.

[76] As of February 2020, "wrongful convictions" is listed as a topic area under "Justice System Reform" on the NIJ website. See online: <https://nij.ojp.gov/topics/justice-system-reform/wrongful-convictions> (last accessed 3 February 2020).

[77] See for example, NIJ, "Police Lineups: Making Eyewitness Identification More Reliable" (1 October 2007), online: <https://nij.ojp.gov/topics/articles/police-lineups-making-eyewitness-identification-more-reliable>; NIJ, "Eyewitness Identification" (28 February 2009), online:<https://nij.ojp.gov/topics/articles/eyewitness-identification>; Sally Q Yates, "Memorandum for Heads of Department Law Enforcement Components All Department Prosecutors" (6 January 2017), online: <https://www.justice.gov/file/923201/download>.

[78] See generally, NIJ, "Forensic Sciences" online: <https://nij.ojp.gov/topics/forensics> (nd); NIJ, "Postconviction DNA Testing," (8 March 2018), online: <https://nij.ojp.gov/topics/articles/postconviction-dna-testing>; Gerald

NIJ has funded research efforts aimed at understanding the causes of wrongful convictions[79] and the effects of such errors on crime victims,[80] as well as a workshop examining under-studied areas related to miscarriages of justice.[81] Perhaps most notably, the NIJ recently spearheaded a "Sentinel Events Initiative," designed to examine negative outcomes in the criminal justice system, including wrongful convictions, and use them as learning opportunities for systemic improvement.[82]

In 2005, Congress asked the National Academies to examine several dimensions of the state of forensic science practice in the nation.[83] That study culminated in a 2009 report ("the NRC Report") in which the authors discussed—among several critical needs—the need for improvements in forensic practices to reduce the risk of wrongful convictions.[84] One of the 13 reform recommendations outlined in the NRC Report called for an independent national entity to establish and enforce best practices in forensic science, establish standards for the mandatory accreditation of laboratories and certification of practitioners, and more. Although an entity as such never materialized, the Department of Justice (DOJ) and the National Institute of Standards and Technology established the National Commission on Forensic Science (NCFS)—representing multiple stakeholders, including forensic scientists, prosecutors, defense attorneys, and judges—to address the concerns raised in the NRC Report.[85] While the NCFS served only in an advisory role to the DOJ, it developed several documents to guide improvements in forensic practice at the federal, state, and local levels—including in the areas of laboratory accreditation, proficiency testing, standards for reporting and testimony, and human factors (*e.g.*, reducing cognitive bias).[86] Unfortunately, when the NCFS' charter expired in 2017, then-Attorney General Jeff Sessions announced that he would not renew the commission.[87]

Laporte, "Wrongful Convictions and DNA Exonerations: Understanding the Role of Forensic Science" NIJ Journal 279 (April 2018), online: <https://www.ncjrs.gov/pdffiles1/nij/250705.pdf>.

[79] NIJ, "Predicting and Preventing Wrongful Convictions" (7 March 2013), online: <https://nij.ojp.gov/topics/articles/predicting-and-preventing-wrongful-convictions>; Jon B Gould, et al, "Predicting Erroneous Convictions: A Social Science Approach to Miscarriages of Justice" Report Submitted to the US Department of Justice (December 12), online: <https://www.ncjrs.gov/pdffiles1/nij/grants/241389.pdf> [*Gould*].

[80] Seri Irazola, et al, "Addressing the Impact of Wrongful Convictions on Crime Victims," NIJ Journal 274 (December 2014), online: <https://www.ncjrs.gov/pdffiles1/nij/247881.pdf>.

[81] Acker, et al, "Elephants in the Courtroom: Examining Overlooked Issues in Wrongful Convictions" (2015/2016) 79 Alb L Rev 705 [Acker], online: <http://www.albany.edu/scj/wrongful-convictions-symposium.php>.

[82] See generally, NIJ, "Sentinel Events Initiative" (1 November 2017), online: < https://nij.ojp.gov/topics/articles/sentinel-events-initiative>; James M Doyle, "NIJ's Sentinel Events Initiative: Looking Back to Look Forward" NIJ Journal 273 (March 2014), online: <https://www.ncjrs.gov/pdffiles1/nij/244145.pdf>.

[83] *Committee on Identifying the Needs of the Forensic Science Community, Strengthening Forensic Science in the United States: A Path Forward* (National Research Council of the National Academies 2009) [*NAS Report*].

[84] *Ibid.*

[85] US Dep't of Justice and Nat'l Inst Standards and Tech, (2017) *National Commission on Forensic Science: Reflecting Back—Looking Toward the Future* available, online: <https://www.justice.gov/archives/ncfs/page/file/959356/download>.

[86] Nat'l Comm'n on Forensic Sci, "Reflecting Back, Looking Toward the Future" (11 April 2017), online: <https://www.justice.gov/archives/ncfs/page/file/959356/download>.

[87] Spencer S Hsu, "Sessions Orders Justice Dept. to End Forensic Science Commission, Suspend Review Policy", The Washington Post (10 April 2017), online:<https://www.washingtonpost.com/local/public-safety/sessions-orders-

It also is important to note that many reforms, even if not on state legislative agendas, have been implemented locally. For example, numerous police departments adopted changes to their eyewitness practices, such as using double-blind procedures, without the prompting of state legislation.[88] Similarly, many police agencies employ policies governing the recording of custodial interrogations. Thus, a 2004 report by Thomas Sullivan, conducted with Northwestern University Law School's Center on Wrongful Convictions, highlighted more than two-hundred departments across thirty-eight states that recorded custodial interrogations,[89] and this practice almost certainly has increased in the years since.

In recent years, District Attorneys also have focused on the problem of wrongful convictions, as seen in the spread of Conviction Integrity Units (CIUs), also known as Conviction Review Units,[90] which are "divisions of prosecutorial offices that work to prevent, identify, and correct false convictions."[91] The first CIU was developed in Santa Clara, California in 2002, although it "got relatively little attention."[92] The more well-known, and longest-standing, CIU was established by Dallas County (Texas) District Attorney Craig Watkins in 2007. Over the last decade, such units have spread across the United States. In 2018, forty-four CIUs were in operation nationwide. The growth of existing CIUs between 2002 and 2018, according to information compiled by the NRE, is shown in Figure 6.

justice-dept-to-end-forensic-science-commission-suspend-review-policy/2017/04/10/2dada0ca-1c96-11e7-9887-1a5314b56a08_story.html>.

[88] One notable example is Minneapolis, Minnesota. Police agencies in California and elsewhere also altered practices prior to the passage of state legislation. See Michael Ollove, "Police are changing lineups to avoid false IDs" Pew Charitable Trusts (13 July 2018), online: <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/07/13/police-are-changing-lineups-to-avoid-false-ids>.

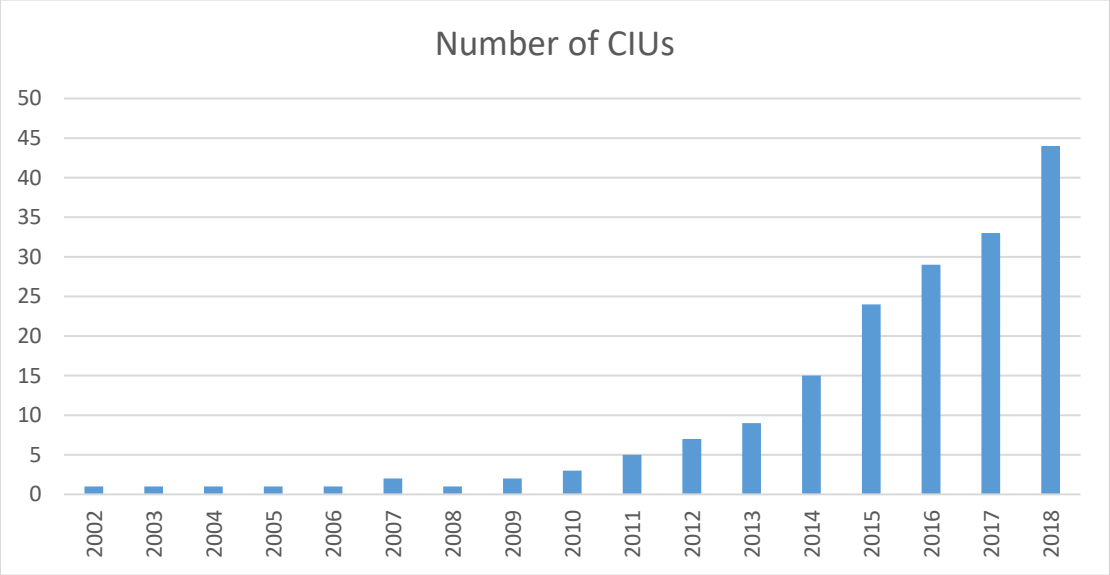
[89] It is important to note that this survey was not done scientifically and did not include the full population of police departments across the US. See Thomas P Sullivan, "Police Experiences with Recording Custodial Interrogations" (2004) Nw U Sch L CWC, online: <https://www.reid.com/pdfs/SullivanReport.pdf>.

[90] See John Hollway, "Conviction Review Units: A National Perspective" (2016), online: <https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2615&context=faculty_scholarship>.

[91] National Registry of Exonerations, "Exonerations in 2018" (9 April 2019) at 2, online: <https://www.law.umich.edu/special/exoneration/Documents/Exonerations%20in%202018.pdf>.

[92] The Santa Clara CIU was dismantled in 2007 due to budget cuts, but was reestablished in 2011. National Registry of Exonerations, "Exonerations in 2014" (27 January 2015) at 5, online: <https://www.law.umich.edu/special/exoneration/Documents/Exonerations_in_2014_report.pdf>.

Figure 6. Number of CIUs in the U.S. per Year



The first CIU-involved exoneration was of Quedillis Ricardo Walker in Santa Clara, California in 2003.[93] Another did not occur until 2007. Then, following a slow increase, the number exploded in 2014, when CIUs were involved in fifty-one exonerations. In 2018, CIUs were involved in fifty-eight exonerations, including forty-five which involved collaborations between CIUs and innocence organizations.[94] This degree of collaboration between prosecutors and the innocence community is particularly noteworthy because these parties have often been portrayed as being at odds with one another.[95] From 2003 through 2018, the National Registry of Exonerations lists 346 exonerations involving a CIU.[96] Annual CIU-involved exonerations are shown in Figure 7.

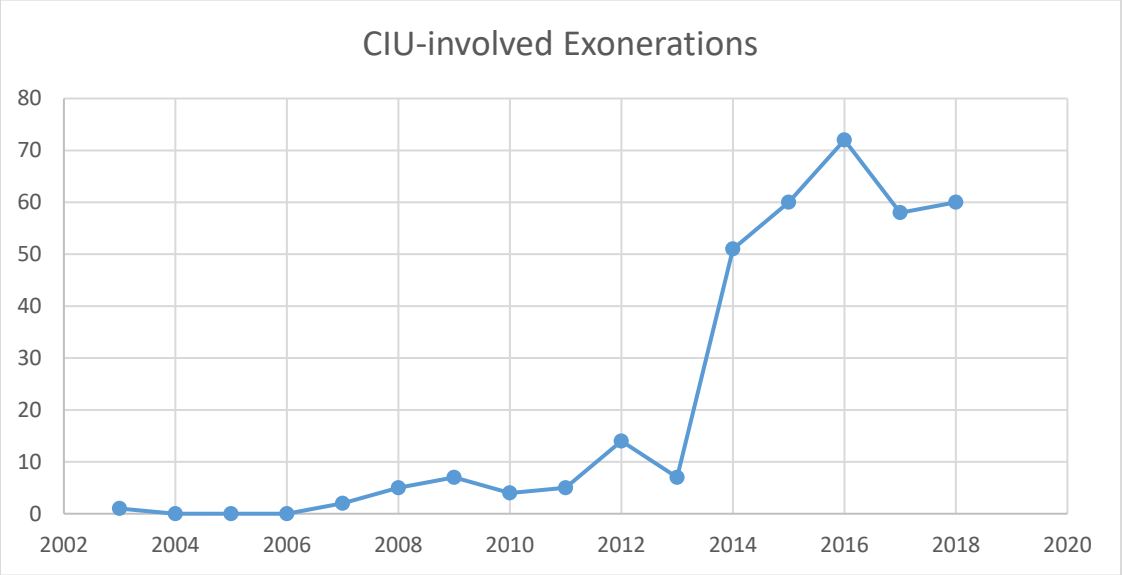
[93] For more on the Walker case, see the NRE case profile, available online: <http://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3712>.

[94] See National Registry of Exonerations, "Exonerations in 2018", online: <https://www.law.umich.edu/special/exoneration/Documents/Exonerations%20in%202018.pdf>

[95] This supports the assertion of several scholars who have suggested that wrongful conviction is an issue that can and should appeal across political divisions and ideological sensibilities. See for example, Keith A Findley, "Toward a New Paradigm of Criminal Justice: How the Innocence Movement Merges Crime Control and Due Process" (2008) 41 "Tex Tech L Rev" 133; Robert J Norris, et al, "The Criminal Costs of Wrongful Convictions: Can We Reduce Crime by Protecting the Innocent?" Criminol & Pub Pol'y [Norris 7] online: <https://www.onlinelibrary.wiley.com/doi/10.1111/1745-9133.12463>.

[96] Current based on NRE website as of 28 January 2020. It is worth noting that the NRE defines the involvement of a CIU as when the "Unit in the prosecutorial office that prosecuted the exoneree helped secure the exoneration. (This does not necessarily mean that the prosecutorial office in question made a factual determination that the defendant is innocent) National Registry of Exonerations, "Glossary", online: <https://www.law.umich.edu/special/exoneration/Pages/glossary.aspx> (nd).

Figure 7. Number of CIU-Involved Exonerations per Year in the U.S.



IV Venturing Forth: What We Don't Know, And Future Research Issues

We began this article with the goal of combining various sources of information about wrongful convictions and exonerations and systematically assessing what we know about innocence in the United States over the thirty-year-period bookended by the first DNA exonerations in 1989 and the end of 2018. The development and growth of the innocence movement has been little short of astounding. The discovery of errors, the investments made to uncover their sources, and the extent and breadth of legal and operational reforms stemming from concerns about wrongful convictions, are impressive, to say the least. Given the widespread and relatively rapid nature with which they have spread, claims about the innocence movement being a "revolution,"[97] a "revelation,"[98] or even a "new civil rights movement"[99] may not be severely overstated.

Yet, despite the increasing awareness of wrongful convictions and the incredible expansion of advocacy and research efforts in this domain of criminal justice, much is still unknown. Numerous under-examined and unstudied issues remain for innocence scholars to tackle. We identify several of these issues below, although this discussion is far from exhaustive. The study

[97] Marshall, *supra* note 34.

[98] Norris 1, *supra* note 1 at 164

[99] The "new civil rights" language has been used in several places. For examples of its use among advocates, see "Spread of Innocence Projects" *Associated Press* (6 June 2002). Seen as "New Civil Rights Movement" *Dallas Morning News* (6 June 2002); Innocence Project, "As 100th Innocent Prisoner is Freed by DNA Tests, Innocence Network Convenes to Map the Future of 'New Civil Rights Movement'" *Criminal Justice* (17 January 2002). Scholars also have used such language. For example, Medwed referred to innocence as "the civil rights movement of the twenty-first century" Daniel Medwed, "Innocentrism" (2008) 2008 U Ill L Rev 1549 at 1550. For a critical discussion of the framing of the innocence movement using civil rights language, see Norris 1, *supra* note 1 at 164-177.

of wrongful convictions and exonerations (and other miscarriages of justice) remains a fruitful area of inquiry for scholars from a wide array of disciplines, making use of diverse methodological toolsets.

A. Theoretical and Methodological Development

More than a decade ago, Richard Leo argued that the literature on wrongful convictions was "theoretically impoverished."[100] The field of innocence scholarship has developed considerably since that time, although we still lack a strong understanding of the fundamental causes of wrongful convictions.[101] The factors typically highlighted as contributors to wrongful convictions—eyewitness errors and false confessions, for example—are better classified as "legal causes" than "root causes,"[102] absent the empirical analyses required to establish causation as understood in the social sciences.[103] This is understandable; as has been discussed elsewhere, the challenges associated with the study of wrongful convictions are many and complex.[104] Many of the key issues involved in innocence scholarship, including the three substantive "elephants in the courtroom" discussed in the following section, have been given relatively short shrift because they present such challenges to study. Interested scholars must continue to think carefully and creatively about overcoming such challenges.

One promising methodological approach to further our understanding of the root causes of wrongful convictions is the use of comparison groups. An interesting example of this technique is a recent NIJ-funded study completed by Jon Gould and colleagues. Their research compared wrongful convictions with "near misses," or cases in which "a factually innocent defendant was indicted but released before conviction on the basis of his innocence,"[105] in order to understand what causes an innocent person charged with a crime to be convicted rather than spared conviction. Their findings highlight a variety of factors that may help cause wrongful convictions but which are not included on the typical list of contributing factors, such as state death penalty culture and the defendant's criminal history.[106] Although such analyses are complicated and not without

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[100] Leo 1, *supra* note 16 at 213.

[101] Leo 2, *supra* note 60 at 82.

[102] Leo 2, *ibid* at 84, 94; see also, Leo 1, *supra* note 16.

[103] The issues typically highlighted as "causes" (e.g., eyewitness errors, jailhouse snitches, etc) may be causes in a legal sense, in that they may produce inculpatory evidence and may influence a judge or jury to convict. However, establishing causation in the social sciences requires more extensive data. Such analyses require variation on the outcome variable (for example, both "wrongful" and "rightful" convictions), as well as a variety of independent and control variables. For a discussion, see for example, Leo & Gould, *supra* note 60 and Norris & Bonventre, *supra,* note 60.

[104] For discussions about the challenges associated with the study of wrongful convictions, see Leo & Gould, *ibid*; Leo 3, *supra* note 100; Leo 2, *supra* note 60; Norris & Bonventre, *ibid*; Samuel R Gross & Barbara O'Brien, "Frequency and Predictors of False Conviction: Why We Know So Little, and New Data on Capital Cases" (2008) 5 J Empircal Legal Stud 927 [*Gross & O'Brien*]; Marvin Zalman, "Criminal Justice System Reform and Wrongful Conviction: A Research Agenda" (2006) 17 Crim Just Pol'y Rev 468; Catherine L Bonventre, Robert J Norris & Emily West, "Studying Innocence: Advancing Methods and Data," in Redlich, *supra* note 10.

[105] Gould, *supra* note 79 at xiv.

[106] The full list of significant variables includes state death penalty culture, age of defendant, criminal history of defendant, strength of prosecution's case, intentional misidentification, forensic evidence error, withholding of

limitations, the approach used by Gould and colleagues is a promising one for scholars as we try to better understand the underlying causes of wrongful convictions.

Debate continues concerning the extent to which the study of wrongful convictions can be grounded in theory, at least in the traditional sense.[107] Yet, there is general agreement that scholars can and should work across fields, capitalizing on theories and theoretical perspectives from multiple disciplines to better understand the many dimensions of wrongful convictions. Indeed, criminal justice is "an inherently multi-theoretic discipline,"[108] and thus a richly varied theoretical approach is likely to be the best path forward.

B. The "Elephants in the Courtroom"[109]

In October 2015, the National Science Foundation and the National Institute of Justice co-sponsored a special workshop to further advance our understanding of wrongful convictions by focusing on four overlooked issues, or what were called the "elephants in the courtroom." The "elephants" examined were (1) the relationship between race and the production of wrongful convictions; (2) guilty pleas; (3) wrongful convictions in misdemeanor cases; and (4) data needs and methodological constraints that impede wrongful conviction research and the dissemination of research findings to policymakers and practitioners. A full discussion is beyond the scope of the present article, but we touch on these four issues here.[110]

a. Race

Race affects virtually every aspect of the criminal justice system. Those identifying as Black or African American make up approximately thirteen per cent of the United States population, but account for more than one-third of sentenced inmates[111] and nearly half of all exonerations known to date.[112] The disparity is greater for certain types of crimes, most startlingly, for sex crimes. Approximately 21 percent of those under state correctional authorities for rape or

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evidence by the prosecution, non-eyewitness lying, the strength of the defense, and whether the defendant offered a family witness. Gould, *ibid* at xvii.

[107] For a discussion, see Leo 1, *supra* note 16 at 94-97; see also, Leo 3, *supra* note 100; Norris & Bonventre, *supra* note 60; Marvin Zalman, "Theorizing Wrongful Conviction" in Redlich, *supra* note 10; William Lofquist, "Finding the Causes in the Contexts: Structural Sources of Wrongful Convictions" in Redlich, *ibid*; Leo & Gould, *supra* note 60.

[108] Marvin Zalman, "The Search for Criminal Justice Theory: Reflections on Kraska's Theorizing Criminal Justice" (2007) 18 J Crim J Educ 163 at 170.

[109] Acker, *supra* note 81 at 705.

[110] Interested readers are referred to the Volume 79, Issue 3 of the Albany Law Review, which includes ten articles resulting from the workshop.

[111] Furthermore, Black men have an imprisonment rate about six times higher than White men. Jennifer Bronson & E Ann Carson, "Prisoners in 2017" (Washington, DC: U. S. Department of Justice, April 2019), online: <https://www.bjs.gov/content/pub/pdf/p17.pdf>.

[112] Current as of 3 February. See National Registry of Exonerations, "Exonerations by Race and Crime", online: <https://www.law.umich.edu/special/exoneration/Pages/ExonerationsRaceByCrime.aspx> (nd).

sexual assault are Black,[113] although nearly 60 percent of known exonerations for sexual assault have involved Black defendants.[114]

Exploring the relationship between the traditional causes of wrongful convictions and deep-seated systemic and societal factors may help us better understand these disparities. For example, Alexander analyzes modern justice systems in light of historical forms of discrimination.[115] She argues that current systems target African Americans and create a modern caste-system of sorts, serving to promote social and racial control. Such broad perspectives might help uncover some of the underlying currents of miscarriages of justice and illuminate some of the root causes of racialized patterns. For instance, the cases of the Scottsboro Boys[116] and the Central Park Five[117]—a half-century apart and separated by the American Civil Rights Movement—look eerily similar: a group of minority men accused of sexual crimes against white women, highly racialized public outcry, questionable decisions by system actors, and ultimately erroneous convictions.[118] A historical analysis of wrongful convictions, drawing on sociology, political science, psychology, and cultural studies, might help us unpack the root causes of this continued pattern of racialized errors.

b. Guilty Pleas

Guilty pleas account for the overwhelming majority of criminal convictions in this country: roughly 94 percent of those produced in state courts and 97 percent in the federal courts.[119] But we know that not all admissions of guilt are reliable. To date, roughly 11 percent of exonerations compiled by the Innocence Project and 20 percent of the NRE cases involved defendants convicted via guilty plea,[120] and the true incidence may well be much higher. Several incentives embedded in criminal justice systems can encourage innocent people to plead guilty.[121] Entering a guilty plea can be the quickest and surest way for people charged with crimes, perhaps unjustly, to escape pretrial incarceration and return to their families and jobs. Defendants who contest guilt and exercise their right to a trial risk facing significantly harsher punishment caused by structural rewards and institutionalized "trial taxes."[122] In several cases, innocent defendants pled guilty after

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[113] Bronson & Carson, *supra* note 111.

[114] National Registry of Exonerations, "Exonerations by Race and Crime" *ibid.*

[115] Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (New York: The New Press, 2012).

[116] See James R Acker, *Scottsboro and Its Legacy: The Cases that Challenged American Legal and Social Justice* (Westport: Praeger, 2008).

[117] See Sarah Burns, *The Central Park Five: A Chronicle of a City Wilding* (New York: Alfred A Knopf, 2011).

[118] N Jeremi Duru, "The Central Park Five, the Scottsboro Boys, and the Myth of the Bestial Black Man" (2004) 25 Cardozo L Rev 1315.

[119] (2012) *Missouri v Frye*, 132 S Ct 1399.

[120] Accessed 31 January 2020, online:<https://guiltypleaproblem.org/#about>; National Registry of Exonerations, *Browse cases: Detailed view*; accessed 31 January 2020, online: <http://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx>.

[121] Stephanos Bibas, "Plea Bargaining's Role in Wrongful Convictions," in Redlich, *supra* note 10 at 157-167; Albert W Alschuler, "A Nearly Perfect System for Convicting the Innocent" (2015/2015) 79 Alb L Rev 919 [*Alschuler*].

[122] Gregory M Gilchrist, "Trial Bargaining" (2016) 101 Iowa L Rev 609; Jed S Rakoff, "Why Innocent People Plead Guilty" *New York Review of Book* (20 November 2014), online: <http://www.nybooks.com/articles/2014/11/20/why-

watching co-defendants lose at trial and receive harsh sentences. For example, referencing a set of wrongful convictions in Tulia, Texas, Covey observed, "The first several Tulia defendants fought the drug charges at trial and were convicted and sentenced to draconian prison terms. After seeing the writing on the wall, however, most of the remaining defendants agreed to plead guilty."[123]

Plea bargaining, a practice so redolent with explicit and implicit rewards and threats, informational deficiencies, and power imbalances, arguably represents "a nearly perfect system for convicting the innocent."[124] The plea-bargaining process presents research and policy challenges, among them identifying the specific features that may entice innocent defendants to plead guilty and then assessing whether justice systems that are so heavily dependent on plea bargaining and guilty pleas realistically can and should alter their practices to lessen those risks.

c. Misdemeanors

The bulk of criminal convictions in the United States occur at the misdemeanor level,[125] and yet the blistering pace of misdemeanor adjudication has not abated over time.[126] The National Association of Criminal Defense Lawyers has argued that misdemeanor courts in the U.S. are "grossly inadequate and frequently unjust."[127] Inadequate or altogether absent legal representation, combined with prosecutorial and judicial pressure on defendants to take quick action on their cases, "leads to guilty pleas by the innocent, inappropriate sentences, and wrongful incarceration, all at taxpayer expense."[128] Yet, like the other "elephants," scholars have paid relatively little attention to the nature and extent of wrongful convictions among misdemeanor offenses. Instead, scholarship has focused almost exclusively on felony convictions, and disproportionately on information derived from murder and rape exonerations.[129] Currently, less than 4 percent of all known exonerations are for misdemeanor wrongful convictions.[130]

Misdemeanor charges are rarely contested via trials, and innocent people may be charged with misdemeanors for conduct that is not even criminal. For example, Natapoff has noted that thousands of loitering arrests are made annually in Baltimore and New York.[131] However, failure

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innocent-people-plead-guilty/>; Ronald F Wright, "Trial Distortion and the End of Innocence in Federal Criminal Law" (2005) 154 U Pa L Rev 79.

[123] Russell Covey, "Police Misconduct as a Cause of Wrongful Convictions" (2013) 90 Wash U L Rev 1133.

[124] Alschuler, *supra* note 121.

[125] Robert C Boruchowitz, Malia N Brink & Maureen Dimino, *Minor Crimes, Massive Waste: The Terrible Toll of America's Broken Misdemeanor Courts* (Washington, D.C.: National Association of Criminal Defense Lawyers, April 2009) [*Boruchowitz*], online: <https://www.nacdl.org/reports/misdemeanor/>.

[126] See for example, Alisa Smith and Sean Maddan, *Three-Minute Justice: Haste and Waste in Florida's Misdemeanor Courts* (Washington, D.C.: National Association of Criminal Defense Lawyers, July 2011), online: <https://www.nacdl.org/reports/threeminutejustice/>.

[127] Boruchowitz, *supra* note 125 at 14.

[128] Boruchowitz, *ibid* at 7.

[129] Gross & O'Brien, *supra* note 104.

[130] Current based on NRE cases as of February 5, 2020.

[131] Alexandra Natapoff, "Why Misdemeanors Aren't So Minor" *Slate*, (27 April 2012), online: <http://www.slate.com/articles/news_and_politics/jurisprudence/2012/04/misdemeanors_can_have_major_consequences_for_the_people_charged_.html>.

to "move along" does not fit the legal definition of loitering and thus it is an open question whether vast numbers of arrestees were actually guilty of "loitering."[132] These findings echo Caleb Foote's 1956 analysis of the administration of vagrancy laws in Philadelphia. In that study, the individuals who were charged with and convicted of vagrancy often did not violate the governing statute; instead they simply looked like they did not belong in Philadelphia.[133] However, most known wrongful convictions are of the "wrong person" type, where a crime actually occurred but the wrong person was convicted. About one-third of known wrongful convictions qualify as "no crime" cases, where a person was convicted even though no crime was committed. It may be that "no crime" wrongful convictions occur more regularly among misdemeanors. Indeed, nearly 95 percent of known misdemeanor exonerations are "no crime" wrongful convictions.[134] More research is sorely needed on the relations between low-level charges and innocence.

d. Data Limitations

The structural and systemic factors that implicate race, that can prompt the innocent to plead guilty, and that characterize the "assembly line" justice of misdemeanor cases also make these issues resistant to study and cause miscarriages of justice to be even more difficult to identify. In 2008, Gross and O'Brien asked the question, "Why [do] we know so little about false convictions?"[135] Their basic premise was that wrongful convictions are hidden from view, thereby making them especially difficult to study. They focused on why researchers cannot know or even reliably approximate the frequency of wrongful convictions (or arrests), and their causes and predictors. As discussed, what we think we know about wrongful convictions, such as the leading contributing factors, is based on an unrepresentative sample of exoneration cases that, to a large extent, originated with trial convictions for rape and murder. More than a decade later, we could ask the same question posed by Gross and O'Brien and receive a similar answer. Simply put, our current knowledge about wrongful convictions is badly incomplete because in the vast majority of cases, we know too little about how, when, and why the process erred.

e. Exploring the "Circles of Harm"[136]

Innocence scholarship has grown increasingly diverse as it has expanded, although it remains largely focused on cases and contributing factors. Much of the literature consists of legal scholarship that typically involves case descriptions and examination of collections of known exonerations.[137] Extensive specialized literatures also exist on specific issues related to

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[132] Peter Moskos, *Cop in the Hood: My Year Policing Baltimore's Eastern District* (Princeton: Princeton University Press, 2008).

[133] Caleb Foote, "Vagrancy-Type Law and Its Administration" (1956) 104 U Pa L Rev 603.

[134] National Registry of Exonerations, "Browse Cases: Detailed View" (last accessed 5 February 2020), online: <https://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx>.

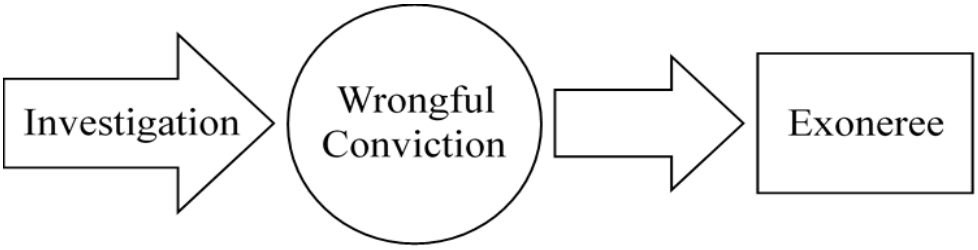
[135] Gross & O'Brien, *supra* note 104.

[136] Jennifer E Thompson & Frank R Baumgartner, "An American Epidemic: Crimes of Wrongful Liberty" *Injustice Watch* (3 April 2018) [*Thompson & Baumgartner*], online:<https://www.injusticewatch.org/commentary/2018/an-american-epidemic-crimes-of-wrongful-liberty/ >.

[137] The reports produced by the National Registry of Exonerations and other organizations generally fit this description. In addition, legal scholars have done tremendous work in collecting and describing cases. See for example, Garrett, *supra* note 61.

miscarriages of justice, such as eyewitness misidentifications,[138] forensics,[139] and false confessions.[140]A welcome development has been a growing literature devoted to the "aftermath" of wrongful convictions.[141] This research has generally focused on individuals who have been wrongly convicted. Scholars have examined the many negative effects of miscarriages of justice on exonerees,[142] including the stigma they face,[143] and the compensation and other reentry services they need, which are often lacking.[144]

Figure 8. Foci of Traditional Innocence Scholarship



The effects of wrongful convictions and incarceration on exonerees are clearly worthy of study. They are important for both normative and policy reasons, and there is still much to learn. However, there is also room for interested scholars to broaden their inquiries and thereby expand innocence scholarship. The effects of wrongful convictions extend far beyond individual

[138] As noted earlier, the literature is extensive enough to have produced a scientific consensus paper in 1998 as well as a current update. Wells 1, *supra* note 44; Wells 2, *supra* note 44.

[139] See for example, the growing literature that has applied the psychological sciences to develop deeper understandings of the sources of error in forensic examinations. These include, e.g., Karl Ask & Par Anders Granhag, "Motivational Sources of Confirmation Bias in Criminal Investigations: The Need for Cognitive Closure" (2005) 2 J Investigative Psych & Crim Profiling 43; Itiel E Dror, David Charlton, & Ailsa E Péron, "Contextual Information Renders Experts Vulnerable to Making Erroneous Identification" (2006) 156 Forensic Sci Int'l 74; Saul M Kassin, Itiel I Dror & Jeff Kukucka, "The Forensic Confirmation Bias: Problems, Perspectives, and Proposed Solutions" (2013) 2 J Applied Research in Memory & Cognition 42.

[140] As noted earlier, this literature extends back decades and produced enough scholarship for a scientific consensus paper, published a decade ago. See Kassin, *supra* note 61.

[141] Westervelt & Cook produced an entire volume on aftermath-related issues. See Saundra D Westervelt & Kimberly Cook, "The Albany Law Review: Foreword" (2012) 75 Alb L Rev 1223.

[142] See for example, Westervelt & Cook, *ibid*; Saundra D. Westervelt and Kimberly J Cook, "Framing Innocents: The Wrongly Convicted as Victims of State Harm" (2010) 53 Crime L & Soc Change 259; Saundra D Westervelt & Kimberly J Cook, "Coping with Innocence After Death Row" (2008) 7 Contexts 32; Adrian Grounds "Psychological Consequences of Wrongful Conviction and Imprisonment" (2004) 46 Can J Criminol & Crim Just 165; Kathryn Campbell and Myriam Denov, "The Burden of Innocence: Coping with a Wrongful Imprisonment" (2004) 46 Can J Criminol & Crim Just 139; Jennifer Wildeman, Michael Costelloe, & Robert Schehr, "Experiencing Wrongful and Unlawful Conviction" (2011) 50 J Offender Rehab 11.

[143] See for example, Adina M Thompson, Oscar R Molina & Lora M Levett, "After Exoneration: An Investigation of Stigma and Wrongfully Convicted Persons" (2011/2012) 75 Alb L Rev 1373; Kimberly A Clow & Amy-May Leach, "Stigma and Wrongful Conviction: All Exonerees are Not Perceived Equal" (2015) 21 Psychol, Crime & L 172.

[144] See for example, Bernhard, *supra* note 62; Norris 5, *supra* note 62; Owens & Griffiths, *supra* note 3.

exonerees, entangling an array of people in their "web of impact."[145] Indeed, the commission of a crime that results in a wrongful conviction creates "widespread circles of harm,"[146] and researchers must explore the full breadth and extent of the rippling damage in order to fully understand the proximal and distal impacts of wrongful convictions.

For example, Jennifer Thompson, the rape victim in the case resulting in Ronald Cotton's wrongful conviction in North Carolina, has pointed out that the original crime victim is "doubly victimized" when an innocent person is erroneously convicted, "once by the perpetrator, then again by the judicial system."[147] Understanding the effects of justice system errors on crime victims is a vital, yet underexplored component of research concerning wrongful convictions.[148]

Tragically, the only true beneficiary of a wrongful conviction is the actual perpetrator of the crime, who remains undetected and consequently is free to commit additional "crimes of wrongful liberty."[149] The few studies of these true perpetrators suggest that wrongful convictions may ultimately contribute to the commission of tens of thousands of additional crimes, highlighting the importance of preventing wrongful convictions to promote both due process and crime control objectives.[150]

Researchers have yet to examine many additional harms associated with justice system errors. For example, what are the effects of "near-misses," even if they do not result in wrongful convictions? How do exonerees' experiences harm their families, social networks, and communities? How do errors affect officials, legal actors, and jurors involved in wrongful conviction cases? And what are the effects of wrongful convictions on public perceptions of and confidence in the criminal justice system and those who work within it?[151]

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[145] Westervelt & Cook, *supra* note 72 at 84; see also, Robert Lopez, "Authors Discuss Wrongful Convictions, Death Penalty" *Greensboro News and Record* (13 July 2014), online: <https://www.greensboro.com/news/local_news/authors-discuss-wrongful-convictions-death-penalty/article_1113b886-1925-11e4-8c9d-001a4bcf6878.html>.

[146] Thompson & Baumgartner, *supra* note 136.

[147] Thompson & Baumgartner, *ibid.*

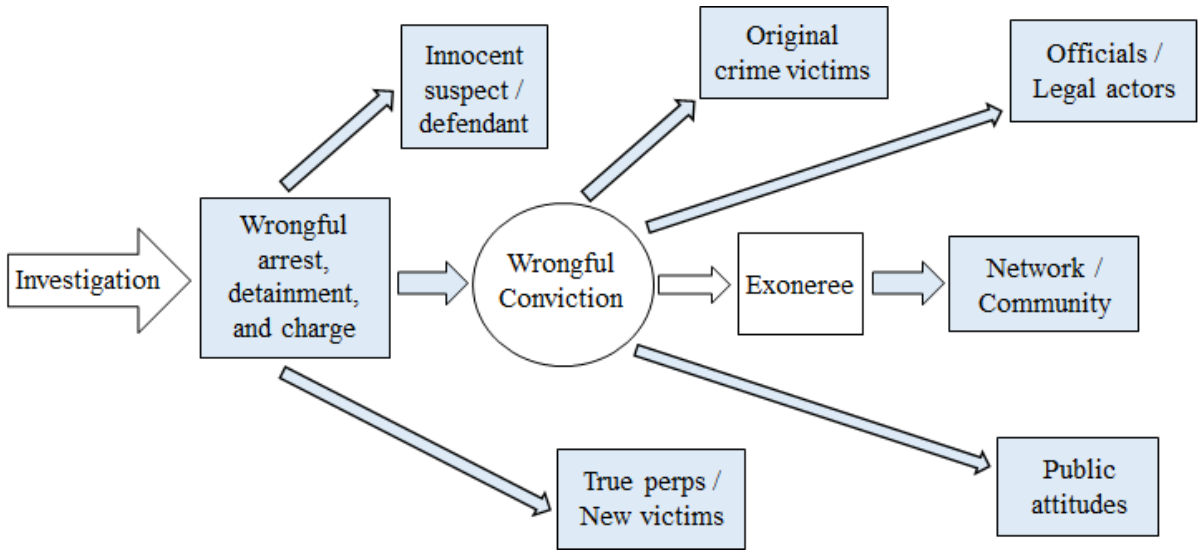
[148] We are aware of at least one ongoing study of original crime victims in cases of wrongful convictions, though it has yet to yield published materials.

[149] Frank R Baumgartner, et al, "The Mayhem of Wrongful Liberty: Documenting the Crimes of True Perpetrators in Cases of Wrongful Incarceration" (2017/2018) 81 Alb L Rev 1263 [*Baumgartner*].

[150] Baumgartner, *ibid*; Norris 7, *supra* note 95; West & Meterko, *supra* note 39.

[151] The effects of wrongful convictions on public opinion have been explored in several studies, although there are likely many nuances that have yet to be uncovered. See for example, Robert J Norris and Kevin J Mullinix, "Framing Innocence: An Experimental Test of the Effects of Wrongful Convictions on Public Opinion" (2019) J Experimental Criminol, online:<https://link.springer.com/article/10.1007%2Fs11292-019-09360-7#citeas>; Kathleen M Donovan and Charles F Klahm, "How Priming Innocence Influences Public Opinion on Police Misconduct and False Convictions: A Research Note" (2018) 43 Crim J Rev 174; Frank E Dardis, et al, "Media Framing of Capital Punishment and Its Impact on Individuals' Cognitive Responses" (2008) 11 Mass Comm & Soct'y 115; Eric G Lambert, et al, "The Impact of Information on Death Penalty Support, Revisited" (2011) 57 Crime & Delinq 572.

Figure 9. The Dimensions of Wrongful Convictions



These questions, and many others, are ripe for social scientific and legal research, and we hope that scholars will devote increased attention to them to help ensure that the coming decades are as fruitful as these last three have been.

V. Conclusion

Stephen and Jesse Boorn were spared execution and imprisonment, respectively, in early 19th century Vermont when the ostensible victim of the murder for which they were convicted reappeared after a several-year absence, alive and well.[152] Although the Boorns share the dubious distinction of being the defendants in the first recognized case of wrongful conviction in the United States, they certainly were not the first innocent individuals to be falsely accused, convicted, and punished. As much as anything, the serendipitous nature of their exoneration, including the incontrovertible evidence of their innocence, suggests a deep chasm between the true incidence of miscarriages of justice, and the likelihood that erroneous convictions will be detected and corrected.

To understand a problem requires, at a minimum, a firm grasp of its scope and dimensions. Despite thirty years of attention, we still lack this fundamental knowledge about wrongful convictions. Exoneration cases are but an imperfect subset of wrongful convictions.[153] Yet we rely on known cases of wrongful conviction, *i.e.*, those resulting in exoneration, to gain a measure of insight about how frequently and why justice miscarries. We thus have attempted to describe in some detail attributes of modern-day exonerations (beginning in 1989), in reliance on the principal

[152] See text accompanying notes 6-7, *supra*. Both Boorns originally were sentenced to death but the Governor commuted Jesse's capital sentence to a term of life imprisonment.

[153] We recognize that truly guilty individuals are sometimes erroneously exonerated, although the far greater problem almost certainly concerns the number of innocent individuals whose wrongful conviction will remain unrecognized.

datasets cataloguing them: those compiled by the Innocence Project and the National Registry of Exonerations.

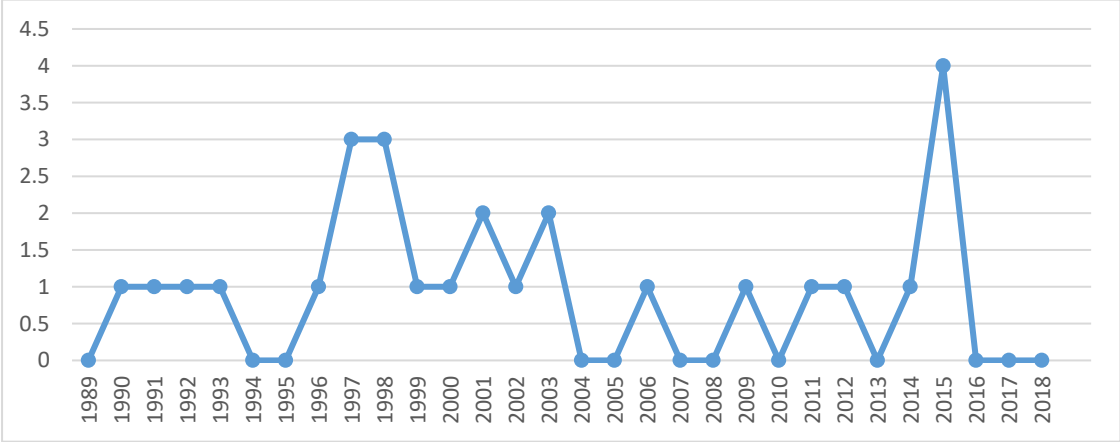
The ensuing challenge is to fashion responses to the problems exposed. Important measures have been introduced in numerous jurisdictions, by legislation, by court order, and administratively, in an attempt to minimize, detect, and remedy justice system errors. We have described several of the policies developed in justice systems, and where they have been adopted. Whether the enacted reforms are sufficient, and whether they have been effectively implemented, are not answered by this accounting.

And thus, a mandate endures for researchers and policymakers to remain active in investigating the root and proximate causes of wrongful convictions, to probe aggressively to ascertain how those errors can be detected and corrected, and to keep pressing forward to determine how the multitude of individual and social costs associated with miscarriages of justice can be minimized and redressed. Much good work has been carried out on these fronts in the past thirty years. If as much effort is expended and progress is made in the next three decades as has occurred over the last three, we can be encouraged that there is hope for the future. Still, the innocence movement must press forward and continue its forward momentum, because much more remains to be done.

VI Appendix: State-By-State Summaries (1989-2018)[154]

Alabama

- First Exoneration: Melvin Todd (1990)
- Total Exonerations over Time (27)

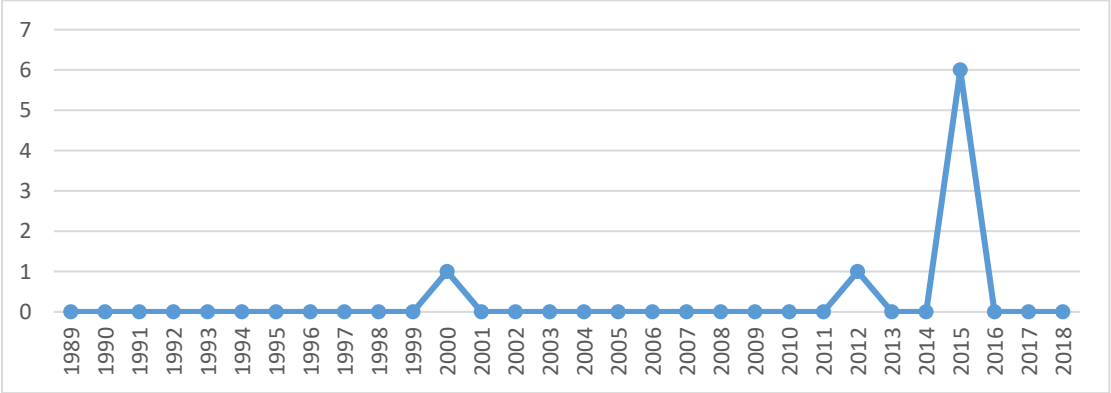


- Innocence Network Organizations Present: 0
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

[154] All exoneration figures reported from the NRE website from 1989 through 2018, current as of January 28, 2020. Active organizations from the IN website. Policy reform areas according to the IP's website.

Alaska

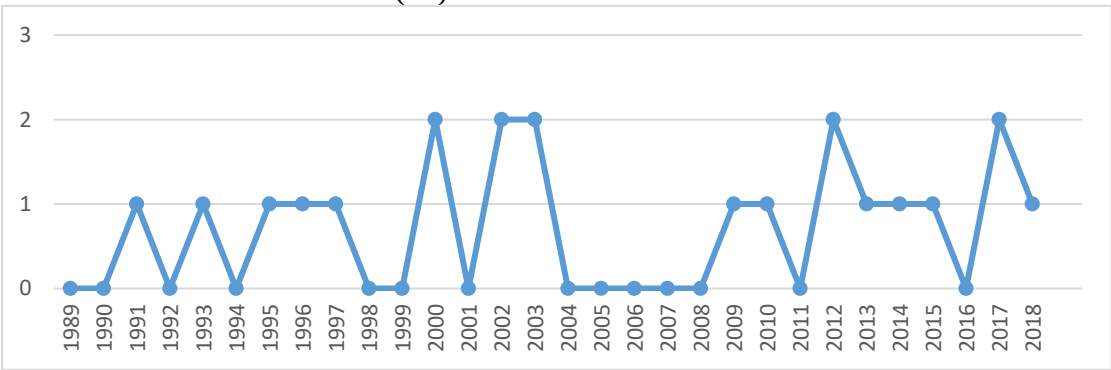
- First Exoneration: Layo Sinegal (2000)
- Total Exonerations over Time (8)



- Innocence Network Organizations Present: 11
- Policy Reform Areas: 3 (Interrogation recording, DNA access, evidence preservation)

Arizona

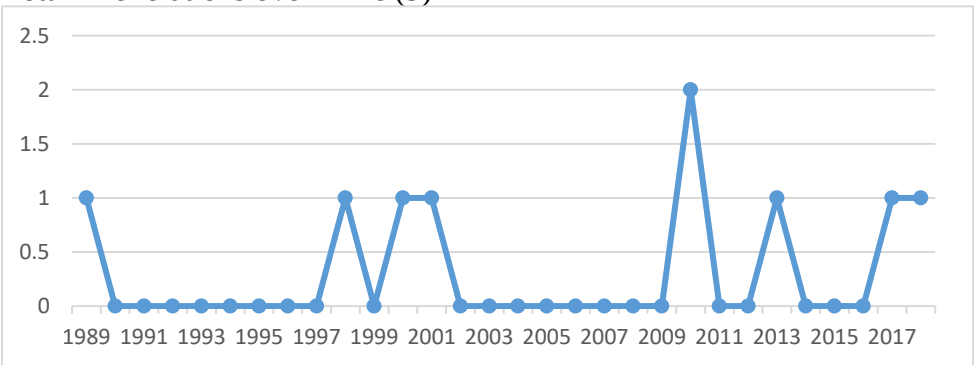
- First Exoneration: Ray Girdler (1991)
- Total Exonerations over Time (21)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 2 (DNA access, evidence preservation)

Arkansas

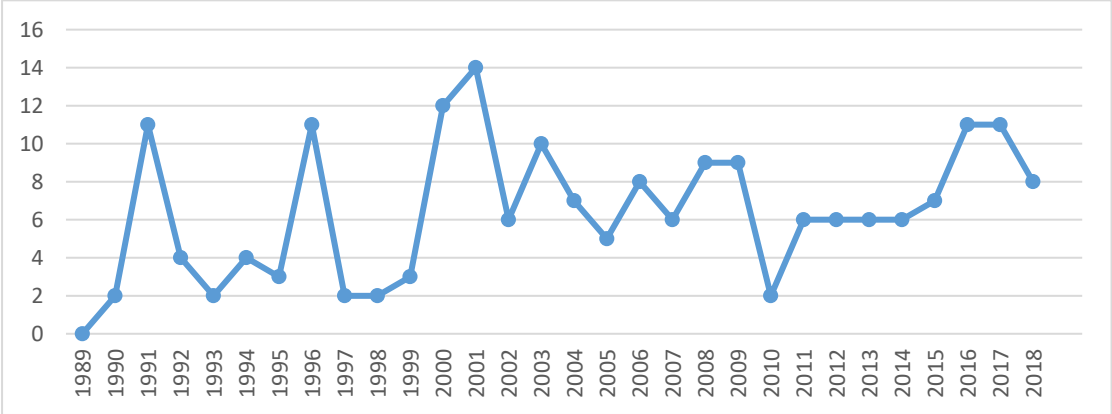
- First Exoneration: Scotty Scott (1989)
- Total Exonerations over Time (9)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 2 (DNA access, evidence preservation)

California

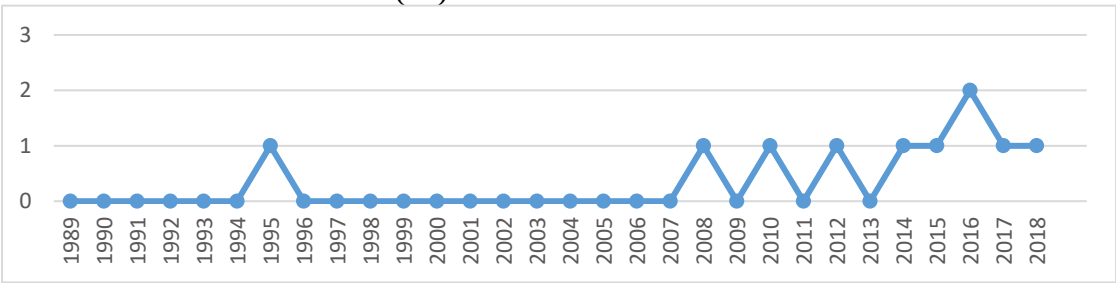
- First Exoneration: Marjorie Grafton and Tim Palomo (1990)
- Total Exonerations over Time (193)



- Innocence Network Organizations Present: 3
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Colorado

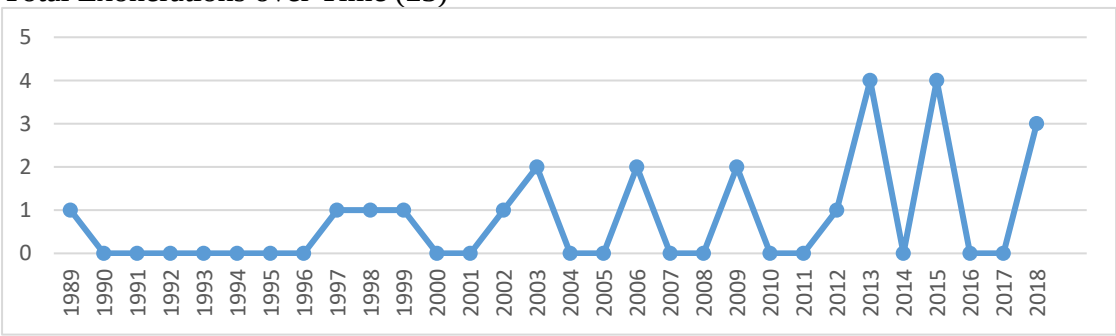
- First Exoneration: Alarico Joe Medina (1995)
- Total Exonerations over Time (10)



- Innocence Network Organizations Present: 2
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Connecticut

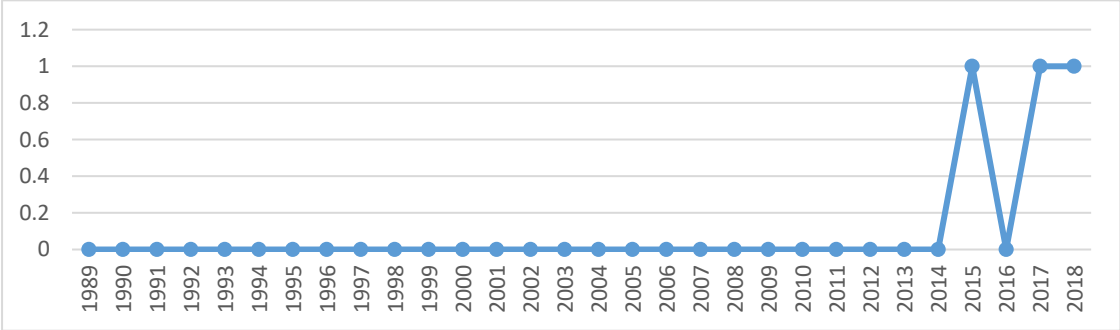
- First Exoneration: Benjamin Miller (1989)
- Total Exonerations over Time (23)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Delaware

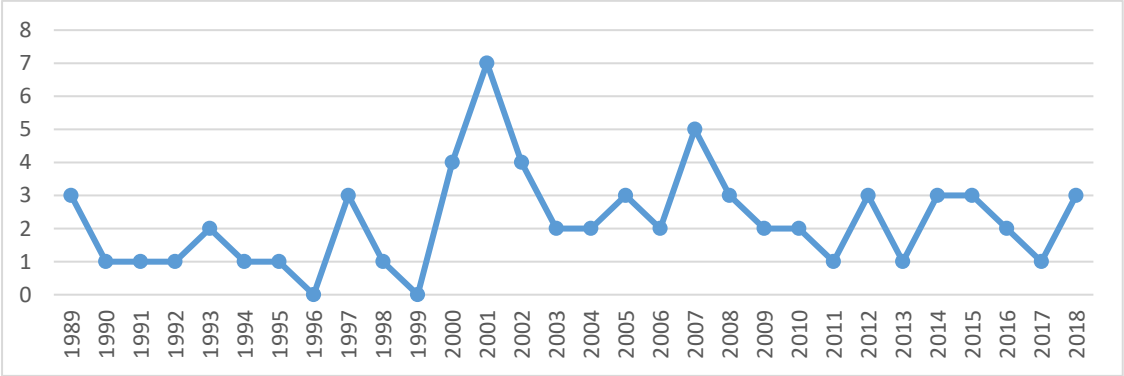
- First Exoneration: Jermaine Dollard (2015)
- Total Exonerations over Time (3)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 1 (DNA access)

Florida

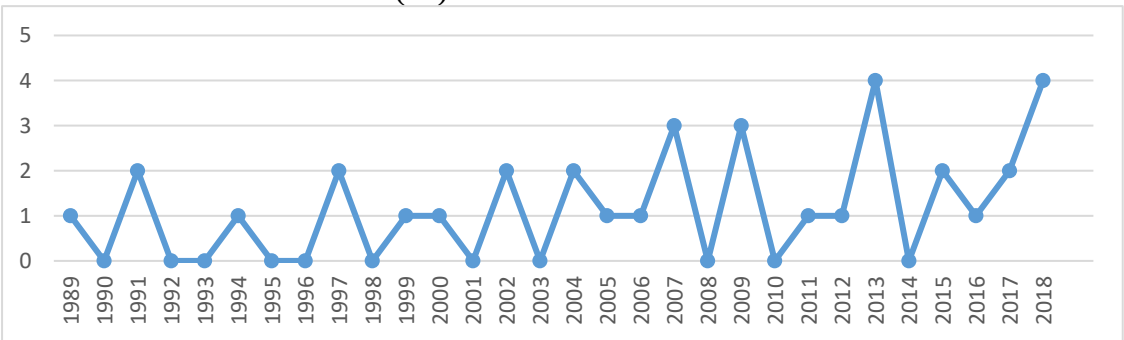
- First Exoneration: James Joseph Richardson (1989)
- Total Exonerations over Time (67)



- Innocence Network Organizations Present: 2
- Policy Reform Areas: 4 (eyewitness ID, DNA access, evidence preservation, compensation)

Georgia

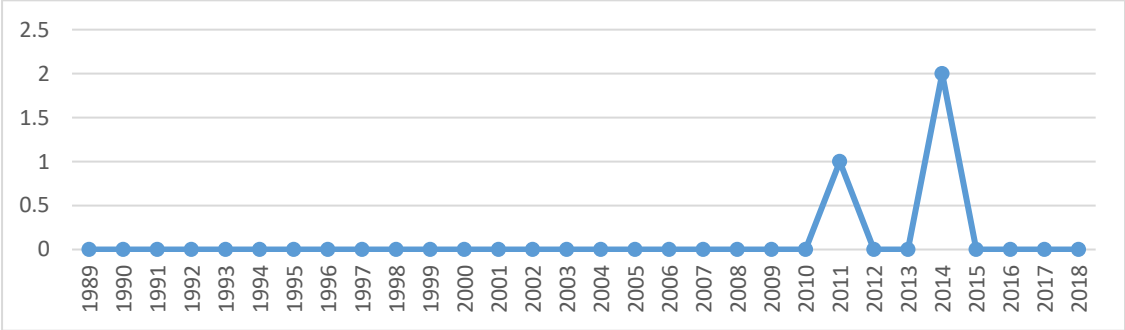
- First Exoneration: James Williams (1989)
- Total Exonerations over Time (35)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (eyewitness ID, DNA access, evidence preservation)

Hawaii

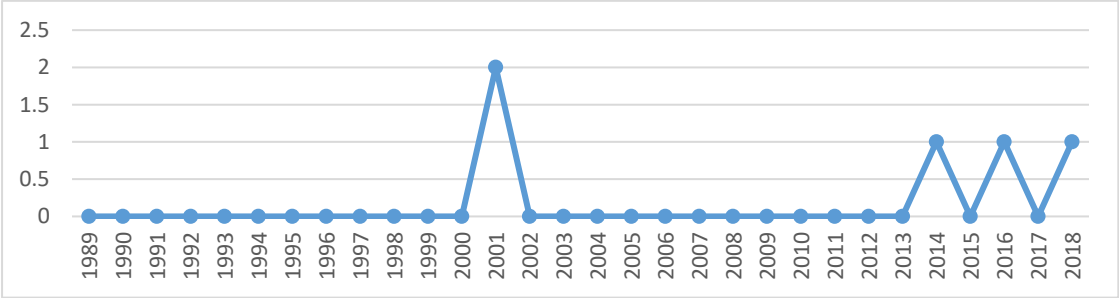
- First Exoneration: Alvin Jardine (2011)
- Total Exonerations over Time (3)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

Idaho

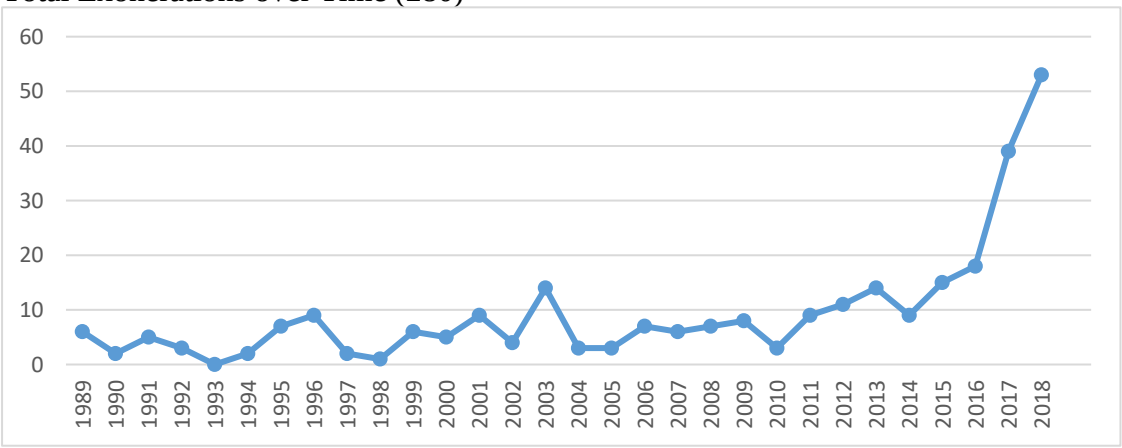
- First Exoneration: Donald Paradis (2001)
- Total Exonerations over Time (5)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 1 (DNA access)

Illinois

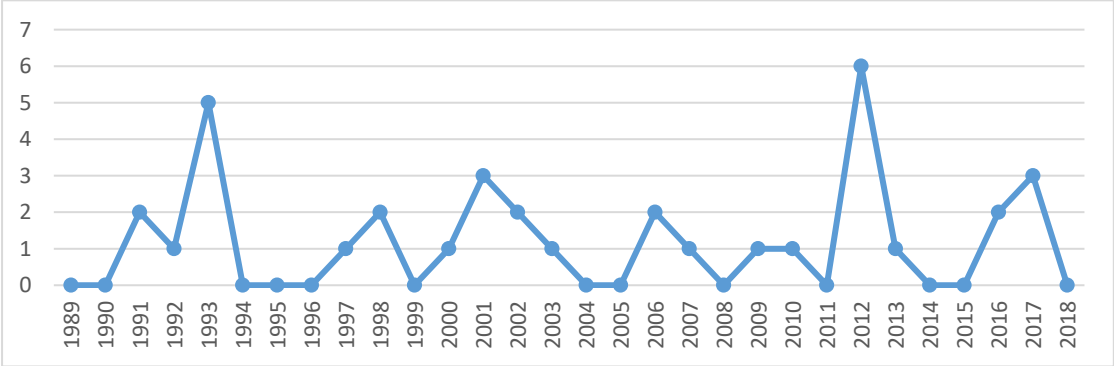
- First Exoneration: Gary Dotson (1989)
- Total Exonerations over Time (280)



- Innocence Network Organizations Present: 3
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Indiana

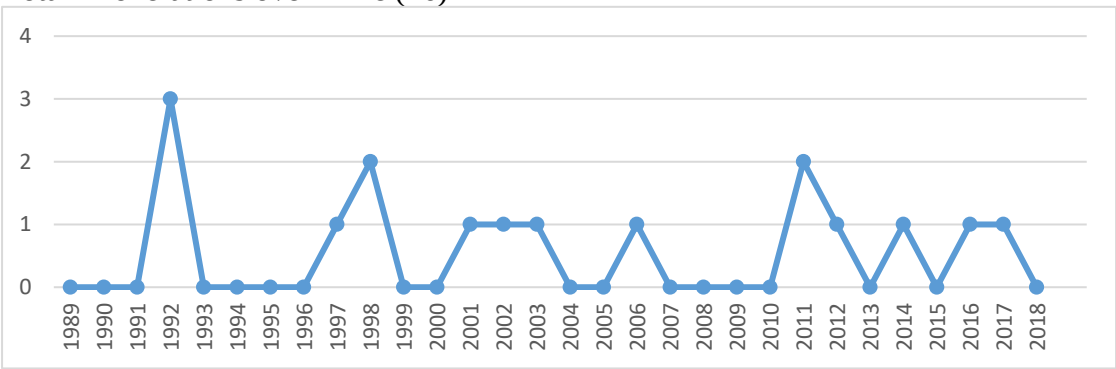
- First Exoneration: William DeMotte (1991)
- Total Exonerations over Time (35)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (interrogation recording, DNA access, evidence preservation)

Iowa

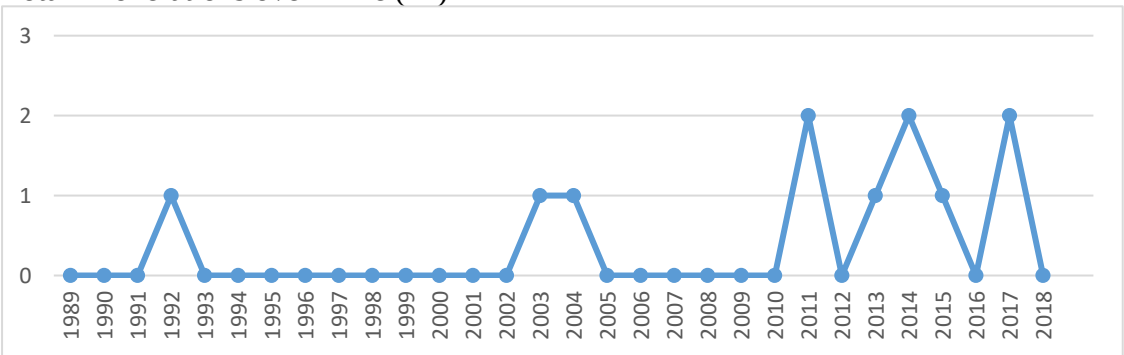
- First Exoneration: Anthony Davis and Donald Hannon (1992)
- Total Exonerations over Time (16)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

Kansas

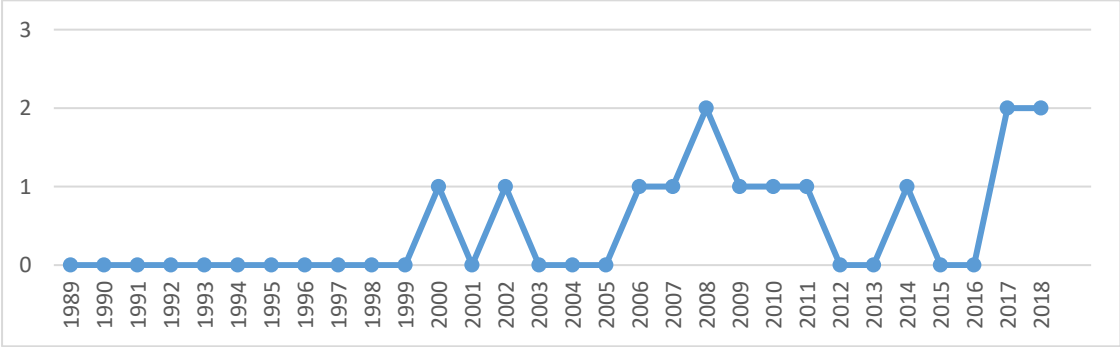
- First Exoneration: Joe Jones (1992)
- Total Exonerations over Time (11)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Kentucky

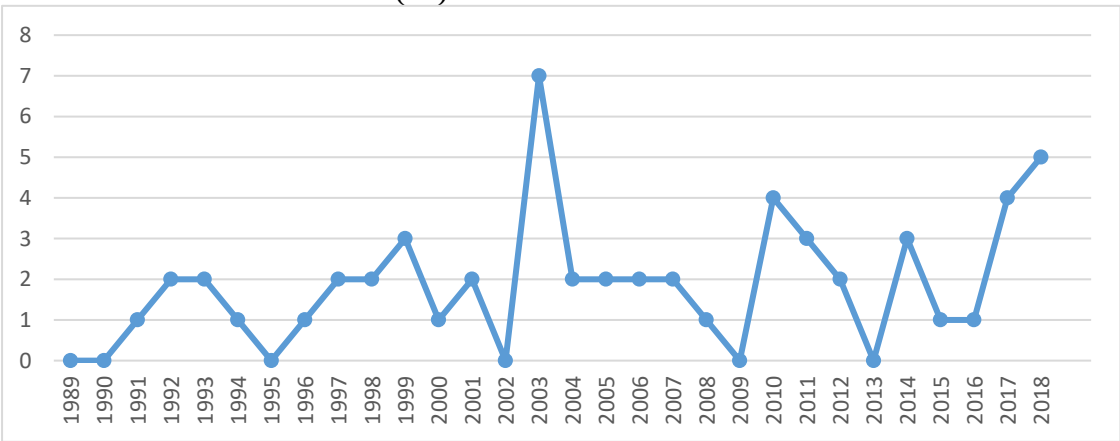
- First Exoneration: William Gregory (2000)
- Total Exonerations over Time (14)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 2 (DNA access, evidence preservation)

Louisiana

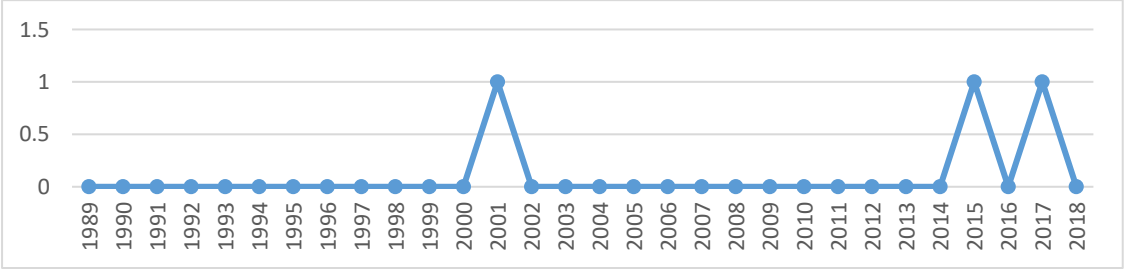
- First Exoneration: Isaac Knapper (1991)
- Total Exonerations over Time (56)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 4 (eyewitness ID, DNA access, evidence preservation, compensation)

Maine

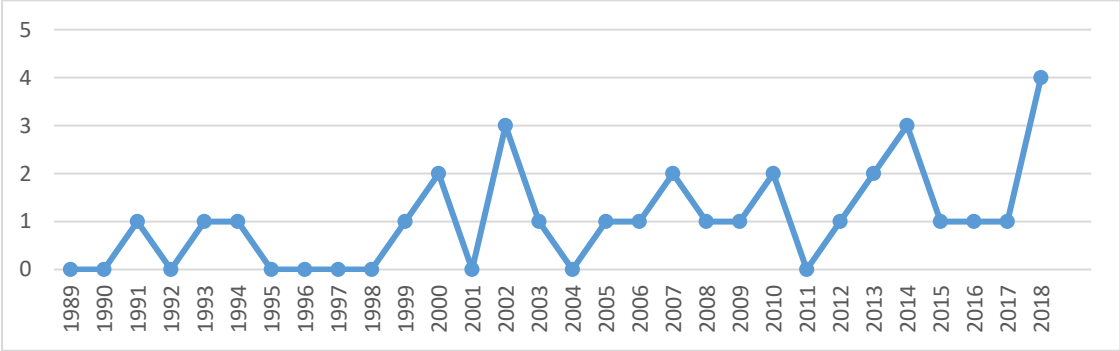
- First Exoneration: David McMahan (2001)
- Total Exonerations over Time (3)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Maryland

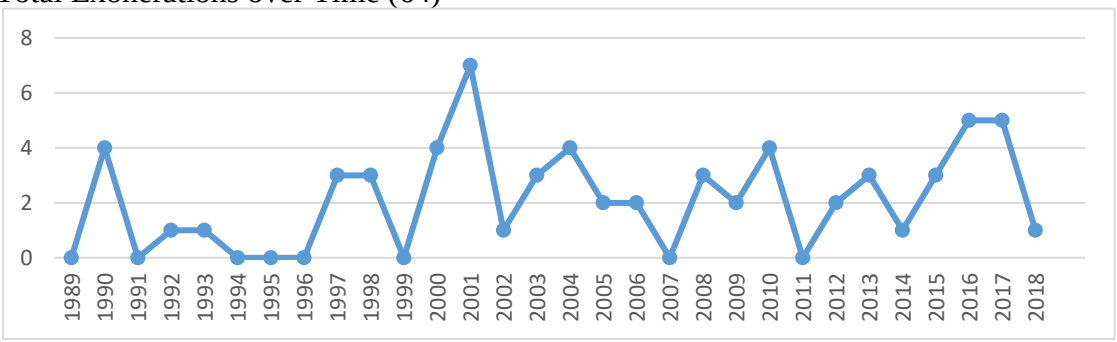
- First Exoneration: Sandra Craig (1991)
- Total Exonerations over Time (31)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Massachusetts

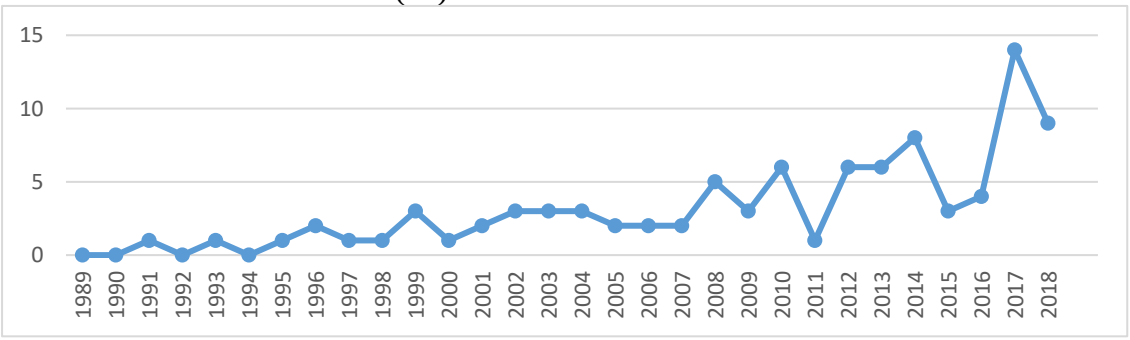
- First Exoneration: Louis Santos (1990)
- Total Exonerations over Time (64)



- Innocence Network Organizations Present: 3
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Michigan

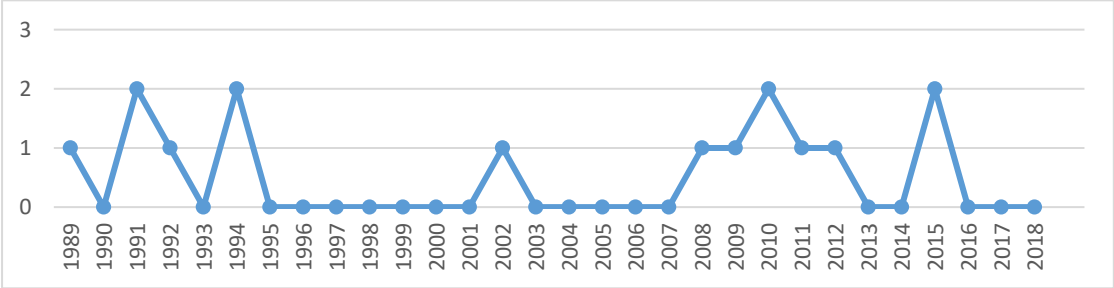
- First Exoneration: Laurie Moore (1991)
- Total Exonerations over Time (93)



- Innocence Network Organizations Present: 3
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Minnesota

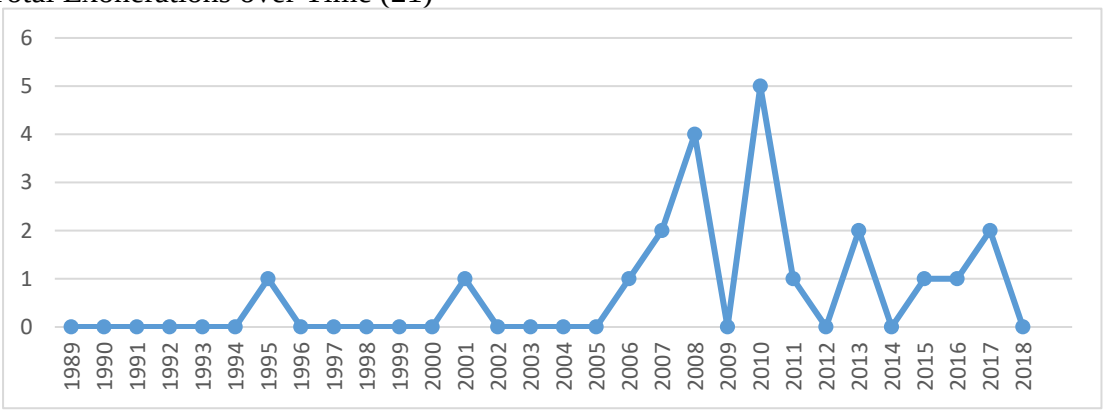
- First Exoneration: Richard Paul Dziubak (1989)
- Total Exonerations over Time (15)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Mississippi

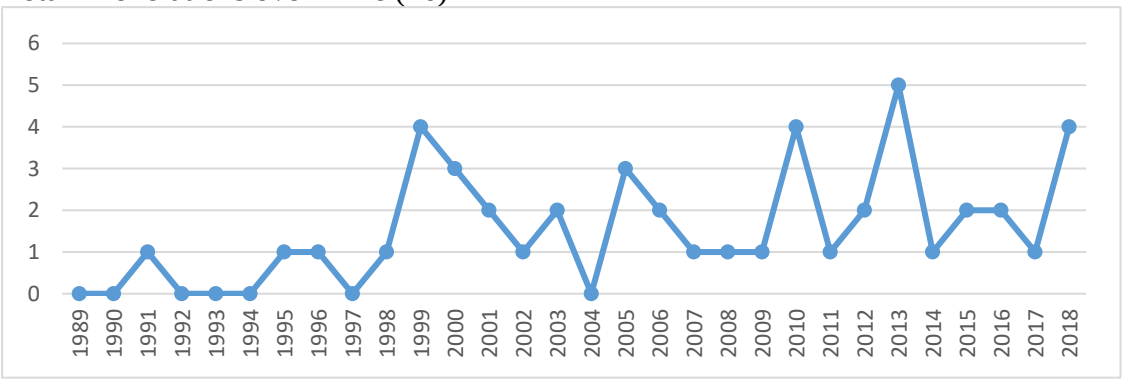
- First Exoneration: Sabrina Butler (1995)
- Total Exonerations over Time (21)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

Missouri

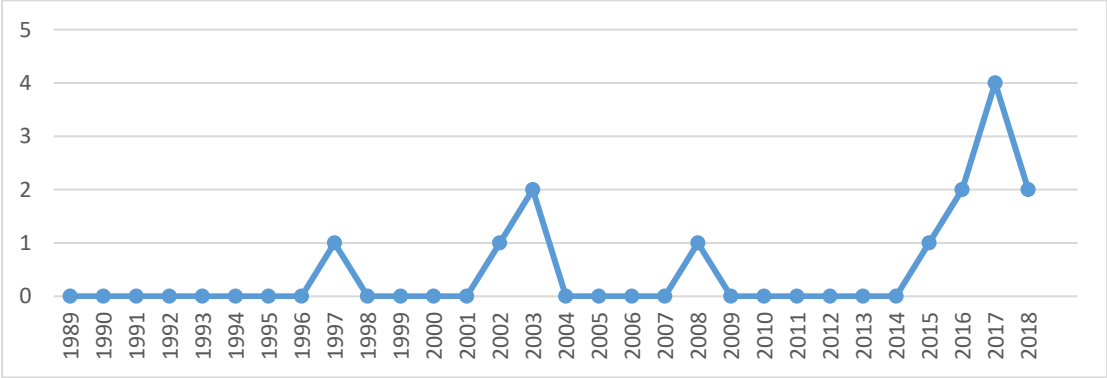
- First Exoneration: Patricia Stallings (1991)
- Total Exonerations over Time (46)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Montana

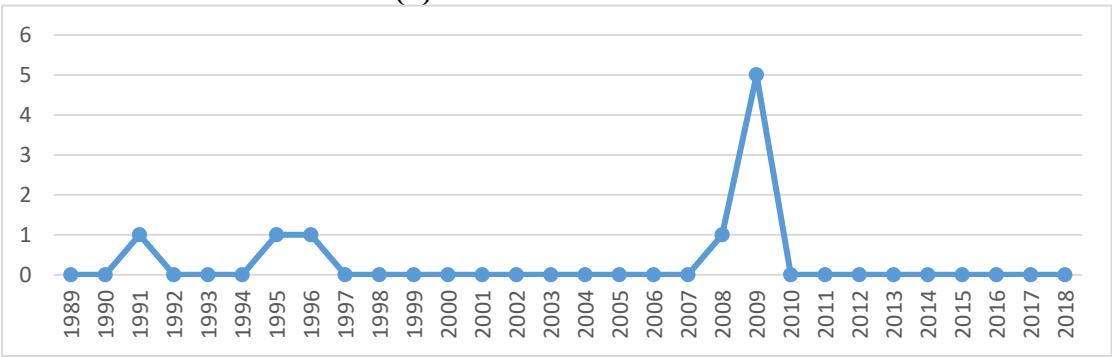
- First Exoneration: Chester Bauer (1997)
- Total Exonerations over Time (14)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 4 (interrogation recording, DNA access, evidence preservation, compensation)

Nebraska

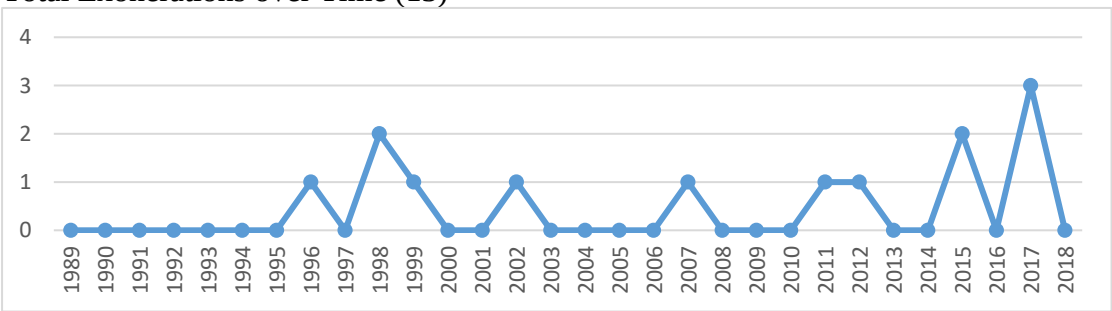
- First Exoneration: Darrel Parker (1991)
- Total Exonerations over Time (9)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Nevada

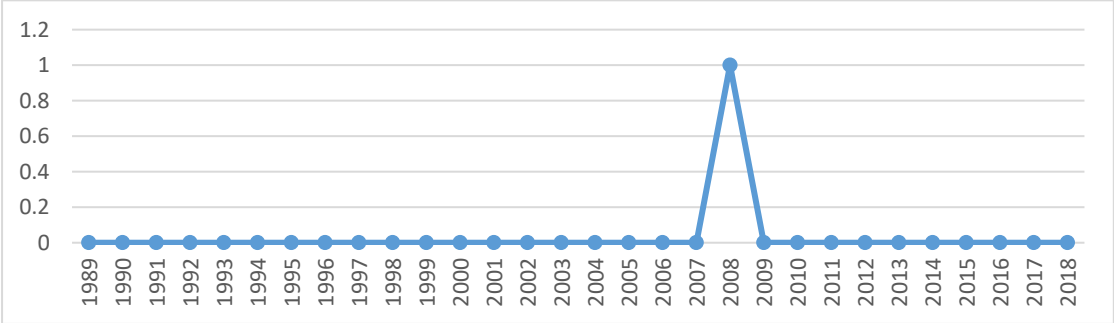
- First Exoneration: Roberto Miranda (1996)
- Total Exonerations over Time (13)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 3 (eyewitness ID, DNA access, evidence preservation)

New Hampshire

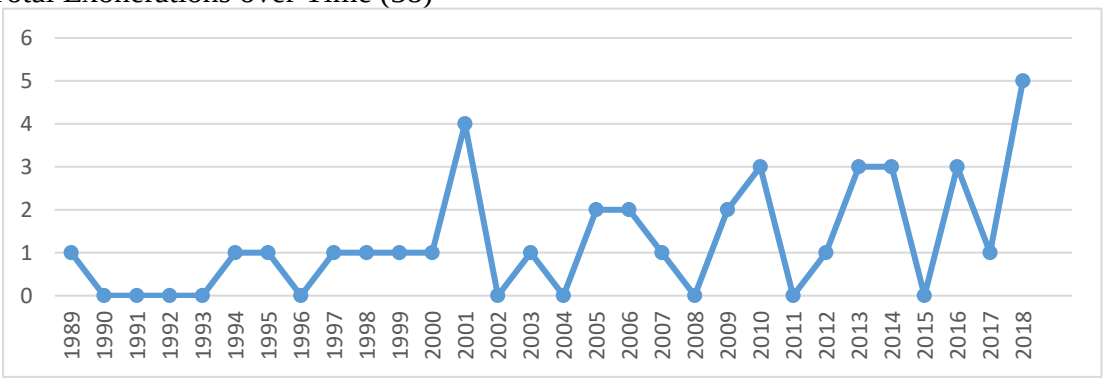
- First Exoneration: Roland Chretien (2008)
- Total Exonerations over Time (1)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

New Jersey

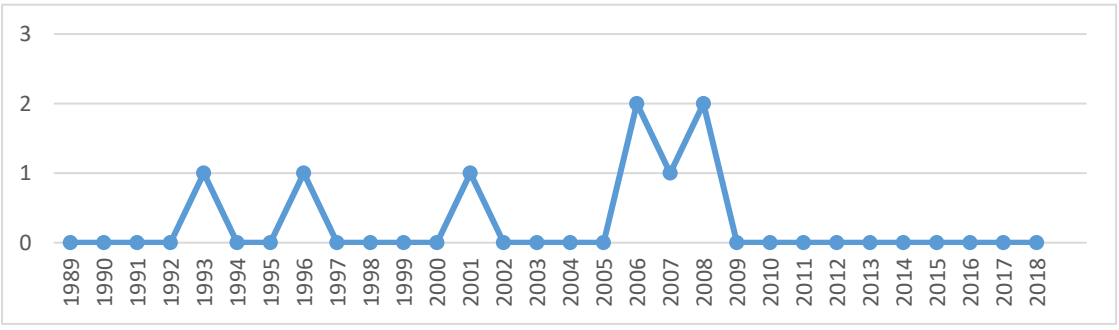
- First Exoneration: Damaso Vega (1989)
- Total Exonerations over Time (38)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

New Mexico

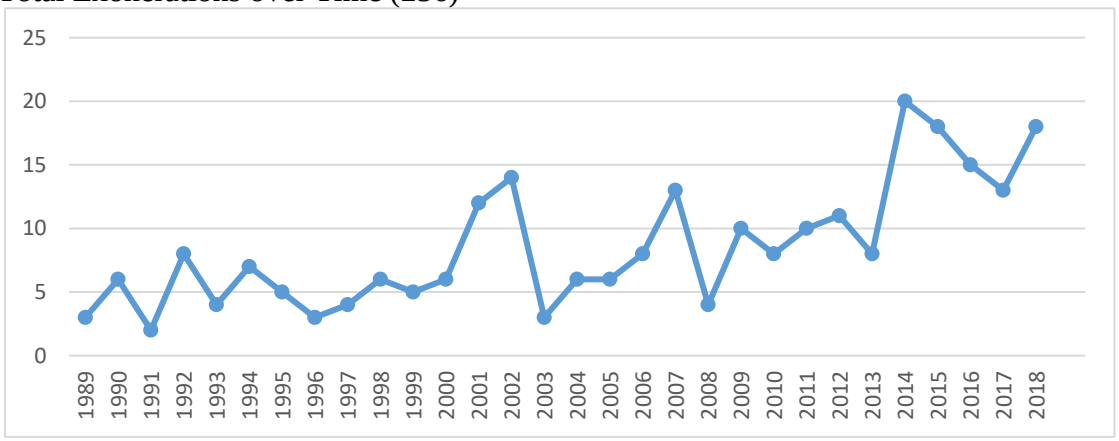
- First Exoneration: Gene Curtis Ballinger (1993)
- Total Exonerations over Time (8)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (interrogation recording, DNA access, evidence preservation)

New York

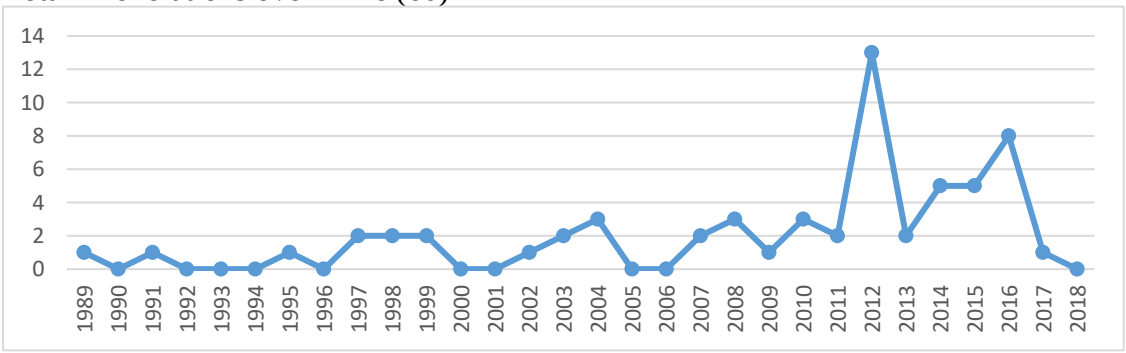
- First Exoneration: Bryan Blake (1989)
- Total Exonerations over Time (256)



- Innocence Network Organizations Present: 4
- Policy Reform Areas: 4 (eyewitness ID, interrogation recording, DNA access, compensation)

North Carolina

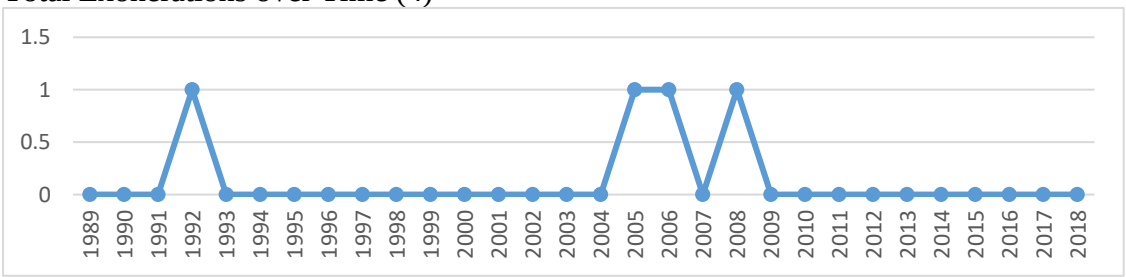
- First Exoneration: Thomas Shreve (1989)
- Total Exonerations over Time (60)



- Innocence Network Organizations Present: 3
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

North Dakota

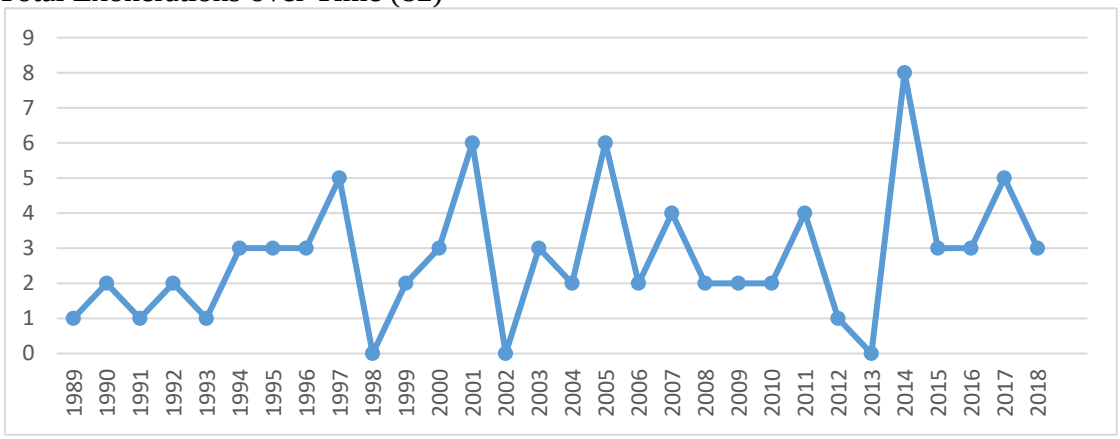
- First Exoneration: Richard McIntyre (1992)
- Total Exonerations over Time (4)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 1 (DNA access)

Ohio

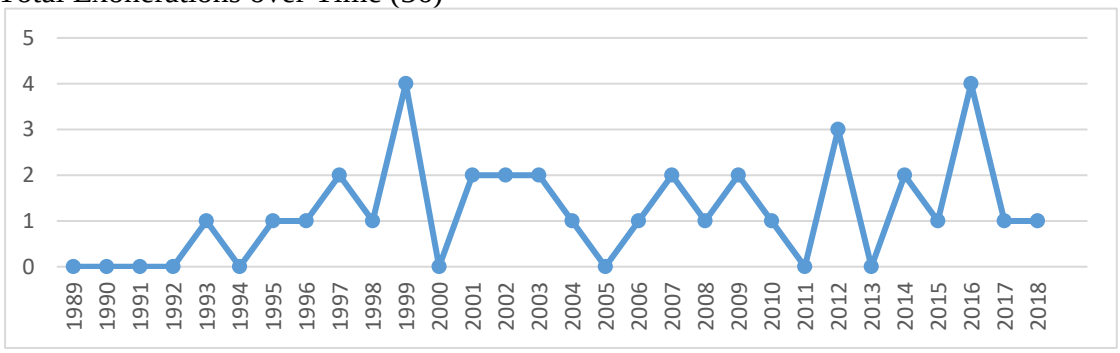
- First Exoneration: William Mueller (1989)
- Total Exonerations over Time (82)



- Innocence Network Organizations Present: 2
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Oklahoma

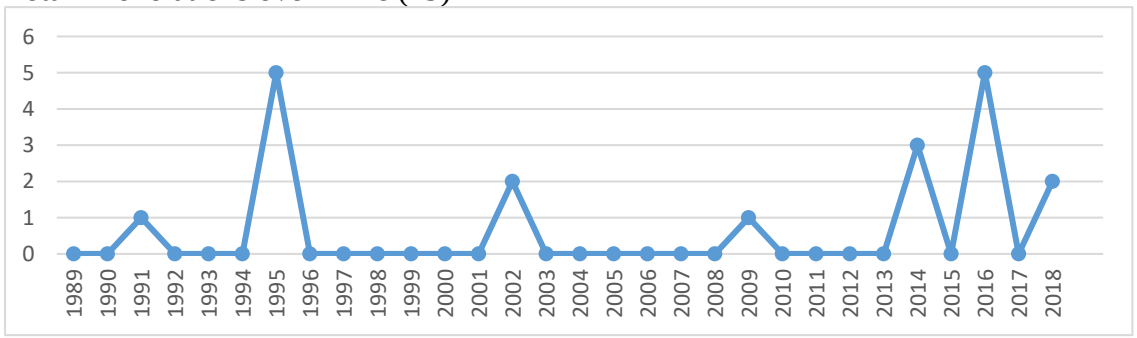
- First Exoneration: Gregory Wilhoit (1993)
- Total Exonerations over Time (36)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

Oregon

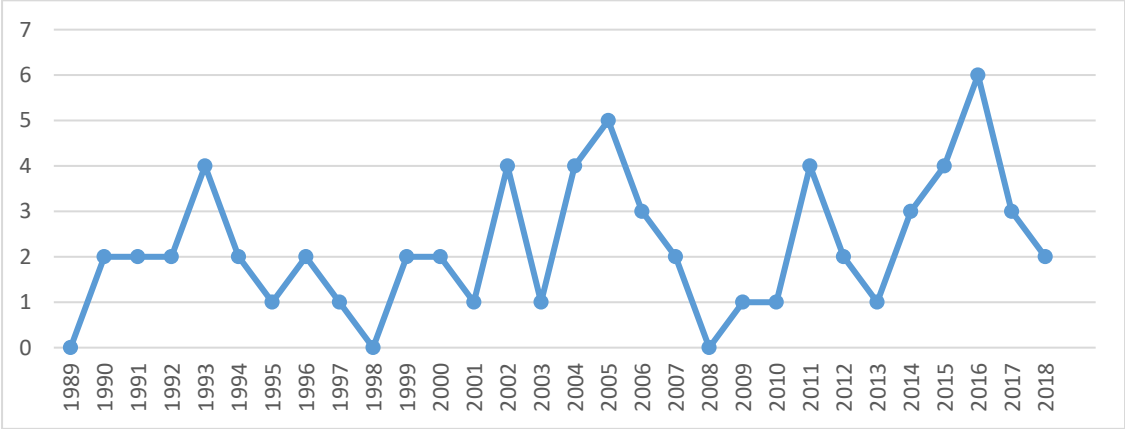
- First Exoneration: Santiago Ventura Morales (1991)
- Total Exonerations over Time (19)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (interrogation recording, DNA access, evidence preservation)

Pennsylvania

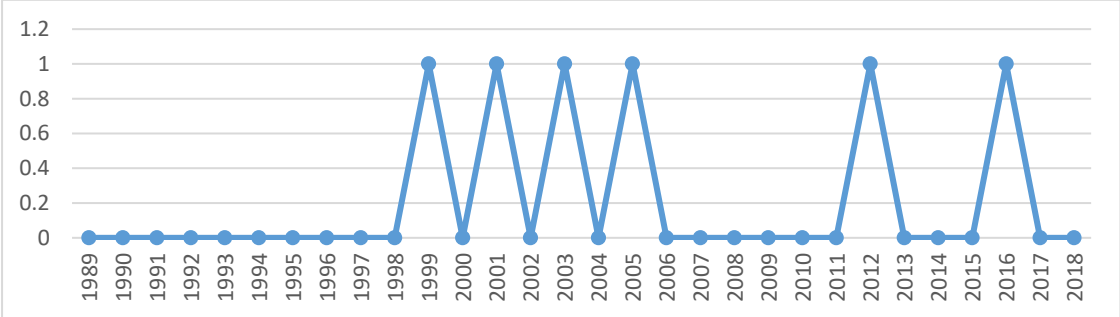
- First Exoneration: Matthew Connor (1990)
- Total Exonerations over Time (67)



- Innocence Network Organizations Present: 2
- Policy Reform Areas: 2 (DNA access, evidence preservation)

Rhode Island

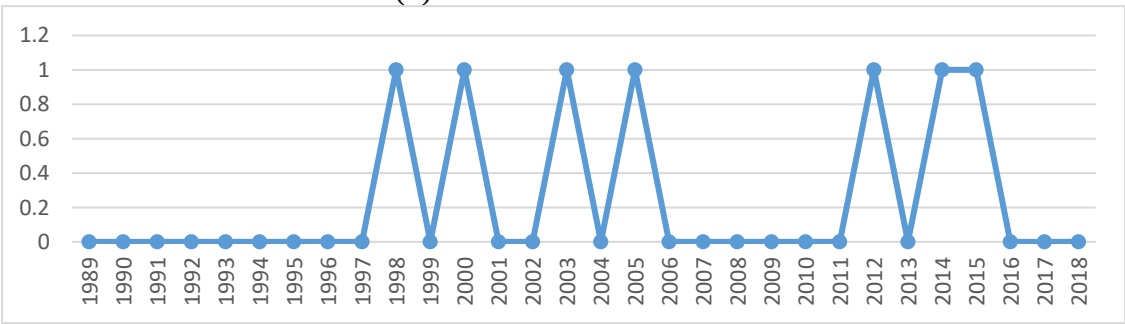
- First Exoneration: Paul Courteau (1999)
- Total Exonerations over Time (6)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 4 (eyewitness ID, interrogation recording, DNA access, evidence preservation)

South Carolina

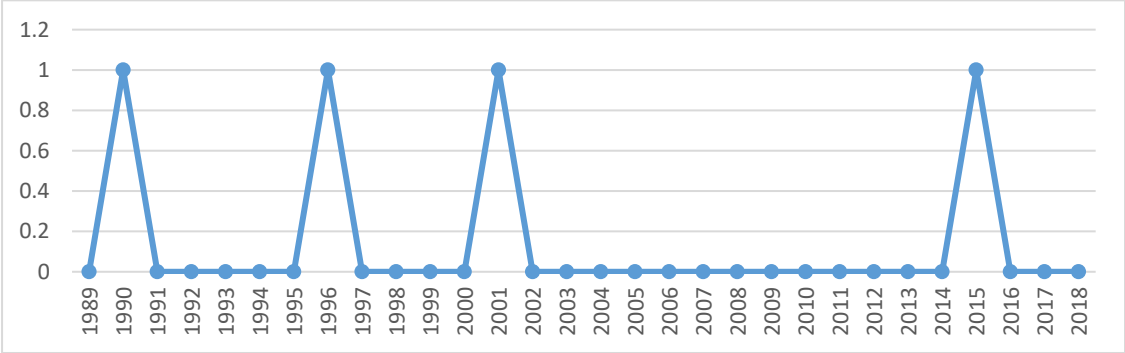
- First Exoneration: Perry Mitchell (1998)
- Total Exonerations over Time (7)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 2 (DNA access, evidence preservation)

South Dakota

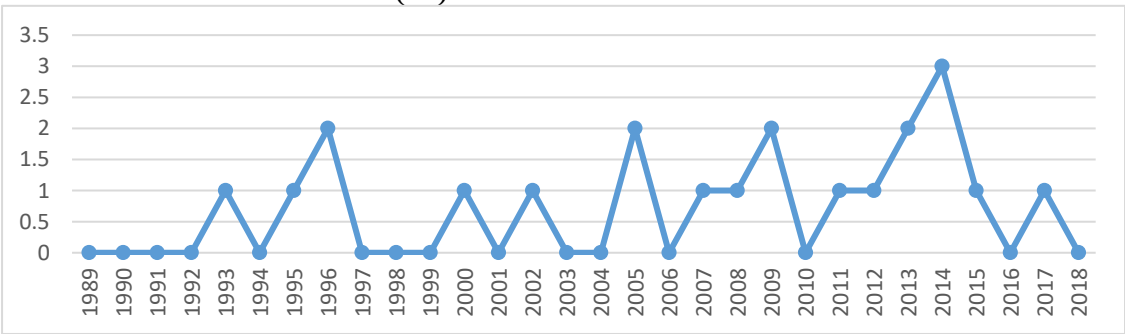
- First Exoneration: Anthony Rome, Sr. (1990)
- Total Exonerations over Time (4)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 2 (DNA access, evidence preservation)

Tennessee

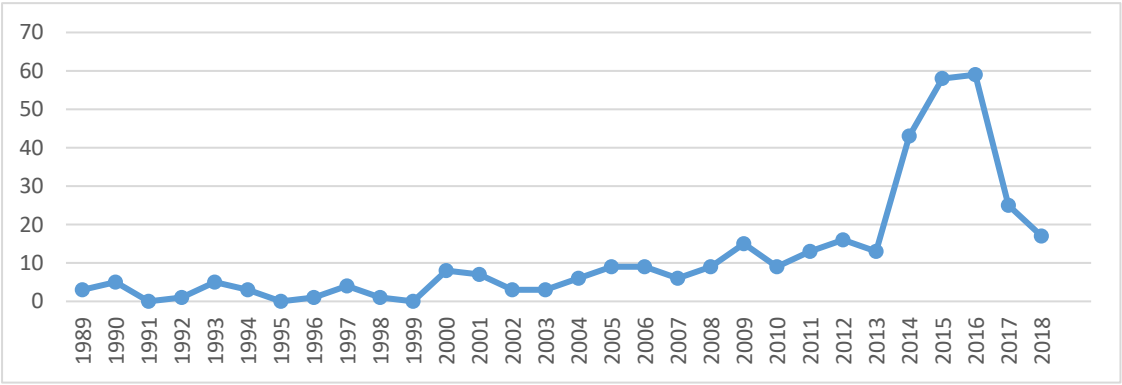
- First Exoneration: Frances Ballard (1993)
- Total Exonerations over Time (21)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

Texas

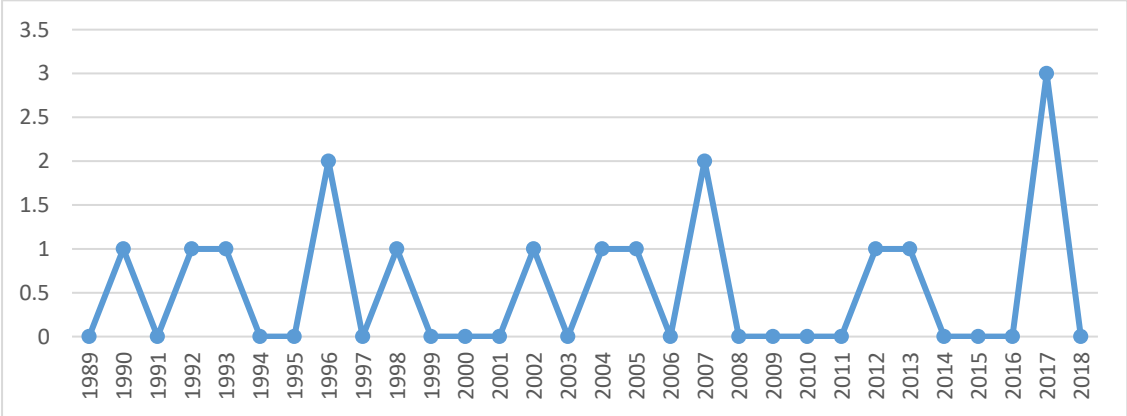
- First Exoneration: Alfred Williams (1989)
- Total Exonerations over Time (351)



- Innocence Network Organizations Present: 3
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Utah

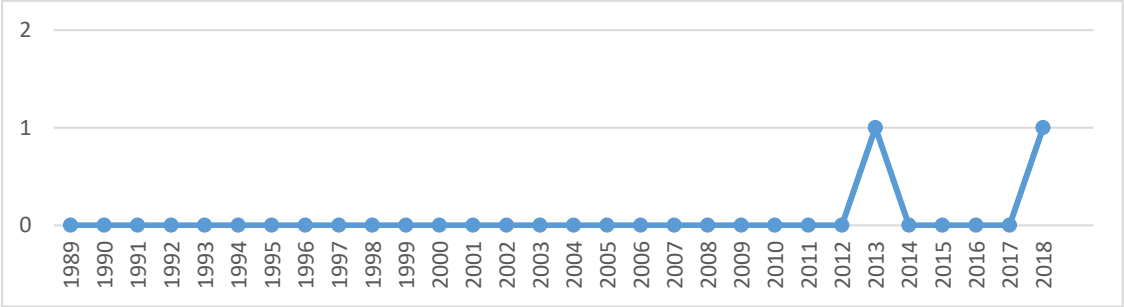
- First Exoneration: Paul Sheffield (1990)
- Total Exonerations over Time (16)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

Vermont

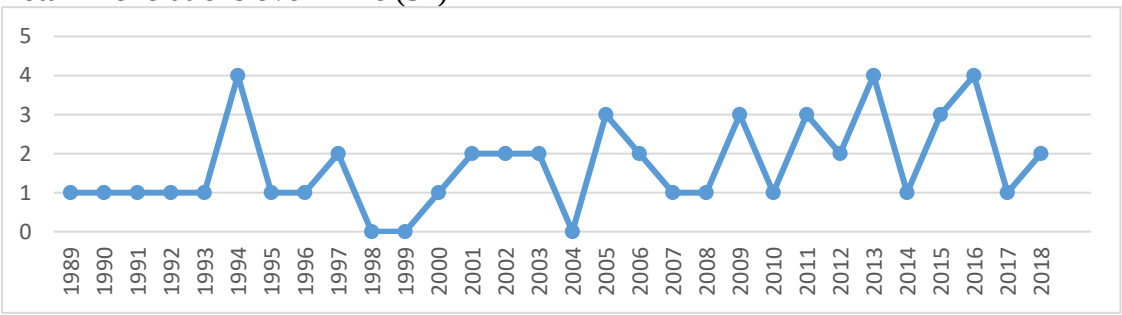
- First Exoneration: John Grega (2013)
- Total Exonerations over Time (2)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 4 (eyewitness ID, interrogation recording, DNA access, compensation)

Virginia

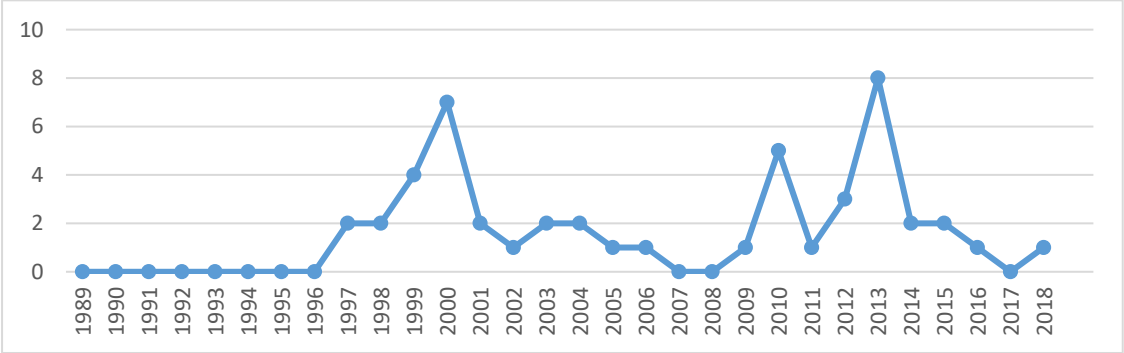
- First Exoneration: David Vasquez (1989)
- Total Exonerations over Time (51)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 4 (eyewitness ID, DNA access, evidence preservation, compensation)

Washington

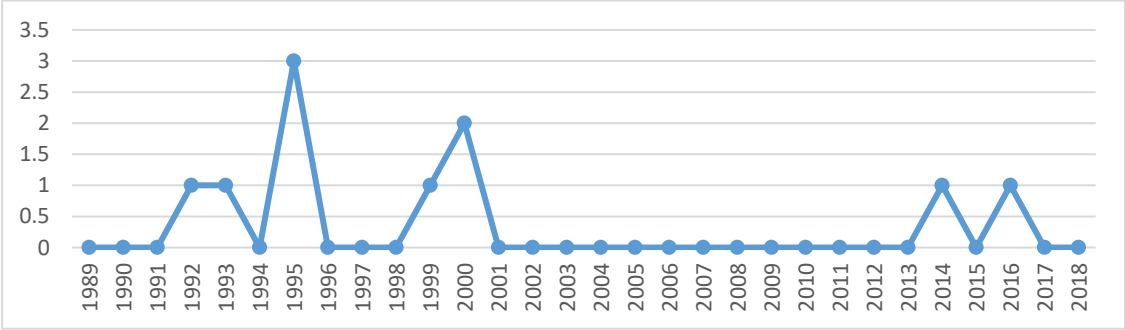
- First Exoneration: Connie Cunningham (1997)
- Total Exonerations over Time (48)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (DNA access, evidence preservation, compensation)

West Virginia

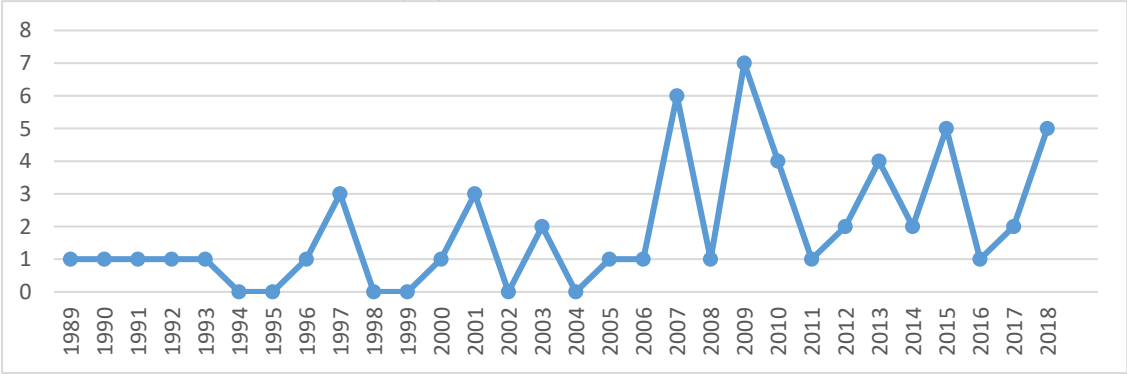
- First Exoneration: Glen Woodall (1992)
- Total Exonerations over Time (10)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 3 (eyewitness ID, DNA access, compensation)

Wisconsin

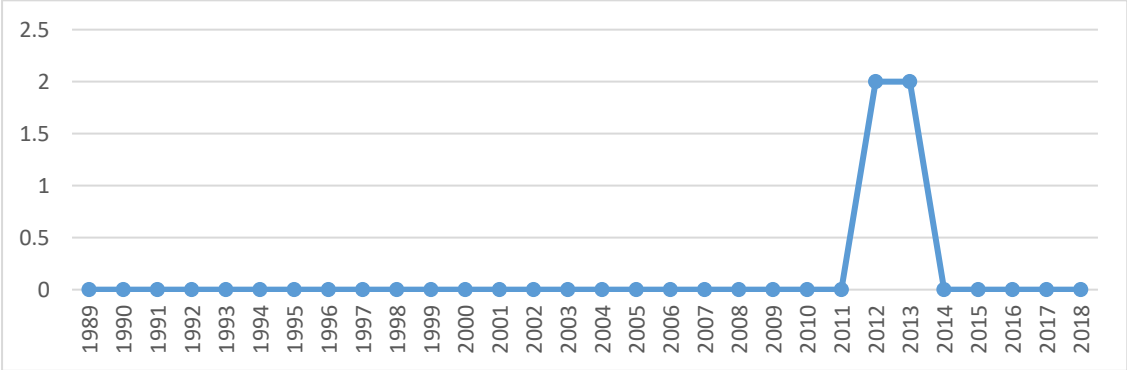
- First Exoneration: Peter Ambler (1989)
- Total Exonerations over Time (57)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Wyoming

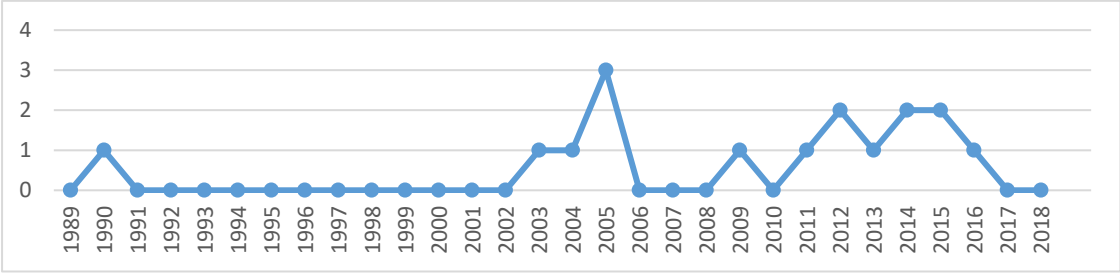
- First Exoneration: Troy Willoughby (2012)
- Total Exonerations over Time (4)



- Innocence Network Organizations Present: 0
- Policy Reform Areas: 1 (DNA access)

Washington, D. C.

- First Exoneration: Edward Green (1990)
- Total Exonerations over Time (16)



- Innocence Network Organizations Present: 1
- Policy Reform Areas: 5 (eyewitness ID, interrogation recording, DNA access, evidence preservation, compensation)

Dealing with DNA Evidence in the Courtroom: A Plain English Review of Current Issues with Identification, Mixture and Activity Level Evidence

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Queensland, Australia.

Kirsty Wright
Visiting Fellow, Genomics Research Centre, Institute of Health and Biomedical Innovation,
Queensland University of Technology, Brisbane,
Queensland, Australia.

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Adjunct Associate Professor, School of Environment and Science,
Nathan Campus, Griffith University, Queensland, Australia

DNA has played a revolutionary role within criminal justice systems across the world. This paper, while honouring the role DNA evidence has played, nevertheless aims to set out (in plain English in order to make it readily accessible to lawyers dealing with this evidence) some on-going and new key aspects related to the use of DNA evidence in the courtroom. Areas canvassed relate to identification evidence, activity level evidence and DNA mixtures. Specific issues considered include the potential for misunderstanding of DNA statistics both generally and when 'partial' match profiles are involved; concerns in regard to underlying assumptions and interpretation of transfer and activity information to determine how and when the DNA was deposited; and a highlighting of a change to the way statistical calculations are made through new software being used across Australia and internationally, including 'black box' assumptions that go into those calculations that are particularly relevant to DNA mixtures. This article is Australian-based and some key Australian cases relevant to these issues are considered, however the issues and principles contained within the article are widely applicable within an international context.

I DNA in the Courtroom

DNA evidence has changed the face of the criminal justice system. It has played a revolutionary role in correcting the wrongful convictions of hundreds of factually innocent people in the United States.[1] Despite DNA exonerations only representing the tip of the wrongful

[1] See e.g., The Innocence Project, *DNA Exonerations in the United States,* online:

conviction ice-berg, the exposure has signaled the unanticipated magnitude of the wider problem. Internationally there is a growing awareness within the legal and broader community that the conviction of innocent people is real and on-going. Thanks to DNA testing, the fallibility of a range of other evidence routinely presented within the courtrooms (such as eyewitness identification, other less reliable forms of scientific evidence, confessions, informant evidence and more), is now known.[2] This in turn has demonstrated the need for new mechanisms for the uncovering and correcting of wrongful convictions more broadly.[3] The crucial part that DNA evidence has played and continues to play within criminal justice systems across the world is not disputed.

DNA evidence itself however is not infallible. Its use within the criminal justice system is vastly different and more complex than when it is used in the more pristine medical or clinical context.[4] Challenges particularly arise when utilizing DNA evidence for inculpatory (as opposed to exculpatory) purposes.[5] It has already led to the wrongful conviction of an innocent person in Australia. Farah Jama, a young man of 19 years old was wrongly convicted of the rape of a woman in the bathroom of a venue he had never visited, based solely on the (contaminated) DNA evidence presented in that case. It appears that the contamination occurred in the hospital where the rape kit was taken.[6] As reported by The Honourable Justice Vincent:

> It is almost incredible that, in consequence of a minute particle, so small that it was invisible to the naked eye, being released into the environment and then by some mechanisms settling on a swab, slide or trolley surface, a chain of events could be started that culminated in the conviction of an individual for a crime that had never been committed by him or anyone else, created immense personal distress for many people and exposed a number of deficiencies on our criminal justice system. But that, I believe is what happened.[7]

And as noted earlier in the Report:

> It became clear that the DNA evidence was perceived as so powerful by all involved in the case that none of the filters upon which our system of criminal justice depends to minimise the risk of a miscarriage of justice, operated effectively

<https://www.innocenceproject.org/dna-exonerations-in-the-united-states/>.

[2] Keith A Findley, "Learning from our Mistakes: A Criminal Justice Commission to Study Wrongful Convictions" (2002) 38:2 Cal WL Rev 333, online: <http://heinonline.org/HOL/Page?handle=hein.journals/cwlr38&div=15&g_sent=1&collection=journals> accessed 16 August 2017.

[3] See e.g., the range of DNA innocence testing regimes now in place throughout the United States.

[4] Erin E Murphy, *Inside the Cell: The Dark Side of Forensic DNA* (New York, Nation Books, 2015) at 5.

[5] See e.g., William C Thompson, "Forensic DNA Evidence: The Myth of Infallibility" in Sheldon Krimsky & Jeremy Gruber, eds, *Genetic Explanations: Sense and Nonsense* (Cambridge, Harvard University Press, 2013) at 230.

[6] The Honourable FHR Vincent, *Report: Inquiry into the circumstances that led to the conviction of Mr Farah Abdulkadir Jama* (Melbourne, Printing and Publishing Services Victoria, May 2010).

[7] *Ibid* at 48.

> at any stage until a matter of weeks, before Mr Jama's appeal was expected to be heard.[8]

It has been said that Jama got lucky and that the error was discovered because of the quality and diligence of the specific Crown Prosecutor whose desk this case came across. As stated by barrister Saul Holt QC at a DNA symposium held in Brisbane, Australia: 'the system didn't find the error, a person did. That is terrific at one level and should be celebrated, but it is quite terrifying at another.'[9]

While issues of potential contamination are not dealt with in this article, the Jama case highlights the need for those within the criminal justice system to be particularly diligent when dealing with this powerful evidence. Understanding the range of underlying complex scientific methodologies and assumptions related to DNA evidence, is far from an easy task for many lawyers and it can be both particularly relevant and problematic for lawyers when confronted with incriminating DNA evidence in their cases. Gary Edmond has previously noted that 'most lawyers confronted with incriminating DNA evidence encourage their clients to plead guilty and few challenge the evidence or go beyond the *low hanging fruit* of conflicts of interest, obvious chain of custody anomalies and the possibility of DNA mixes and mistakes.'[10]

The structure and adversarial nature of the criminal justice system demands some level of DNA fluency within the courtroom context if lawyers are to effectively question on highly complex scientific evidence. For lawyers to ask the right questions, some understanding of how scientists reach their conclusions is necessary.[11] With validation processes for example, lawyers need to: (i) identify when assumptions are being used and how they impact on profile interpretation; (ii) understand what the statistical calculations mean and have the knowledge that the type of scientific question posed will result in different statistical conclusions reached; (iii) understand what the margin of error means in terms of the evidence presented; and more. If within a case it is accepted that the defendant's DNA profile is present on the crime sample but the question is *how* and *when* it got there (known as 'activity level' evidence), lawyers will need to understand and effectively question the scientist on: (i) how DNA is transferred (types of transfer); (ii) what affects transfer (surface, duration of contact, shedder status etc.); (iii) what assumptions, error and uncertainty relate to the expert opinion; (iv) how scientists convert 'ranking phrases' into appropriate weighting of the evidence; and (v) the difference and deciphering between expert opinion, scientific results and 'scientific' speculation.

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[8] *Ibid* at 11.

[9] DNA Symposium, *Lifting the Veil on DNA Evidence: What Do the Statistics Really Mean?* (Brisbane, 30 June 2017) [*DNA Symposium*].

[10] Gary Edmond, "The building blocks of forensic science and law: Recent work on DNA profiling (and photo comparison)" (2011) 41 Soc Stud Sci 127 at 145.

[11] For areas upon which lawyers should question scientific expert witnesses generally, see e.g., Gary Edmond, et al, "How to Cross Examine Forensic Scientists: A Guide For Lawyers" (2014) 39 Austl Bar Rev 174.

DNA methods and technology are not static. New technology has been rolled out across Australia and elsewhere in the world that not only increases the number of loci tested,[12] but also incorporates a new and different method of analyzing and calculating the results of that testing and the statistics presented in court.[13] It is therefore an appropriate time to devote renewed attention to the use of DNA evidence in the courtroom and to highlight potential areas for caution and concern in terms of its use.

This paper, while honoring the role DNA evidence has played in the criminal justice system,[14] nevertheless aims to set out some on-going and new key aspects of DNA evidence. It specifically aims to do so in plain English in order to make it readily accessible to lawyers dealing with this evidence. One of the many challenges for lawyers in properly understanding and evaluating DNA evidence, can be the application of scientific principles and use of scientific language that is not easily transferable outside the scientific paradigm. As such, this paper aims to present the issues it raises in a manner that enables understanding by a wide legal audience who may need to deal with this DNA evidence. Areas canvassed relate to identification evidence, activity level evidence and DNA mixtures. Specific issues considered include the potential for misunderstanding of DNA statistics both generally and when 'partial' match profiles are involved; concerns in regard to underlying assumptions and interpretation of transfer and activity information to determine how and when the DNA was deposited; and a highlighting of a change to the way statistical calculations are made through new software being used across Australia and internationally, including 'black box' assumptions that go into those calculations that are particularly relevant to DNA mixtures. While this article is Australian-based and some key Australian cases relevant to these issues are considered, the issues and principles contained within the article are widely applicable within an international context.

II Identification Evidence

DNA testing is being rolled out across Australia, increasing the number of loci tested from 15 to 21.[15] Profiling with increased loci offers advantages including a greater ability to distinguish between related individuals, and decreasing the possibility of adventitious matches within criminal databases. Previously in Australia when the number of loci tested was nine, a DNA 'match' was said to occur when nine loci were matched from the biological sample at the crime scene to the

[12] National Institute of Forensic Science, *Introduction of New DNA Marker Sets in Australian Forensic Laboratories*, online: <http://www.anzpaa.org.au/forensic-science/our-work/products/scientific-papers-/introduction-of-new-dna-marker-sets-in-australian-forensic-laboratories>.

[13] Joanne Bright, et al, "Developmental Validation of STRmix™, Expert Software for the Interpretation of Forensic DNA Profiles" (2016) 23 Forensic Sci Int'l: Genetics 226; Mark Perlin, et al, "Validating TrueAllele® DNA Mixture Interpretation" (2011) 56:6 J Forensic Sci 1430 [*Bright*].

[14] See e.g., President's Council of Advisors on Science and Technology, [*PCAST*], *Report to the President - Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (September 2016), online: <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf>.

[15] Linzi Wilson Wilde, "Introduction of New DNA Marker Sets in Australian Forensic Laboratories" (2012) 3:6 J Forensic Res, online: <http://dx.doi.org/10.4172/2157-7145.1000e109>.

suspect's biological sample. The scientific community in Australia, generally no longer use the term 'match', in part because consistency between an individual's DNA profile and that taken from a crime scene does not offer a definitive identification as only a portion of the whole DNA (genome) is being analyzed with the forensic markers, and even if those markers match, it doesn't mean that the entire genome matches. Statistics are offered to relay to the jury how rare a particular DNA profile is, by estimating the probability of a randomly selected person having the same DNA profile as that retrieved from the crime scene. This statistical expression is known as 'random match probability' (RMP). But statistics presented in the courtroom may not be easily understood by non-scientists.

Statistical calculations presented to the jury for a nine-locus match between a crime scene sample and a suspect could, for example, estimate that the RMP is one in billions. This indicates that the profile is 'rare' and may well provide compelling evidence of guilt. For those not familiar with statistics, however, the results of occasional studies where criminal databases have been searched for matching profiles from unrelated individuals (adventitious matches) may be surprising. For example, in an examination of an Arizona database of 65, 493 people, there were:

- 122 unrelated people who matched at nine loci; and
- 20 unrelated people who matched at 10 loci.[16]

Although these were in fact 'partial matches' in that the Arizona database used 13 loci and the additional testing showed other loci that mis-matched between the individuals, a lay person may be surprised at the number of potential 'matches'. To a statistician, however, these results are unsurprising. It is simply a matter of which question they are answering. The RMP and the Arizona database example, highlight two very different questions, using two different statistical formulas. This is why there are two very different answers. The RMP estimates the chance of picking one unrelated person at random who has the same DNA profile as that found on the evidence. In other words, if you were standing on a busy street with many thousands of people walking past you, and you can only randomly pick one person, what is the chance the one person you picked had the same DNA profile as the evidence? Intuitively, the chance of this occurring is extremely small. Evaluating the rarity of a DNA profile when posed in this manner generally leads to small probabilities when presented to courts.

On the other hand, estimating the number of DNA profiles in a criminal database that could match at 9 loci means that instead of having one chance to pick a person with one specific DNA profile (the same as the evidence), you have as many chances as there are profiles in the database for them to match any other profile in the database. This is a very different question to that being addressed by the RMP, and an entirely different probabilistic calculation is used.

In terms of understanding how the two different calculations can represent the chance of seeing 'two DNA profiles that are the same', think of standing on the footpath of a busy city street. As the crowd of people walks by, you can randomly select only one person. The chance that one person you randomly selected has the same DNA profile as the DNA from the crime scene is like

[16] Edward Ungvarsky, "What Does One in a Trillion Mean?" (2007) 20:1 Gene Watch 10, online: <http://wispd.org/attachments/article/244/What%20does%20One%20in%20a%20Trillion%20Mean.pdf>.

the RMP example (except the randomly selected person is the suspect). Continuing on from the 'people in the city' example, if you were in a city of 1 million people, the chance that anyone's DNA profile in that city will match anyone else's is like the Arizona Database example. Given you can match 1 million people against 1 million people, the chance of getting two people with the same DNA profile is much greater than if you only had one matching chance (the RMP).

The likelihood ratio (LR) calculation is yet another way that expresses the chance of seeing two matching profiles. The LR compares the probabilities that two opposing hypotheses might explain the evidence (the matching profiles), typically the prosecution's hypothesis (the DNA found on the evidence came from the defendant, or where relevant the victim) and the defence's hypothesis (the DNA found on the evidence came from an unrelated person randomly chosen from the population, that is, an adventitious match). The probability associated with the defence's hypothesis is calculated by using the RMP (the denominator in the LR equation), and for the prosecution's hypothesis is always a certainty at 100% (or 1, the numerator in the LR equation).

$$\text{Likelihood ratio} = \frac{\text{Prosecutor's hypothesis}}{\text{Defence's hypothesis}} = \frac{1}{\text{RMP}}$$

If the LR is greater than one, the prosecutor's hypothesis is supported. If the LR is less than 1, the defence's hypothesis is supported. An LR of 1 is neutral, the evidence has no probative value. This form of statistical evidence arguably requires the jury to understand the RMP, then understand the LR which evaluates a 'hypothetical theory', then requires the jury to convert the weighting of that 'theory' back to 'how rare is that DNA profile' and a further step of using this to appropriately weight the DNA evidence within the context of the factual scenario involved in the case.

The key to understanding the statistical evidence, is to understand what question it is actually addressing. The RMP and LR have been formulated by scientists for the intended purpose of assisting in answering questions of identity within the criminal justice context. Yet while statisticians may fully understand the different meanings of the statistics presented based on the question they are answering, very few untrained people have an intuitive sense of what the numerical value, provided by the RMP or LR, actually means when evaluating identification scenarios. The scientific community have therefore developed guidelines in an attempt to better convey to the courts how evidence should be weighted based on the statistical calculation, by creating LR thresholds linked to qualitative assessments of how strongly they support the prosecution's hypothesis, demonstrated in the table below.[17]

[17] John M Butler, *Fundamentals of Forensic DNA Typing* (Cambridge, Academic Press/Elsevier, 2010) at 253.

If the likelihood ratio is…	Then the evidence provides…
1 to 10	limited support…
10 to 100	moderate support…
100 to 1,000	moderately strong support…
1,000 to 10,000	strong support…
10,000 or greater	very strong support…

According to these guidelines, used by many laboratories around the world, a jury would hear that any LR over 1,000 provides *strong support* that the defendant was the donor of the evidentiary sample, and *very strong support* for any LR over 10,000. Yet it can be argued that these thresholds are only arbitrary and may in fact misrepresent to the jury the appropriate weighting that should be given to the DNA evidence. There have been suggestions that (i) this table should be scrapped and (ii) due to the risks involved of an adventitious match with any LR of less than 1 million, a measure of the probability of an adventitious match for the DNA profiles present in a mixture using appropriate population data should be reported.[18]

A partial profile may easily generate a LR of 1,000 - which raises the concern about using partial profile evidence. The threshold values used in the guidelines[39] permit partial profile evidence to be considered by the courts, which places responsibility on the scientist to disclose when partial profiles are used as evidence. Should only 'complete profiles' be used to generate a LR? The definition of a 'complete profile' will constantly change as loci expand. Nine loci would be considered a 'complete profile' using a nine-locus kit, however, it would be considered a partial profile if generated by the newer 21 loci kits. Gill states that:

> Provided that the (likelihood ratio) calculations are correct there is no reason to discount a low number as 'insufficient evidence' so long as the model used to interpret is reasonable.[19]

This reasoning is consistent with the approach used by forensic biology laboratories. Only the courts can decide the ultimate question of 'identity'. The scientists provide probabilities, not definitive conclusions, to assist the courts to make their decision when DNA evidence is relevant to the case. But if the statistics are not properly understood or the 'assisting' qualitative table is being received by jurors in a manner that over-represents the probative value of the evidence, then the courts may be misled, not assisted.

Any missing loci from DNA evidence may be exculpatory - and when a criminal database is searched, a partial profile may coincidently match one or more previous offenders. The RMP calculation does not provide the courts with an understanding of the chance of this occurring. While the 21 locus tests being introduced will see the number of loci tested rise, partial profiles

[18] Dr Brian McDonald, DNA Symposium, *supra* note 9.

[19] Peter Gill, *Misleading DNA Evidence: Reasons for Miscarriages of Justice* (Cambridge, Academic Press/Elsevier, 2014) at 92.

with any number of matching loci can still be used as evidence against the defendant. Even small numbers of matching loci can result in extremely low RMPs – i.e. one in millions.

Effective communication of DNA evidence is more than just exchange of information – it is ensuring that the receivers fully understand the meaning of the information. There should be a focus on elements of the information that are both complex and key to the receiver's needs. Statistics in general, may be poorly understood and poorly explained to the court, in part due to the non-concordant understanding of DNA evidence previously described. Recent research by Cronin found that how a statistical phrase was presented to 124 potential jury members, significantly affected their ability to correctly understand what the statistic actually meant.[20] DNA evidence presented using RMPs was correctly interpreted nearly twice as often as the same DNA evidence presented as LRs (83% versus 42%). This could be expected given the numerous steps required by the jury to convert the LR back to information they needed to weight the DNA evidence. Of note is the low percentage of correct interpretations when DNA evidence was expressed as a LR. Given that incorrectly interpreting the evidence when using LRs occurred 58% of the time in Cronin's study, a prejudicial effect could be occurring with this kind of DNA evidence in courts. Further research like this is needed to indicate how well statistical evidence is understood when presented in different formats. If misunderstanding the statistics is prevalent among key players within a criminal justice trial, then potential options for presenting this evidence in a way that is more easily and fully understood must be considered.

For example, forensic biologists working in the Thai Tsunami Victim Identification Centre reported their DNA evidence as posterior probabilities.[21] This was reported as a percentage, to more easily relate the statistical evidence to police investigators evaluating the DNA statements in the Reconciliation Team and to non-scientific experts on the Identification Board. The statement would read "the posterior probability is 99.9% certain that the remains belong to (person X)". The statements were presented in this way with the goal of more clearly addressing the question being asked of the evidence, providing a quantitative weighting of the evidence that is familiar to lay persons, and providing a margin of error that is also familiar to lay persons. It is possible for DNA evidence in criminal cases to be converted into a posterior probability and this is one option the authors submit should be considered. More broadly, extensive research has been undertaken in regard to the problematic issue of jury understanding of DNA evidence. It is submitted that the legal and academic fraternity are now best placed to act as the drivers for a fundamental re-think as to how DNA statistics are presented in the courtroom. In doing so, engaging with forensic biologists and statistical experts to evaluate alternative reporting methods and phrases that address their questions and relay the weighting of the evidence will be essential.

[20] Alanah Cronin, *Determination of Suitable Wording for Interpretation of Statistical Methods for Reporting DNA Evidence to The Various Audiences in Court* (Honours Thesis, Griffith University, 2017).

[21] Posterior probabilities are a revised probability which takes into consideration existing information (prior probability), such as the number of people killed in a disaster. Posterior probability = prior probability x LR.

III Activity Level Evidence

The concepts of primary, secondary and tertiary DNA transfer have been widely reported in scientific journals and revealed in cases of wrongful conviction.[22] The issue of how and when DNA was deposited on an item found at a crime scene is becoming increasingly prevalent in the courts. Was it innocent transfer, or an activity that relates to the criminal offence? The newer DNA tests are more sensitive, so even smaller amounts of 'trace' DNA can be profiled from an item, which previously would not have been detected.[23]

As a result, the scope of DNA evidence has dramatically expanded, with transfer or 'activity level' information developing into an issue as critical to the courts as the question of identity. Different scenarios of how the DNA could have been transferred to an item are being offered to the scientist to evaluate. The scientist uses a range of factors to provide a response (including duration and nature of contact, type of surface, time since deposition, fluid type, 'shedder status', and environmental conditions).[24] Each factor considered by the scientist includes assumptions, uncertainties, errors, and results in a qualitative, rather than statistical, approach to the interpretation of the evidence, which is also at risk of 'contextual bias' (a subconscious conclusion about evidence based on external influences).[25] This may occur, for example, when police provide the scientist with a version of events prior to their analysis and interpretation of the evidence. Unlike DNA identification evidence where a scenario can be definitively excluded (i.e. the DNA does not match the suspect), exclusion of DNA transfer scenarios may not be possible and rather, the scientist may only be able to provide a ranking of 'most likely' scenarios. Activity level evidence is therefore, more prone to be inaccurate than identity or 'source level' evidence. Validation of scientific techniques is a key component in regard to the integrity and admissibility of scientific evidence within the courtrooms.[26] It is submitted that the ranking of DNA transfer scenarios currently lacks robust scientific validation. If the central question of a case is 'how did the DNA get there', then courts need to be cautious.

In 2014, the High Court of Australia (which is the highest court in the country) quashed the murder conviction of Daniel Glenn Fitzgerald after they found DNA transfer evidence was not sufficient to establish his presence or participation in a murder.[27] A DNA mixture was obtained

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[22] Mariya Goray, et al, "Investigation of secondary DNA transfer of skin cells under controlled test conditions" (2010) 12:3 Legal Medicine 117; Mariya Goray, et al, "Secondary DNA transfer of biological substances under varying test conditions" (2010) 4:2 Forensic Sci Int'l: Genetics 62.

[23] Ane Fonnelop, et al, "Secondary and subsequent DNA transfer during criminal investigation" (2015) 17 Forensic Sci Int'l: Genetics 155.

[24] Goergina Meakin & Allan Jamieson, "DNA Transfer: Review and implications for casework", (2013) 7:4 Forensic Sci Int'l: Genetics 434.

[25] Nikkita Venville, *A Review of Contextual Bias in Forensic Science and its potential Legal Implications* (Melbourne, Australia and New Zealand Policing Advisory Agency, National Institute of Forensic Science, 2010). Also see Itiel E Dror and Greg Hampikian, "Subjectivity and Bias in Forensic DNA Mixture Interpretation" (2011) 51 Sci & Just 204. For more on contextual bias in terms of forensic science generally, including DNA evidence, see also Gary Edmond, et al, "Contextual bias and cross-contamination in the forensic sciences: The corrosive implications for investigations, plea bargains, trials and appeals" (2014) 13 Law Prob & Risk 1.

[26] See e.g., *Tuite v The Queen* [2015] VSCA 148; 49 VR 196 at paras 101-104 [*Tuite*]; PCAST, *supra* note 14.

[27] *Fitzgerald v The Queen* [2014] HCA 28 [*Fitzgerald*]

from a didgeridoo found near the deceased, and the major component of the mixture was consistent with Fitzgerald's DNA. During the trial it was not disputed that the DNA was Fitzgerald's, rather, the case hinged on how and when the DNA was deposited on the didgeridoo. As stated by the High Court, an essential link in the prosecution's circumstantial case was that it be shown beyond reasonable doubt, that Fitzgerald's DNA was transferred by him to the didgeridoo during the attack.[28]

Defence counsel proposed that Fitzgerald's DNA was transferred to the item by a co-accused, after the pair shook hands hours before the murder (secondary transfer). Prosecution argued that the DNA was deposited on the item directly by Fitzgerald during the attack (primary transfer). The scientist was unable to exclude either scenario, however, indicated that primary transfer was the most likely scenario. The High Court decided three key points in terms of the DNA evidence, being: (i) that whether the DNA sample came from blood or another source could not be established beyond reasonable doubt; (ii) that how the DNA was deposited could not be established beyond reasonable doubt; and (iii) that the time and circumstances as to when and how Fitzgerald's DNA came to be on the didgeridoo, could not be determined. Therefore, it could not be accepted that the evidence relied on by the prosecution was sufficient to establish beyond reasonable doubt that the appellant was present at and participated in the attack, and a reasonable hypotheses consistent with innocence could not be excluded by the jury.

However, when the matter was earlier before the Court of Criminal Appeal in South Australia, their Honours' (Gray and Sulan JJ; Blue J agreeing) had determined that in light of the scientific evidence presented, secondary transfer was 'extremely unlikely'.[29] The High Court noted that in reaching this conclusion, the Court of Appeal did not refer to some of the evidence that had been presented by the scientist in regard to secondary transfer and 'dating' of DNA.[30] While the authors agree with the High Court's decision, this case nevertheless highlights a question for criminal justice systems more broadly as to whether DNA transfer evidence is properly understood and evaluated, whether there is an appreciation of the limitations and potential error involved in this kind of evidence, and whether there is an awareness of the underlying assumptions used by scientists to rank the DNA transfer scenarios. To help address this issue, it is suggested that forensic biologists need to more clearly articulate the assumptions, limitations and sources of error associated with activity level DNA evidence - or alternatively, not provide an expert opinion of this form of evidence.

Van Oorschot, et al, highlight another important consideration for providing evidence on DNA transfer, persistence, prevalence and recovery.[31] They encourage forensic biology laboratories to provide dedicated training, competency assessment, authorizations, and ongoing proficiency testing for experts providing DNA transfer evidence. Mock cases analyzed by scientists demonstrated a lack of appropriate training and standards, causing differences in activity level reporting within and between laboratories, and limitations in the ability of scientists to identify key factors that could impact on their conclusions.

[28] *Ibid* at 28.

[29] *R v Sumner, R v Fitzgerald* [2013] 117 SASR 271 at para 106.

[30] *Fitzgerald, supra* note 27 at para 26.

[31] Roland van Oorschot, et al, "Need for dedicated training, competency assessment, authorisations and ongoing proficiency testing for those addressing DNA transfer issues" (2017) Supp Series, 6 Forensic Sci Int'l: Genetics e32.

> In numerous instances, key factors known to influence the likelihood of (DNA) transfer were not considered, or assumed irrelevant, when assessing the profiles resulting in either an incorrect answer or the correct answer but with incorrect strength of likelihood. Of the 18 responses per participant, the per cent of correct responses by any participant ranged from 11 to 67% (average 42%).[32]

This raises concerns in regard to the accuracy and integrity of this evidence in the courtroom. If on average, a scientist evaluating and reporting on activity level evidence is doing so incorrectly 58% of the time, it must be questioned whether this evidence is of sufficient reliability to be admitted into the courtroom. Training, competency testing, and method validation based on agreed international standards are mandatory requirements for all other tasks performed by forensic biologists, including screening and recovering biological evidence, generating DNA profiles, DNA interpretation, statistical analysis and court reporting (at the identity level). It is submitted that the introduction of activity level DNA evidence into the courts has occurred prior to experts being properly prepared for such questioning, and without formal authorizations or validation. The courts should consider the weighting of DNA transfer evidence with great caution, and beware of 'evidence creep'. Activity level DNA evidence is not at the same level of scientific maturity as identity level evidence.

IV DNA Mixtures and New DNA Methodology

DNA mixtures have long been a source of complexity in the interpretation and understanding of DNA evidence. The increased sensitivity of the new DNA tests has considerably affected how often DNA mixtures are obtained from items.[33] Items that would have produced single contributor profiles using the 9 locus test, are now producing mixtures of increasing complexity due to detection of previously latent trace DNA. Disentangling the contributors of complex mixtures may not be possible with standard methods, prohibiting a definitive statement of exclusion to the courts.[34] These complexities were recognized in the 2016 report by the United States President's Council of Advisors on Science and Technology (PCAST), 'Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods'. The report highlighted that the traditional method of interpreting complex mixtures is subjective and may be prone to bias, and that inconsistency of approaches exists between scientists.[35]

The scientific community have responded to the challenges of interpreting complex mixtures, applying an alternative method of statistically evaluating such profiles, which is broadly termed as probabilistic genotyping. Software such as STRmix™ and TrueAllele® provide statistical probabilities for complex mixtures that previously would not have been possible.[36] The

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[32] *Ibid* at e33.

[33] Promega Corp, *Two years later: a reflection on the implementation of STRMIX in a high throughput DNA laboratory,* online: <https://www.promega.com/-/media/files/products-and-services/genetic-identity/ishi-26-oral-abstracts/6-kerr.pdf>.

[34] Na Hu, et al, "Current developments in forensic interpretation of mixed DNA samples (Review)" (2014) 2:3 Biomed Rep 309.

[35] PCAST, *supra* note 14.

[36] Bright, *supr*a note 13; Kathryn Kadash, et al, "Validation study of the True Allele® automated data review system" (2004) 49:4 J Forensic Sci 1.

introduction of evidence generated by STRmix™ into Australian courts is the most significant change to DNA evidence since the introduction of short tandem repeat (STR) profiling in the late 1990's. The software approaches the interpretation of the profile and calculation of probabilities in a very different manner to the established methods.

Traditionally, an allele would be included in comparisons against DNA profiles obtained from suspects if it met a certain analysis threshold (peak height). If the allele fell below the threshold, it was excluded as being a source of information. In scientific terms, this is known as 'the binary method'; the allele was either included in the calculations or not. Once the allele was included, statistical calculations would be carried out to assign a weighting to its presence in the DNA. No use was made of alleles which did not meet the required peak height. An alternative approach uses a 'continuous method' of interpreting the DNA profile, in which the actual peak height is included regardless of any threshold, and alleles with low peaks are considered as representing potential degradation or other profiling effects that can arise from trace DNA. Such effects are known as 'stochastic effects' and the probabilities of their occurrence are modelled using theoretical formulae and estimates based on experimental data and experience. To further complicate the matter, DNA techniques have improved to the point that the typical DNA profile is now a mixture of a number of contributors, requiring a far more complex interpretation than when a profile was simply from a single individual. To derive probabilities about who could be the donor of a mixture from such highly variable 'one off' information requires a method to evaluate the combined characteristics of the questioned DNA mixture.

The statistical methods used in the 'binary era' were part of the 'frequentist' paradigm where the belief is that there really is a true value of the allele's probability in the population of interest, and a sample of data (the database) will be used to estimate this true value. Consideration of the accuracy of the estimate given the size of the database used, was provided through a confidence interval (typically 95%) which gave a range which could be expected to cover the true value 95% of the time. Few assumptions were required for the implementation of the binary, frequentist method and no prior estimates were applied. With the advent of more refined DNA processes and the acknowledgement of stochastic effects and mixed profiles, a more complex statistical modelling approach is required. Probabilistic models are needed to predict the possibility of the different stochastic effects. These probabilistic models are regarded as prior information, and to fully define them for use in the forensic setting, research is needed to determine appropriate values to include in them, along with assumptions of the mathematical form they will take. The presence of a DNA mixture introduces the possibility of a large number of possible scenarios that could have produced the mixture, each of which needs to be considered and weighted against the others to identify the 'true' scenario.

The various probabilistic events are incorporated into the calculations by using decision trees or networks, which are constructed to represent all aspects of the process; the information used in these is regarded as *a priori* in that it is based on previous experimentation and/or assumed knowledge. At each point in the process, the *a priori* information required will be estimated from prior research or from expert knowledge, and will be either a single value (the frequentist approach) or some form of probabilistic distribution in which the value is used as part of an assumed mathematical formula (the Bayesian approach). Once estimates are available for each stage of the process, simulation will take place to select a random sample of values of what the

data is expected to look like coming from the decision process (or network). These samples will be summarised and used to form a final reported result. Various processes exist for selecting such random samples and the one in common use in the forensic community is known as the Markov Chain Monte Carlo (MCMC) Method.

Using this approach enables the range of possible probabilities from the questioned DNA mixture to be provided, along with a measure of how likely each of those probabilities is to be the truth. This methodology has been used for many decades in disciplines such as agriculture, engineering and medicine and while the forensic scientific community has largely welcomed this new approach, it is unclear whether the legal fraternity are fully aware that this is a significant change in the method for calculating probabilities in DNA casework. It should be noted that at each stage of the decision process (or network), assumptions are made which require knowledge from prior experience; if these assumptions are incorrect or the values used in them are poor 'guesstimates' the resulting conclusions may be in error.

At an interlocutory appeal in the 2015 Australian case, *Tuite v The Queen,*[37] the Victorian Court of Appeal (Maxwell ACJ, Redlich and Weinberg JJA) confirmed the decision of the pre-trial judge, allowing the admissibility of evidence generated by STRmix™.[38] The pre-trial hearing, which lasted twenty two days, involved consideration of STRmix™ calculations that included likelihood ratios in the billions and sextillions. For example, in regard to item 1 – 3 (trace from the ends of shoelace combined):

> The analysis showed a mixed DNA profile from three contributors. The complainant is an assumed contributor. Using STRmix™, it is estimated to be 2.7 sextillion times more likely that the DNA profile obtained from Item 1-3 would occur if the DNA originated from the accused, the complainant and one unknown person than if it originated from the complainant and two unknown people chosen at random from the Australian Caucasian population. This is reported using the default likelihood ratio for PP21 analyses of 100 billion.[39]

This case raised questions, among other things, about the reliability of the relatively new statistical methodology, now used by laboratories across Australia and adopted by a number of laboratories elsewhere in the world. It was argued that the methodology was largely untested and had not been generally accepted by the forensic science community, nor properly validated by the laboratory using the software. It was also disputed that the scientist did not have enough specialized knowledge about the statistical methodology used in STRmix™ to allow her to give the DNA evidence. In the pre-trial, Emerton J rejected the application to have the evidence excluded under either ss 79 or 137 of the *Evidence Act 2008,* Victoria. Relevant to the considerations at the preliminary hearing, was that although the scientist who presented the evidence (and another who testified on the validation of the software) were not mathematical experts, they were considered to

[37] *Tuite, supra* note 26.

[38] *Ibid*. Their Honours noted that the standard of review to be applied at the interlocutory appeal (as opposed to a conviction appeal) was whether the decision of the pre-trial judge was "reasonably open", not whether it was correct: [8]. See also earlier decision at pre-trial: *Tuite v The Queen* [2014] VSC 662 (Emerton J). For later considerations in this matter, see also: *DPP v Tuite* (Ruling No 3) [2017] VSC 442 (11 August 2017) (Hollingworth J).

[39] *Tuite, supra* note 26 at para 19.

have sufficient expertise to understand and operate the system. The judge conceded that STRmix™ involved the application of 'black box' technology (in part because its software is not open source), however, evidence about the mathematical and statistical models underpinning the STRmix™ could be provided in this case, by one of the developers.[40]

In 2015 it was reported that the laboratory in Queensland, Australia, had been using STRmix™ for six months with a 'miscode', which led to errors in calculated probabilities in 60 cases.[41] The developers of the software highlighted that the laboratory had been given the software for free, but had not purchased an updated software manual, and speculated user error. This raises concerns over reporting evidence using a 'black box' method. Without a thorough knowledge of how the software works, the assumptions it relies upon, or appropriate training or expertise in the system, scientists will struggle to detect when errors are made. Lawyers, more so.

David Bentley QC in the Law Society Gazette (UK) commented on the new software models:

> To understand (and therefore critique) these models, you need the skills of an advanced statistician, a computer scientist and a molecular biologist. Little wonder therefore that there have been few challenges to such evidence when it has come before our courts.[42]

Moreover, the use of secret source-codes appears at odds with a legal system that includes the rights of an accused person to cross-examine evidence to expose potential problems. If it cannot be revealed as to how statistical conclusions are reached, then the use of proprietary 'black box' evidence in court remains a live issue.

The data models used in probabilistic genotyping rely on a number of assumptions. Some of these assumptions vary across the different software packages available. The main assumptions include (i) mixture ratio (how differences in DNA input by each donor will be reflected in peak heights across each locus in the mixture), (ii) noise peak height distribution (how non-DNA peaks and real DNA peaks will be distributed), (iii) forward stutter (if it is included or excluded from the model), (iv) the number of contributors in the DNA mixture. The assumption of number of contributors is made by the forensic biologist using the software. Not knowing the true number of contributors to the questioned DNA mixture, they must provide a best guess based on the number of peaks at each locus. Assuming the incorrect number of contributors may affect the accuracy of the model and the resulting probability. Swanminathan *et al.* found in all four probabilistic models tested, intra-model variability increased when the number of assumed contributors also increased.[43] PCAST considered probabilistic genotyping to have "foundational validity…under

[40] *Ibid* at paras 33-40.

[41] Courier Mail, *Queensland Authorities Confirm "Miscode" Affects DNA Evidence In Criminal Cases* (20 March 2015), online: <http://www.couriermail.com.au/news/queensland/queensland-authorities-confirm-miscode-affects-dna-evidence-in-criminal-cases/news-story/833c580d3f1c59039efd1a2ef55af92b>.

[42] David Bentley QC, "DNA and case preparation" *The Law Society Gazette* (12 January 2015), online: <https://www.lawgazette.co.uk/practice-points/dna-and-case-preparation/5045883.article>.

[43] Harish Swaminathan et al, "Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference and reporting" (2018) PLOS One 13 (11), Online:

limited circumstances (specifically, a three-person mixture in which the minor contributor constitutes at least 20 percent of the DNA in the mixture), but that substantially more evidence is needed to establish foundational validity across broader settings". Laboratories, however, are using probabilistic genotyping for three or more donors' mixtures with low level DNA contribution from some donors.

V Conclusion

DNA has exonerated hundreds of individuals in the United States. It has highlighted to us more broadly, weaknesses within a range of different types of evidence accepted within our courtrooms. It is the gold standard of scientific evidence. DNA evidence has played and continues to play a crucial and welcome role within criminal justice systems across the world. There are however, areas where its use in the courtroom in regard to both identification and activity evidence as outlined in this article, would benefit from greater attention so as to ensure its accuracy and integrity. These include: (i) the potential over-representation of the value of the DNA statistics as used against the defendant where the (arguably outdated and potentially misrepresentative) qualitative table has been used; (ii) the use of low-level 'partial' match profiles that may offer high-level statistical calculations against an accused even though it may be an adventitious 'match'; (iii) activity level assumptions and misinterpretations that may lead to inaccurate evidence being presented; (iv) the use of insufficiently validated 'ranking' scenarios; and (v) the invisibility of scientific assumptions within the new black box statistical software currently used across Australia and internationally that includes in its calculations, alleles that are not present or would previously have been below the reportable threshold – and where miscoding by scientists has already been alleged to have occurred.

Methodology and scientific calculations upon which DNA evidence is presented is continuously evolving and progressing. If DNA 'identification' or 'activity' evidence is inaccurate, misinterpreted or misunderstood, then we are faced with the possibility of prejudice against the accused or an outright wrongful conviction. The challenge for the criminal justice system is how to maintain the use of highly probative DNA evidence, while also addressing the complexities associated with the use of this evidence in the courtroom.

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Prosecutorial Involvement in Exoneration:
An Exploratory Analysis of Individual, Organizational, and Environmental Factors

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The current literature on wrongful convictions documents the legal, psychological, and institutional barriers that prosecutors face in considering post-conviction claims of innocence. However, less is known about how the local court context may relate to prosecutors' decisions to engage in wrongful conviction investigations. To address this gap, the present study explores how characteristics of the local court community are related to the likelihood of prosecutors assisting, actively opposing, or remaining uninvolved in post-conviction claims of innocence. Specifically, we examine prosecutorial involvement in exonerations from three levels: case-factors, organizational factors, and county-context factors. Using archival data on the exonerations of factually innocent individuals (N = 75), we find that case-related factors are the strongest predictors of prosecutors' involvement in exonerations. Broadly, our findings suggest that prosecutors are more willing to revisit, assist and even investigate potentially wrongful convictions when the stakes are lower (e.g., the offense is less severe, there is no alleged official misconduct, the district attorney is well-established in the role, etc.). Given the wide range of prosecutorial responses to wrongful conviction claims, we emphasize the importance of specialized conviction review units to help routinize the practice of post-conviction review. Secondly, we suggest that district attorneys explicitly define professional performance metrics to include corrective measures such as assisting in the review of wrongful conviction claims. Finally, we encourage states to adopt formal legal regulations to guide prosecutorial behavior in response to post-conviction claims of innocence.

I Introduction

Prosecutors in the American legal system are tasked with multiple, sometimes conflicting, roles. They are expected to be both zealous advocates and neutral ministers of justice.[1] Fred Zacharias describes this contradiction in roles as having to be both a player and a referee.[2] Prosecutors are entrusted with the adversarial role of ensuring convictions while also being obligated to act as a "quasi-judicial officer," zealously advocating for the safety of the public but only through legitimate means.[3] This contradiction is especially acute when faced with post-conviction claims of innocence. A conviction has already been secured, if not by the current prosecutor then by his or her predecessor. Yet, the legitimacy of that conviction is being called into question. What then does the prosecutor do? Does he or she willingly turn over documents and aid the investigation at every opportunity? Does he or she remain uninvolved and wait to see how it plays out? Or does the prosecutor oppose the exoneration effort by maintaining that the defendant is guilty and refusing to dismiss charges? Formal legal policies offer little guidance in this domain, leading to idiosyncratic involvement by prosecutors in involvement in exoneration cases.[4] The narratives of two exoneration cases represent the extremes of this variation.[5]

On June 7, 1998, Judith Johnson and her six year old granddaughter, Brooke Sutton, were beaten and raped in Johnson's home. Johnson was murdered and her granddaughter was left for

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[1] Douglas H Gingsburg & Hyland Hunt, "The Prosecutor and Post-Conviction Claims of Innocence: DNA and Beyond?" (2010) 7 Ohio St J Crim L 771 [*Gingsburg & Hunt*].

[2] Fred C Zacharias, "Structuring the Ethics of Prosecutorial Trial Practice: Can Prosecutors Do Justice" (1991) 44 Vand LR 45 at 110 [*Zacharias*].

[3] Daniel S Medwed, "The Prosecutor as Minister of Justice: Preaching to the Unconverted from the Post-Conviction Pulpit" (2009) 84 Wash L Rev 35 at 39 [*Medwed*].

[4] Medwed, *ibid*; Fred C Zacharias, "The Role of Prosecutors in Serving Justice After Convictions" (2005) 58 Vand L Rev 171; Gingsburg & Hunt, *supra* note 1.

[5] Case details come from publicly available information provided by the National Registry of Exonerations and the Innocence Project. All other information in this paper is anonymous and covered under the Human Subjects Protection Plan of the Preventing Wrongful Convictions research project. *See* Innocence Project, Joseph Abbitt, online: <https://www.innocenceproject.org/cases/joseph-abbitt/> (last visited 4 October 2019); Innocence Project, Clarence Elkins, online: <https://www.innocenceproject.org/cases/clarence-elkins/> (last visited 4 October 2019); The National Registry of Exonerations, Joseph Lamont Abbitt, online: <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3807> (last visited 4 October 2019); The National Registry of Exonerations, Clarence Elkins, online: <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3202> (last visited 4 October 2019).

dead. When Sutton regained consciousness, she called a neighbor and reported that someone had killed her grandmother. Based on the six year old's statement to the police that the perpetrator "looked like Uncle Clarence," Judith Johnson's son-in-law, Clarence Elkins, was convicted of rape and murder. He was sentenced to life in prison. Elkins maintained his innocence, and his wife set out to exonerate him. Several years after the conviction, Brooke Sutton recanted her identification of Clarence Elkins. On that basis, Elkin's lawyers requested a new trial. That marked the start of several years of active opposition from the District Attorney's Office. The prosecution, under the direction of Sherri Walsh, insisted that Elkins was guilty and ridiculed the victim's recantation as having been coached by her family. The convicting judge denied a new trial for Elkins. Two years later, a local innocence organization conducted DNA tests on the evidence from the crime scene. They found that the DNA evidence did not match that of Clarence Elkins. Despite this new evidence, the D.A.'s office maintained that Elkins was guilty, and the judge denied a new trial on the basis that the verdict was decided on Sutton's identification, not physical evidence, so the DNA results would not have changed the jury's decision.

Finally, the defense team turned their focus to a neighbor, Earl Mann, who had been convicted of raping three young girls sometime after the attack on Johnson and her granddaughter. Elkins was able to collect DNA evidence from Mann in the form of a cigarette butt when, by chance, Mann was transferred to the same prison and, eventually, same cell block as Elkins. He sent the cigarette butt to his attorneys, which they tested and found that Mann's DNA was a match with the DNA collected from the crime scene. Undeterred, the prosecution refused to release Elkins. It was only after the Ohio attorney general at the time held a press conference pressuring the District Attorney's Office to dismiss the charges, that they began to abandon their fight against Elkins' exoneration. After an additional round of DNA testing linked Mann to the crime scene, District Attorney Sherri Walsh filed a motion to dismiss the charges against Clarence Elkins. On December 15, 2005, the common pleas judge signed the order vacating the charges against Elkins and ordered his immediate release.[6]

By contrast, consider a different case of eyewitness misidentification. On May 2, 1991, two teenaged sisters were raped at knife point by an intruder who entered through the kitchen window in their home. The intruder bound their feet and hands before fleeing from the home over an hour after breaking in. The two victims later told investigators that the perpetrator looked like a man by the name of Joseph Abbitt who had previously lived in the neighborhood and had visited their home before. Both girls identified Abbitt from a photo lineup. From there, the police considered Abbitt their primary suspect despite mostly inconclusive, and even contrary, DNA evidence. After the victims positively identified Abbitt in court as the man who had attacked them, a jury convicted him of rape, burglary, and kidnapping. Abbitt maintained his innocence and in 1995 applied for assistance from a local innocence organization. The organization accepted his case and submitted the rape kits for reanalysis. While the first test came back inconclusive, a second test excluded Abbitt as the attacker. After fourteen years of serving a sentence for a crime he did not commit, Joseph Abbitt was officially exonerated.

In Joseph Abbitt's case, the prosecution's response looked profoundly different than that in Clarence Elkins case. A Raleigh newspaper described Abbitt as one of the lucky ones because

[6] Jim Petro & Nancy Petro, *False Justice*, *Eight Myths that Convict the Innocent*, rev ed, (London: Kaplan Publishing, 2015).

the district attorney in the county where he was convicted was on a quest to free the wrongfully convicted after a prominent exoneration case in his jurisdiction rattled him several years earlier.[7] The D.A. cooperated with the local innocence organization that was investigating Abbitt's case and quickly moved to exonerate him once DNA evidence pointed to his innocence.

What explains why prosecutors in one case would erect barrier after barrier to avoid an exoneration while prosecutors in another case took an active role in overturning a wrongful conviction? Prior research suggests that there are numerous legal, psychological, and institutional disincentives to prosecutors assisting in exoneration investigations.[8] What is still missing from our understanding of prosecutors' responses to post-conviction innocence claims, however, is the role of the broader court context. Prior scholarship highlights the role of organizational and county-level contexts in shaping prosecutors' responses to post-conviction claims of innocence.[9] In the present study, we seek to address these gaps by applying Eisenstein, Flemming, and Nardulli's courts as communities framework to prosecutorial assistance in the post-conviction phase.[10] Specifically, we consider if prosecutorial involvement in an exoneration is related simply to case facts, whether organizational leadership plays a role, or if broader cultural factors are at work as well. Understanding prosecutorial involvement in exonerations is significant because the difference in prosecutors' approaches can equate to years of an innocent person's life spent waiting for freedom.[11]

In Part II, we discuss the theoretical and empirical foundations for our research and offer a brief review of the relevant literature on post-conviction prosecutorial discretion. In Part III, we describe our exoneration data and the method of analysis we employ. In Part IV, we present our analysis and discuss which factors predict the nature of prosecutorial involvement in an exoneration case. In Part V, we provide context for our findings. We argue that the discretion prosecutors have in whether, and to what degree, they will become involved in a wrongful conviction investigation, presents an unfair choice. It is far better to establish clear procedures that compel prosecutors to cooperate with a credible and official entity tasked with reviewing post-conviction claims of innocence, than to leave it up to prosecutors to determine if they can afford to put their reputation and professional relationships on the line. When prosecutors' options of how to respond to wrongful conviction claims can range from active opposition and stonewalling to

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[7] Mandy Locke, "DNA Exonerates a Second Forsyth Inmate: Six Years After the Darryl Hunt Case, Joseph Abbitt is Cleared of Raping Two Girls in 1991", *The News & Observer* (3 September 2009).

[8] Gingsburg & Hunt, *supra* note 1; Daniel S Medwed, "The Zeal Deal: Prosecutorial Resistance To Post-Conviction Claims Of Innocence" (2004) 84 BU L Rev 125; Aviva A Orenstein, "Facing the Unfaceable: Dealing with Prosecutorial Denial in Postconviction Cases of Actual Innocence" (2010) 48 San Diego L Rev 401 [*Orenstein*]; Alafair S Burke, "Improving Prosecutorial Decision Making: Some Lessons of Cognitive Science" (2005) 47 Wm & Mary L Rev 1587 [*Burke*]; Dana Carver Boehm, "The New Prosecutor's Dilemna: Prosecutorial Ethics and the Evaluation of Actual Innocence" (2014) 2014 Utah L Rev 613 [*Boehm*].

[9] Robert J Norris & Catherine L Bonventre, "Advancing Wrongful Conviction Scholarship: Toward New Conceptual Frameworks" (2015) 32 Just Q 929 [*Norris and Bonventre*]; Elizabeth Webster, "A Postconviction Mentality: Prosecutorial Assistance In Exoneration Cases" (2017) Just Q 1 [*Webster*].

[10] James Eisenstein, Roy Flemming & Peter Nardulli, *The Contours of Justice: Communities and Their Courts* (Boston: Little Brown, 1988) [*Eisenstein, Flemming & Nardulli*].

[11] Webster, *supra* note 9; Daniel S Medwed, *Prosecutorial Complex: America's Race to Convict and its Impact on the Innocent* (New York: New York University Press, 2012).

significant assistance, far too much of a potentially wrongfully convicted individual's fate is left up to the preferences of a particular prosecutor or staff of prosecutors. We also outline specific recommendations to alleviate some of the burden on individual prosecutors by specializing or externalizing the conviction review process which, in effect, can improve wrongfully convicted individuals' access to (a second chance at) justice. Secondly, we propose a reprioritization of performance metrics to include corrective measures such as efficiently assisting in credible wrongful conviction claims. Finally, we encourage states to adopt formal legal regulation to guide prosecutorial behavior in the face of wrongful conviction claims. We conclude in Part VI by reviewing our findings and policy recommendations.

II Prior Research

The existing body of literature on post-conviction prosecutorial discretion generally concludes that prosecutors face significant barriers to assisting in an exoneration effort. After a conviction has been secured, there are very few incentives for prosecutors to reopen a case.[12] The lack of professional or legal code directing prosecutorial behavior after a conviction yields broad discretion in if, and to what degree, the local district attorney's office will engage in the investigation of a post-conviction claim of innocence.[13] Up until 2008, the American Bar Association's Model Rules for Professional Conduct offered no prescriptions for how prosecutors were to handle new, and possibly exonerating, evidence after a conviction had already been secured.[14] The addition of amendments (g) and (h) to Rule 3.8 on the special responsibilities of a prosecutor to the Model Rules of Professional Conduct directs prosecutors to investigate and disclose new evidence of a possible wrongful conviction, and when the evidence establishes a likely erroneous conviction, prosecutors are compelled to remedy the conviction.[15] These amendments, however, establish what legal scholar Dana Carver Boehm describes as a floor, rather than a ceiling, for prosecutors' responsibility to disclose new information that points to a possible erroneous conviction.[16] The rule does not require prosecutors to initiate an investigation solely based on a claim of wrongful conviction, and the provision only goes into effect when the

[12] Gingsburg & Hunt, *supra* note 1; Bruce A Green & Ellen Yaroshefsky, "Prosecutorial Discretion and Post-Conviction Evidence of Innocence" (2009) 6 Ohio St J Crim L 467; Orenstein, *supra* note 8; Daniel S Medwed, "The Zeal Deal: Prosecutorial Resistance to Post-Conviction Claims of Innocence" (2004) 84 BU L Rev 125; Zacharias, *supra* note 4.

[13] Medwed, *supra* note 3; Zacharias, *supra* note 4 at 173.

[14] Am. Bar Association, *Model Rules of Professional Conduct* (Chicago: Am Bar Ass'n, 1983) [*Model Rules of Prof'L Conduct*]; Webster, *supra* note 7.

[15] See Model Rules of Prof'L Conduct, *ibid* (stating that, "[g] When a prosecutor knows of new, credible and material evidence creating a reasonable likelihood that a convicted defendant did not commit an offense of which the defendant was convicted, the prosecutor shall: [1] promptly disclose that evidence to an appropriate court or authority, and [2] if the conviction was obtained in the prosecutor's jurisdiction, [i] promptly disclose that evidence to the defendant unless a court authorizes delay, and [ii] undertake further investigation, or make reasonable efforts to cause an investigation, to determine whether the defendant was convicted of an offense that the defendant did not commit. [h] When a prosecutor knows of clear and convincing evidence establishing that a defendant in the prosecutor's jurisdiction was convicted of an offense that the defendant did not commit, the prosecutor shall seek to remedy the conviction.").

[16] Boehm, *supra* note 8.

prosecutor is made aware of new and credible exculpatory information.[17] Beyond Model Rule 3.8 (g) and (h), which only a minority of states have adopted, there is a profound absence of legal or professional regulation on prosecutors' post-conviction involvement in wrongful conviction investigations.[18]

A. The Individual Level

Given the lack of legal regulation on how district attorneys and their staff respond to post-conviction claims of innocence, there is significant variation in the role of district attorney's offices in exoneration investigations. This variation can create significant inequalities among wrongfully convicted individuals seeking relief. Despite the significance of prosecutors' roles in exoneration investigations, the literature on why prosecutors assist or oppose post-conviction claims is largely underdeveloped. What little we do know about prosecutors' behavior in the post-conviction phase tends to focus narrowly on the individual level. Analysis at the individual level considers the role of factors related to the individual case, defendant, and prosecutor involved. In the first, and to date, only prior empirical examination of prosecutorial assistance, Elizabeth Webster focuses on a number of defendant and case-level predictors.[19] She finds that cases involving violent offenses are less likely to receive at least some prosecutorial assistance than non-violent offenses. Black and Hispanic defendants and actually more likely to receive assistance than their White counterparts, and defendants who pled guilty to their charges are more likely to receive assistance than those who went to trial. Finally, she finds that evidentiary issues (e.g., mistaken witness identification, false confession, perjury, etc.) are not significantly related to prosecutorial assistance.[20]

While Webster uses empirical data to predict prosecutorial assistance, the legal scholarship in this area draws heavily from cognitive science to explain the barriers prosecutors face in assisting with an exoneration investigation.[21] Daniel Medwed describes how the widespread practice of evaluating prosecutors by their conviction rate can be internalized by individual prosecutors to create a conviction psychology.[22] This conviction psychology may become especially engrained the longer a prosecutor is steeped in the office culture.[23] By extension, conviction psychology is a barrier to post-conviction prosecutorial assistance, as it compounds the already unpleasant task of acknowledging one's own, or a colleague's, mistake with the additional burden of tarnishing one's conviction record.

Relatedly, the desire for finality acts as an additional psychological barrier to assisting with post-conviction claims of innocence. By virtue of working in an adversarial system as a representative of the state, prosecutors tend to develop an alignment or affinity with victims.[24]

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[17] *Ibid.*

[18] *Ibid*; Webster, *supra* note 9.

[19] Webster, *ibid*.

[20] *Ibid.*

[21] Burke, *supra* note 8; Medwed, *supra* note 8.

[22] Medwed, *ibid*; Orenstein, *supra* note 8; Boehm, *supra* note 8.

[23] Laurie L Levenson, "The Problem with Cynical Prosecutor's Syndrome: Rethinking a Prosecutor's Role in Post-Conviction Cases" (2016) 20 Berkeley J Crim L 335 [*Levenson*]; Medwed, *supra* note 8.

[24] Kenneth J Melilli, "Prosecutorial Discretion in an Adversary System" (1992) BYUL Rev 669.

They are likely to communicate with, and often meet, victims of a crime they are prosecuting. Conversely, prosecutors generally have limited interaction with defendants. Often times, the extent of a prosecutor's exposure to a defendant is the rap sheet and police report, or perhaps even an experience prosecuting him in a previous case.[25] In that way, experiences with victims can be humanizing whereas the limited exposure to defendants may reinforce the perceived criminality of the defendant. This alignment with victims and opposition to defendants likely contributes to the desire for finality in two ways. First, prosecutors may be hesitant to reopen a case out of concern for a victim's desire for closure and to avoid retraumatizing them.[26] Second, prosecutors may resist reopening a case because they feel "the ends justify the means." This is the defense that, while the defendant may not be guilty of what he was convicted of, he is certainly guilty of something.[27]

Additionally, there are a number of relevant cognitive biases that work in favor of maintaining convictions, rather than re-examining cases. In his application of cognitive science to prosecutorial discretion, Alafair Burke acknowledges that, like laypeople, prosecutors are not perfectly rational actors and, thus, are vulnerable to the influence of cognitive biases in making decisions.[28] He identifies four cognitive biases as particularly relevant to prosecutorial decision-making. First, Burke describes the human tendency to be more responsive to evidence that confirms, rather than refutes, our assumptions and to interpret new evidence in ways that are consistent with our preexisting beliefs.[29] This phenomenon is known as confirmation bias and is particularly relevant to post-conviction prosecutorial decision-making. When a prosecutor first receives a case, he or she begins shaping a narrative around the event the took place. An understanding of confirmation bias suggests that further evidence that supports the original narrative will be accepted relatively uncritically, while evidence that is incongruent with the original narrative may go unnoticed or dismissed.[30] After a conviction, confirmation bias may be even stronger, as the guilty verdict itself acts as further confirmation of the prosecutor's original narrative that the defendant is guilty.[31]

Burke applies three additional cognitive biases to prosecutorial decision-making: selective information processing, belief perseverance, and cognitive dissonance.[32] Selective information processing explains the tendency of people to weigh evidence that supports their existing beliefs

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[25] *Ibid.*

[26] Gingsburg & Hunt, *supra* note 1; Bruce A Green & Ellen Yaroshefsky, "Prosecutorial Discretion and Post-Conviction Evidence of Innocence" (2008) 6 Ohio St J Crim L 467 [*Green & Yaroshefsky*]; Orenstein, *supra* note 8.

[27] Mark Baker, *D.A.: Prosecutors in Their Own Words* (New York: Simon & Shuster, 1999); Orenstein, *supra* note 8; Medwed, *supra* note 8.

[28] Burke, *supra* note 8.

[29] Joshua Klayman & Young Won Ha, "Confirmation, Disconfirmation, and Information in Hypothesis Testing" (1987) 94 Psychol Rev 211; Ziva Kunda, *Social Cognition: Making Sense of People* (Cambridge: The MIT Press, 1999).

[30] Orenstein, *supra* note 16 at 426; Peter H Ditto & David F Lopez, "Motivated Skepticism: Use of Differential Decision Criteria for Preferred and Nonpreferred Conclusions" (1992) 63 J Pers Soc Psychol 568.

[31] Burke, *supra* note 8 at 1612.

[32] Burke, *ibid* note 8.

more heavily than evidence that contradicts those beliefs.[33] Belief perseverance describes how people often fail to update their beliefs, even in the face of proof to the contrary.[34] Finally, cognitive dissonance offers insight into why the aforementioned cognitive biases may be present. Cognitive dissonance describes the discomfort people feel when there is a disconnect between their behavior and their internal beliefs. As such, people tend to have a bias toward reconciling their beliefs with their actions.[35] In the case of prosecutors, this may mean maintaining a conviction even in light of potentially exonerating information. Confirmation bias, selective information processing, belief perseverance, and cognitive dissonance each highlight the cognitive barriers that prosecutors face in acknowledging and interpreting possibly exonerating evidence, especially after conviction.

B. Broadening the Lens

As an emerging line of research, prosecutorial involvement in exonerations does not yet have a widely accepted theoretical framework. However, the literature on criminal case processing, more generally, often relies on Eisenstein, Flemming, and Nardulli's courts as communities framework, which is applicable.[36] This conceptualization of courts extends beyond the individual actors involved in the criminal justice process by integrating three lines of research on courtroom decision-making: the individual, the organizational, and the environmental. The individual approach examines the backgrounds and attitudes of court actors. The organizational approach examines the interactions between those court actors, and the environmental approach examines the broader economic, social, and political culture of the community in which the court operates. By integrating these approaches, Eisenstein and colleagues emphasize the interdependence of court actors and the nature of courts as, "complex social institutions."[37]

Although the literature on prosecutorial behavior in the post-conviction phase articulates the individual level perspective fairly well, analysis at the organizational and environmental level is more limited. Norris and Bonventre argue that this organizational perspective is too often absent from the literature on wrongful conviction.[38] In an effort to advance the conceptual frameworks for understanding wrongful convictions, they call for increased attention to the organizational contexts in which wrongful convictions manifest, rather than focusing narrowly on the individual actors at the forefront of prominent wrongful convictions.[39] In the context of prosecutorial involvement in exonerations, some of the legal scholarship addresses the influence of organizational factors, but this line of research requires additional development.

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[33] Charles G Lord, Lee Ross & Mark R Lepper, "Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence" (1979) 37 J Pers Soc Psychol 2098; Burke, *supra* note 8.

[34] Lee Ross, Mark R Lepper & Michael Hubbard, "Perseverance in Self-Perception and Social Perception" (1975) 32 J Pers Soc Psychol 880.

[35] Leon Festinger, *A Theory of Cognitive Dissonance* (Stanford: Stanford University Press, 1957); Leon Festinger & James E Carlsmith, "Cognitive Consequences of Forced Compliance" (1959) 58 J Abnorm Soc Psychol 203.

[36] Eisenstein, Flemming & Nardulli, *supra* note 10.

[37] *Ibid* at 294.

[38] Norris & Bonventre, *supra* note 9.

[39] *Ibid.*

C. The Organizational Level

At the organizational level, scholars identify several disincentives to assisting in post-conviction investigations. For example, institutional norms in district attorneys' offices generally prioritize zealous prosecution, a concept that has traditionally been measured by conviction rates.[40] Not only is a prosecutor's conviction rate a performance metric, but in many offices it is also a factor in determining promotions and raises.[41] Thus, there is very little institutional incentive to "undo" a conviction that has already been won. Additionally, reviewing wrongful convictions claims has a real cost in terms of resources and decreased efficiency. The concern for efficient use of time and resources is particularly relevant in light of the large number of post-conviction claims of innocence many district attorney's offices receive, some of which prove to be baseless. Daniel Medwed describes this as the "needle in a haystack disincentive."[42]

Related to the institutional pressures prosecutors face in deciding to assist in the review of old cases are their concerns about maintaining working relationships with the police. By virtue of the working relationship between police departments and district attorneys' offices, prosecutors often develop a unified mentality with police officers, trusting that the police have done their due diligence in investigating the case and identifying the appropriate offender.[43] Elizabeth Webster finds empirical support for this notion, concluding that the likelihood of a prosecutor assisting in the investigation of a post-conviction innocence claim is significantly lower when the case involves alleged police misconduct.[44] Likewise, Levenson notes that senior prosecutors with a long history of working with the police department may be especially inclined to defer to the police in post-conviction investigations.[45] These findings highlight the salience of professional relationships and reflect a resistance from prosecutors to disrupt those working relationships by investigating alleged misconduct on the part of their colleagues.[46]

Organizational disincentives to assist in wrongful conviction claims may be reinforced by public and political pressures faced by district attorneys' offices. Reopening a case, for example, exposes the fallibility of the criminal justice system, thus putting public trust in the system at risk.[47] This may be a particularly unpopular move in more conservative jurisdictions, as entertaining claims of innocence may undercut the "tough on crime" image to which many prosecutors aspire, and upon which many district attorneys campaign.[48] The opinions of the public play a uniquely important role in the careers of prosecutors, even compared to other criminal justice actors. This is because the vast majority of chief prosecutors is publicly elected.[49] Although elected prosecutors are accountable to the public, the public has very few metrics upon which to base their support

[40] Boehm, *supra* note 8.

[41] Medwed, *supra* note 8; Orenstein, *supra* note 8.

[42] Medwed, *supra* note 8 at 148.

[43] Medwed, *ibid* note 8.

[44] Webster, *supra* note 9.

[45] Levenson, *supra* note 23.

[46] Webster, *supra* note 9.

[47] Gingsburg & Hunt, *supra* note 1; Orenstein, *supra* note 8.

[48] Medwed, *supra* note 8; Gingsburg and Hunt, *supra* note 1; Judith A Goldberg & David M Siegel, "The Ethical Obligations of Prosecutors in Cases Involving Postconviction Claims of Innocence" (2002) 38 Cal WL Rev 389.

[49] Carol J DeFrances, *Prosecutors in State Courts, 2001* (Rockville: BJS, US Dept of Justice, 2002).

other than rhetoric and conviction rate.[50] As such, assisting in a possible exoneration case may be particularly undesirable for prosecutors, as it threatens the aforementioned metrics which have consequences for both personal career development and the reputation of the prosecutor's office as an organization.

D. The Environmental Level

According to the courts as communities metaphor, at least one additional level of analysis is missing from our understanding of prosecutorial behavior in the post-conviction phase: the environmental context.[51] This broad level of analysis incorporates the social, political, and organizational factors that create the environment in which court actors make decisions: the local court context.[52] There is strong support in the criminal sentencing literature that sentencing is a contextualized process as researchers typically find that sentencing outcomes vary between jurisdictions and communities.[53] In his evaluation of contextual disparities in sentencing practices, Brian Johnson emphasizes that courtroom actors do not make decisions in a vacuum, but rather, their decisions are influenced by the environment in which those decisions are made.[54] To date, this perspective is largely missing from the work on prosecutorial behavior in the post-conviction phase. In her work on prosecutorial assistance in wrongful conviction investigations, Elizabeth Webster identifies the need for additional research on the relationship between local court context and prosecutorial assistance.[55] She writes, "A better understanding of political considerations, such as the racial demographics, "county legal culture," and political leanings of the jurisdiction, may also contribute to developing a clearer portrait of the circumstances surrounding prosecutors' willingness to assist."[56] Webster's call for greater attention to the county context and Norris and Bonventre's call for increased consideration of the role of the organizational context join together to highlight the need for multiple levels of analysis in understanding the path to remedying a wrongful conviction.[57]

In response to the gaps identified by Norris and Bonventre, and Webster, we take a multi-pronged approach to understanding prosecutorial involvement in the investigation of wrongful conviction claims.[58] Specifically, our study applies the courts as communities metaphor to

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[50] Medwed, *supra* note 8.

[51] James Eisenstein & Herbert Jacob, Felony Justice: *An Organizational Analysis of Criminal Courts* (Lanham: University Press of America, 1977)

[52] Eisenstein, Flemming & Nardulli, *supra* note 10; Brian Johnson, "Contextual Disparities in Guidelines Departures: Courtroom Social Contexts, Guidelines Compliance, and Extralegal Disparities in Criminal Sentencing" (2005) 43 Criminol 761 [*Johnson*].

[53] Chester L Britt, "Social Context and Racial Disparities in Punishment Decisions" (2000) 17 Just Q 707; Jo Dixon, "The Organizational Context of Criminal Sentencing" (1995) 100 Am J Sociol 1157; Celesta Albonetti, "Sentencing Under the Federal Sentencing Guidelines: Effects of Defendant Characteristics, Guilty Pleas, and Departures on Sentence Outcomes for Drug Offenses" (1997) 31 Law Soc'y Rev 789.

[54] Johnson, *supra* note 52.

[55] Webster, *supra* note 9.

[56] *Ibid* at 23.

[57] Webster, *supra* note 9; Norris and Bonventre, *supra* note 9.

[58] Webster, *supra* note 7; Robert J Norris & Catherine L Bonventre, "Advancing Wrongful Conviction Scholarship: Toward New Conceptual Frameworks" (2015) 32 Just Q 929.

prosecutorial involvement in wrongful conviction investigations by analyzing three levels. First, we consider the most proximal factors, those related to the specific case that is being reviewed. Next, we consider the organizational context by looking at factors related to the district attorney in office at the time of conviction. Finally, we consider how the local county context is related to post-conviction prosecutorial involvement. In addition to addressing the gaps identified in prior scholarship, we extend the current literature by looking at instances of active prosecutorial opposition to wrongful conviction investigations. Prior empirical work looked only at prosecutorial assistance relative to cases where the prosecutor was not involved.[59] By examining the full range of prosecutorial responses to wrongful conviction claims from active opposition to non-involvement to active assistance, we are able to take a more comprehensive view of prosecutorial discretion. Finally, the current study avoids the debate on the definition of innocence by looking solely at individuals who are factually innocent.[60] By doing so, we eliminate cases where the prosecutor may fail to assist the defense because the defendant is still credibly believed to have committed the offense in question but is legally innocent on the basis of a procedural error.

III Data and Methods

This study explores prosecutorial involvement in the investigation of post-conviction claims of innocence by using archival data collected for seventy-five exoneration cases. We identify these cases from data originally collected for the Preventing Wrongful Convictions Project (PWCP), an empirical study funded by the National Institute of Justice. From the PWCP data, we identified twenty-two cases where prosecutors actively assisted in the post-conviction review and twenty-six cases where prosecutors actively opposed exoneration. We then used a random number generator to take a random sample of twenty-seven additional cases to create a third group where the prosecutor neither assisted nor actively opposed. Thus, the analytic sample for this study consists of seventy-five exoneration cases. In each case, the defendant was deemed factually innocent.[61]

We augment the data from the PWCP dataset with organizational and county-level variables. At the organizational level, we collected information about the chief district attorney in office at the time of the exoneration from government websites, defendant profiles from the Innocence Project and the National Registry of Exonerations, and news articles. For several cases where the relevant information was not available online, we called the district attorney's offices and requested the missing information. We acknowledge that the presiding chief district attorney may not always have been the one personally handling the post-conviction review. However, given the prominence and controversy of wrongful convictions, we are confident that chief district

[59] Webster, *supra* note 9.

[60] Jon B Gould, Julia Carrano, Richard A Leo & Joseph K Young, *Predicting Erroneous Convictions: A Social Science Approach to Miscarriages of Justice* (Washington, DC: NIJ, 2012) [*Gould* et al].

[61] The designation of factual innocence is reserved for cases with an executive, legislative, or judicial acknowledgement that the defendant was wrongfully convicted and sufficient evidence to convince a reasonable person that the convicted individual did not commit the offense. This definition distinguishes cases from legal innocence where an individual may be exonerated on the basis of a procedural error without necessarily being factually innocent. E.g., Jon B Gould & Richard A Leo, "One Hundred Years Later: Wrongful Convictions After a Century of Research" (2010) 100 J Crim L & Criminol 825.

attorneys would typically be involved in deciding how to proceed in response to wrongful conviction claims and, thus, are an appropriate level of analysis for understanding the role of organizational leadership. For the county-level variables, we collected a variety of demographic and political indicators from the 2000 U.S. Census, David Leip's *Atlas of Presidential Elections*, and included several existing variables from the PWCP data.[62]

A. Outcome of Interest

The dependent variable of interest is a categorical indicator for whether a district attorney's office actively opposed, was uninvolved, or actively assisted in an exoneration case. The PWCP dataset defines active assistance as individuals or agencies "who played a crucial, direct, and active role in the exoneration."[63] Active opposition, by contrast, is defined as individuals or agencies who actively sought to hinder the exoneration in some way or maintained that the defendant was guilty even in the face of overwhelming evidence of innocence. For cases where the district attorney's office neither actively assisted nor actively opposed the investigation, we coded the type of prosecutorial involvement as uninvolved. While the delineations between a prosecutor assisting, opposing, or remaining uninvolved are not perfectly objective, these classifications help to capture the full range of prosecutorial responses in the post-conviction phase.

For cases involving active assistance or active opposition, the PWCP dataset differentiates between post-conviction involvement from the original, convicting prosecutor and involvement from a subsequent prosecutor.[64] The majority of exoneration cases in our sample involved a subsequent prosecutor, rather than the convicting prosecutor (see Figure 1). In other words, at the time of the exoneration, the prosecutor who originally convicted the defendant in question was either no longer working at that office or was not involved in reviewing the wrongful conviction claim. Of prosecutors who actively opposed the exoneration effort, twenty-one were the subsequent prosecutor only, four were the convicting prosecutor only, and, in one case, both the convicting and subsequent prosecutors were involved in opposing the exoneration effort. Of prosecutors who assisted, eighteen were the subsequent prosecutor and four were the convicting prosecutor.[65]

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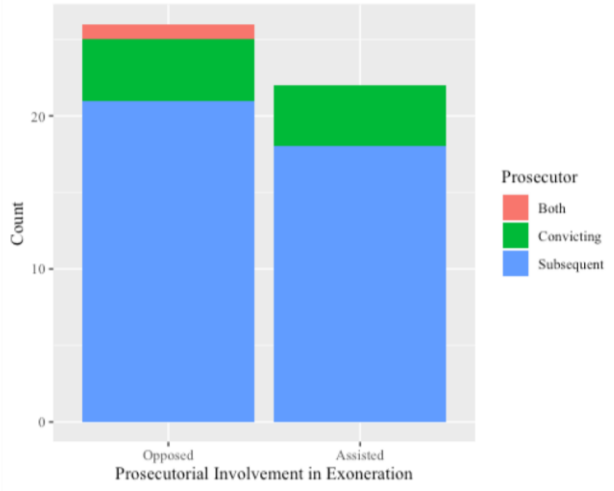
[62] US Census Bureau, 2000 Census, online: <https://www.census.gov/data/tables.html> (last visited 10 April 2019); David Leip, David Leip's Atlas of U.S. Presidential elections, datasets (2018), online: <http://uselectionatlas.org>; Jon B Gould et al, Predicting Erroneous Convictions, (2014) 99 Iowa L Rev 471.

[63] Gould et al*, supra* note 60 at 222.

[64] We are unable to differentiate between convicting and subsequent prosecutors for the cases coded as uninvolved because that distinction was only provided in the PWCP data when a case received prosecutorial assistance or opposition.

[65] The fairly even split between cases of assistance, non-involvement, and opposition does not suggest that these outcomes are equally likely occur. The uninvolved cases were sampled to create a similarly sized group to the assisted and opposed cases.

Figure 1. Convicting and Subsequent Prosecutor's Involvement in Exoneration Cases



B. Predictor Variables

At the most proximal level, we examine a number of case-related variables (see Table 1). We include an indicator of whether or not an innocence organization played a central role in the exoneration (0 = no, 1 = yes). Innocence organizations were involved in 28.00% of the cases in our sample. Official misconduct is dummy coded (0 = no, 1 = yes). Official misconduct was involved in 22.67% of the cases (12% of all cases involved prosecutorial misconduct and 16.00% of all cases involve police misconduct).[66] Since DNA testing started being used to establish innocence in 1989, we include an indicator of whether the defendant was convicted pre or post 1989.[67] We also control for the severity of the offense using an ordered variable from least severe to most severe (1 = robbery, 2 = sexual assault only, 3 = murder only, 4 = both sexual assault and murder). The offenses the defendant was convicted of involved Robbery in 4.00% of cases, sexual assault (no murder) in 49.33% of cases, murder (no sexual assault) for 25.33% of cases, and both sexual assault and murder in 21.33% of cases. Black defendants represent a slight majority at 54.67%, with White defendants making up 32.00% of cases, and Hispanic defendants representing the remaining 13.33%. Finally, we control for the amount of time served by the defendant prior to exoneration.[68]

[66] In the PWCP codebook, official misconduct is defined as an action "that violates a defendant's constitutional rights. There is an element of intentionality or extreme negligence that is either present or can be legally inferred." Misconduct is therefore distinct from official error, which is categorized as a mistake or omission that does not suggest intentional wrongdoing.

[67] Barry Scheck, Peter Neufeld & Jim Dwyer, *Actual Innocence: Five Days to Execution and Other Dispatches from the Wrongly Convicted* (New York: Doubleday, 2000).

[68] Levenson , *supra* note 23 (Levenson suggests that prosecutors' length of tenure may be negatively correlated with willingness to review post-conviction claims of innocence).

Table 1. Descriptive Statistics

	Frequency	Mean/Percent	Min	Max
Type of Involvement				
Actively Opposed	26	34.67%	0	1
Uninvolved	27	36.00%	0	1
Assisted	22	29.33%	0	1
Case-Level Factors				
Innocence Organization Responsible	21	28.00%	0	1
Official Misconduct	17	22.67%	0	1
Conviction occurred post-DNA	32	42.67%	0	1
Robbery	3	4.00%	0	1
Sexual Assault	37	49.33%	0	1
Murder	19	25.33%	0	1
Sexual Assault and Murder	16	21.33%	0	1
White Defendant	25	33.33%	0	1
Black Defendant	40	53.33%	0	1
Hispanic Defendant	10	13.33%	0	1
Time Served	-	144.89	7	342
District Attorney Factors				
White D.A.	68	90.67%	0	1
Male D.A.	68	90.67%	0	1
Time in Office	-	10.79	0	30
County-Level Factors				
Midwest	20	26.67%	0	1
South	28	37.33%	0	1
Northeast	21	28.00%	0	1
West	6	8.00%	0	1
Cook County	7	9.33%	0	1
Post-Furman Executions	54	72.00%	0	1
Rural Urban Continuum	-	1.77	1	7
Median Household Income	-	$42,323.16	$22,330	$65,288
Log Median Household Income	-	10.63	10.01	11.09
% Bachelor's Degree	-	27.00%	10.9	60.2
% Presidential Vote Republican	-	55.48%	0.25	0.86
% Foreign Born	-	6.15%	0.1	16.1
% Non-White	-	24.50%	4.2	42.8

$N = 75$

To broaden our scope to the organizational level, we collected data on a number of factors related to the presiding district attorney at the time of the exoneration. The demographic variation among the district attorneys in our sample was rather limited, with 90.67% of the district attorneys being White and 90.67% being male. We also control for the number of years the presiding district attorney was in office when the exoneration occurred. Prior literature suggests that there may be a number of reasons why the length of time in office may be negatively related to willingness to

review post-conviction claims of innocence.[69] Levenson notes a false sense of expertise, being trained before the exoneration era, more exposure to the influence of the courtroom community, and established relationships with colleagues as possible factors that make older prosecutors more likely to resist post-conviction claims of innocence. Since district attorneys are the final authority on the decisions of the office, we control for the length of time in office prior to the exoneration. The average amount of time in office was 10.79 years.

The third and final level of analysis is the local court context. Since the vast majority of prosecutors' offices have county-based jurisdiction, we examine the local court context at the county level.[70] We consider two concepts related to county-context: the regional/political culture and the county demographics. To assess the regional/political culture, we include an indicator for region (Midwest, West, South, Northeast) and a measure from the U.S.D.A .Economic Research Service that ranks counties on a seven-point scale from urban to rural.[71] We also include an indicator of whether any executions had occurred in that state since the *Furman v. Georgia* decision.[72] The final regional/political variable we include is the percent of the Presidential vote for the Democratic candidate in the election year prior to the exoneration.[73] To examine the effect of county demographics, we include a number of concepts traditionally used in sentencing research to determine if courtroom actors' punitiveness varies by county.[74] Specifically, we include indicators of the percent of the county population that is foreign-born and the percent of the population that is non-White.[75] Additionally we include a measure of the percent of the population with a bachelor's degree and the median household income.[76] In both of the county-factors models we include a dummy variable for Cook County.

C. Analytical Approach

Given the natural ordering of types prosecutorial involvement, we analyze our data using ordered logistic regression (0 = opposed, 1 = uninvolved, 2 = assisted). This allows us to consider how variables from each of our three levels of analysis predict the likelihood of a prosecutor assisting rather than staying uninvolved or opposing the case. In other words, this type of analysis allows us to consider prosecutorial involvement as a range from opposition to assistance.[77] The

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[69] *Ibid.*

[70] Steven W Perry, *Prosecutors in State Courts 2005* (Washington, DC: BJS, 2006).

[71] US Dep't of Agriculture Economic Research Service, Rural Urban Continuum Codes (2003).

[72] *Furman v Georgia*, (1972) 408 US 238. In *Furman v Georgia,* the Court decided that the imposition of the death penalty (in the cases in question) qualified as a cruel and unusual punishment and, thus, violated the Constitution. In effect, the *Furman v Georgia* decision severely restricted the applicability of the death penalty.

[73] We control for the election year to account for the variation in the percentage of the vote for the Democratic candidate based on the year.

[74] Brian Johnson, "The Multilevel Context of Criminal Sentencing: Integrating Judge and County Level Influences" (2006) 44 Criminol 259; Kim Byungbae, et al, "The Impact of United States v. Booker and Gall/Kimbrough v United States on Sentencing Severity: Assessing Social Context and Judicial Discretion" (2016) 62 Crim Delinq 1072.

[75] We include quadratic terms for both percent non-White and percent foreign born to test for curvilinearity.

[76] We take the log of median household income

[77] Although individual cases are nested within jurisdictions, we do not employ a fixed effect model because most of our jurisdictions contain only one case. However, to account for shared county-level characteristics, we include a

number of exonerations per county in our sample ranges from 1 to 7. We include a dummy variable for Cook County in our county context models since Cook County is home to the most exoneration cases in our sample and the cases are rather uniform in handling (the prosecutor actively opposed in six of the seven cases out of the County). Without controlling for Cook County, we risk overstating the effect of any of the county-level variables on prosecutorial opposition.

According to the diagnostic Brant test, our case factors model satisfies the parallel regression assumption. However, a few of the coefficients in the D.A. model and the county context model fail to satisfy the parallel regression assumption.[78] This suggests that a single equation may not be sufficient to provide the appropriate coefficient estimates across each level of our outcome. To account for this, we estimate each of the latter two models using a generalized ordered logistic regression.[79] To avoid overfitting the model with too many predictors relative to the limited number of observations, we examine each level of analysis separately.

IV Results

A. Case-Factors Model

By first examining the case-factors model, we see that a number of factors are statistically significant predictors of type of prosecutorial involvement in an exoneration. Innocence organization involvement, conviction post-DNA, misconduct, and offense severity are all statistically significant ($p<0.05$). In order to interpret the magnitude of the effect of our variables, we estimate average marginal effects (see Table 2). Average marginal effects allow us to speak in terms of the likelihood of a particular outcome occurring based on a particular variable, holding all of the other variables constant. Offense severity is negatively related to the likelihood of receiving prosecutorial assistance. Specifically, the likelihood of a prosecutor actively opposing an exoneration increases 10 percentage points for each unit increase in offense severity. This suggests that a case involving sexual assault is 10 percentage points more likely to receive active prosecutorial opposition than a case only involving robbery. Official misconduct is negatively related to prosecutorial assistance. The likelihood of prosecutorial assistance is almost 22 percentage points lower for cases involving official misconduct than cases without misconduct. Contrary to Webster's findings, we find that cases where an innocence organization was involved

clustering correction by county for the organizational and environmental analyses since some jurisdictions account for more than one observation in our data.

[78] All of the coefficients in the case-factors model satisfied the parallel regression assumptions according to the Brant test. In the DA factors model, time in office violated the parallel regression assumption ($p=0.019$). In the county context model, the Cook county variable and the indicator for region (West) did not satisfy the parallel regression assumption ($p=0.00$ for both).

[79] To estimate a generalized ordered logistic regression, we use Richard Williams' gologit2 Stata command (inspired by Vincent Fu's gologit command). This allows us to free some variables from the parallel lines constraint, while still constraining the variables that do satisfy the parallel lines assumption. Richard Williams, "Generalized Ordered Logit/Partial Proportional Odds Models for Ordinal Dependent Variables" (2006) 6 Stata J 58.

are actually less likely to have active assistance from the prosecutor.[80] In the discussion section, we offer a possible explanation for this departure.

Table 2. Case Level Factors (Level 1). Ordered logistic regression predicting prosecutorial involvement in exoneration cases (N=75).

	Model 1	**Opposed vs. Uninvolved or Assisted**	**Assisted vs. Uninvolved or Opposed**
	b (robust s.e.)	A.M.E.	A.M.E.
Innocence Organization Responsible	-1.254 (0.599)**	0.237	-0.198
Official Misconduct	-1.268 (0.569)**	0.232	-0.219
Post-DNA Conviction	1.880 (0.601)***	-0.344	0.325
Offense Severity	-0.549 (0.277)**	0.100	-0.095
Black Defendant	-0.687 (0.533)	0.123	-0.122
Hispanic Defendant	-0.491 (0.756)	0.086	-0.089
Time Served	0.008 (0.003)*	-0.001	0.001
/cut1	-1.410 (1.001)		
/cut2	-.465 (0.994)		

Notes. Pseudo R-squared: 0.12. /cut1 is the intercept indicating where the latent variable is cut to differentiate opposed from uninvolved and assisted when the predictor variables are at zero. /cut2 is the intercept indicating where the latent variable is cut to differentiate opposed and uninvolved from assisted when the predictors are zero.

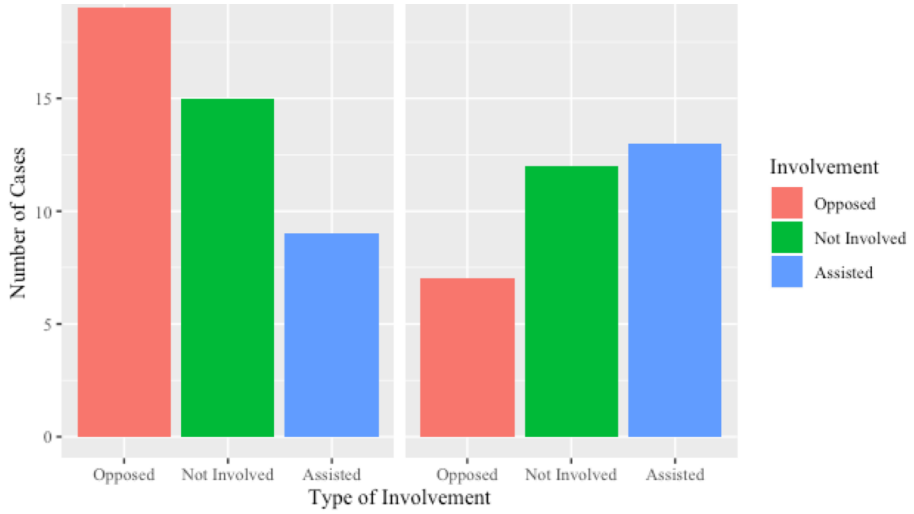
*** p<0.01, ** p<0.05, * p<0.1

Whether the conviction occurred prior to the use of DNA testing in courts is also statistically significantly related to the type of involvement. Prosecutors are almost 33 percentage points more likely to assist, rather than oppose or remain uninvolved, in convictions that occurred from 1989 forward, when DNA evidence was more regularly available. To further investigate this finding, we looked at a simple cross tabulation of type of involvement pre- and post-DNA. We found that, of convictions that occurred prior to DNA, 44.19% were actively opposed by the prosecutor and 20.83% received assistance while the inverse was true of convictions that occurred post-DNA.[81] Figure 2 displays how the frequencies of opposition and assisting flip after 1988.

[80] Webster, *supra* note 9.

[81] According to a chi-squared test, the difference in type of involvement before relative to after DNA is marginally significant (X^2=5.09, p=0.078).

Figure 2. Type of prosecutorial involvement for cases convicted pre and post DNA



The amount of time served by the defendant prior to exoneration is marginally significant, but the effect is quite small ($p<0.1$). It suggests that for each additional month served, the likelihood of a prosecutor actively opposing rather than staying uninvolved or assisting decreases by 0.1 percentage points. This is perhaps better understood as each additional year served decreasing the likelihood of prosecutorial opposition by 1.2 percentage points. This tentatively suggests that the barriers to assisting in an exoneration may diminish as the original conviction, and perhaps the prosecutor who secured that conviction, move further into the past.

Defendants' race and ethnicity are the only variables in our case-level model that fail to reach statistical significance. Webster found that Black and Hispanic defendants were more likely than White defendants to receive at least minor prosecutorial assistance.[82] Whether it is due to our smaller sample size or broader range of prosecutorial involvement, we fail to replicate Webster's findings.[83] Our case level factors model, explains about 12% of the variation in type of prosecutorial involvement.[84]

B. District Attorney Model Factors

To consider if any of the unexplained variation in type of prosecutor involvement is explained by factors related to the district attorney in charge at the time of the exoneration investigation, we estimate a second model. This model specifically examines the relationship between characteristics of organizational leadership (i.e., D.A. race, sex, and tenure) and involvement in exoneration investigations. We find that this organizational model explains only a small percentage of the variation in prosecutorial responses to wrongful conviction claims (about 4%).

[82] Webster, *supra* note 9.

[83] *Ibid.*

[84] This is determined from the pseudo R-squared output of 0.12.

Of the district attorney level factors, only time in office is statistically significantly related to prosecutorial involvement in the exoneration (see Table 3).[85] The average marginal effect for time in office suggests that for each year in office, the likelihood of prosecutorial opposition decreases by 1.4 percentage points. The lack of significance for D.A. sex and race may be explained, in part, by the general lack of variation in D.A. demographics. Over 90% of the D.A.s in the sample were male and over 90% were White. Overall, the district attorney level factors we measure do not appear to exert much of an influence on prosecutors' decisions to engage in an exoneration effort.[86]

Table 3. **District Attorney Factors (Level 2).** Generalized ordered logistic regression predicting prosecutorial involvement in exoneration cases (N=75).

	Equation 1	**Equation 2**	**Likelihood of Opposition**
	b (robust s.e.)	*b* (robust s.e.)	A.M.E.
White D.A.	-0.115 (0.906)	-	0.024
Male D.A.	-1.147 (0.958)	-	0.245
Time in Office	0.066 (0.033)**	0.005 (0.027)	-0.014

Notes. Pseudo R-squared: 0.04. Clustered by county (52 clusters). Equation 1 compares opposition to all outcomes above (uninvolved and assisted) and Equation 2 compares opposition and being uninvolved to assisting.

*** p<0.01, ** p<0.05, * p<0.1

C. County-Level Factors Model

Finally, we broaden the scope even further to explore the influence of county-level factors on the types of prosecutorial involvement in exonerations (see Table 4). We look at two county-level concepts. First, we examine the regional/political context, then we examine the demographic characteristics of the county. We find that the percent of the presidential vote for the Democratic candidate is not predictive of prosecutorial involvement in an exoneration. Likewise, our measure for culture of punitiveness (post-Furman executions) is not statistically significant. The ruralness of the county is also not predictive of prosecutorial involvement. However, we find that prosecutors in the West are less likely to actively oppose exoneration investigations than those in the Midwest, even after controlling for Cook County.[87] Specifically, cases in the West are 39.2 percentage points less likely to see prosecutorial opposition than cases in the Midwest. Webster also found that prosecutorial assistance was least likely in the Midwest; however, in her work, the greatest contrast was between the Midwest and the South, whereas we found that a significant difference between cases in the Midwest and West.[88]

[85] Since time in office did not satisfy the parallel regression assumption, we report the results for time in office for both equation 1 (opposed vs uninvolved and assisted) and equation 2 (opposed and uninvolved vs assisted).

[86] When we model case factors and DA factors together, the pseudo R-squared estimate only increases from 0.12 to 0.14, a minimal gain in predictive power for the three additional variables.

[87] Of the seven cases drawn from Cook County, six were incidents where the prosecutor actively opposed the exoneration effort. The remaining case was an incident where the prosecutor was generally uninvolved in the exoneration effort.

[88] Webster, *supra* note 9.

Next, we examine whether the demographic makeup of the county predicts prosecutorial involvement in exonerations. We find that the racial/ethnic composition is not significantly related to prosecutorial involvement in exonerations. The percent of the county population that is non-White is not significantly related to prosecutorial involvement. Similarly, we fail to find a relationship between the percent of the population that is foreign born and how prosecutors engage in exoneration investigations.[89] Our wealth/status measures also fail to be statistically significant. Neither median household income nor the percent of the county population with a bachelor's degree is statistically significantly related to whether a prosecutor opposes or assists in an exoneration.

Table 4. County Level Factors (Level 3). Ordered logistic regression predicting prosecutorial involvement in exoneration cases (N=75).

	Equation 1		**Equation 2**		**Likelihood of Opposition**
	b (robust s.e.)		*b* (robust s.e.)		A.M.E.
Political/Regional					
% Presidential Vote (D)	1.255	(2.001)	-		-0.229
Post-Furman Executions	0.259	(0.807)	-		-0.047
Northeast	0.207	(0.746)	-		-0.041
South	0.072	(0.632)	-		-0.015
West	15.810	(0.816)***	0.984	(1.161)	-0.392
Rural-Urban	0.024	(0.141)	-		-0.004
Cook County	-2.825	(0.930)***	-16.802	(0.959)***	0.515
Demographic					
% Non-White	-0.021	(0.127)	-		0.004
% Non-White Quadratic	-0.000	(0.003)	-		-0.000
% Foreign Born	0.195	(0.266)	-		-0.037
% Foreign Born Quadratic	-0.009	(0.018)	-		0.002
% Bachelors Education	0.025	(0.038)	-		-0.005
Log Median Income	-1.043	(1.102)	-		0.199
Cook County	-2.974	(0.713)***	-15.734	(1.207)***	0.567

Notes. Election years are omitted for clarity. Equation 1 compares opposition to all outcomes above (uninvolved and assisted) and Equation 2 compares opposition and being uninvolved to assisting.

*** p<0.01, ** p<0.05, * p<0.1

V Discussion

Understanding prosecutorial involvement in exonerations is a fairly new line of research. The current study is only the second empirical test of post-conviction prosecutorial assistance. Our findings, in part, support prior literature on prosecutorial assistance in exonerations while also

[89] We include quadratic terms for population and percent foreign born but neither are significant, which suggests that population and percent foreign born are not linearly or curvilinearly related to prosecutorial involvement.

extending this emerging field of research in three important ways. First, we expand the scope of prosecutorial involvement in exonerations by including cases where prosecutors actively opposed, rather than limiting the analysis to just cases where prosecutors assisted or not. Secondly, we avoid any debate about whether prosecutors rightly resisted a wrongful conviction by including only cases of factual innocence. Finally, we address the identified gap in the literature by broadening the analysis to include organizational and county-level factors.

Like Webster, we find that the likelihood of prosecutorial assistance is lower when the original conviction involves a more serious offense and when there is alleged official misconduct.[90] Both findings suggest that prosecutors may resist assisting in an exoneration when the stakes are higher. In his evaluation of post-conviction prosecutorial behavior, Medwed describes a number of disincentives to assistance in wrongful conviction investigations but notes that there are few exceptions.[91] One such exception is when the case has relatively low stakes. Medwed describes low stakes cases as those in which the defendant will not actually be released from custody due to a sentence for a separate crime or where the innocence of one defendant is coupled with evidence of the actual offender's guilt.[92]

Our crime severity findings seem to fall within this lower stake framework. The stakes of overturning cases involving less serious crimes are likely lower than overturning convictions for more egregious and violent crimes because the former will likely draw less public attention or concern. This may explain why we see prosecutors more likely to assist when the crime is less severe and more likely to oppose when the case involves both murder and sexual assault. Further, overturning a conviction for a violent offense like murder leaves a victim's family without a conviction. Prosecutors are likely reticent to reopen a closed case for fear of revisiting past trauma for the victim and victim's family. Prosecutors' and victims' desires for finality deter active assistance, and our findings suggest that this is particularly the case when the offense in question was particularly violent.[93] Likewise, the personal and professional stakes of overturning a conviction are lower when there is no alleged official misconduct. Assisting in a case where either the prosecutor himself, a colleague, or a law enforcement officer is accused of misconduct may seriously jeopardize that prosecutor's professional relationships or even his own professional reputation in the event that he was the convicting prosecutor. Exposing law enforcement or prosecutorial misconduct can have significant professional and political implications.

The stakes of an exoneration may also fall the longer a defendant has served time. We find that for each additional year served, the likelihood of prosecutorial assistance increases by 1.2 percentage points. As such, the amount of time already served may combat the "ends justifies the means" mentality of some prosecutors that although the defendant may not be guilty of the crime he was convicted of, he is certainly guilty of something.[94] Since the defendant has been punished by serving some time already, the prosecutor may not fight as hard to ensure that defendant remains in custody. An alternative explanation is that the longer the defendant has been incarcerated, the less likely the convicting prosecutor is still in office. Removing the organizational concern of

[90] Webster, *supra* note 9.

[91] Medwed, *supra* note 8.

[92] *Ibid.*

[93] Gingsburg & Hunt, *supra* note 1; Green & Yaroshefsky, *supra* note 26; Orenstein, *supra* note 8.

[94] Orenstein, *supra* note 8; Medwed, *supra* note 8.

protecting a current colleague may increase prosecutors' willingness to assist in an exoneration. Either explanation fits within the lower-stakes framework.

Some promising news from Webster's work is that prosecutors have become more likely to assist in exonerations over time.[95] Relatedly, we find that prosecutors are less likely to oppose exoneration attempts in cases post-1989, when DNA became increasingly admissible in court. The progressive use of DNA testing in courts may give cover to prosecutors to assist in an exoneration by providing an objective test that they can use to defend an exoneration to the public. This sort of evidence can lower the stakes of assisting in the exoneration.

In addition, the increasing number, and rising publicity, of exonerations may have reduced prosecutors' tendency to oppose exoneration efforts, even for cases that are not specifically exonerated on the basis of exculpatory DNA evidence. Prior literature on wrongful convictions suggests that media attention and public aversion to wrongful convictions may be a counterweight to prosecutors' disincentives to pursue post-conviction claims of innocence.[96] As the network of innocence organizations grows and films like *The Central Park Five, Brian Banks,* and the Netflix miniseries *When They See Us* chronicle the stories of wrongful convictions*,* exonerations are increasingly a part of public discourse.[97] Perhaps these narratives and the public aversion to wrongful convictions provide prosecutors an opportunity that may not have existed 40 years ago, the opportunity to be the champion in overturning a wrongful conviction, rather than the villain.

Unlike Webster, we find that the involvement of an innocence organization is negatively related to active prosecutorial assistance.[98] However, this may very well be an artifact of differing measures of innocence organization involvement. While Webster broadly defines this as any involvement from an innocence organization or agency that reviews the wrongful conviction claim, our study more narrowly defines involvement as playing a, "crucial, direct, and active role in the exoneration."[99] As such, our definition drives down the likelihood that a case is identified as having "crucial, direct, and active" assistance from both the prosecutor and the innocence organization. The second departure from Webster's findings is that we fail to see a statistically significant effect of exoneree race/ethnicity on the type of assistance. While Webster found that both Black and Hispanic individuals were more likely to receive at least minor prosecutorial assistance than White individuals, we observe no effect.[100] Either way, Black individuals are significantly overrepresented among the wrongfully convicted.[101]

As the courts as communities metaphor would suggest, the decision whether to oppose or assist in an exoneration is not a decision that prosecutors make in isolation or solely on the basis

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[95] Webster, *supra* note 9.

[96] Green & Yaroshefsky, *supra* note 26; Medwed, *supra* note 8.

[97] Ken Burns, Ben McMahon & Sarah Burns, *The Central Park Five* [Documentary, 2012]; Tom Shadyac, *Brian Banks* (Biographical Drama, 2019) Ava DeVernay, *When They See Us* [Television Broadcast, Netflix, 2019).

[98] Webster, *supra* note 9.

[99] *Ibid*; Gould et al, *supra* note 60 at 222.

[100] Webster, *supra* note 9.

[101] Talia Roitberg Harmon, "Race for Your Life: An Analysis of the Role of Race in Erroneous Capital Convictions" (2004) 29 Crim Just Rev 76; Samuel Gross, Maurice Possley & Klara Stephens, *Race and Wrongful Convictions in the United States* (Irvine, National Registry of Exonerations, 2017).

of case-level factors.[102] Rather, they make decisions about how to engage in a post-conviction claim of innocence within the context of organizational and environmental pressures as well. That said, in the current study, we are only able to identify and properly measure two particular organizational and environmental pressures that appear to sway prosecutors' decisions to engage in an exoneration investigation. Only the length of the time the district attorney has been in office and the region of the country appear to have this broad organizational/environmental influence on prosecutorial assistance.

Of the district attorney factors, only length of time in office was statistically significant. This may suggest that when district attorneys are more established and secure in their role, they feel more comfortable revisiting old cases and assisting in wrongful conviction investigations. This finding appears to run counter to Laurie Levenson's notion of the cynical senior prosecutor.[103] Her work suggests that more senior prosecutors have more conflicts of interest, tend to rely on their gut instincts, trust the credibility of their colleagues' work, and trust their informants. Each of those tendencies act to dissuade assistance.[104] While that may be true for line prosecutors, our finding suggests that the stability of the district attorney may in fact minimize the perceived risk of assisting. If the district attorney has repeatedly been re-elected (or weathered multiple changes in local political administrations), their office may be able to tolerate a bit more risk.

Of the county-level factors, only region appears to be systematically related to post-conviction prosecutorial behavior. We find that prosecutors in the Midwest are more likely to oppose an exoneration than prosecutors in the West. Importantly, this effect is independent of our measures of county political affiliation, punitiveness, and ruralness. As such, it remains to be seen what the particular mechanism is that explains this regional variation in prosecutorial behavior. Future research is needed to adjudicate if it is regional access to innocence organizations, the quality of professional training on post-conviction responsibilities, or some other regionally specific factor, or set of factors, that explains the variation in prosecutorial assistance in exonerations.

A. Limitations and Future Research

In considering each level of analysis in tandem, it is evident the case-level factors exert greater influence over prosecutors' decisions to get involved in an investigation than broader organizational and county level factors. The lack of statistically significant findings at the county-level is not particularly surprising, as the effect of more distal factors tends to be more diffuse than factors that are more proximal.[105] There is support for our findings in a related body of literature. Haynes, Ruback, and Cusick draw from the courts as communities framework but apply it to sentencing outcomes, rather than prosecutorial discretion. They, like many others, find that case specific factors such as offense severity and prior record are routinely the strongest predictors of

[102] Eisenstein, Flemming & Nardulli, *supra* note 10.

[103] Levenson, *supra* note 23.

[104] *Ibid.*

[105] Stacy Hoskins Haynes, Barry Ruback & Gretchen Ruth Cusick, "Courtroom Workgroups And Sentencing: The Effects Of Similarity, Proximity, And Stability" (2010) 56 Crime Delinq 126 [*Haynes, Ruback & Cusick*].

sentencing outcomes.[106] The more distal factors, such as percent Republican or poverty rate, generally have a weaker direct effect on sentencing outcomes.[107] If there is a true effect of regional/political culture or demographic context on prosecutors' willingness to assist in wrongful conviction investigations, we would likely need greater statistical power from additional cases to detect these more diffuse effects.

This brings us to several limitations in the current study. One central limitation is the limited number of cases we are able to analyze. With only 75 cases, and an ordered outcome, we have fairly limited statistical power. This makes it difficult to find statistically significant differences, even if they may exist. Further, the small number of cases required us to limit our models to only the most theoretically relevant variables at each of the three levels rather than being able to analyze all of the variables in a single model because we simply did not have sufficient degrees of freedom to justify such a large model.

A second primary limitation in the current study is a matter of a relevant comparison group. All of the cases in our sample resulted in an exoneration, so we cannot speak to instances where there was a wrongful conviction claim and investigation but not an exoneration. As such, the results of the current study should be understood as relating to prosecutorial involvement among cases that are ultimately exonerated. Different trends may exist among cases that are investigated but not formally exonerated. This motivates the first proposal for further research. Future studies ought to collect data on prosecutorial involvement in cases that are investigated but not exonerated and those that result in an exoneration. By doing so, future research could speak to prosecutorial involvement in wrongful conviction investigations more broadly than just those that result in successes. With the additional cases, future research could investigate cross-level interactions between case factors and the broader organizational and county-level factors to determine if the effect of case-level factors on prosecutors' decisions to get involved in a wrongful conviction investigation vary by jurisdiction.

B. Policy Considerations

Although we find little evidence that prosecutorial involvement in exonerations differs systematically between counties, there are a number of institutional reforms that may help minimize the more proximal barriers to prosecutorial assistance. In fact, the general lack of county-level variation in prosecutorial involvement suggests that the successful reforms in one county may be successfully applied in another county. Broadly, our findings suggest that prosecutors are more likely to assist and less likely to oppose exoneration efforts when the stakes are lower. As such, we offer several recommendations for lowering the stakes of assisting in exonerations.

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[106] Jill K Doerner & Stephen Demuth, "The Independent and Joint Effects of Race/Ethnicity, Gender, and Age on Sentencing Outcomes in U.S. Federal Courts" (2010) 27 Just Q 1; Darrell Steffensmeier & Stephen Demuth, "Ethnicity and Judges' Sentencing Decisions: Hispanic-Black-White Comparisons" (2001) 39 Criminol 145; Darrell Steffensmeier & Stephen Demuth, "Ethnicity and Sentencing Outcomes in U.S. Federal Courts: Who is Punished More Harshly?" (2000) 65 Am Soc Rev 705.

[107] Haynes, Ruback & Cusick, *supra* note 105; Jeffery Ulmer & Mindy Bradley, "Variation in Trial Penalties Among Serious Violent Offenses" (2006) 44 Criminol 631.

Our findings lend support for the implementation of Conviction Review Units (CRUs) or Conviction Integrity Units.[108] We find that prosecutors are more likely to actively oppose exonerations when the stakes are higher, and CRUs offer a way to remove some of the burden on prosecutors to weigh the costs and benefits of getting involved in an exoneration. By shifting the responsibility for reviewing post-conviction claims of innocence from the discretion of the individual prosecutor involved to a specially assigned unit, district attorneys can increase the likelihood that their office equitably reviews wrongful conviction claims. Importantly, attorneys assigned to conviction review should work to become experts on the matter and implement efficient and unbiased systems for vetting claims.[109]

Hollway's national review of CRUs identifies three best practices.[110] CRUs can be most effective when they are independent from the district attorney's office, flexible in accepting all plausible claims of factual innocence for a preliminary review, and transparent in exchanging information and publishing policies and procedures. Although Hollway identifies independence from the district attorney's office as a best practice, there is a tradeoff. The independence of conviction review organizations can reduce potential conflicts of interest and can promote public confidence in the fairness of the review process, however, internal units have greater access to resources and evidence and, thus, may be able to review cases more efficiently.[111] Whether internal or independent, CRUs can help to relieve prosecutors from having to be both a player and a referee.[112]

For offices that may not have the resources or staff capacity to implement a CRU, we offer a second policy reform. District attorneys should initiate a change in performance standards.[113] Our results suggest that offices where the district attorney is more established (has served longer) are more likely to provide active assistance in exonerations. We suggest that established district attorneys should leverage this influence. Instead of focusing on conviction rates in isolation, factors like declining weak cases, decreasing charge severity for overcharged cases, and assisting in wrongful conviction investigations ought to be factored into the overall performance evaluation of line prosecutors. In his research on prosecutorial responses to police misconduct, Erwin Chemerinksy identified the lack of professional incentives to investigate possible police misconduct as particularly problematic.[114] In the Los Angeles District Attorney's office where Chemerinksy conducted his study, there was a widespread in belief among line prosecutors that promotion was a matter of efficiency and conviction rates. As such, efforts to investigate police wrongdoing would jeopardize professional relationships without offering any sort of professional reward.

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[108] John Hollway, "Conviction Review Units: A National Perspective" (2016) Faculty Scholarship at Penn Law 1614 [*Hollway*]; Green & Yaroshefsky, *supra* note 26.

[109] Medwed, *supra* note 8.

[110] Hollway, *supra* note 108.

[111] Green & Yaroshefsky, *supra* note 26.

[112] Zacharias, *supra* note 2.

[113] Medwed, *supra* note 8; Erwin Chemerinsky, "The Role of Prosecutors in Dealing with Police Abuse: The Lessons of Los Angeles" (2001) 8 Va J Soc Pol'y & L 305 [*Chemerinsky*].

[114] Chemerinsky, *ibid*.

Medwed argues that lack of incentive to redress wrongs is also relevant to the post-conviction context.[115] Importantly, Medwed notes that, in many cases, assisting rather than stonewalling an investigation is more efficient and minimizes negative media attention.[116] If the prosecution works with defense, they can expedite the investigation and, potentially, position the office as a champion of the exoneration. Joining with Medwed, we argue that district attorneys should explicitly redefine the parameters for promotion to include corrective measures such as dismissing superfluous charges and providing active assistance in credible exoneration investigations. Included in this redefinition of performance measures comes a need to more thoroughly document prosecutors' behavior in the post-conviction phase. If prosecutors are going to be held accountable for their treatment of wrongful conviction claims, there needs to be robust data on the timeliness and completeness of the information prosecutors contribute to exoneration investigations. By establishing prosecutorial assistance as a priority from the top, district attorneys can lower the stakes for their line prosecutors.

Formalized units for conviction review and reprioritized professional metrics offer some relief from the psychological and institutional barriers to prosecutorial assistance by making post-conviction assistance a routine that can be rewarded. However, the lack of legal requirements guiding prosecutorial behavior in the post-conviction phase stills leaves room for inter-jurisdictional and inter-prosecutor variation in responses to wrongful convictions. This highlights the need for states to impose formal postconviction obligations. At a minimum, states should adopt Model Rule 3.8(g) and (h), which gives prosecutors an affirmative responsibility to investigate "new, credible and material evidence."[117] Adopting these amendments is not simply a matter of compelling prosecutors to act a certain way. Rather, formal legal regulation provides cover for prosecutors from potentially upset victims or the public. By removing some of the discretion in how to respond, prosecutors can simply do their duty. Certainly, none of our policy recommendations in isolation will eliminate prosecutorial opposition to wrongful conviction investigations. However, if taken together, these recommendations offer a path forward to ensure that wrongfully convicted individuals have a second chance at justice.

VI Conclusion

Although there is significant room for future research to advance the current study, we provide an initial analysis that addresses some of the gaps identified in prior literature on prosecutorial involvement in exonerations. Norris and Bonventre called for greater attention to organizational perspectives in understanding wrongful convictions, and Webster called for analysis of the county legal culture in understanding prosecutorial assistance in exonerations.[118] We address each of these gaps by looking at prosecutorial involvement from three perspectives – case-level, district attorney level, and county level. We find that case level factors are the most strongly related to prosecutorial involvement. Broadly, our findings at the case-level suggest that when the stakes are lower (the crime is less serious, there is no alleged misconduct, the defendant

[115] Medwed, *supra* note 8.

[116] *Ibid.*

[117] Boehm, *supra* note 8; Michele K Mulhausen, "A Second Chance at Justice: Why States Should Adopt ABA Model Rules of Professional Conduct 3.8(g) and (h)" (2010) 81 U Colo L Rev 309.

[118] Norris & Bonventre, *supra* note 9; Webster, *supra* note 9.

has already served time), prosecutors are less likely to oppose an exoneration effort and more likely to assist. At the organizational level, the longer the district attorney had been in office at the time of the exoneration, the more likely the office is to extend prosecutorial assistance. In line with the lower-stakes framework, this suggests that more established district attorneys may be able to withstand more risk. Finally, at the county-level, we observe regional variation in prosecutorial assistance with prosecutors in the West being more likely to assist than prosecutors in the Midwest.

Prosecutorial opposition to an exoneration compounds the injustice of a wrongful conviction. Yet, when the potential professional and organizational costs of an exoneration are high, it is especially hard for prosecutors to see a defendant as innocent. For that reason, we support specializing and, when possible, externalizing conviction review to remove some of the burden from individual prosecutors and to increase access to justice. Secondly, we propose that district attorneys explicitly redefine professional evaluation metrics to include corrective measures, not just convictions. Finally, states should adopt formal legal regulation directing prosecutors' post-conviction responsibilities. Minimizing prosecutorial opposition is essential to rectifying wrongful convictions as efficiently as possible. For a wrongfully convicted individual, each delay or refusal to turn over evidence translates into days, weeks, or even years spent incarcerated, out of the workforce, and away from loved ones. The difference between a tumultuous and protracted path to exoneration like that of Clarence Elkins and being "one of the lucky ones" like Joseph Abbitt turns on the discretion of the prosecutor. In order to minimize the undue influence of case-level factors and broader organizational and county-level pressures, prosecutorial involvement in exonerations needs to be a matter of standard practice not of prosecutor' preference.

Unveiling Wrongful Convictions Between the U.S. and Italy:

Cross-Learning From Each Other's Mistakes

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This paper focuses on the issue of wrongful convictions as it emerged in the U.S.A. during the nineties and subsequently gained attention throughout Europe. The first part focuses on the factors that have brought the issue of wrongful convictions to light and on the impact that the American experience has had on the European Criminal Systems' acknowledgment of the problem. The second part suggests that the perspective of the Italian jurist might be privileged when confronted with the topic of wrongful convictions, as the Italian criminal justice system was designed to combine the best aspects of both inquisitorial and adversarial systems. For this reason, one would expect the Italian system as generating few wrongful convictions. Facts and figures, however, do not support this expectation. The third part therefore focuses on those that might be the main causes for wrongful convictions within the Italian system, and it subsequently points out one major flaw of the Italian approach to the issue of wrongful convictions: the absence of a national database providing detailed information on previous cases of wrongful convictions. The paper then takes the U.S. National Registry of Exonerations and the establishment of conviction integrity units as positive examples from which Italy should learn. The conclusive part highlights one positive aspect of the Italian system: the limitations to plea bargaining and suggests that they might be taken as an example in other countries' reforms of such mechanism.

[1] This paper is, in its entirety, the result of a shared reflection of the authors; however, Prof. Luca Lupária drafted paragraphs I and II while Chiara Greco drafted paragraphs III and IV.

I Introduction: The Evolution on the Perception of Wrongful Convictions; The Long Path from the U.S. to Europe

In one of his first television appearances of 2020, Italy's Ministry of Justice has stated, twice, that "innocent people don't end up in jail".[2] The latest information concerning unlawful detentions, provided by the Minister of Economics, however, proves quite the opposite. Between 1991 and 2018, indeed, approximately 27,500 cases of unjust detention[3] and 153 cases of wrongful conviction have been reported in Italy.[4] While not all of those individuals might have been factually innocent,[5] most of them were, indeed, legally innocent, meaning that it was ascertained there was not sufficient evidence to convict them. This is to mean that, in fact, innocent people do 'end up in jail', and any modern State is bound to ask itself what are the reasons behind such past mistakes and what are the instruments that might help avoiding them in the future.

As it is well re-known, the starting point of the ever-increasing debate concerning wrongful convictions can be traced back to the '90s, in the U.S., and has profoundly overcome the American boundaries ever since. Albeit there had been scholars that had previously brought attention to such an issue,[6] the nineties are still considered to be the moment from which academics and law practitioners started to take it 'seriously', analyzing cases of previous convictions in order to have them overturned and to shed light on the causes of such mistakes.[7] Scholars worldwide tend to agree that, before the nineties, little space was given to the issue because of a conservative

[2] Online: <http://www.today.it/politica/bonafede-innocenti.html>. The article contains both the Ministry's statement and his following explanations.

[3] With this expression we refer to those instances where an individual was held in pre-trial detention, according to Article 285 of the Italian code of criminal procedure (from now on, also "cpp"), and afterwards was acquitted of all charges (or his/her detention proved to be unjustified).

[4] Online: <https://www.errorigiudiziari.com/errori-giudiziari-quanti-sono/>. Bear in mind that the data herein provided are not coming from the Minister of Justice but from the Minister of Economics and Finance; indeed, such data refers to the number of cases in which the State had to pay compensation to the individual. For this reason, the numbers herein provided might be different from the 'real' number of 'ascertained' wrongful convictions, as not every 'exoneree' may seek or be accorded financial compensation.

[5] We use the term 'factually innocent' to indicate those individuals that did not materially commit the crime they were accused of. The difference between material innocence and probative innocence (meaning there is no sufficient evidence to prove guilt) is well explained by Larry Laudan, *Truth, Error and Criminal Law. An Essay in Legal Epistemology* (New York: Cambridge University Press, 2006).

[6] Among others, see Edwin M Borchard, *Convicting The Innocent: Sixty-Five Actual Errors Of Criminal Justice* (Garden City: Garden City Publishing Company, 1932); Ruth Brandon & Christie Davies, *Wrongful Imprisonment: Mistaken Convictions And Their Consequences* (Hamden: Archon Books, 1973); Jerome Frank & Barbara Frank, *Not Guilty* (Garden City: Doubleday, 1957); Erie Gardner, *Court Of Last Resort* (New York: Pocket Books, 1952); Edward Radin, *The Innocents* (New York: William Morrow, 1964)

[7] In this respect, it is worth mentioning Hugo Bedau & Michael Radelet, "Miscarriages of Justice in Potentially Capital Cases" (1987) 40:1 Stan L Rev 21; Scott Christianson, *Innocent: Inside Wrongful Conviction Cases* (New York: New York University Press, 2004); Ronald Huff, Arye Rattner & Edward Sagarin, *Convicted But Innocent: Wrongful Conviction And Public Policy* (London: Sage, 1996); Barry Scheck, Peter Neufeld & Jim Dwyer, *Actual Innocence: Five Days To Execution And Other Dispatches From The Wrongly Convicted* (New York: Doubleday, 2000) [*Scheck, Neufeld & Dwyer*].

approach concerning justice.[8] The almost universally accepted reason behind such a rapid drift in public and institutional attention towards wrongful conviction is twofold.

On the one hand, during the nineties science had reached the ability to match with sufficient precision DNA profiles, and those techniques started to be used in court;[9] as it has been noted, "before the invention of DNA testing, the problem of convicting the innocent remained largely out of sight. Many doubted that a wrongful conviction could ever occur".[10] While DNA testing is frequently used to convict a suspect,[11] it was deeply precious in securing hundreds of exonerations in cases where biological samples had not been tested or new technologies had emerged.[12]

On the other hand, and almost needless to recall, in 1992 professors Barry C. Scheck and Peter J. Neufeld founded the first 'Innocence Project' within the Benjamin N. Cardozo School of Law at Yeshiva University in New York City. As the project started to gain public acknowledgement for being able to effectively assist convicts and have them overturn their sentence, that what had begun as the legal clinic of a single U.S. University turned out to be a world-wide phenomenon.[13] Innocence Projects started to flourish all around the U.S. and reached Europe, with Italy having its Innocence Project[14] founded in late 2013 (the project is now based at Roma Tre University, and in 2014 was admitted to the Innocence Network). Those projects not only have been of incredible help to those that seek legal assistance, but – and perhaps more importantly – were able to draw the public's attention on the causes that lie behind wrongful convictions and helped foster academic research.

DNA testing and Innocence Projects, combined with the fact that, as many know, the U.S. has the largest prison population in the world and one of the highest percentages of individuals

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[8] Ronald Huff & Martin Killias, eds, *Wrongful Convictions: International Perspectives on Miscarriage of Justice* (Philadelphia: Temple University Press, 2008) 72 *[Huff & Killias]*; Richard A Leo, "The Criminology of Wrongful Conviction: A Decade Later" (2017) 33 J Contemp Crim Just 82.

[9] In fact, the first time DNA was actually applied for identification purposes was in 1985, by Alec Jeffreys from the University of Leicester. See Huff & Killias, *ibid* at 42.

[10] Brandon L Garrett, *Convicting the Innocent: When Public Prosecutors Go Wrong* (Cambridge: Harvard University Press, 2011) 5 [*Garrett*]. The work has been recently updated in Brandon L Garrett, *Convicting the Innocent Redux* in Daniel Medwed, ed, *Wrongful Convictions and the DNA Revolution: Twenty-Five Years of Freeing the Innocent* (Cambridge: Cambridge University Press, 2017) 40.

[11] Indeed, as noted by Luca Lupária, "Cultura della Prova ed Errore Giudiziario: Il Processo Penale in Discussione" in Giovanni Paolozzi, Luca Marafioti & Luca Lupária, eds, *Errori Giudiziari e Background Processuale* (Torino: Giappichelli, XV, 2015) [*Paolozzi, Marafioti & Lupária*] XI, DNA testing in Europe is still conceived at its core as a decisive proof of guilt.

[12] According to the National Registry of Exonerations on 2 February 2020 out of 2565 exonerees, 504 have had DNA play a decisive role in their exoneration; see online: <https://www.law.umich.edu/special/exoneration/Pages/Exoneration-by-Year.aspx>. Another good source of information and data on 367 DNA exonerations is *Convicting the Innocent*, an online Database, online: <www.convictingtheinnocent.com> that updates the research by Professor Brandon Garrett, *supra* at note 10.

[13] Jon B Gould & Richard A Leo, "One Hundred Years Later: Wrongful Convictions After A Century Of Research" (2010) 100:3 J Crim L & Criminol 825 [*Gould & Leo*]; Allison D Redlich & John Petrila, eds, "The Age of Innocence: Miscarriage of Justice in The 21st Century" (2009) 27 Behav Sci & L 297; Scheck, Neufeld & Dwyer, *supra* note 7.

[14] Online: <https://italyinnocenceproject.org>. The Italy Innocence Project is directed by Professor Luca Lupária.

detained,[15] made it possible for the U.S. to become the home of the largest set of wrongful convictions brought to light by lawyers (and not only using DNA technology). Thanks to the immense public impact that such a high number of reversed convictions had, scholars throughout the globe have devoted their attention to studying the causes of wrongful convictions and to the elaboration of possible remedies.

Among the most positive outcomes of the nineties' revolution concerning wrongful convictions stands the fact that it has transcended American boundaries; indeed, the exonerees' phenomenon has brought scholars throughout Europe to analyze their own past judicial decisions and legal systems, in order to verify whether the same *virus* existed also within the Continent. Unsurprisingly, the answer was positive, and Europe was obliged to face a long-standing *taboo*, the reluctance to recognize that European criminal justice systems can, indeed, generate wrongful convictions.[16]

Thanks to that, lawmakers throughout Europe are slowly improving remedies to overturn convictions, while some States have created *ad hoc* mechanisms appointed to verify the necessity to reopen final decisions.[17] In addition to this, the exonerees' outburst has offered the opportunity for continental jurists to reflect on the reliability of some traditional evidence, often overrated within courtrooms.[18] Still, the shift towards 'safer' criminal justice systems is far from being

[15] Garrett, *supra* note 10 at 245. According to the statistics published by the Bureau of Justice Statistics of the U.S. Office of Justice Programs, online: <https://www.bjs.gov/index.cfm?ty=dcdetail&iid=269> latest data available in 2017) that every year used to collect the data on the penitentiary situation in the U.S., in 2013, a peak of 1,574,700 inmates had been reached, E Ann Carson, "Prisoners in 2013" (U.S. Department of Justice, BJS, 2014) 1, diminished to 1,526,800 at 31 December 2015, E Ann Carson & Elizabeth Anderson, "Prisoners in 2015" (U.S. Department of Justice, BJS, 2016) 1. Other important information on mass incarceration in the U.S. can be found on the "The Sentencing Project" website (http://www.sentencingproject.org/issues/incarceration/).

[16] See Huff & Killias, *supra* note 8 with regard to: Chrisje Brant, "The Vulnerability of Dutch Criminal Procedure to Wrongful Conviction" at 157; Nathalie Dongois, "Wrongful Convictions in France: The Limits of "Pourvoien Révision" at 249; Isabel Kessler, "A Comparative Analysis of Prosecution in Germany and the United Kingdom: Searching for Truth or Getting a Conviction" at 213; Martin Killias, "Wrongful Convictions in Switzerland: The Experience of a Continental Law Country" at 139; Emil W Plywaczewski, Adam Górski & Andrzej Sakowic, "Wrongful Convictions in Poland: From the Communist Era to the Rechtstaat Experience" at 273; Clive Walker & Carole McCartney, "Criminal Justice and Miscarriages of Justice in England and Wales" at 183. See also Luca Lupária, ed, *Understanding Wrongful Conviction: The Protection of The Innocent Across Europe And America* (Milano: Wolters Kluwer, 2015) 2 [Lupária 1].

[17] See Ulf Stridbeck & Syein Magnussen, "Prevention of Wrongful Convictions: Norwegian Legal Safeguards And The Criminal Cases Review Commission" (2012) 80:4 U Cin L Rev 1373; Syein Magnussen, "Opening potentially Wrongful Convictions – Look to Norway" (2012) 58:2 Crim LQ 267. For an overview of the Dutch experience see Theodore A De Roos and Johannes F Nijboer, "Wrongfully Convicted: How the Dutch Deal with the Revision of their Miscarriages of Justice" (2001) 22 Crim LF 567. See Geert-Jan Alexander Knoops, *Redressing Miscarriages of Justice: Practice and Procedure in National and International Criminal Law Cases* (The Hague: Sdu Uitgevers, 2006) [*Knoops*].

[18] Lupária 1, *supra* note 16 at 3. On eyewitness identification see Amy Bradfield Douglass & Nancy K Steblay, "Memory Distortion in Eyewitnesses: A Meta-Analysis of the Post-Identification Feedback Effect" (2006) 20 Applied Cognitive Psychol 859. On the accuracy level of DNA as incriminating evidence see Daniel S Medwed, ed, "Symposium: Beyond Biology, Wrongful Conviction in The Post-DNA World" (2008) Utah L Rev 1. On the risks of

completed, as cases of wrongful convictions are still quite frequent and national authorities are not always willing to admit their flaws – as we noted at the beginning of this article.

In this paper, therefore, we seek to provide readers with the perspective of an Italian jurist on wrongful convictions: as many of its continental counterparts, Italy as well has to face its own 'wrongful convictions' problem. Despite the term 'judicial error' being contained in Italy's Constitution,[19] revision instances are rarely welcomed by appeal courts, while thousands of individuals every year seek compensation for the unjust detention they have suffered.

II The Italian System and its "Privileged Perspective" on Wrongful Convictions

Some authors have argued in the past that in order to understand how to prevent wrongful convictions, an 'interesting thought exercise' would have been to imagine a new, hybrid criminal justice system, combing the best aspects of both inquisitorial and adversarial systems.[20]

Ideally speaking, then, this would entail that when confronted with the topic of wrongful convictions, the perspective of those who are surrounded by the Italian criminal procedure should be privileged. Indeed, since 1988's reform, the Italian criminal justice system stands out, among its European counterparts, for being the 'genuinely hybrid' one, showing both inquisitorial and adversarial traits.[21]

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new scientific methods see Brandon L Garrett & Peter Neufeld, "Invalid Forensic Science Testimony and Wrongful Convictions" (2009) 95 VA L Rev 1.

[19] Article 24 para 4 of the Italian Constitution states that "*The law shall define the conditions and forms of reparation in case of judicial errors*".

[20] Martin Killias & C Ronald Huff, Wrongful Convictions and Miscarriages of Justice – What Did We Learn? in Martin Killias & C Ronald Huff, eds, *Wrongful Convictions and Miscarriages of Justice: Causes and Remedies in North American and European Criminal Justice System* (New York: Routledge, 2013) 393 [*Killias & Huff*].

[21] For an in depth yet approachable summary of Italian criminal procedure see Luca Lupária & Mitja Gialuz, "The Italian Criminal Procedure Thirty Years after the Great Reform" (2019) 1 Roma Tre L Rev 26 [*Lupária & Gialuz*]; Luca Marafioti, "Italian Criminal Procedure: A System Caught Between Two Traditions" in John Jackson, Maximo Langer & Peter Tillers, eds, *Crime, Procedure and Evidence in a Comparative and International Context* (Portland, Hart, 2008) 81 [*Jackson, Langer & Tillers*]; for an English translation of the Italian code of criminal procedure, it might be useful to refer to Mitja Gialuz, Luca Lupária & Federica Scarpa, *The Italian Code of Criminal Procedure: Critical Essays and English Translation* (Milano: Wolters Kluwer, 2017) [*Gialuz, Lupária &Scarpa*]. As it has been noted, any simplistic classification of the Italian system among the adversarial or inquisitorial ones ought to be avoided, Lupária & Gialuz, *ibid* at 29. The system, notwithstanding having embraced a vast array of features traditionally pertaining to adversarial systems, still bears the traces of an inquisitorial past. See also Ennio Amodio, "The Accusatorial System Lost and Regained: Reforming Criminal Procedure in Italy" (2004) 52 Am J Comp L 489; Elisabetta Grande, "Italian Criminal Justice: Borrowing and Resistance" (2000) 48 Am J Comp L 227; Michele Panzavolta (2005) "Reforms and Counter-Reforms in the Italian Struggle for an Accusatorial Criminal Law System" (2005) 30 NCJ Int'l L & Com Reg 577; William Pizzi & Mariangela Montagna, "The Battle to Establish an Adversarial Trial System in Italy" (2004) 25 Mich J Int'l L 429.

In fact, the Italian phase of pre-trial investigation is essentially governed by the public prosecutor (*pubblico ministero*).[22] Albeit being part of the judiciary, she is entrusted with functions that differ significantly from those of the judge. The public prosecutor is indeed conceived as a party, like the defendant, though being bound by the compulsory prosecution principle[23] and formally obliged to also investigate exculpatory evidence.[24]

At the end of the pre-trial phase the public prosecutor will either request the case to be brought to trial (*richiesta di rinvio a giudizio*) or to be dismissed (*richiesta di archiviazione*). These requests will be evaluated by another *ad hoc* judge, who will have to assess whether the evidence collected by the prosecutor is, *prima facie*, enough to sustain the accused at trial.

When the judge decides that the evidence is, indeed, sufficient, she will form two separate 'dossiers'; one will remain in the public prosecutor's office; the other one will be given to the trial judge and will contain only the minutes of those activities that, despite being carried out before the trial, are non-repeatable. This rule is aimed at avoiding that, in principle, the materials that were acquired during the investigation are shown to the trial judge, so that she can start the trial with a 'virgin mind' (*tabula rasa*) and that all evidence is gathered during the trial *strictu sensu.*[25]

The 1988 reform, indeed, has transposed into the Italian system the adversarial principles of orality, immediacy and confrontation: the accused has the right to be judged upon the evidence, and solely the evidence, which is formed during the trial in front of the trial judge, and she has the right to confront her accusers and cross-examine witnesses.[26] Lastly, technical defence is compulsory throughout the trial and the suspect-accused benefits of 'the most radical protection' of her right to silence.

While most of the features we have described so far will be familiar to those that are used to adversarial systems, the Italian Code of Criminal Procedure still provides with multiple elements that reveal Italy's inquisitorial background. First, judges have the power to order evidence to be acquired *ex officio*, if they deem it necessary (see art. 422 and 507 c.p.p.).[27] Moreover, judges can

[22] Her role is similar to that played by the District Attorney in the U.S.A., albeit they structurally differ – the public prosecutor being a magistrate as well as the judge.

[23] The principle is embedded in art 112 of the Italian Constitution; despite its formal proclaim, scholars tend to agree on the fact that, in reality, prosecutors enjoy wide discretion as to whether to prosecute or not an individual.

[24] According to Article 358 of the Italian Code of Criminal Procedure "The Public Prosecutor shall carry out any activity necessary for the purposes referred to in Article 326 and shall also investigate facts and circumstances in favor of the suspected person". See Luca Marafioti, 'Italian Criminal Procedure: A System Caught Between Two Traditions" in Jackson, Langer & Tillers, *supra* note 21.

[25] Lupária and Gialuz, *supra* note 21 at 53; Julia Grace Mirabella, "Scales of Justice: Assessing Italian Criminal Procedure Through the Amanda Knox Trial" (2012) 30:1 BU Int'l LJ 235 [*Mirabella*].

[26] This 'golden rule', however, suffers multiple exceptions, and albeit the written material courts might use are formally limited, there is still an ongoing tendency to consider as evidence the results of the public prosecutor's investigation.

[27] Though these powers were designed to be used only in exceptional circumstances, Italian judges have widely resorted to them – struggling to adjust to the new passive role that the reform wanted them to play. See Luca Marafioti, "Italian Criminal Procedure: A System Caught Between Two Traditions" in Jackson, Langer, Tillers, *supra* note 21 at 93; the Author underlines that judges are still assuming a dominant position within the trial; even if such an attitude

also question witnesses (albeit only after the parties' cross-examination) and indicate to the parties new issues that need to be addressed. Second, the Italian appellate system has been left mainly untouched by the reform, and still provides the parties with two additional 'instances' of judgment.[28] Third, Italy did not fully implement the U.S plea bargaining mechanism: indeed, its Italian version (so called '*patteggiamento'*) is only available for minor offences and has to be subjected to a deep and comprehensive evaluation by the judge.[29]

If the original plan of 'taking the best from the adversarial tradition while clinging to the positive aspects of the inquisitorial one' had been perfectly completed, then, one would expect the Italian system as generating few, if any, wrongful convictions.

Facts and figures, however, do not support this expectation. Albeit having undergone a deep and complex renovation process, the Italian system is far from perfect – especially when it comes to wrongful convictions. As it has been noted at the beginning of this paper, within the (not so long) span of less than thirty years, Italy had to face at least 153 cases of wrongful conviction.[30] We use the expression 'at least', as this number is in no way truly representative of the real proportion of wrongful convictions. Indeed, a reversal of a previous final judgment (this being, *strictu sensu*, a wrongful conviction) can only occur in extremely exceptional circumstances and – in addition to this – the Ministry of Justice provides no official data as to how many and which criminal cases turned out to be wrongful convictions.

Moreover, procedural reforms had little impact on another worrisome feature of the Italian criminal system: the 'use and abuse' of pre-trial detention. Needless to remembers, the average Italian criminal trial is extremely lengthy when compared to other European States or the U.S.[31] The slowness of the Italian criminal justice machine has two perverse effects: on the one hand, it can cause the suspect to be acquitted because of statutory limitations, thus undermining the deterrent effect of criminal law. On the other hand, it leaves citizens unsatisfied, as they perceive that the State is not doing enough to effectively keep society safe and prosecute those responsible for serious crimes.

To counter these effects, pre-trial detention is often abused,[32] in the sense that it is resorted to more often than necessary, so as to re-assert the deterrent effect of criminal justice and satisfy the public's demand for safety. This entails that, pending trial, a large part of Italian suspects suffers long periods of pre-trial detention, sometimes multiple years, before being found eventually not guilty. Although pre-trial detention cannot be imposed for minor offences, and is virtually

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could be attributed to the need to search for the truth, in practice it serves as a counter-balance for weaknesses in prosecutions. See Mirabella, *supra* note 25.

[28] As it has been noted, such an appellate system reveals that the Italian legislator had no real trust in the ability of the first-instance trial to reach the truth, despite its 'adversarial' renovation. It has additionally been noted that "the appeals process plays as large a part in the effort to ascertain truth as the trial itself" Mirabella, *supra* note 25 at 253.

[29] See art 444 ff cpp.

[30] Online: <https://www.errorigiudiziari.com/errori-giudiziari-quanti-sono/>.

[31] See online: <https://rm.coe.int/rapport-avec-couv-18-09-2018-en/16808def9c> at 311.

[32] Such a phenomenon has been described by 'always more alarming', see Frederica Centorame, "Valutazione del Fumus Commissi Delicti e Ingiusta Detenzione Cautelare" [*Centorame*] in Paolozzi, Marafioti & Lupária, *supra* note 11 at 5.

limited in time, those suspected of having committed serious crimes can spend in pre-trial detention up to six years. Moreover, when it comes to mafia type organizations or terrorism, pre-trial detention seems to be the rule rather than the exception.[33]

The misuse of pre-trial detention explains why during the course of less than thirty years there have been approximately 27,500 cases of wrongful detention, (i.e., cases in which there was no justification to detain the suspect or she was later acquitted of all charges).[34]

The numbers differ significantly if one considers the cases of those who obtained a 'revision' of their conviction pursuant to art. 630 c.p.p. (the Italian equivalent of U.S. exonerees): up to 2018, approximately 153 cases had been reported. This shows that Italy's main concern is indeed that of wrongful pre-trial detention, rather than wrongful convictions (though the latter occur as well). However, since some evidence (serious *indicia* of guilt) is needed for prosecutors to obtain pre-trial detention, flawed evidence can be both the cause of wrongful convictions and unjust detentions.

The overview provided in the last paragraphs is not intended to lead the reader to believe that the huge 1988 reform was useless or, worse, detrimental. On the contrary, the original structure of the 1930 criminal procedure code, born under the fascist era, could no longer be deemed compatible with the Italian Constitution or the European Convention on Human Rights. Change was needed and the transplant of many adversarial principles has profoundly strengthened the rights of the accused.

Such a transplant, however, simply did not solve the issue of wrongful conviction, thus making it necessary to ask ourselves 'What is going wrong and how to fix it?'[35] In answering these questions we believe that there is still much room for the Italian system to learn from its American counterpart, or maybe better, to learn from the multiple and efficient ways in which U.S. State agencies and academics have responded to the rise of the 'innocent movement'. On the other hand, we would also like to point out some 'Italian pros' that, if implemented in the U.S. might reduce the 'American risk' of wrongful convictions.

[33] Some authors speak of "a nearly compulsory detention system for more severe offences" see Lupária & Gialuz, *supra* note 21 at 40. See also Centorame, *ibid* at 7, where the author underlines how - with respect to a list of crimes set out in art 273 (3) cpp - pre-trial detention is applied automatically, simply because of the *nomen iuris* of the crime that the suspect has allegedly committed.

[34] Online, *supra* note 30.

[35] Let's bear in mind, however, that 'official numbers' of compensation accorded to unlawfully detained/convicted individuals only started to be provided in 1991, thus after the new code was adopted. This is to say that we have no way of 'officially' comparing the previous and the actual criminal justice system when it comes to wrongful convictions.

III Learning from the Americans: The Need for a National Registry of Exonerations and *Ad Hoc* Commissions

In this part, after having identified the four factors that have been deemed by scholars the most prominent 'evidentiary' causes of wrongful convictions[36] - we will try to understand whether such causes can be said to operate in the Italian system as well. Spoiler alert, the lack of data will render our mission quite complex, thus leading us to propose some possible reforms that we consider indispensable in order to better understand the legal and root causes of the Italian wrongful convictions.

A. The Most Common Causes of Wrongful Convictions Discovered in the U.S. Happening in Italy

a. False Confessions

One of the causes of wrongful convictions among which there seems to be almost unanimous consensus is that of false or coerced confessions: [37] though it may seem highly unreasonable, and therefore rare, for someone to confess to a crime she didn't commit,[38] decades of in-depth studies have proved quite the opposite.[39]

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[36] Knoops, *supra* note 17; Mark Godsey, *Blind Injustice* (Oakland: University of California Press, 2007) 201 [*Godsey 1*]. We have chosen to focus on false confessions, forensic errors, misidentification and jailhouse informants for two reasons; first, there is unanimous consensus of them being the main 'unreliable evidence' concern; second, as with respect to this specific causes there is some Italian literature and case-law we can draw upon.

[37] Specialized literature on the issue of false confessions is extremely vast: see Steven A Drizin & Richard A Leo, "The Problem Of False Confessions In The Post-DNA World" (2004) 82 NCL Rev 891; Steven A Drizin & Marissa Reich, "Heeding the Lessons of History: The Need for Mandatory Recording of Police Interrogations to Accurately Assess the Reliability and Voluntariness of Confessions" (2004) 52 Drake L Rev 619; Luca Lupária, *La Confessione dell'Imputato nel Sistema Processuale Penale* (Milano: Giuffrè, 2006) [*Lupária* 2]; Mark Godsey, "Shining the Bright Light on Police Interrogation in America" (2009) 6 Ohio St J Crim L 711 [*Godsey 2*]; Gisli Gudjonsson, *The Psychology of Interrogations and Confessions: A Handbook* (Chichester: John Wiley, 2003); Saul Kassin, "The Psychology of Confession Evidence" (1997) 52 Am Psychol 221; Saul Kassin & Katherine Neumann, "On the Power of Confession Evidence: An Experimental Test of the Fundamental Difference Hypothesis" 21 Law & Human Behav 460; Richard A Leo, "False Confessions: Causes, Consequences and Implications" (2009) 37:3 J Am Academy Psy & L 344. See also Garrett, *supra* note 10 whose second chapter is entirely devoted to the issue of coerced confessions. More recently, see Godsey 2, *supra* note 37 at 136.

[38] Scholars have pointed out that for a long time it has been vigorously denied that false confessions were even an existing phenomenon; the perspective changed as soon as DNA testing unveiled the falsity of previous confessions. See Garrett, *supra* note 10 at 16.

[39] A suspect or even someone who is not in the radar of the police might confess to an unsolved crime for multiple reasons: she might be seeking public attention, she might hope to protect a loved one who she believes is the culprit, she might hope to receive a more lenient sentence; more frequently, the confession is simply coerced by police pressure. Other factors that have been unveiled as underpinning false confessions are the need to build an alibi for a different crime, mental weakness, wrong self-beliefs. The more the subject is vulnerable, the interrogation techniques harsh and the evidence apparently irrefutable, the more a false confession will seem an easy solution. Studies have also shown that - besides blatant cases in which the confession is violently obtained - the most common way for police officers to obtained a detailed confession of a crime the suspect did not commit is leaking to her facts of the crime she

In most American cases in which false confessions were obtained, the interrogation was not recorded at all or, at best, only some final parts of it were recorded. Despite the suspects having also provided information that was inconsistent with the real facts of the case, false confessions were still considered reliable and ended up in a conviction. This is also due to the fact that, after having secured a confession, police frequently stopped the investigation and failed to investigate the inconsistencies of the case.[40]

Albeit false, and sometimes even blatantly so, confessions are still incredibly powerful evidence at trial, to the point where scholars doubt that juries have the ability to 'put a confession out of mind' even if told to do so.[41]

As opposed to the American experience, the issue of false confessions in Italy has not been made the object of a case based study; for this reason, it appears difficult both to assess the extent to which this phenomenon actually exists in our country and to verify its causes. If one only takes into account 'the law on the books', the Italian system does not seem to give much consideration to confessions within the criminal trial;[42] indeed, confessions are not regulated by the Italian Code of Criminal Procedure, they are not formally considered as evidence and there is no legal guideline as to how judges should evaluate them. The Code takes confessions into account only to allow the trial to commence without a preliminary hearing if the suspect has confessed during the interrogation (*giudizio direttissimo*).

Furthermore, Italian trials are conducted in front of professional judges, not laymen juries, thus theoretically decreasing the risk of the emotional impact brought by a confession. Only for specific (serious yet not technically complex) crimes there is a mixed panel composed by two professional judges and six jurors (*Corte d'Assise,* in line with the French legal tradition).

In addition to this, the Italian system seems to offer all it takes in order to avoid unnecessary pressure to be put on the suspect during interrogation. In fact, what the suspect has said during the interrogation conducted by the police can be used in court only if the accused's lawyer was present; furthermore, after a preventive measure has been executed, only the judge is authorized to interrogate the suspect, thus excluding both the police and the public prosecutor. Lastly, if the suspect is detained, her interrogation needs to be recorded so as to be admissible in court.

Notwithstanding the apparent lack of weight that the system puts on confessions, and all the guarantees mentioned above, there have been in fact cases where false confessions have

might not have otherwise known. The role of police malpractice in fabricating false confession is not a concern exclusive to the U.S.; for the UK experience it is worth mentioning Kessler in Huff & Killias, *supra* note 8 at 234.

[40] See Garrett, *supra* note 10 at 32.

[41] Marvin M Zalman, "The Adversary System and Wrongful Conviction" in Huff & Killias, *supra* note 8 at 71. Page 74 highlights that false confessions overwhelm the jury's decision-making abilities.

[42] Loredana Garlati "Miti Inquisitori: la Confessione tra Ricerca della Verità e Garanzie Processuali" in Luca Lupária & Luca Marafioti, eds, *Confessione, Liturgie della Verità e Macchine Sanzionatorie* (Torino: Giappichelli, 2015) 70 [*Lupária & Marafioti*].

occurred.[43] Setting aside a blatant case in which torture is believed to have been the cause of the confession,[44] the other three cases that we have been able to identify do share the same traits of most of the cases that have been analyzed in the U.S. In one case, the suspect was mentally ill;[45] in the second one, she was supposedly pressured by police, who told her she would have benefit from the confession and that there was other evidence against her and her accomplices;[46] in the third case, he wanted to cast suspicion away from his daughter.[47] While knowing that a few cases cannot serve as a solid basis to conduct an in-depth analysis, they seem to prove that no country is immune from the phenomenon of false confessions, and that the main causes are quite recurring.

In addition to this, Italian scholars have highlighted that the difference between 'the law on the books' and 'the law in action', when it comes to confessions, is quite striking. Confessions end up playing a decisive role in day-to-day judicial experience and shed their light on the whole pre-trial investigation phase. Prosecutors do indeed set out 'traps' to stimulate the suspect's cooperation, pre-trial detention is used in order to gain confessions[48] and there is an ongoing tendency to consider self-incriminatory statements even when obtained outside the criminal trial.[49] Moreover, judges do attribute great value to confessions, and there is a tendency to allow convictions to be based solely on a confession, with no other evidence upholding the prosecutor's theory.[50] Lastly, judges do not frequently make use of the various confessions' reliability parameters that have been elaborated by psychology.

b. Forensic Errors

As we have noted in the introduction, forensic science,[51] especially DNA profiling techniques is one of the main reasons that has brought the topic of wrongful convictions to light

[43] It has been indeed noted that the occurrence of false confessions is quite frequent; see Giulio Garofalo, "La Caduta Del Mito Della "Prova Regina": Confessione E Testimonianza" in Paolozzi, Marafioti & Lupária, *supra* note 11 at 47.

[44] We are making reference to Giuseppe Gulotta, acquitted after 22 years spent in jail because of a confession that was obtained by torture; the case has been made the object of enormous public attention in Italy. See online: <https://www.progettoinnocenti.it/new/nostri-casi/il-caso-gulotta-accolta-la-revisione-dellergastolo-dopo-22-anni-di-carcere/>.

[45] Guglielmo Gulotta, *Innocenza e Colpevolezza sul Banco degli Imputati* (Milano: Giuffrè, 2018) [*Gulotta*] 212.

[46] Ferdinando Imposimato, *L'errore giudiziario. Aspetti Giuridici e Casi Pratici*. (Milano: Giuffrè, 2009) 179.

[47] Giulio Garofalo, "Da Lovanio ad Avetrana: "Appetito di Confessione" e Intolleranza alla Ritrattazione" [*Garofalo*] in Lupária & Marafioti, *supra* note 42 at 115.

[48] Lupária 2. Some authors have noticed that such a distorted use of pre-trial detention still happens in judicial practice although the Italian Code of Criminal Procedure explicitly forbids to consider the suspect's refusal to render a statement as a ground to detain him.

[49] Garofalo, *supra* note 47 at 123.

[50] This is also due to the fact that the Code of Criminal Procedure does not require confessions to be 'corroborated' by other evidence in order to allow the judge to convict.

[51] Forensic science is the use of science to answer legal questions; the definition is provided by Garrett, *supra* note 10 at 85.

during the nineties. Forensic science itself, however, when it translates into forensic errors,[52] is also considered to be one of the most recurring causes for wrongful conviction.[53]

The expression 'forensic error' encompasses multiple instances of mistakes taking place at the various stages of collection, storage and analysis of evidence. First, physical evidence may be incorrectly handled during its collection and thus contaminated,[54] with this error mainly happening at the beginning of the investigation.[55] Second, even when evidence was correctly collected and stored, it may be analyzed using unreliable techniques.[56] Thirdly, even when the methods used

[52] The issue of 'forensic error' is extensively addressed in specialized literature; George Castelle & Elizabeth F Loftus "Misinformation and Wrongful Convictions" in Sandra D Westervelt & John A Humphrey, eds, *Wrongly Convicted, Perspectives On Failed Justice* (New Brunswick: Rutgers University Press, 2001); Itiel E Dror, David Charlton & Alisa A Péron, "Contextual Information Renders Experts Vulnerable to Making Erroneous Identifications" (2006) 156 Foren Sci Int'l 74; Mark Godsey "The Human Factor in Wrongful Conviction" [*Godsey 3*] in Luca Lupária, ed, *Understanding Wrongful Conviction: The Protection Of The Innocent Across Europe And America* (Milano: Wolters Kluwer, 2015) 18 [Lupária 1]; Mark Godsey & Marie Alou, "She Blinded Me with Science: Wrongful Convictions and the 'Reverse CSI-Effect" (2011) 17:4 Tex Weleyan L Rev 481 [*Godsey & Alou*]; David A Harris, *Failed Evidence: Why Law Enforcement Resists Science* (New York: New York University Press, 2012); Barry Scheck & Peter Neufeld, "DNA and Innocence Scholarship" in Sandra D Westervelt & John A Humphrey, eds, *Wrongly Convicted, Perspectives On Failed Justice* (New Brunswick: Rutgers University Press, 2001) [*Westervelt & Humphrey*]; Beatrice Schiffer & Christophe Champod, "Judicial Error and Forensic Science: Pondering the Contribution of DNA Evidence" Huff & Killias, *supra* note 8 at 33; Juelle Vuille, Alex Biedermann & Franco Taroni, "Accounting for the Potential of Error in the Evaluation of the Weight of Scientific Evidence" [*Vuille, Biedermann & Taroni*] in Lupária 1, *supra* note 16 at 39.

[53] In the U.S., a fundamental turning point for the awareness of the problems linked to 'forensic errors' has been the publication in 2009 of a report by the prestigious National Academy of Science, Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* (Washington, DC, NRC, 2009). This publication, released on 18 February 2009 after three years of studies carried out by the Committee on Identifying the Needs of the Forensic Sciences Community and the Committee on Applied and Theoretical Statistics, has clearly underlined the necessity of a serious and critical reevaluation of the entire world of forensic science. For the literature's comments of the report, see D Michael Risinger, "Whose Fault?-Daubert, the NAS Report, and the Notion of Error in Forensic Science" (2010) 38 Fordham Urb LJ 519; D Michael Risinger, "The NAS/NRC Report on Forensic Science: A Path Forward Fraught with Pitfalls" (2010) Utah L Rev 225; Paul C Giannelli (2012) The 2009 NAS Forensic Science Report: A Literature Review, Faculty Publications, Paper no 99, online: <https://scholarlycommons.law.case.edu/faculty_publications/99>.

[54] M Finnebraaten, T Graner & P Hoff-Olsen, "May A Speaking Individual Contaminate the Routine DNA Laboratory?" (2008) Forensic Sci Int'l 421; Nicholas J Port, Victoria L Bowyer, Eleanor A Graham, Madu Batuwangala & Guy N Rutty, "How Long Does It Take A Static Speaking Individual to Contaminate the Immediate Environment?" (2006) 2:3 Forensic Sci Med & Pathol 157; Adam L Poy & Roland A H Van Oorschot, "Beware; Gloves And Equipment Used During The Examination Of Exhibits Are Potential Vectors For Transfer Of DNA-Containing Material" (2006) 1288 Int'l Congress Series 556. When talking about DNA analysis, the authors highlight that other risks are the use of non-pertinent DNA samples and the neglect of other scientific and circumstantial evidence.

[55] Italian scholars have noted that urgent activities carried out by police officials at the preliminary stage of an investigation pose a high risk of evidence contamination, as there is no provision devoted to the specific techniques that ought to be used in order to preserve the evidence.

[56] A method is considered to be unreliable when – according to the scientific community – it does not provide consistent or accurate results; see Garrett, *supra* note 10 at 86. Instances of unreliable techniques are bite-mark or ear-

were reliable, invalid conclusions may still be drawn from them,[57] as might happen if available data are misinterpreted and/or the obtained results are presented at trial in a misleading way.[58]

All the above-mentioned mistakes and their impact on the outcome of the trial can be exacerbated by other contributing factors. Indeed, experts are often biased because they either work for the prosecution or have been provided with specific details of the case; which might mean that the conclusions they present are not fully impartial.[59] In addition to this, legal practitioners – both judges and lawyers – are lacking the scientific knowledge it would take to understand whether a forensic method is reliable and how valid the conclusions presented by the expert are.

The scope of this paper prevents us from offering a complete overview of the most common instances of forensic error; for this reason, in this part we will focus on a specific kind of forensic error that has received less attention compared to its 'brothers', albeit quite common: wiretapping error.[60] Indeed, Italian prosecutors make wide use of interceptions, especially when they are investigating organized crime.[61] Furthermore, when mafia-type associations or other serious crimes are involved, the grounds upon which interceptions can be obtained are extremely ample, thus making it possible for intercepted communications to be one of the first pieces of evidence collected by the prosecutor.

Although the issue of wiretapping errors has not been thoroughly analyzed by scholars, numerous cases of wrongful conviction based on mistaken interceptions have been reported by NGOs.[62] Among the most recurring mistakes are wrong voice identifications, flawed transcriptions and poor comprehension of the content of the communication.

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mark comparison. Another topic quite related to unreliable techniques is the one of unreliable scientific theories, like the SBS, Shaken Baby Syndrome; see Deborah Tuerkheimer, "The Next Innocent Project: Shaken Baby Syndrome and the Criminal Courts" (2009) 87 Wash U L Rev 1.

[57] Itiel E Dror, David Charlton & Alisa A Péron, "Subjectivity and Bias in Forensic DNA Mixture Interpretation" (2011) 51:4 Sci & Just 204; William C Thompson, "Painting the Target Around the Matching Profile: The Texas Sharpshooter Fallacy in Forensic DNA Interpretation" 8 Law Prob & Risk 257.

[58] As an example, scholars and scientists have warned that it is invalid for the analyst to conclude that the DNA could only have come from the defendant; on the contrary, the analyst should only present the relevant statistics; in terms, Garrett, *supra* note 10 at 101. See also Godsey and Alou, *supra* note 52; Juelle Vuille, Luca Lupária & Franco Taroni, "Scientific Evidence and the Right to a Fair Trial Under Article 6 ECHR" (2017) 16 Law Prob & Risk 55.

[59] Itiel E Dror, David Charlton & Alisa A Péron, "Contextual Information Renders Experts Vulnerable to Making Erroneous Identifications" (2006) 156 Foren Sci Int'l 75; Schiffer & Champod in Huff & Killias, *supra* note 8. As it has been noted, 'forensic analysts do not do their work blind'.

[60] Helen Fraser, "How Interpretation of Indistinct Covert Recordings Can Lead to Wrongful Conviction: A Case Study and Recommendations for Reform" in Ron Levy, Molly O'Brien, Simon Rice, Pauline Ridge & Margaret Thornton, eds, *New Directions for Law in Australia: Essays in Contemporary Law Reform* (Canberra: ANU Press, 2017).

[61] Here, it suffices to notice that the prosecutor wishing to intercept a suspect needs to file a request to the preliminary investigation judge, who will rule upon the request and authorize the wiretapping to commence. See art 266 cpp.

[62] See online: <https://www.errorigiudiziari.com/?s=intercettazioni>; many of the cases that were reported, however, involved unjustified pre-trial detention rather than wrongful convictions. As we will see in this paragraph, such a phenomenon is in part to be attributed to the possibility of using 'summaries' of the intercepted communications in order to request pre-trial detention.

Such recurring errors appear to be consistent with the 'wiretapping risks' observed by the few scholars that have addressed the issue; indeed, it has been noted that every phase of the interception process is prone to error. First, during the listening stage difficulties may be caused by background noises or by obsolete recording instruments; furthermore, those who speak may use different languages or dialects, talk extremely fast or try to mask their voice. Second, during the transcription stage operators may neglect to write down what they did not understand or fail to add details concerning intonation or pauses. Third, during the comprehension stage, difficulties may arise out of grammatically incorrect sentences or the use of dialects; moreover, the operator might fail to understand the intent of those who were speaking, the inferences they made during the conversation or the correct meaning of specific words.

Some possible causes underlying these mistakes might be better understood if one just pays attention to the wiretapping rules provided by the Italian Code of Criminal Procedure. During the investigating stage, after judicial authorization has been granted, the police is the one invested with the task of listening, recording and summarizing the content of the intercepted communications (summaries are called *brogliacci*). Both records and summaries are routinely sent to the public prosecutor, who can use them to request pre-trial detention and afterwards to request the case be brought to trial.[63]

The fact that the police are the ones summarizing the content of the intercepted communication poses itself a huge risk: police officials, indeed, suffer from an almost universally recognized confirmation bias;[64] they know the facts of the case, are aware of who the suspects are and of the evidence already collected against them. They may therefore be far from impartial when de-coding the content of a conversation in which the suspect is involved.

For the intercepted communications to be used as evidence at trial, however, both the prosecutor or the defendant have to ask the judge to appoint an impartial expert that will listen to the records and transcript them *ex novo*.[65] The expert, however, is routinely authorized to use the summaries that were formed by police officials. The main concerns that arise out of this mechanism are two: first, if the expert resorts to the summaries formed by the police, she might concur in the same mistakes committed by police officials (if any, of course). Second, there is no provision obliging the judge to appoint as expert someone who has studied psycholinguistics. Finally, although scholars have warned against the use of voice comparison techniques – sometimes described as a 'totally distorted forensic discipline'[66] – such methods are still used in court.

[63] See art 268 cpp.

[64] Confirmation bias is defined as "The seeking or interpreting of evidence in ways that are partial to existing beliefs, expectations or a hypothesis in hand" – Raymond S Nickerson, "Confirmation Bias: A Ubiquitous Phenomenon In Many Guises, (1988) 2 Rev Gen Psychol 175. See also Godsey 3, *supra* note 52 at 18; Godsey 1, *supra* note 36 at 90.

[65] See art 268 (7) and 493-bis cpp; the jurisprudence of the Italian Supreme Court, however, has clarified that failing to transcribe the intercepted communications does not – *per se* – render them inadmissible at trial.

[66] Garrett, *supra* note 10 at 106.

c. Misidentification

False eyewitness identification of the accused is considered to be the foremost cause of wrongful conviction worldwide.[67] Even though scholars agree about the high unreliability of identification procedures, the statement of a witness, or worse, the victim recognizing the suspect is still an extremely powerful piece of evidence. Eyewitness identification, alone, may suffice to convict an individual.

Two issues have been identified as the main problematic aspects of identification procedures; first, human memory is extremely fragile and malleable, in spite of how certain the witness claims to be. Furthermore, repetitive identification procedures - quite common in judicial practice - can cement false memories by making a wrong person look more familiar.[68] Second, law enforcement procedures have a huge impact on the outcome of an identification and, when flawed, definitively crash its genuineness.[69]

Among the most recurring factors that impinge upon the outcome of identification are remarks or suggestions made by police officials, both before and after the witness has answered; the construction of a line-up in a way that one single individual blatantly stands out among the others; worse than all, show-up identifications in which the witness is presented with only one individual and asked if she recognizes him.[70] As an aggravating circumstance, it is extremely difficult to understand how properly the identification was conducted, as such procedures are rarely documented; even when there is a report, it simply states the outcome of the procedure, without mentioning the way in which it took place.

Eyewitness identification has long been at the center of academic debate among Italian scholars, due to elusive prosecutorial and judicial practices. Indeed, the Italian Code of Criminal Procedure (art. 213-214) contains a very detailed discipline of judge-conducted eyewitness identification (*ricognizione*), thus proving the distrust that the legislator had towards this specific mechanism and underlining the necessity to ensure its reliability.

First, the judge needs to ask the witness to describe the suspect, to recall whether she was called for previous identifications or if she has otherwise seen the person and to explain if there are any other circumstances that may have an impact upon the identification's reliability. Then, after the witness is temporarily removed from the setting, the judge has to make sure that at least two other individuals are presented to her – together with the suspect – and that those individuals

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[67] Brian L Cutler & Steven D Penrod, *Mistaken Identification: The Eyewitness, Psychology And The Law* (New York: Cambridge University Press, 1995); Elizabeth Loftus, *Eyewitness Testimony* (Cambridge: Harvard University Press, 1979); Gary Wells & Elizabeth Olson, "Eyewitness Testimony" (2003) 54 Ann Rev Psychol 277: Gary L Wells, Mark A Small, Steven D Penrod, Roy S Malpass, Solomon M Fulero, C Elizabeth Brimacombe, "Eyewitness Identification Procedures: Recommendations for Lineups and Photo Spreads" (1998) 22 Law & Human Behav 603.

[68] Scholars speak of a 'following visualization effect' – *effetto della visualizzazione successiva*; see Gulotta, *supra* note 45 at 289.

[69] Some authors have noted that in 78% of flawed identification cases there was evidence that police had contaminated the procedure. See Garrett, *supra* note 10 at 49.

[70] Garrett, *ibid* at 45.

are as similar as possible to the suspect. After the witness returns, the judge asks if she recognizes anyone and, if positive, whether she is certain.

All those guarantees and procedural steps, however, almost disappear in the everyday judicial practice. First, judges do admit as evidence in court the minutes of previous identifications conducted by the police or the prosecutor during the investigative phase – albeit those subjects are not bound to respect the same procedural steps that we have described above. Moreover, during the investigation, identifications are frequently conducted using photographs and not live line-ups, although this technique is far less reliable.[71]

Secondly, Italian jurisprudence has for a long time allowed identifications to take place in Court, during the hearing, with the prosecutor asking the witness if she recognizes the culprit in the courtroom. However, in the courtroom the suspect is standing alone, next to her lawyer, in the defendant's bench, or worse, in a cage.

The *hiatus* that exists between the law on the books and judicial practice has been vigorously stigmatized by scholars, as it blatantly overlooks all the guarantees and procedural steps that should be respected in order to ensure identifications' reliability.

d. *Pentiti*: The Italian Counterpart of U.S. Jailhouse Informants?

Another cause for wrongful convictions upon which there is ample consensus among scholars concerns a specific kind of testimony, the one provided by 'incentivized witnesses' (i.e., the so-called jailhouse informants or snitches).[72] The adjective 'incentivized' underlines that these witnesses are strongly motivated by the institutional rewards awaiting them if they (even falsely) testify in support of the prosecutor's theory.[73] Because of that, they are frequently willing "to shape their stories to fit whatever is needed".[74]

As it has been noted, the American criminal system makes wide use of this kind of testimony,[75] although it has long been proved incredibly unreliable. Whether the informant is specifically placed in the same cell as the suspect, or she 'spontaneously' approaches the prosecutor to provide information, the pattern is quite recurring. The informant is usually someone

[71] Indeed, scholars have highlighted that photographs shown during an identification are often low-resolution ones, and that while posing individuals tend to assume unnatural facial expressions.

[72] With this respect see Robert M Bloom, "Jailhouse informants" (2003) 18:1 Crim Just 20; Brandon L Garrett, "Trial and Error" in Huff and Killias, *supra* note 8; Alexandra Natapoff, "Beyond Unreliable: How Snitches Contribute to Wrongful Convictions" (2006) 37 Golden Gate U Law Rev 107; Jeffrey S Neuschatz, "The Effects of Accomplice Witnesses and Jailhouse Informants on Jury Decision Making" (2008) 32 Law & Human Behav 137; Kent Roach, "Unreliable Evidence and Wrongful Convictions: The Case for Excluding Tainted Identification Evidence and Jailhouse and Coerced Confessions" (2007) 52 Crim LQ 210; Robert W Stewart, "Jailhouse Snitches: Trading Lies for Freedom" Los Angeles Times (16 April 1989); Clifford Zimmerman, "From The Jailhouse To The Courthouse: The Role Of Informants In Wrongful Convictions" in Westervelt & Humphrey, *supra* note 52.

[73] Richard A Leo, "Rethinking the Study of Miscarriages of Justice: Developing a Criminology of Wrongful Conviction" (2005) 21:3 J Contemp Crim J 201 at 207.

[74] C Ronald Huff, "Wrongful Convictions in the United States" in Huff and Killias, *supra* note 8 at 63.

[75] Godsey 1, *supra* note 36 at 205.

with previous convictions or currently facing charges; she strongly denies having ever met the defendant before;[76] she claims to have directly or indirectly heard the defendant confess to the crime for which he is standing trial; she is able to provide specific details of the crime that only the culprit might have known.[77] Frequently, her statement perfectly fits the prosecution's case. She usually denies having made any sort of a deal with the prosecution (with this being corroborated by the prosecutor's own denial), yet the charges against her are subsequently dropped or she receives a more lenient sentence.[78] Even though all the previous observations should cast serious doubts about the reliability of such witnesses, juries do credit their statements, either because of their accuracy or because the prosecutor firmly denies having promised any reward.

The issue of jailhouse informants has not gotten much attention in the Italian literature; this is probably due to the fact that Italian prosecutors are bound by the compulsory prosecution principle, enshrined in art. 112 of the Constitution. As such, they simply cannot drop charges or adhere to less serious charges in exchange for cooperation – and therefore have little to offer to potential informants. Theoretically (and if they are the ones in charge of the case) prosecutors might ask for a lighter sentence if the informant or the co-defendant has cooperated, but since the issue has not been analyzed we have no proof that this happens in practice and, if it does, how often.

However, the Italian legislation specifically addresses a peculiar kind of incentivized witness, the so-called '*collaboratore di giustizia'* (more commonly, *pentito*).[79] Such a figure appeared during the political terrorism emergency of the past century, and during the last decades the legislator has extended its use to other instances of serious crimes: most notably, mafia-type organizations[80] and – within the last year – political corruption. *Pentiti* have been extremely useful in the past, as they usually provide 'inside' information about criminal enterprises that would have otherwise remained secret. Because of how useful that information is to the fight against organized crime, and to 'balance' the dangers that *pentiti* undergo when they decide to cooperate with the State, they are 'awarded' with consistent sentence reduction and the possibility of accessing 'alternative measures' other than detention.[81] On the other hand, individuals that are convicted for the same serious crimes for which cooperation is possible, and who refuse to cooperate, face the

[76] Garrett, *supra* note 10 at 132.

[77] Garrett, *ibid* at 124.

[78] Garrett, *ibid*. At p.129 the author notes that prosecutor, at their discretion and albeit having been vague with the informant about the possible benefits, may drop charges, pursue more lenient charges or a shorter sentence.

[79] See for some examples, art 289-bis, 323-ter cpp; DL 625/1979; L 304/1982; L 34/1987; DPR 309/1990.

[80] Sebastiano Ardita, "La Nuova Legge sui Collaboratori e sui Testimoni di Giustizia" (2001) 5 Cass. Pen 1698*;* Alessandra Dino, ed, *Pentiti. I Collaboratori di Giustizia, Le Istituzioni, L'opinione Pubblica* (Roma: Donzelli, 2006); Paolo Giordano, "Profili Premiali Della Risposta Punitiva Dello Stato" (1997) 3 Cass. Pen 916; Domenico Pulitanò, "Tecniche Premiali Fra Diritto e Processo Penale" 4 (1986) Riv I. Dir Proc Pen 1005; Carlo Ruga Riva, *Il Premio per la Collaborazione Processuale* (Milano: Giuffrè, 2002).

[81] The recently introduced art 323-ter of the Italian Criminal Code, concerning political corruption, goes as far as to award co-defendants that cooperate with impunity.

quasi-impossibility of accessing the same alternative measures.[82] It is thus fair to say that the Italian State does, in fact, push some defendants to cooperate with the prosecutor.

Our intention is nowhere near to that of underestimating the importance that *pentiti*'s declarations have had in the past; without them, most of what we currently know about mafia-type organizations' structure would have been almost impossible to discover. However, there seems to be quite enough consensus among scholars that, in order to obtain a lighter sentence or for reasons of personal vengeance, it has in fact happened that *pentiti* have provided false statements leading to the conviction of innocent people.[83] The most famous case is probably that of late Enzo Tortora,[84] at the time being one of the most prominent Italian journalists, arrested and tried on drug charges because of what turned out to be entirely made up statements coming from multiple *pentiti*.

As observed by NGOs, the Tortora case is not isolated, and the list of individuals falsely implicated in the commission of a crime by *pentiti*'s declarations is continuing to grow.[85] This might be due to the fact that Italian jurisprudence currently allows convictions to be founded upon multiple *pentiti*'s statements, as long as they corroborate each other.[86] This '*riscontri incrociati'* argument, however, makes it possible for *pentiti* to agree on a specific version of the events, in order for their declarations to be considered reliable and usable in Court (and for them to obtain benefits or vengeance).[87]

B. Learning from the Americans: The Need for a National Registry of Exonerations and Conviction Integrity Units

The brief summary of probable causes for wrongful convictions we have provided might lead the reader to believe that, as it has been done in the U.S., Italian scholars have had the opportunity of accessing case files and analyzing previous cases of wrongful convictions, in order to gain a precise knowledge of past mistakes, the trial stage in which they occurred and their frequency. Once again, reality is quite different from imagination.

As it has already been noted, the Italian system does not provide accurate statistics or research concerning wrongful convictions, despite having had to face many 'infamous' instances of such a phenomenon in the past.[88] The Ministry of Justice is not bound nor is spontaneously required to publish any official data concerning wrongful conviction cases, let alone disclose the original case materials in order for scholars to study them in the context of a case-by-case analysis.

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[82] See art 4-bis of the law on the penitentiary system, L 354/1975. These kind of limitations, however, are starting to be dismantled by the Italian Constitutional Court, see judgment n 253/2019; see also ECtHR, app n 77633/16, *Viola v Italy.*

[83] See online: <https://www.errorigiudiziari.com/OLD/tag/false-dichiarazioni-pentiti/>.

[84] English speaking readers may find a summary of the Tortora case here: online: <https://en.wikipedia.org/wiki/Enzo_Tortora>.

[85] See online: <https://www.errorigiudiziari.com/OLD/tag/false-dichiarazioni-pentiti/>.

[86] See Italian Court of Cassation, sec VI, 14/06/2018, sentence n 40899.

[87] Gulotta, *supra* note 45 at 223.

[88] Lupária 1, *supra* note 16 at 5.

This means that besides cases in which lawyers (or exonerees) themselves have shared the facts and files of 'their' wrongful conviction, Italian scholars have few possibilities of identifying with sufficient certainty both the legal and the root causes of the 'Italian miscarriage of justice'. We don't know the percentage of cases in which identification procedures were conducted in an informal way; we don't know how often police officials and forensic experts contaminate evidence; we don't know in how many cases the official transcribing of interceptions had no expertise in psycholinguistics; we don't know in how many cases the defendant was subject to undue pressure while questioned; we have no clue of the number of cases in which *pentiti*'s declarations were not corroborated by other evidence. Worse of all, we don't know if there are other causes specific to the Italian system, absent in other countries, that might explain our escalating figures of wrongful convictions.

All we know is that scholars have long been warning that there is often a huge hiatus between the guarantees and procedural safeguards provided by law and every-day judicial practice; yet the same scholars are not able to assess what qualitative and quantitative impact this hiatus is currently producing on trial outcomes. Simply stated, we know that the law is not always strictly followed by police officials, prosecutors and judges, yet we cannot provide certain data about the influence that these kinds of malpractices have on wrongful convictions (albeit knowing that wrongful convictions are in fact occurring).

The negative impact of this lack of knowledge cannot be underestimated; to decrease the number of wrongful convictions, systemic and judicial culture changes are needed. Yet, if there is no reliable data on what the real, Italian, causes of wrongful convictions are, it is hard to figure in which direction to change. What we need to understand, therefore, is what are the most common errors, at what stage of the proceeding they occur and what are the roots causes behind them (e.g., chance, human fallibility, institutional deficiencies).[89] In this respect, Italy has much to learn from the U.S. experience.[90]

Needless to say, American scholars have conducted in depth, case by case analysis of wrongful convictions.[91] Accurately studying case files made it possible for them to precisely identify what mistakes were occurring, at what stage of the proceeding, with what frequency and who was responsible. Such precise knowledge has led to well-founded reform proposals, often implemented both through legislation or guidelines.[92] Most importantly, American scholars have at their disposal an extremely powerful tool: the well re-known National Registry of

[89] Eric Colvin, "Convicting the Innocent: A Critique of Theories of Wrongful Convictions" 20 Crim LF 173. Italy is not the only country in which there has been no extensive case-by-case study; see also David T Johnson, "Wrongful Convictions and the Culture of Denial in The Culture of Capital Punishment in Japan" in *Palgrave Advances in Criminology and Criminal Justice in Asia Book Series* (Palgrave: Pivot Cham, 2020).

[90] We must however note that, to our knowledge, the absence of an official database is common to each and every European Country; the American National Registry of Exonerations itself is provided by the University of California, the Irvine Newkirk Centre For Science & Society, the University Of Michigan Law School & Michigan State University College of Law, and not by the U.S. Government.

[91] Russell Covey, "Police Misconduct as a Cause of Wrongful Convictions" (2013) 90 Wash U L Rev 1133; Scheck, Neufeld & Dwyer, *supra* note 7.

[92] Mark Godsey, "False Justice and the 'True' Prosecutor: A Memoir, Tribute, and Commentary" (2012) 9 Ohio St J Crim L 789 [*Godsey 4*].

Exonerations.[93] Currently counting 2,555 exonerations since 1989, the Registry provides (to everyone and for free) accurate information on each and every exoneree's case, with the additional possibility for practitioners to request case files. Such an enormous database enables scholars to easily obtain the information and data they need to build their own theory on the causes of wrongful convictions, to advance reform proposals and to share awareness. As a leading scholar has noted, "The National Registry may be the wave of the future for the next generation of American wrongful conviction studies".[94]

The American experience, in this respect, must serve as an example for every European judicial system. The Italian Innocence Project is currently working to have an equivalent of the National Registry of Exonerations established in Italy, providing detailed information on all the cases where final convictions were reversed in a revision trial.[95] Needless to say, the cooperation of national institutions is of paramount importance: not only it would render the collection and storage of data an easier task, but it would also help national institutions to become more aware of the issue of wrongful conviction.

This observation leads us to the second aspect of the U.S. experience that should serve as an example for Italy: the judiciary needs to be involved in the process of preventing and reversing wrongful convictions. In Italy, the Prosecutor is allowed to ask for a revision process, yet this rarely occurs *sua sponte*. As the decrease in the number of wrongful convictions serves the purpose of justice, and not merely that of the defendant, judges and prosecutors should not consider the work of Innocence Projects as 'disturbing' the normal course of justice, but rather as a precious instrument to decrease the risk of judicial errors being made.

In the U.S. (albeit not always) there have been virtuous examples of prosecutors and district attorneys cooperating with Innocent Projects and lawyers to shed light on previous 'dubious' convictions.[96] More importantly, the rise of Innocence Projects has brought many U.S. Prosecutor's Offices to establish "Conviction Integrity Units" (C.I.U.); they are divisions of prosecutorial offices that work to prevent, identify, and remedy false convictions.[97] In less than 20 years (the first unit was established in 2002), CIUs have secured 390 exonerations, thus proving the astonishing results that serious cooperation between the prosecutor and the defense can produce.[98] As Italian prosecutors already have the power to ask for a revision process, it is not

[93] Online: <https://www.law.umich.edu/special/exoneration/Pages/about.aspx>.

[94] Richard A Leo, "The Criminology of Wrongful Conviction: A Decade Later" (2017) 33 J Contemp Crim J 82.

[95] The importance of comprehensive databases in wrongful conviction literature's methodology is stressed by Richard A Leo, "Rethinking the Study of Miscarriages of Justice: Developing a Criminology of Wrongful Conviction" (2005) 21:3 J Contemp Crim J 201 at 216.

[96] Godsey 4, *supra* note 92; Lupária 1, *supra* note 16 at 5; Jim Petro & Nancy Petro, *False Justice: Eight Myths That Convict the Innocent* (New York: Kaplan Publishing, 2010).

[97] For a list of the existing CIUs see online: <https://www.law.umich.edu/special/exoneration/Pages/Conviction-Integrity-Units.aspx>.

[98] Kay L Levine & Ronald F Wright, "Prosecutor Risk, Maturation, and Wrongful Conviction Practice" (2017) 42:3 Law & Soc Inq 648; Barry Scheck, "Professional and Conviction Integrity Programs: Why We Need Them, Why They Will Work, and Models for Creating Them" (2010) 31 Cardozo L Rev 2215; Mike Ware, "Dallas County Conviction Integrity Unit and the Importance of Getting It Right the First Time" (2010) 56 NY Law Sch Rev 1033.

difficult to imagine the benefits that the establishment of similar units might have within the Italian criminal system.

IV Conclusions. Learning from the Italians: Plea Bargaining Limitations

Even if the Italian path towards a decrease in wrongful convictions still looks quite long, we do believe that our criminal justice system is equipped with some mechanisms that do serve this purpose. Thus, while we might still need to learn from other countries' experiences to improve our approach to the issue of wrongful convictions, in this last part we would like to highlight one aspect of our system that we believe could be of inspiration: Italy's version of plea bargaining.[99]

Many scholars share the opinion that plea bargaining carries with it a significant risk of wrongful conviction;[100] it has indeed been demonstrated that innocent defendants might well accept to plead guilty despite being deeply convinced of their innocence.[101] This counter-intuitive choice happens for a variety of reasons: the defendant might be 'confused' with respect to the charges brought against her, she may be pressured by her lawyer[102] or she might have the feeling that the evidence of her guilty is seemingly overwhelming. More than that, however, she simply

[99] Obviously, we do not believe that plea bargaining limitations are the only positive aspect of the Italian criminal system; many other national mechanisms, indeed, are (also) designed in order to avoid 'unsafe convictions': examples might be drawn from the Court's power to order additional evidence to be produced or from the possibility of Court appointed experts to analyze evidence and testify. Such mechanisms, however, are deeply rooted in the inquisitorial tradition, and it would be extremely difficult to transplant them into traditionally adversarial systems. Plea bargaining, on the contrary, is a typical 'common law mechanism', that the Italian system has 'borrowed' from its oversea counterpart, albeit deeply modifying it. As such, it might be less traumatic for adversarial-accustomed scholars and practitioners to look at the Italian version of plea bargaining as a source for inspiration. Indeed, some authors in the U.S. have already advanced the proposal to adopt the 'European Plea-Bargaining solution', see Killias & Huff "Wrongful Convictions and Miscarriages of Justice – What Did We Learn? in Killias & Huff, *supra* note 20 at 389.

[100] John J Baldwin & Michael McConville, *Negotiated Justice: Pressures to Plead Guilty* (London: Martin Robertson, 1977); Josh Bowers, "Punishing the Innocent" (2008) 156:5 U Penn L Rev 1117; Lucian E Dervan, "Bargained Justice: Plea-Bargaining's Innocence Problem and the *Brady* Safety-Valve" (2012) 51 Utah L Rev 61; Oren Gazal-Ayal, "Partial Ban on Plea Bargains" (2005) 27 Cardozo L Rev 2295; F Andrew Hessick & Reshma M Saujani, "Plea Bargaining and Convicting the Innocent: The Role of the Prosecutor, the Defense Counsel, and The Judge" (2002) 16 BYU J Pub L 189; Wes R Porter, "Threaten Sentencing Enhancement, Coerce Plea, (Wash, Rinse,) Repeat: A Cause of Wrongful Conviction by Guilty Plea" (2015) 3 Tex A&M L Rev 26; Douglas A Smith, "Plea Bargaining Controversy" (1986) 77 J Crim L Criminol 949; AN Stern, "Plea Bargaining, Innocence, and the Prosecutor's Duty to "Do Justice" (2012) 25 Geo J Legal Ethics 1027.

[101] The most recent data provided by the National Registry of Exoneration prove that 15% of those exonerees pleaded guilty; this number might seem non-significant, if one considers that 95% of U.S. trials end up in plea agreements, see online: <https://www.law.umich.edu/special/exoneration/Pages/Guilty-Pleas.aspx>. However, it has been noted that the legal and practical barriers to obtain an exoneration if one has pleaded guilty are extremely high, when compared to those that decided to face trial. See Albert Alschuler, "A Nearly Perfect System for Convicting the Innocent" (2017) 612 U Chicago Pub L & Legal Theory Paper Series 931.

[102] See the '*meet'em and plead'em defense lawyers'* in Garrett, *supra* note 10 at 151.

might accept the plea deal the prosecutor is offering is so convenient that it clearly overbalances the chance of acquittal she feels might occur if she goes to trial.[103]

Indeed, some authors have argued that in the American system "The prosecutor can reduce the offered punishment to the point that it will become advantageous for the defendant to plead guilty whether he is guilty or innocent".[104] In this respect, the limitations that the majority of European systems[105] and, more specifically, Italian law, impose when it comes to plea bargaining (the so called *patteggiamento,* art. 444 c.p.p.)[106] might decrease such a risk. In fact, plea bargaining is only available when the charges might lead to a sentence not longer than five years of imprisonment;[107] moreover, the deal offered by the prosecutor can neither involve a discretionary modification of the charges nor decrease the sentence of more than one third of the minimum penalty provided by law. Once there is agreement between the prosecutor and the defendant, it will then be up to the judge to verify whether the legal qualification of the facts is correct and the proposed sentence appropriate. As such, prosecutors, in principle, could not advance such appealing proposals so as to convince an innocent defendant to accept the deal.[108]

These last remarks allow us to conclude that thirty years ago, the continental and the American legal systems could not be any more different and the issue of wrongful convictions was rarely to be found in the public and academic debate. Within the span of just three decades, both conclusions stated came to be false. On the one hand, European criminal systems slowly

[103] See among others, Victoria Colvin, "Plea Bargaining and Miscarriage of Justice: A Case Study of the Prosecution of Gabe Watson, the So-Called Honeymoon Killer" (2015) 34 UQLJ 71; Murat C Mungan & Jonathan Klick, "Reducing False Guilty Pleas and Wrongful Convictions through Exoneree Compensation" (2016) 59 JL & Econ 173.

[104] Albert Alschuler, "A Nearly Perfect System for Convicting the Innocent" (2017) 612 U Chicago Pub L & Legal Theory Paper Series 920.

[105] Indeed, it has been observed that almost every continental system nowadays, provides with some sort of plea bargaining or a functional equivalent – Jackson, Langer & Tillers, *supra* note 21 at 8; yet, within the Continent plea bargaining is only allowed in very limited circumstances and for minor offenses. See Killias & Huff "Wrongful Convictions and Miscarriages of Justice – What Did We Learn?" in Killias & Huff, *supra* note 20 at 381.

[106] Maximo Langer, "From Legal Transplants to Legal Translations: The Globalization of Plea Bargaining and the Americanization Thesis in Criminal Procedure" (2004) 45 Harvard Int'l LJ 1; JJ Miller, "Plea Bargaining and Its Analogues under the New Italian Criminal Procedure Code and in the United States: Towards a New Understanding of Comparative Criminal Procedure" (1989) 22 NYU J Int'l L & Pol 215; RA Van Cleave, "An Offer You Can't Refuse? Punishment Without Trial in Italy and the United States: The Search for Truth and an Efficient Criminal Justice System" (1997) 11 Emory Int'l L Rev 419.

[107] However, the Italian Government has recently approved a proposal (*disegno di legge*) whose goal is to allow patteggiamento to take place when the charges might lead to a sentence not longer than eight years of imprisonment, thus increasing the maximum penalty for which it is possible to plead guilty. This proposed amendment should, in principle, contribute to a decrease in the duration of criminal proceedings; yet, it might have a negative impact on the numbers of wrongful convictions, as it allows those who have been accused of (also) serious crimes to waive their right to trial in exchange for more lenient sentences. For a summary of all the amendments that the abovementioned proposal contains, see online: <http://www.quotidianogiuridico.it/documents/2020/02/19/riforma-del-processo-penale-e-prescrizione-il-testo-del-disegno-di-legge>.

[108] Once again, unfortunately, the lack of data concerning Italian wrongful convictions prevents us from knowing how many, if any, of the approximately 153 cases that have been reported since 1991 involved a *patteggiamento*. For some critical remarks on the Italian *patteggiamento* see Lupária & Gialuz, *supra* note 21.

incorporated adversarial elements in their procedure, in order to establish equality of arms between the prosecution and the defendant and to strengthen the latter's guarantees. On the other hand, the adversarial system by definition, the U.S. one, had to face the harsh reality of wrongful convictions, a reality which in turn came to be acknowledged also across Europe. The rise of the innocence movement and the many legislative and procedural amendments that such an acknowledgement has brought represent milestones paving the long way to safer, more precise criminal justice systems. While not disregarding all the results that we have accomplished so far, we must acknowledge that our systems are yet full of flaws and that many individuals are still behind bars for crimes they did not commit. Learning from each other's mistakes and solutions seems to be the only way to grant these individuals the justice they, and we, all deserve.

Edwin Borchard's Innocence Project:

The Origin and Legacy of His Wrongful Conviction Scholarship

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The article recognizes the life and work of Edwin Montefiore Borchard, the founder of US innocence scholarship, as fitting for the Wrongful Conviction Law Review's inaugural issue. The sources of his scholarship are located in his life and times in the early twentieth century US Progressive movement. The links between Borchard's other legal scholarship and his wrongful conviction writings are explained. Borchard's writings and advocacy leading to his main work, Convicting the Innocent, and passage of the federal exoneree compensation law are described. The article concludes that Borchard's lasting legacy is to refute innocence denial, a deeply held belief that wrongful convictions never occur or are vanishingly rare.

I Introduction

Edwin M. Borchard was the first American scholar to catalogue wrongful convictions and advocate wrongful conviction compensation. *Convicting the Innocent*[1] is cited frequently by innocence scholars, who may ascribe more to it than was intended.[2] His exoneree compensation

[1] Edwin M Borchard, *Convicting the Innocent: Errors of Criminal Justice* (New Haven: Yale University Press, 1932) [*Borchard 1*]; a popular version was also printed.

[2] See e.g., Russell Covey, "Police Misconduct as a Cause of Wrongful Convictions" (2013) 90 Wash UL Rev 1133 at 1143; Jon B Gould and Richard A Leo "The Path to Exoneration" (2016) 79 Alb Rev 325 (2016); Stephanie Roberts Hartung, "Habeas Corpus for the Innocent" (2016) 19 U PA JL & Soc Change 1 at 19; Jessica S Henry, "Smoke but No Fire: When Innocent People Are Wrongly Convicted of Crimes That Never Happened" (2018) 55 Am Crim L Rev 665 at 689.

articles are cited in like studies.[3] This article extends earlier work[4] that explored the impact of Borchard's innocence scholarship and advocacy.

Part II reviews Borchard's Ethical Culture credo and progressive ideology as bases for his wrongful conviction reform interest. Part III examines his career as a preeminent legal scholar who made substantial contributions to international law, the declaratory judgment, and tort law. Although his wrongful conviction scholarship constituted a small portion of his academic output, it had significant policy impact[5] and sprang from a coherent, progressive, view of the individual's relationship to the state. Part IV, regarding Borchard's "agenda," describes his advocacy for laws to indemnify the innocent. Part V traces what I call Borchard's "innocence project" his desire to eradicate "innocence denial."[6] His work is evaluated in the context of his era but I conclude with reflecting on its significance for today's innocence movement.

II Borchard's Life, Character, And Ideology

"Borchard's rise in his chosen profession—international law—was almost meteoric."[7] At the age of twenty-six in 1910, while a legal specialist at the Library of Congress, he advised the American international arbitration delegation at The Hague, while studying for a Ph.D. in international law at Columbia University.[8] He then toured Europe to interview "lawyers, judges, professors, and law librarians as to the important legal literature of their respective countries" and

[3] Edwin M Borchard, "European Systems of State Indemnity for Errors of Criminal Justice" (1912) 3 J Am Inst Crim L & Criminol 684 [*Borchard 2*]; Edwin M Borchard, "State Indemnity for Errors of Criminal Justice" (1941) 21 BU L Rev 201 [*Borchard 3*]. See e.g., Rachel Dioso-Villa, "Out of Grace: Inequity in Post-Exoneration Remedies for Wrongful Conviction" (2014) 37 UNSWLJ 349; Chelsea N Evans, "A Dime for Your Time: Case for Compensating the Wrongfully Convicted in South Carolina" (2017) 68 S Car L Rev 539 at 545; Jeffrey S Gutman, "An Empirical Reexamination of State Statutory Compensation for the Wrongly Convicted" (2017) 82 Mo L Rev 369 at 370; Michael Leo Owens & Elizabeth Griffiths, "Uneven Reparations for Wrongful Convictions: Examining the State Politics of Statutory Compensation Schemes" (2011) 75 Alb L Rev 1283.

[4] Marvin Zalman, "Edwin Borchard and the Limits of Innocence Reform" in C Ronald Huff & Martin Killias, eds, *Wrongful Convictions and Miscarriages of Justice: Causes and Remedies in North American and European Criminal Justice Systems* (New York: Routledge, 2013) at 329 [*Zalman, Borchard*] (arguing that Borchard's work could not lead to an innocence movement without social and institutional change).

[5] Herbert W Briggs, *In Memoriam: Edwin M. Borchard, 1884-1951* (1951) 45 Am J Int'l L 708 at 709; *Edwin Borchard, Law Expert, Dead*, NY Times (23 July 1951) (mentioning wrongful conviction work) [*NY Times Obituary*].

[6] Lara Abigail Bazelon, "Ending Innocence Denying" (2019) 47 Hofstra L Rev. Available at SSRN, online: <https://ssrn.com/abstract=3235834 or http://dx.doi.org/10.2139/ssrn.3235834>.

[7] Justus D Doenecke, "Edwin Montefiore Borchard 1884-1951", *Dictionary of American Biography, Supplement 5: 1951-1955* (New York, American Council of Learned Societies, 1977) [*Doenecke 1*], online: <http://ic.galegroup.com.proxy.lib.wayne.edu/ic/bic1/ReferenceDetailsPage/ReferenceDetailsWindow?displayGroupName=Reference&disableHighlighting=false&prodId=BIC1&action=e&windowstate=normal&catId=&documentId=GALE%7CBT2310017447&mode=view&userGroupName=lom_waynesu&jsid=3d6c47306ec30eb72aca5c0b9aed27ca)>.

[8] This arbitration settled decades of dispute between Great Britain and the United States, see Robert Lansing, "North Atlantic Coast Fisheries Arbitration" (1910-1911) 59 U Pa L Rev 119; Edwin M. Borchardt (*sic*), "The North Atlantic Coast Fisheries Arbitration" (1911) 11 Colum L Rev 1.

collect comparative and international law materials for the Library of Congress.[9] In 1911, Borchard was appointed Law Librarian of Congress. He served as assistant solicitor for the State Department for a year and another practising law for a New York bank, before his appointment to Yale University's Law School faculty in 1917, where his distinguished career lasted until his retirement in 1950 shortly before his death.[10] In the midst of his government service, getting married, and completing his monumental dissertation,[11] all before 1915, he found the time to publish his exoneree compensation article, which[12] was the foundation for his subsequent wrongful conviction work.[13]

The sources of his achievements and his interest in miscarriages of justice lay in Borchard's family's circumstances and Jewish roots, extensive education, assimilation into high Anglo-American culture, and the remarkable era during which he grew to maturity.[14] He was born in 1884 in New York City into "a prosperous Jewish merchant family, and … enjoyed the benefits of a highly cultured upbringing. He attended City College of New York from 1898 to 1902, after which he earned an LL.B., cum laude, from New York Law School (1905), a B.A. from Columbia College (1908), and a Ph.D. from Columbia University (1913)."[15] By 1914 he was the Law Librarian of Congress and that year married Corinne Elizabeth Brackett, a recent graduate of George Washington University and a Daughters of the American Revolution (DAR) member.[16] Later in life Borchard "was on the advisory board of the First Humanist Society of New York" and the national board of the American Civil Liberties Union (ACLU).[17]

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[9] Herbert Putnam, "Report of the Library of Congress" *House of Representatives, 62d Congress*, *2d Sess,* Doc. No. 147 at 36 (Washington: Government Printing Office, 1911), listing 47 people visited. Borchard wrote or supervised review essays based on the materials collected, e.g., Edwin M Borchard, *The Bibliography of International Law and Continental Law* (Washington: Government Printing Office: 1913) and additional volumes on the law and legal literature of several European countries.

[10] In 1927 Borchard was named the Justus H Hotchkiss Professor of Law, a position he held until retirement in 1950, Michael S Mayer, "Edwin Montefiore Borchard" *American National Biography*, [*Mayer 1*],online:<https://doi.org/10.1093/anb/9780198606697.article.1100081>; Doenecke 1, *supra* note 7.

[11] Edwin M Borchard, *The Diplomatic Protection of Citizens Abroad or the Law of International Claims* (New York: Banks Law Publishing Co., 1915) [*Borchard 4*] began as his 1914 doctoral dissertation at Columbia University, see online:<https://wild.worldcat.org/title/diplomatic-protection-of-citizens-abroad-or-the-law-of-internationalclaims/oclc/566404>.

[12] Borchard 2, *supra* note 3.

[13] Borchard 1, *supra* note 1.

[14] My thesis draws on biographical sketches, Doenecke 1, *supra* note 7; Mayer 1, *supra* note 10 and materials on Borchard's wrongful conviction work at Yale University's archives but not on personal letters or other intimate sources. Insights from Justus D Doenecke, "Edwin M Borchard, John Bassett Moore, and Opposition to American Intervention in World War II" (Winter 1982) 6 J Libertarian Stud 1 [*Doenecke 2*] were helpful.

[15] Mayer 1, *supra* note 10.

[16] *Directory of the National Society of the Daughters of the American Revolution* (Washington, D.C.: Memorial Continental Hall, 1911) at 179, online: <http://books.google.com/books?id=_AktAAAAMAAJ&pg=PA179&lpg=PA179&dq=Daughters+of+the+American+Revolution+-Corinne+Brackett&source=bl&ots=0CzoWCtnOV&sig=SA8WcDO_BTzrmRTTqRrRO11zY7s&hl=en&sa=X&ei=1XTKT4uaOaT00gGHwoWpAQ&ved=0CEIQ6AEwAg#v=onepage&q&f=false>.

[17] Doenecke 1, *supra* note 7.

Borchard's family milieu was that of assimilated German-American Jews, who by the time of his birth numbered 250,000 in the United States and constituted a respected part of the commercial class, thanks to their emigrating at a time of mild anti-Semitism and the extraordinary expansion of American industry and commerce following the Civil War. This group practiced Reform Judaism which broke away from traditional rites and emphasized communal charitable action. From the assimilationist and social reform strains of Reform Judaism arose Ethical Culture. The Ethical Culture Society was founded in 1876 by Felix Adler, the son of a leading Reform Judaism rabbi. Adler was educated at Columbia University and studied in Germany for the rabbinate but, moved by German neo-Kantianism and funded by members of his father's synagogue, founded a sect that eschewed ritual and dogma and was based on the ethical and humanistic core of world religions. A central element of Ethical Culture was "deed" over "creed," expressed by social reform activities. Although Ethical Culture grew out of Reform Judaism it divorced spirituality from belief in a deity and severed ties with group identity. By joining Ethical Culture, Borchard was freed from a Jewish identity that was a barrier to many professional or academic posts, especially as Anti-Semitism turned more toxic in the late nineteenth century, and probably smoothed the way to marrying into white Anglo-Saxon Protestant (WASP) society, albeit to a well-educated, cultured, and companionate wife.[18] With his marriage to DAR member Corrine Elizbeth Brackett, Borchard achieved "Anglo-conformity" assimilation.[19] Borchard's cultured German-Reform-Jewish environment and the "good deed" ethos of Ethical Culture likely supported his altruistic inclinations and shaped the "zealous humanitarian interest in legal reform" that animated his scholarship and advocacy.[20]

An accomplished student,[21] Borchard put his long educational gestation period to good use.[22] His privileged upbringing and his studies provided the self-confidence and ability to deal with men of power and accomplishment on an equal basis at an early age. His international law mentor at Columbia, John Bassett Moore, who was nationally prominent in international law,

[18] See generally, Lucy S Dawidowicz, *On Equal Terms: Jews in American, 1881-1881* (New York: Holt, Rinehart and Winston, 1982); Henry L Feingold, *Zion in America: The Jewish Experience from Colonial Times to the Present* (New York: Hippocrene Books, 1974); Milton M Gordon, "Assimilation in America: Theory and Reality" (1961) 90:2 Daedalus 263; Arthur A Goren, *The American Jews* (Cambridge: Belknap Press/Harvard University Press, 1982); Susanne Klingenstein, *Jews in the American Academy, 1900-1940; The Dynamics of Intellectual Assimilation* (Syracuse: Syracuse University Press, 1998); Michael A Mayer, "German-Jewish Identity in Nineteenth Century America" in Jacob Katz, ed, *Toward Modernity: The European Jewish Model* (New Brunswick: Transaction Books, 1987); Annie Polland & Daniel Soyer, *Emerging Metropolis: New York Jews in the Age of Immigration, 1840-1920* (New York: NYU Press, 2012); Howard B Radest, *Toward Common Ground: The Story of the Ethical Societies in the United States* (New York: Frederick Ungar Publishing Co., 1969).

[19] The announcement of Edwin and Corrine's engagement in the *NY Times* (18 October 1914) was a mark of elite status; they lived a cultured life in New Haven as indicated by society page citations: *NY Times* (30 April 1931, 21 May 1931, 31 October 1931); they were involved with classical music, see NY Times Obituary, *supra* note 5.

[20] Briggs, *supra* note 5 at 709; See Part III, *infra*.

[21] Elected to Phi Beta Kappa while at Columbia, NY Times Obituary, *supra* note 5.

[22] He probably grew up in a German-speaking or bilingual household and studied languages during his undergraduate years as indicated by his dealings with European legal experts in 1911 and by his fluency with French, German, Italian and Spanish sources in his dissertation, Borchard 4, *supra* note 11 at xxvi-xxxvi (bibliography).

undoubtedly assisted Borchard's entrée into Washington's legal community.[23] Borchard's intelligence, assuredness, persuasiveness, and facility in advising power brokers, characteristic of his mature career, was seen early as he advanced his draft of an exoneree compensation bill through Congress in 1913.[24]

The Progressive Era during which Borchard came of age likely made the greatest imprint on his scholarship.[25] He remained an avowed Progressive throughout his life.[26] His early teen years, the 1890s, saw America in crisis, as it's enormous industrial expansion collapsed into a depression and generated unparalleled income inequality, violent labor confrontations, and agrarian grievances that exploded into the Populist movement, which called for economic reforms.[27] Many of the failed Populist movement's economic and political goals were ultimately adopted by the Progressive Movement in the early twentieth century.

Borchard's college and law school years (1898 to 1908) coinciding with the Progressive Movement's heyday, included Theodore Roosevelt's dynamic presidency, the Spanish-American War and the creation of an American empire,[28] muckraking journalism,[29] and a wave of progressive laws and programs like environmental conservation and anti-trust enforcement. The role of government in the lives of people expanded, including state-passed political reforms like primaries, the recall, and the initiative and referendum.[30] Progressives fought against monopolies and income inequality, favored an inheritance tax,[31] and ratified constitutional amendments in the first decade of Borchard's professional life.[32] Although ambiguous in some respects, the

[23] Moore served as a judge on the Permanent Court of International Justice (i.e., the World Court) and was acknowledged as the dean of the international law profession, Edwin Borchard, "John Bassett Moore" (1946) 32 ABA J 575 [*Borchard 5*]. "Moore's *Digest of International Law* (1906) was undoubtedly the most important American work on international law in the early twentieth century," Doenecke 2 *supra* note 14 at 1.

[24] Part IV *infra*.

[25] "The Progressive Era…marks the collective response to the newly emerging industrial world, which presented challenges to every aspect of traditional American life…." Francis J Sicius, *The Progressive Era: A Reference Guide XV* (Santa Barbara: ABC-CLIO, LLC, 2015) at XV [*Sicius*]; See Richard Hofstadter, *The Age of Reform: From Bryan to F.D.R*. (New York: Knopf, 1955) [*Hofstadter*]; Jill Lepore, *These Truths: A History of the United States* (New York: Norton, 2018) 330 [*Lepore*]; Samuel Elliot Morrison, *The Oxford History of the American People* (New York: Oxford University Press, 1965) [*Morrison*].

[26] "For your personal information, I may add that I am an old-line Progressive and was happy to be considered a friend of Senator La Follette, Sr." Letter from Borchard to Sen Gerald Nye, 12 November 1929, Yale University Archives, Borchard Papers, MSS Group # 670, Box 111, Folder 1065 (requesting that Sen Nye introduce compensation legislation) [*Yale Archives*].

[27] Hofstadter, *supra* note 25 at 166.

[28] Julius W Pratt, *America and World Leadership, 1900-1921* (London: Collier Books, 1967). Borchard's international law mentor at Columbia University was intimately involved in the creation of the American empire, John Bassett Moore, *Dictionary of American Biography* (New York: Charles Scribner's Sons, 1974).

[29] Hofstadter, *supra* note 25 at 185-196.

[30] Morrison, *supra* note 25 at 815, generally at 799-834; Sicius, *supra* note 25.

[31] Robert M LaFollette, "The Battle for Progressive Government in Wisconsin" in H Landon Warner, ed, *Reforming American Life in the Progressive Era* (New York: Ozer Books, 1971) 116-132.

[32] Amdt XVI (income tax, 1913); Amdt XVII (direct election of senators, 1913); Amdt XVIII (Prohibition, 1919); Amdt XIX (women's vote, 1920).

Progressive Era on balance was a significant period of government reform.[33]

The Progressive Movement positioned an expanding and educated middle class between fears of radical populism, socialism and excessive union power on the left and fears of organized corporate power on the right.[34] The major political parties had dominant Progressive wings as Republican President Theodore Roosevelt and Democratic President Woodrow Wilson were exemplary Progressives.[35] The movement was complex, and while encompassing various strains, included many common goals.[36]

Historians describe the flavor of progressivism as a kind of liberal conservatism,[37] driven to reform conditions only after concluding that huge economic changes required government action to balance the power of the corporations and trusts.

> Progressivism had roots in late nineteenth-century populism; Progressivism was the middle-class version: indoors, quiet, passionless. Populists raised hell; Progressive read pamphlets. … Populists believed that the system was broken; Progressives believed that the government could fix it.[38]

In this vein, the quintessentially urban, urbane, hyper-educated, articulate, reform-minded, government-involved Edwin Borchard fit the Progressive mold. When combined with a driven work-ethic and a personality described by his biographer as "affable among friends, provocative and rigorous in the classroom, and tenacious in debate,"[39] we can imagine his formidable presence in the legal policy arenas he entered.

III Borchard's Career: Progressive Legal Scholar and Advisor

Borchard's innocence scholarship was slight in relation to his other work, consisting of one book, *Convicting the Innocent*, published mid-career, and two exoneree compensation articles written at the beginning and toward the end of his four decades of scholarship.[40] Although foremost an international law scholar,[41] he contributed significantly to the declaratory judgment and

[33] Thomas McCraw, "The Progressive Legacy" in Lewis M Gould, ed, *The Progressive Era* (Syracuse: Syracuse University Press, 1974) 181-201, citing, e.g., workmen's compensation laws, Pure Food and Drugs Act, state minimum wage laws, Federal Reserve Act.

[34] Hofstadter, *supra* note 25 at 213.

[35] Hofstadter, *ibid* at 132.

[36] Sicius, *supra* note 25 at 6, e.g., controlling monopolies, universal primary education, local government reform, anti-vice laws, worker's compensation, labor protection (especially for women & children), housing standards, clean water, sewage control, mass inoculations, open space in cities, and national parks.

[37] "Theodore Roosevelt, and after him Presidents Taft and Wilson, were liberal conservatives," Morrison, *supra* note 25 at 811.

[38] Lepore, *supra* note 25 at 364. Hofstadter saw progressivism as "a rather widespread and remarkably good-natured effort of the greater part of society to achieve some not very clearly specified self-reformation."

[39] Doenecke 1, *supra* note 7.

[40] Borchard 1, *supra* note 1; Borchard 2, *supra* note 3; Borchard 3, *supra* note 3; see Part IV *infra*.

[41] "Borchard was an authority on diplomatic protection for alien citizens and property." Doenecke 1, *supra* note 7.

sovereign immunity in tort law, and wrote on constitutional law and jurisprudence.[42] Borchard published at least one-hundred and seventeen law journal articles in his thirty-nine year career,[43] with about fifty on international and comparative law, including diplomatic protection, war, peace, belligerency, and aliens' claims; thirty-three articles related to the declaratory judgment; and twenty on sovereign immunity or government liability in tort.[44] He also wrote several consequential books, including his treatise on diplomatic protection of citizens abroad,[45] a declaratory judgments treatise,[46] and a co-authored brief for neutrality written before the U.S. entered World War II.[47] Legal scholars continue to cite him.[48] In this Part I do not examine his scholarship in depth but relate it to his wrongful conviction writings.

Borchard developed each area of scholarship in his first decade of academic writing and for the rest of his career doggedly pursued each with accomplished scholarship that supported law-reform activism.[49] The civil law issues he pursued arose from his deep study of comparative and international law. Each reform program introduced European legal concepts into American jurisprudence. His flagship article advocating the curtailment of sovereign immunity challenged a Supreme Court justice who "overlooked the fact that practically every country of western Europe has long admitted [state] liability [for the torts of government officers or agents]."[50] He traced the declaratory judgment from Roman and medieval Germanic and Italian law to modern European and Asian civil procedure.[51] His method—an encyclopedic review of comparative law sources—marks his foundational exoneree indemnification article, appropriately titled "European Systems of State Indemnity for Errors of Criminal Justice".[52]

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[42] E.g., Edwin Borchard, "Justiciability" (1936) 4 Chicago L Rev 1.

[43] HeinOnLine >Databases>Law Journal Library>Author/Creator: Search term (Edwin w/2 Borchard); the 117 articles were published steadily from 1911 to 1949 (except for 1914). "In addition to writing a number of books, Borchard was the author of more than 200 articles and book reviews…. He also wrote for such popular periodicals as the Nation, New Republic, American Mercury, Current History, and Saturday Review of Literature" Doenecke 1, *supra* note 7.

[44] These figures are my counts among the 117 titles listed in HeinOnLine; my categorization might not be precisely correct. I count six constitutional law articles, two on jurisprudence and a few others, including a review of his mentor's work, Borchard 5, *supra* note 23.

[45] Borchard 4, *supra* note 11.

[46] Edwin Borchard, *Declaratory Judgments* **(**Cleveland: Banks-Baldwin Law Publishing Co., 1934) [*Borchard 6*] (2nd ed, 1941).

[47] Edwin Borchard & William Potter Lage, 2nd ed, *Neutrality for the United States* (New Haven: Yale University Press, 1937).

[48] HeinOnLine >Databases>Law Journal Library> Text>Search term (Edwin w/2 Borchard) produced 3,576 hits on 7 November 2019: 278 hits in 1991-2000; 383 hits in 2001-2010; 334 hits in 2011-2019. Titles of the first 100 hits in 2010-2019 indicated that 47 were related to wrongful convictions and 53 to other subjects.

[49] He published the influential pamphlet "The Declaratory Judgment" in 1918, Doenecke 1, *supra* note 7. His first article on "Government Liability in Tort" was published in the Yale Law Journal in 1924, and his major international law treatise and his first article on exoneree compensation were completed before 1915.

[50] Edwin M Borchard, "Government Liability in Tort" (1924) 34 Yale LJ 1 at 2.

[51] Borchard 6, *supra* note 46 at 201-244.

[52] *Ibid*, also see text at note 71, noting Borchard's penchant for supporting his analysis with copious references from legal history, apparently drawn from his doctoral dissertation.

Each area had a Progressive reformist cast. The declaratory judgment, a procedural device that allows judicial resolution of contested issues "without the appendage of any coercive decree,"[53] for example, fit the Progressive model of structural or legal-technocratic reform, making law more efficient and allowing dispute resolution before the monetary and psychic costs of litigation piled up. Conservative jurists resisting the declaratory judgment failed to recognize that "a judicial declaration of rights … becomes an instrument not merely of curative but also of preventive justice."[54] In addition to authoring the leading treatise, Borchard's avid advocacy led to his sobriquet as the "father" of the declaratory judgment.[55] Justice William O. Douglas, a law school colleague, wrote that Borchard acted "almost [as] a one-man lobby to push through the federal Declaratory Judgment Act,"[56] a style of activism he would replicate with exoneree compensation.[57]

Borchard's indefatigable advocacy for allowing tort lawsuits against government agents was in the same mold.[58] His introductory article raised a salient Progressive factor, namely that the substantial growth of government operations inevitably injured more people. Barring lawsuits for government-inflicted harm "in Anglo-American law [left] the individual citizen … to bear almost all the risks of a defective, negligent, perverse or erroneous administration of the State's functions."[59] There is "no sound reason" why the relations between government officers and agents should not be determined by "modern social and legal principles."[60] These well-meaning reforms, important to a well-functioning modern polity, fit the ambiguous Progressive Era "good government" frame rather than seeking sweeping solutions to deeper social and economic inequities.

The Progressive roots of Borchard's innocence (and other) scholarship was eloquently stated in his dissertation, which emphasized a caring state's obligation to individual well-being both at the diplomatic and local level:

> The state is not merely an end in itself, nor only a means to secure individual welfare.… National welfare and individual welfare are indeed intimately bound together. In an impairment of individual rights, the state, the social solidarity, is affected . . .

[53] Borchard 6 *supra* note 46 at vii.

[54] Borchard 2, *supra* at note 3.

[55] *US Fidelity & Guaranty Co v Koch*, (1939) 102 F2d 288 at 290.

[56] William O Douglas, *Go East, Young Man: Early Years – The Autobiography of William O Douglas* (New York: Vintage Books, 1974) at 167. "He lobbied strenuously and successfully for passage in 1934 of the Declaratory Judgments Act" Mayer 1, *supra* note 10.

[57] Part IV, *infra*.

[58] Borchard made his case for reforming sovereign immunity in a string of sequential law review articles with identical or very similar titles: Edwin M Borchard, "Government Liability in Tort" (1924) 34 Yale LJ 1; (1924) 34 Yale LJ 129; (1925) 34 Yale LJ 229; (1925) 59 Am L Rev 393; (1926) 36 Yale LJ 1; (1927) 36 Yale LJ 757; (1927) 36 Yale LJ 1039; (1928) 28 Colum L Rev 577; (1928) 28 Colum L Rev 734. He publicized the issue to the larger legal community: Edwin M Borchard, "State and Municipal Liability in Tort: Proposed Statutory Reform" (1934) 20 ABA J 747.

[59] Borchard, *ibid* (1924) 34 Yale LJ 1.

[60] *Ibid* at 2.

> The assurance of the welfare of individuals, therefore, is a primary function of the state, accomplished internally by the agency of municipal public law, and externally through the instrumentalities of international law and diplomacy. The establishment of the machinery to insure this object constitutes an essential function of state activity – within, protecting every member of society from injustice or oppression by every other member; without, protecting its citizens from violence and oppression by other states.[61]

When Borchard wrote this, a central Progressive reform, workmen's (now workers') compensation, providing certain compensation for the scourge of industrial injuries, was sweeping through state legislatures.[62] The theoretical support for workmen's compensation as a substitute for uncertain lawsuits closely paralleled compensating wrongfully convicted defendants.

Borchard's seemingly anomalous support of traditional neutrality and opposition to America's entry into World Wars I and II, the position for which he was best known, and his alignment with the America First Committee before World War II, was consistent with many Progressives.[63] He took unwavering liberal positions as demonstrated by his American Civil Liberties Union (ACLU) board membership, public support for easing immigration law restrictions to admit refugees fleeing Nazi Germany and public relief bills, and opposition to President Roosevelt's "Court-packing" plan.[64] Never shy of criticizing presidents, Borchard was one of very few academicians to openly criticize the government during World War II for interning Japanese-American civilians. He "signed on to the briefs" in the Korematsu and Endo cases.[65] Despite his liberalism, isolationism was always latent in American life and the interwar period saw many prominent Progressive isolationists.[66] While Borchard was by no means an isolationist, his staunch views on neutrality were intellectually defensible and fit a lifelong adherence to views of international law and international relations that he shared with his mentor.[67]

IV Borchard's Agenda: Compensating the Wrongfully Convicted

Borchard's main innocence agenda—to establish the intellectual basis for and to enact federal and state exoneree compensation laws—emerged fully formed in 1912 and remained firmly fixed to 1941, when widespread enactment of state compensation laws proved futile. Three states

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[61] Borchard 4, *supra* note 11 at 31.

[62] See Zalman, Borchard, *supra* note 4 at 334-335.

[63] Doenecke 1, *supra* note 7; Doenecke 2, *supra* note 14; Mayer 1, *supra* note 10. Progressives had a mixed record on support for the imperial expansion of US power in the early twentieth century, William E Leuchtenburg, "Progressivism and Imperialism: The Progressive Movement and American Foreign Policy,1898-1916" (1952) 39:3 Miss Valley Hist Rev 483.

[64] Correspondence between Roger Baldwin, ACLU Director, activist lawyer Osmond Fraenkel and Borchard, 2-6 February 1937 regarding committee to consider Franklin Delano Roosevelt's "Court Packing" plan, Yale Archives, *supra* note 26 at 1/5.

[65] Sarah H Ludington, "The Dogs That Did Not Bark: The Silence of the Legal Academy during World War II" (2010) 60 J Legal Educ 397 at 419-20.

[66] Hofstadter, *supra* note 25 at 20.

[67] Doenecke 2, *supra* note 14.

and the United States enacted compensation laws he drafted at a time when wrongful conviction was on no policy agenda; widespread passage took flight only after the contemporary innocence movement arose.[68]

His campaign began with a well-crafted article justifying exoneree compensation legislation[69] and a restrictive legislative draft, which reflected a conservative side to his progressivism and a political calculation that narrow legislation would more likely be enacted. He enlisted the support of influential men and worked behind the scenes to ensure the law's passage. This process stretched intermittently from 1912 to 1941.

European Systems laid out his rationale for exoneree compensation and criticized American jurisdictions for failing to indemnify "these unfortunate victims of mistakes in the administration of the criminal law, although cases of shocking injustice are of not infrequent occurrence."[70] This foundation for his activism was never revised. It reviewed medieval and Enlightenment era laws on the subject, analyzed the compensation statutes of seventeen other countries, and included them in an appendix. Compensation was grounded in a Lockean vision of the "ultimate end and object of government" being an "absolute … right to personal security, to liberty and to property."[71] The European compensation statutes were traversed in detail.[72]

The article's theoretical core demolished three arguments against compensation.[73] The first was strict sovereign immunity and the assumption of risk of injury by private citizens, a major area of Borchard's tort scholarship.[74] Allied to this were the doctrines that "the state acting legally can injure no one" and that there is no fault without liability.[75] Drawing on the justification for workers' compensation laws, Borchard argued that only "general burdens borne by all the citizens as a whole" are not to be compensated. In contrast, "special sacrifices asked from the individual in the interests of the entire community," such as the burden on a "juryman" or one whose "property is

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[68] See Innocence Project, *Compensating The Wrongly Convicted* (35 states have enacted compensation laws) https://www.innocenceproject.org/compensating-wrongly-convicted/ (accessed 21 December 2019); Robert J Norris, "Exoneree Compensation: Current Policies and Future Outlook" [*Norris*] in Marvin Zalman & Julia Carrano, eds, *Wrongful Conviction and Criminal Justice Reform: Making Justice,* (New York: Routledge, 2014) [*Zalman & Carrano*].

[69] Borchard 2, *supra* note 3.

[70] Zalman, Borchard, *supra* note 4 at 331, citing Borchard 2, *ibid* at 684. Common law jurisdictions seem retrograde on this issue, see Myles Frederick McLellan, "Innocence Compensation: The Private, Public and Prerogative Remedies" (2013-2014) 45 Ottawa L Rev 59.

[71] Borchard 2 *supra* note 3 at 685; as this theme is applied in tort law, Borchard's work serves as a reference point, see Steven J Heyman, "The First Duty of Government: Protection, Liberty and the Fourteenth Amendment" (1991) 41 Duke LJ 507 at 539.

[72] Borchard 2, *ibid* at 685-87; these laws were passed in a wave of late nineteenth century reform, *ibid* at 688-94.

[73] Borchard also raised the practical concerns of budget stringency and debates over "the proper limitations of the right" of compensation in European parliaments, Borchard 2, *ibid* at 694.

[74]See Part III *supra*.

[75] Borchard 2, *supra* note 3 at 695-696. As for the principle of fault, Borchard noted that "Modern social and economic conditions, however, have brought about an important modification in the rigidity of the doctrine, so that for large classes of cases liability is predicated on the mere causal relation between the act and the injury, whether inflicted with or without fault" Borchard 2, *ibid* at 696.

taken by eminent domain for public use," require public compensation. The wrongfully convicted defendant has made "special sacrifices … for the general benefit of society" and deserves compensation. A counter-argument was that the public gains when property is taken by eminent domain but does not gain when a person is wrongfully convicted. The flaw in this argument, according to Borchard, was that because the advantage to society gained by taking private property exceeds the property-owner's loss, the "price paid represents not the gain of the state, but the loss to the individual. It is a special sacrifice that is asked of the individual, for which society compensates him."[76] In short, the wrongfully convicted person was injured in losing his or her liberty for the protection of public safety and should be compensated for that loss.

"European Systems" then explored features of the European laws: "(a) who may be indemnified; (b) the limitations on the right; (c) the extent of the indemnity; and (d) the procedure for making the right effective."[77] Without examining these points in detail we note that Borchard's immersion in the statutory minutiae was a necessary prelude to his campaign's next step: drafting a model compensation law. His federal compensation statute and comments, printed in the same issue as his article,[78] is quite conservative. Compensation is withheld if the wrongfully convicted person was "guilty of any other offense against the United States." Compensation applied only to those who had been incarcerated, and required a legal exoneration or pardon, after which the person can "apply by petition for indemnification for the pecuniary injury he has sustained." Borchard commented that the "right to the relief is discretionary only."[79] The bill's six-month statute of limitations was very short. Worse, the bill required the claimant to prove his innocence and barred compensation if the claimant had willfully or negligently "contributed to bring about his arrest or conviction," likely barring relief to defendants who confessed or pleaded guilty.[80] Finally, the "relief is limited to five thousand dollars. This provision is to limit any exorbitant claims which may be brought."[81]

To complement his article and bolster the draft statute, Borchard obtained an editorial endorsement from John Wigmore, the most prominent evidence law scholar in America, dean of the Northwestern University Law School, and editor of the Journal of the American Institute of Criminal Law and Criminology: "Mr. Borchard's article in this number of the Journal," wrote Wigmore, "ought to appeal to every citizen of the land and particularly to every legislator. He sets forth what has been done on the continent and points out the entire feasibility of the measure. We ask for its earnest consideration."[82]

Beyond this impressive achievement, the article, statute, and editorial ratification were simultaneously published as a U. S. Senate Report, to accompany a bill sponsored by Sen. George

[76] *Ibid* at 695.

[77] *Ibid* at 697, 697-705.

[78] Edwin M Borchard, "Notes on Current and Recent Events, For Relief to Persons Erroneously Convicted*"* (1912) 3 J Am Crim L & Criminol 792.

[79] *Ibid* §1 at 792.

[80] *Ibid* §§ 2, 4, 5 at 793.

[81] *Ibid* at 794; for comment on the scope of this draft bill, see Part V *infra.*

[82] John H Wigmore, Editorial "The Bill to Make Compensation to Persons Erroneously Convicted of Crime" (1912) 3 J Am Inst Crim L & Criminol 665 at 667 [*Wigmore*].

Sutherland of Utah.[83] Borchard leveraged his position as Law Librarian of Congress to persuade a senator to place his draft bill into the legislative hopper. Borchard later chalked up the failure of passage of exoneree compensation to concerns about World War I.[84] Yet he continued to publicize the idea in academic and popular outlets with an eye to stimulating reform in the states.[85]

The issue stagnated and the project to compensate the wrongfully convicted seemed abandoned. For reasons discussed below,[86] in the late 1920s he once again took up the issue and wrote *Convicting the Innocent*.[87] Borchard clearly planned to use the book to "furnish the support necessary to demonstrate the necessity for state indemnification of errors of criminal justice."[88] To that end he began collecting information about ironclad wrongful conviction cases. By 1929 he had data on about 35 cases when he enlisted the assistance of E. Russell Lutz, a former student who worked in Washington, D.C. and had access to the Library of Congress.[89] To defray costs Borchard requested funding from the Institute of Human Relations at Yale University.[90] He expanded the number of cases for the book by sending a research assistant to state pardon boards to review their unpublished records; meanwhile, Lutz scanned newspaper records and trolled

[83] "Together with the editorial and Mr Borchard's article in this number of the Journal, *ibid* has been reprinted in Senate Document 974, 62d Congress, 3rd Session, and may be obtained from Senator Sutherland or any other member of Congress. The bill was introduced in the House on 5 December by Mr Evans and in the Senate on December 10 by Senator HR Sutherland, 26748; S 7675," Wigmore, *ibid* at 792.

[84] Letter to Harry Elmer Barnes, 14 July 1930, Yale Archives, *supra* note 26 at 111/1066. After describing "how I got into this channel of investigation" Borchard wrote: "in fact California now has such a statute, which arose directly out of the articles written in 1912 on this subject. Wisconsin and North Dakota are the only other states which fell into line, the movement having stopped on the outbreak of the European War, when people became interested in other things." Letter to George Soule, 20 June 1938, Yale Archives, *ibid* at 109/1051 (this humanitarian effort "was stifled by the outbreak of the European War").

[85] Edwin M Borchard, "State Indemnity for Errors of Criminal Justice" (1914) 52:1 Annals Am Acad Pol & Soc 108 and Edwin M Borchard, "Errors of Criminal Justice" (1916) 8:99 New Republic 182 were parallel articles that advanced the theory for exoneree compensation developed in Borchard 2, *supra* note 3; both cited compensation laws passed by Wisconsin and California in 1913. North Dakota passed a Relief for Wrongful Imprisonment Law in 1917 (Sess Laws, ch 172, setting compensation at a maximum of $2,000.00) but repealed it in 1965: NDCC Chap 12-57 (Sess Law 1965, ch 203, §86).

[86] Part V*, infra.*

[87] Borchard 1, *supra* note 1.

[88] E M Borchard, letter to E Russell Lutz, Esq, 15 April 1929, Yale Archives, *supra* note 26 at 111/1065; Borchard laid out two less substantial reasons for the project: to deter prosecutors and juries from convicting on the basis of circumstantial evidence and "spasmodic identifications" alone and "to furnish the most fascinating reading, better than any detective stories that I know…." See Zalman, Borchard, *supra* note 4 at 337. Lutz eagerly accepted by return post, E Russell Lutz letter, 17 April 1929, Yale Archives, *ibid* at 111/1066.

[89] Lutz letter, 17 April 1929, Yale Archives, *ibid*. Lutz was acknowledged on *Convicting the Innocent's* title page; his obituary mentioned his assistance to Borchard, Russell Lutz*,* "Shipping Expert", NY Times (15 January 1970) 42. Lutz spent part of his 1929 vacation tracking down cases, Lutz letter 10 September 1929, *ibid* at 111/1065. Borchard invited him to lunch at the Cosmos Club to discuss his findings, Borchard letter, 14 September 1929, *ibid*.

[90] Memorandum to Mr Schlesinger, 5 June 1929; Memorandum from School of Law, signed by D Schlesinger, 13 June 1929; Yale Archives, *ibid*. Borchard also tried to interest the publisher Alfred Knopf, but apparently the publisher was not prepared to advance royalties on a project that was far from publication, Letters from Borchard to Alfred A. Knopf, 18 April 1929, 24 April 1929, 2 May1929, Letters from the Alfred A Knopf/Borzoi Books Editorial Department, 23 April 1929, 1 May, *ibid*.

Library of Congress records.[91] Borchard even reached out to former Attorney General Wickersham proposing that the presidential commission on prohibition, crime, and criminal justice he was then chairing take up the issue of "state indemnity for errors of criminal justice."[92] By late 1929 Lutz made headway in compiling wrongful conviction records.[93] After some strain requiring a letter from Borchard to President Herbert Hoover, Borchard and Lutz gained access to federal pardon records.[94]

As work on the book accelerated, Borchard, who was routinely in contact with many prominent men in politics, public opinion and international law, corresponded with several regarding errors of justice.[95] Throughout 1930 Lutz steadily reported cases to Borchard as they collaborated on tracking down leads and put in for reimbursement for incidental expenses.[96] The grant from Yale's Institute of Human Relations came through[97] and Lutz was allotted $60 a month for expenses.[98] Yale University Press, in April 1931,[99] indicated an interest in publishing a book entitled "Not Guilty" by the autumn of that year.[100] The completed draft won approval from

[91] Letter from Lutz to Borchard, 5 October 1929, Yale Archives *ibid*. Borchard wrote to various personages requesting information. Letter from Borchard to Norris G Osborn, Editor, *The (New Haven) Journal Courier* (7 October 1929), *ibid*; Letter from Borchard to James A. Finch, the chief federal pardon attorney, 7 October 1929, *ibid*. His files include a prototype letter "To the Governor of The State" requesting assistance, 8 October 1929, *ibid*.

[92] Letter from Borchard to George W Wickersham, 12 November 1929, Yale Archives, *ibid*; Letter from W Barry, Secretary to Wickersham, 14 November 1929, acknowledging receipt of the Senate pamphlet, *ibid*. The Wickersham Commission never addressed the issue, see generally, Franklin E Zimring, "The Accidental Crime Commission: Its Legacies and Lessons" (2013) 96 Marq L Rev 995.

[93] Letter from Russell Lutz to Borchard, 13 December 1929, Yale Archives, *ibid*, detailing information received on cases.

[94] Letters: Lutz, 12 November 1929; Borchard, 15 November 1929; Finch, Pardon Attorney, 20 November 1929; Borchard, 22 November 1929; Borchard, 22 November 1929; Lutz, 25 November 1929; Walter H Newton, President's Secretary, 14 December 1929 (noting that Borchard's request was being submitted to the attorney general for consideration); Letter from Lutz to Borchard, 19 December 1929, Yale Archives, *ibid*.

[95] Henry Spindler letter (Minnesota State Senator), 3 April 1929, Yale Archives, *ibid*; Borchard letter to Sen Gerald Nye, 12 November 1929, Nye to Borchard, 14 November 1929, discussing the Tom Mooney case and including Borchard's inquiry as to whether Sen Nye "would be disposed to reintroduce this bill [i.e., the bill introduced by Sen Sutherland in 1913] in the present Congress" *ibid*. Borchard to Harry Elmer Barnes, 14 July 1930, *ibid* at 111/1066. Mooney was a wrongfully convicted labor leader whose case became a cause célèbre, see Richard H Frost, *The Mooney Case* (Stanford: Stanford University Press, 1968). See *Mooney v Holohan*, (1935) 294 US 103 (prosecutor's knowing use of perjured testimony violates due process).

[96] Lutz to Borchard, 19 July 1930, 5 September 1930, 11 September 1930, 14 September 1930, 30 September 1930, Yale Archives, *ibid* at 111/1067.

[97] Borchard Memorandum to Executive Committee of Human Relations Institute, 21 October 1930, requesting $1500.00; Institute of Human Relations letter, 18 November 1930 appropriating $1,200.00, Yale Archives, *ibid*.

[98] Borchard offer to pay Mrs. Lutz for typing, Borchard to Lutz, 15 November 1930, Yale Archives, *ibid*.

[99] Malcolm W Davis letter, Yale University Press to Borchard, 1 August 1930, Yale Archives, *ibid*; Borchard letter to Alfred A Knopf, 31 January 1931, indicating Institute of Human Relations advanced funds and Yale University Press expressed interest, requesting to withdraw earlier request for publication; letter from AW Barmby, Editorial Department, Alfred A Knopf/Borzoi Books, 22 January 1931, agreeably withdrawing from project, indicating interest in future works, *ibid* at 111/1068.

[100] Malcolm W Davis letter, Yale University Press to Borchard, 3 April 1931, Yale Archives, *ibid* at 111/1069. Felix Frankfurter letter referred to title of "Unjust Convictions," 30 October 1931, *ibid* at 112/1071. The book's title was

Charles E. Clark, dean of the Law School, who reviewed the manuscript for the Institute for Human Relations and the University Council's publication committee. "It seems to me it combined very well indeed scholarly research with matter of considerable human interest, and it focused upon a desirable reform. The combination is unusual and therefore the manuscript has some unique values."[101]

Convicting the Innocent, published by Yale University Press in April 1932,[102] lists Borchard as the sole author but prominently identifies E. Russell Lutz as collaborator and research assistant on the title page. The book was dedicated to Felix Frankfurter, then a prominent Harvard Law School professor and public intellectual, and to John H. Wigmore, the legendary dean of Northwestern University Law School.[103] As Dean Clark noted, the book's unusual structure combined miscarriage of justice vignettes that appealed to average readers with scholarly material.[104] An "Introductory Chapter," most likely to appeal to contemporary innocence scholars,[105] invented the inductive method of drawing wrongful conviction "causes" from the narratives.[106] Each vignette included a bibliography of sources including court opinions, news articles, pardon statements, and attorney interviews.[107]

The book, whilst generally well received,[108] was perceived by reviewers not so much as a foundation for criminal justice reform but aimed at inspiring compensation legislation.

> It is not the main purpose of Professor Borchard in writing this book to advocate reforms in criminal judicial procedure. Indeed, in an introductory chapter he says that "There is not much that the prosecuting or judicial machinery can do to prevent

unsettled; correspondence with Frankfurter bandied about several possible titles: "The Law's Errors", "Innocent Victims of the Law", and "The Innocent Convicted," letters from Felix Frankfurter to Borchard, 20 October 1931, 24 October 1931; letter from Borchard to Frankfurter, 22 October 1931, *ibid* .

[101] Charles E Clark (CEC) letter to Carl Lohmann, 16 November 1931, Yale Archives, *ibid*.

[102] Books and Authors, NY TIMES, 3 April 1932, BR 15; Letter from Felix Frankfurter to Borchard, 8 January 1932, Yale Archives, *ibid* at 112/1072.

[103] The dual dedication was problematic, as explained in Part V, *infra*.

[104] A reviewer noted that "The facts of these cases are narrated with precision, clarity, and brevity. Technical phraseology is avoided.…The stories of these cases as told by the author are highly interesting and often thrilling." Henry W Taft, "Miscarriages of Justice" (1932) 8:42 Saturday Rev Lit 712 [*Taft*].

[105] Borchard 1, *supra* note 1 at xiii-xxix. For the book's impact on later scholars, see Part V, *infra*.

[106] See Richard A Leo, "Rethinking the Study of Miscarriages of Justice: Developing a Criminology of Wrongful Conviction" (2005) 21 J Contemp Crim J 201 [*Leo*] (critique of narratives approach); Marvin Zalman, "An Integrated Justice Model of Wrongful Convictions" (2010) 74 Alb L Rev 1465 at 1500-1504 (coining label "innocence paradigm"); Marvin Zalman & Matthew Larson, "Elephants in the Station House: Serial Crimes, Wrongful Convictions, and Expanding Wrongful Conviction Analysis to Include Police Investigation" (2015) 79 Alb L Rev 941 at 945-952 [*Zalman & Larson*] (assessing nature and limits of Borchard's approach in relation to others).

[107] Borchard 1, *supra* note 1.

[108] Anthony Burnett, "Circumstantial Evidence is Often Wrong" *Washington Post* (27 November 1932) (descriptive review of Convicting the Innocent); James P Gifford, "Convicting the Innocent" (1933) 48:1 Pol Sci Q 127; Max Radin, "Review: Convicting the Innocent" (July 1932) 34 U Cal Chronicles 362; William G Thompson, "Convicting the Innocent. Errors of Criminal Justice" (1932) 32 Colum L Rev 1460. Two cases were republished in the *American Bar Association Journal*, with case bibliographies intact, "Convicting the Innocent" (1932) 18 ABA J 404.

> some of these particular miscarriages of justice." But the author seeks to attach public attention to the fact that … innocent persons are occasionally convicted of crime, and to arouse public opinion in favor of legislation authorizing monetary indemnification of the victims of such miscarriages of justice. [109]

To that purpose the book reprinted Borchard's 1912 *European Systems* article, the California and Wisconsin compensation statutes, and his draft federal bill,[110] providing ammunition for a re-opened campaign to pass a federal compensation law. Borchard wrote to Attorney General Homer Cummings in March 1934 seeking administration support for a compensation law.[111] Special Assistant Attorney General Alexander Holtzoff sent an encouraging letter attesting to administration support.[112] The Attorney General, however, while not opposed to a compensation law, preferred that a bill not emanate from the Roosevelt Administration. As a result, Borchard asked U. S. Senator Francis Maloney of Connecticut to sponsor a bill and he agreed.[113] Later that year he asked Borchard to revise the draft bill to exclude claimants with no other pending federal charges in response to concerns raised in sub-committee that "as it is now drawn the bill would bring about suits against the government in altogether too many cases."[114] Borchard agreed to the change, although expressing concerns that federal prosecutors could stymie relief to the innocent by bringing charges after innocence was established.[115]

From 1936 to 1938 Borchard participated in the tedious legislative drafting process. The Senate Judiciary Committee approved a bill in 1936[116] but progress stalled in 1937.[117] The pace

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[109] Taft, *supra* note 104.

[110] Borchard 1, *supra* note 1 at 375-421.

[111] Borchard letter to Cummings, 8 March 1938, Yale Archives, *supra* note 26 at 109/1050 (alluding to Cummings' famous action as Connecticut prosecutor moving to dismiss murder charges against man for murder of a priest); see Homer S Cummings, "State vs Harold Israel" (1925) 15 J Crim L & Criminol 406; case basis of Hollywood feature picture, "Boomerang" (Feature Film: Twentieth Century Fox, 1947). See Ken Armstrong, "The Suspect, the Prosecutor, and the Unlikely Bond They Forged" *Smithsonian Magazine* (January 2017), online: <https://www.smithsonianmag.com/history/charming-story-homer-cummings-harold-israel-180961429/>.

[112] Holzoff letter to Borchard, 7 December 1934, Yale Archives, *ibid* at 109/1050 (Borchard sent copy of book to Holzoff; discussed payment of federal judgments; reviewed Court of Claims procedures; expressed view that compensation limited to defendants who testified on their own behalf).

[113] Borchard letter to Maloney, 18 February 18, Yale Archives, *ibid*. Borchard was busy on another front seeking the approval of the American Law Institute for a model compensation law. W Draper Lewis, Director, American Law Institute letter to Borchard, 5 February 1935, *ibid* at 113/1079.

[114] Sen Maloney letter, 14 August 1935, Yale Archives, *ibid* at 109/1050.

[115] Borchard letter to Sen Maloney, 18 August 1935, Yale Archives, *ibid*.

[116] Sen Edward R Burcke letter to Sen Maloney, 9 June 1936, Yale Archives, *ibid* indicating that Judiciary Committee draft bill will be printed, noting committee report not needed "as the whole subject is so clearly dealt with by Professor Borchard and Dean Wigmore that we content ourselves with brief excerpts from their written statements." Borchard letter to Sen Maloney, 18 June 1936, *ibid* (thanking him for June 16 letter, enclosing Sen Burke's letter, and forwarding a copy of Convicting the Innocent). Borchard letter to Holtzoff, 18 June 1936, *ibid* (indicating receipt of Judiciary Committee report; expressing hope that bill enacted in the next session; discussing support for Federal Tort Claims Act, which significantly set aside sovereign immunity, a major focus of Borchard's research, *supra Part* III).

[117] Borchard letter to George Soule, 1 October 1937, Yale Archives, *ibid* at 109/1051 (proposing *The New Republic* editorial to advance compensation law, noting objections raised in House of Representatives Judiciary Committee). Borchard letter to Max Lerner, 1 October 1937, *ibid* (proposing *The Nation* editorial, same as Soule letter). Borchard

picked up as the bill headed toward passage in May 1938.[118] Rep. William Citron of Connecticut, who became a House sponsor of the compensation bill, referred concerns of recalcitrant House members to Borchard.[119] Additional letters found Borchard receiving intelligence about the progress of the bill and offering advice on various points,[120] culminating in a telegram to Sen. Maloney advising on last minute changes.[121]

The Act "to grant relief to persons erroneously convicted in courts of the United States" was signed into law on May 24, 1938.[122] In a letter thanking Senator Maloney for "transmitting the pen with which President Roosevelt signed S. 750," Borchard expressed the expectation that "the example of the federal government is likely to be followed by the states, where cases do unfortunately occur not infrequently."[123] This hope, however, would not take off until the twenty-first century. Borchard's overture to the American Law Institute was never pursued.[124] His papers reveal some interest by the American Civil Liberties Union to start a campaign in 1940 or 1941 to advance state compensation legislation.[125] His second, and last law review article on the matter in 1941, reprising the theoretical arguments first raised in 1912, reported the existence of the federal law, provided a few examples of wrongful convictions, made a brief argument for passage of such laws in the states, and appended a model statute. As the article cut no new ground, it was designed to provide material for a state legislative campaign. Perhaps, just as the "European War" deflected interest in Borchard's original legislative campaign in 1914, concerns with a looming World War overwhelmed the states' capacities to consider compensation laws.

letter to Felix Frankfurter, 27 December 1937, *ibid* at 113/1081 (noting *The New Republic* editorial supporting compensation bill, complaining about House Judiciary Committee delay).

[118] Holtzoff letter to Borchard, 14 February 1938, Yale Archives, *ibid* at 109/1051 (enclosing bill revisions made in response to Respresentatives' concerns); Borchard letter to Holtzoff, 17 February 1938, *ibid* (noting Rep Citron informed him of concerns, arguing compensation should allow cause of action for pecuniary damages resulting from conviction and imprisonment).

[119] Rep Citron letter to Borchard, 17 February 1938, Yale Archives, *ibid;* Rep Creal letter to Rep Citron, 10 March 1938, *ibid*; Borchard letter to Rep Citron, 15 March 1938, *Ibid (*responding to Rep Creal's pardon concerns).

[120] Holtzoff letters to Borchard, 24 March & 6 May 1938, Yale Archives, *ibid*; Borchard letter to Rep Citron letter to Borchard, 10 May 1938 (House version superior to Senate Bill, praising Borchard's report); 11 May 1938 (promising to get bill Consent Calendar); 16 May 1938, *ibid.*

[121] Sen Maloney Letter to Borchard, 16 May 1938, Yale Archives, *ibid;* Borchard telegram to Sen Maloney, 17 May 1938, *ibid* (advising that "Senate 750 in the Form in Which it Passed the House is Preferable to Senate Version Writing" (sic)).

[122] (1938) Public Law 75-539 / Chp 266, 75 Congress, 52 Stat 438.

[123] Borchard letter to Sen Maloney, 30 May 1938, Yale Archives, *supra* note 26 at 109/151.

[124] See *supra* note 113.

[125] Roger Baldwin, ACLU Director, letter to Borchard, 9 January 1941, Yale Archives, *ibid* at 109/1053; Memorandum, State Indemnity for Errors of Criminal Justice, 26 July 1940, *ibid* at 109/1052; "Outline of Campaign: Restitution to Prisoners Wrongfully Convicted" 1 April 1941," *ibid* at 109/1053.

V Conclusion: Borchard's Innocence Project and Its Legacy

Borchard did not live to see compensation laws sweep the country,[126] but his work inspired future innocence scholars and activists. *Convicting the Innocent* set the model for "big picture" books,[127] an *idea* that motivated the jurist Jerome Frank.[128] Scholars cited Borchard for decades but their scattershot works did not produce a coherent or evolving body of knowledge.[129] Borchard inspired anti-capital punishment litigator Michael Meltsner as a law student in the 1950s, who nevertheless wrote that innocence was ignored before DNA profiling.[130] Borchard did influence Neufeld and Scheck's "innocence manifesto"—a preface in *Convicted by Juries*[131]—in which the Innocence Project's co-founders commented: "Interestingly, in many respects the reasons for the conviction of the innocent in the DNA cases do not seem strikingly different from those cited by Professor Edwin Borchard in his seminal work, *Convicting the Innocent*…."[132]

Borchard did express other aims in addition to indemnifying exonerees. *Convicting the Innocent*'s "Introductory Chapter," which summarized lessons drawn from the error-of-justice vignettes, was a crude but effective inductive empiricism that prefigured the innocence movement's reform template.[133] His causal analysis, from a social science perspective, was

[126] See Norris, *supra* note 68.

[127] Leo, *supra* note 106. Borchard was disinclined to produce a follow-up book: Borchard letter to Felix Frankfurter, 27 December 1937, Yale Archives, *supra* note 26 at 13/1081 ("Whether I shall ever get to a new edition is doubtful, although I have a collection I think of nearly 100 additional cases.")

[128] Jerome Frank letter to Borchard, 29 December 1946; Borchard's secretary's letter to Frank, 2 January 1947 (forwarding copy of *Convicting the Innocence*, requesting return "when it has served its purpose"), Yale Archives, *ibid* at 113/1082; inquiry resulted in Jerome Frank & Barbara Frank, *Not Guilty* (Garden City: Doubleday & Co, 1957) [*Frank & Frank*].

[129] Bernard Botein, Review of Frank & Frank, *Not Guilty*, *ibid* (1958) 58 Colum L Rev 284; Richard C Donnelly, "Unconvicting the Innocent" (1952) 6 Vand L Rev 20; Joseph D Grano, "Kirby, Biggers, and Ash: Do Any Constitutional Safeguards Remain Against the Danger of Convicting the Innocent?" (1973-74) 72 Mich L Rev 717; Max Hirschberg, "Wrongful Convictions" (1940-1941) 13 Rocky Mtn L Rev 20; Max Hirschberg, "Pathology of Criminal Justice: Innocent Convicted in Three Murder Cases" (1941) 31 Am Crim L & Criminol 536; Joseph H King Jr, "Compensation of Persons Erroneously Confined by the State" (1970) 111 U Pa L Rev 1091; Donal EJ MacNamara, "Convicting the Innocent" (1969) 15:1 Crime & Delinq 57; John T Noonan Jr, "Inferences from the Invocation of the Privilege against Self-Incrimination" (1955) 41 VA L Rev 311; Note "Lawyers and Lineups" (1977) 77 Yale LJ 390; Otto Pollak, "The Errors of Justice" (1952) 284 Annals Am Acad Pol & Soc 115. See generally, Leo, *supra* note 106.

[130] Michael Meltsner, "Innocence Before DNA" [*Meltsner*] in Daniel S Medwed, *Wrongful Convictions and the DNA Revolution: Twenty-Five Years of Freeing the Innocent* (Cambridge: Cambridge University Press, 2017) [*Medwed*] at 14-35. (Meltsner is a leading anti-death penalty litigator).

[131] Edward Connors et al, *Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence after Trial* (Washington, DC: NIJ, 1996) [Connors et al]; the report "became an event rather than one more list" that helped stimulate innocence movement, James M Doyle, *True Witness: Cops, Courts, Science, and the Battle Against Misidentification* (New York: Palgrave Macmillan, 2005) at 129.

[132] Peter Neufeld and Barry C Scheck, Commentary, in Connors et al, *ibid* at xxx.

[133] Some causes perceived by Borchard in his jumbled and overlapping list, like mistaken identification and perjury, are familiar to innocence scholars, but he also saw "circumstantial evidence" as a causal factor, a category that upon reflection is too broad and amorphous to be seen as a source of wrongful convictions, see Zalman and Larson, *supra* note 106 at 949-950.

limited.[134] His application for funding listed a few additional goals beyond compensation laws but they seem more like grant-proposal padding than a motivating reason to write the book.[135]

Borchard's motivation for returning to the study of justice errors in the late 1920s and to again advocate exoneree compensation was, however, a desire to end, once and for all, *innocence denial*: the idea that miscarriages of justice never occur or are vanishingly rare.[136] Innocence denial bolsters the common-law-belief-system, ingrained in American lawyers, that the adversary trial is the best method of wringing truth from contested facts, joined by a concomitant belief that defendants rarely lie when pleading guilty.[137] This belief is chiseled into the pages of American law reports by such eminent judges as Learned Hand, Sandra Day O'Connor, and Antonin Scalia who could not believe that a criminal process offering defendants so many paper guarantees, enshrined in a constitution no less, can fail the innocent.[138] After *Convicting the Innocent* was published Borchard received critical correspondence as well as plaudits. Albert S. Osborn, a noted questioned-documents examiner, argued that Borchard was one-sided: "A book with the title '6500 Cases Where Guilty Men Escaped' could easily have been prepared,"[139] a criticism of innocence

[134] See Jon B Gould et al, "Predicting Erroneous Convictions" (2014) 99 Iowa L Rev 471.

[135] "Memorandum for the Executive Committee of the Institute of Human Relations," 21 October 1930, Yale Archives, *supra* note 26 at 111/1067 (other goals included abolishing death penalty where based on circumstantial evidence; highlighting unreliable identifications "in time of emotional excitement," frequency of perjured testimony, and undue zealousness; suppressing evidence by police and prosecutors; and allowing appellate courts to review facts of felony convictions).

[136] Borchard's "empirical agenda was to refute assertions that the innocent were never convicted," Richard A Leo, "Has the Innocence Movement Become an Exoneration Movement? The Risks and Rewards of Redefining Innocence" in Medwed, *supra* note 130 at 57.

[137] Psychological research refutes Wigmore's widely cited quotation: "Cross-examination is the greatest legal engine ever invented for the discovery of truth," available by Internet search, see Dan Simon, *In Doubt: The Psychology of the Criminal Justice Process* (Cambridge: Harvard University Press, 2012) 180-205.

[138] Judge Hand, "Under our criminal procedure the accused has every advantage," (SDNY 1923) *US v Garsson*, 291 F 646, 649; Justice O'Connor "[Herrera] was tried before a jury of his peers, with the full panoply of protections that our Constitution affords criminal defendants. … Consequently, the issue before us is not whether a State can execute the innocent. It is, as the Court notes, whether a fairly convicted and therefore legally guilty person is constitutionally entitled to yet another judicial proceeding in which to adjudicate his guilt anew, 10 years after conviction, notwithstanding his failure to demonstrate that constitutional error infected his trial" (1993) *Herrera v Collins*, 506 US 390, 419-420 (O'Connor, J, concurring). Justice O'Connor later became more skeptical about capital-sentence accuracy, "Congressional Research Service, Report: Capital Punishment: Selected Opinions of Justice O'Connor (17 August 2005), online: <https://www.everycrsreport.com/files/20050817_RS22224_42545280189972758dd1a725d1008db35987e407.pdf>. Justice Scalia: "Our solemn responsibility is … to ensure that when courts speak in the name of the Federal Constitution, they disregard none of its guarantees—[including] those that ensure the rights of criminal defendants…" (2006) *Kansas v Marsh*, 548 US 163, 185 [*Kansas v Marsh*] (Scalia, J concurring) (reversing state supreme court ruling which struck down statute requiring imposition of death sentence when aggravating and mitigating circumstances in equipoise; Justice Scalia also argued that number of wrongful convictions is minuscule, *Kansas v Marsh*, 185-199).

[139] Albert S. Osborn letter to Borchard, 14 April 1932, Yale Archives, *supra* note 26 at 112/1073, quoting from letter he wrote to third party; Osborn noted he had not read *Convicting the Innocent* but explained that gullible people "do not understand the difficulty of proving criminals to be guilty" *ibid*.

that is alive today.[140] In a lengthy and testy exchange, critic Edmund L. Pearson asserted that Borchard's 65 cases were a minuscule fraction of convictions while Borchard asserted that his research merely "scratched the surface."[141]

The decision to write *Convicting the Innocent*, urged by Felix Frankfurter,[142] was set off by the Sacco-Vanzetti case. In the book's Preface, Borchard wrote:

> A district attorney in Worcester County, Massachusetts, a few years ago is reported to have said: "Innocent men are never convicted. Don't worry about it, it never happens in the world. It is a physical impossibility." The present collection of sixty-five cases, which have been selected from a much larger number, is a refutation of this supposition.[143]

Astute readers could infer a veiled allusion to Frederick G. Katzmann, who prosecuted Sacco and Vanzetti, and see the book as an attack on both of their unfair trials. Yet, Borchard strategically decided to veil Katzmann's identity and avoid any reference to the trials.[144] In a few letters, however, he wrote that his "innocence project" was a reaction to the Sacco-Vanzetti case. After enactment of the federal compensation law he wrote to George Soule, editor of the *New Republic*:

> The effort [to pass compensation legislation] received a new lease of life through the statement made by the District Attorney in the Sacco-Vanzetti case, who remarked that "Innocence Men (sic) are never convicted…."
>
> That dogmatic statement led me to undertake the research which resulted in the book "Convicting the Innocent". A very cursory examination of cases in our state and federal courts disclosed about 200 which seemed airtight. Of these I published some 65 from various jurisdictions presenting various types of cases so as to let the public judge of the accuracy of the statement of the District Attorney.[145]

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[140] See Ronald J Allen and Larry Laudan, "Deadly Dilemmas" (2008) 41 Tex Tech L Rev 65.

[141] Letters between Borchard and Edmund L. Pearson, 22 November 1932, 5 December 1932, 10 December 1932, 2 January 1933, 13 January 1933, Yale Archives, *supra* note 26 at 112/1076. See Edmund Pearson, "A Reporter at Large, Hauptmann and Circumstantial Evidence" (9 March 1935) New Yorker 37 (commenting that *Convicting the Innocent* did not record an execution of an innocent person).

[142] Borchard was in contact with Frankfurter by early 1929 about a planned book project, Borchard letter to Felix Frankfurter, 11 April 1929, Yale Archives, *ibid* at 111/1065. "You gave me the final impetus to start actually after the cases and get the work done" Borchard letter to Felix Frankfurter, 26 December 1930, *ibid* at 111/1067 (referring to support Borchard received from Wigmore and Frankfurter).

[143] Borchard 1, *supra* note 1 at vii.

[144] "The name Sacco-Vanzetti will not appear in the book, but this is my humble contribution to preventing another such case" Borchard letter to Felix Frankfurter, 26 December 1930, Yale Archives, *supra* note 26 at 111/1067. Borchard may have wished to avoid right-wing criticism, but thought that "by leaving that case entirely unmentioned, it will, I think, drive the lesson more vividly home" *ibid*.

[145] Borchard letter to George Soule, 20 June 1938, Yale Archives, *ibid* at 109/1051. Borchard letter to Felix Frankfurter, 27 December 1937, *ibid* at 13/1081 (commenting: in *Convicting the Innocent* he focused on recent and

The impact of the Sacco-Vanzetti case on American opinion at the time was enormous. The convictions of two Italian immigrants and political anarchists for two robberies and two murders in suburban Boston in 1920 and 1921, and their executions after failed appeals and clemency requests in 1927, was the most celebrated U.S. political trial in the first half of the twentieth century.[146] Writing about the case in 1948 the historian Arthur M. Schlesinger noted:

> To duplicate its national repercussions one would have to go back to the trial of the Chicago anarchists for the Haymarket bombing in the 1880's, and for its world effects to the Dreyfus case in France near the turn of the century. … Probably most Americans following the case at the time can remember where they were and what they were doing when the word first reached them that Sacco and Vanzetti had lost their last chance of escaping death.[147]

Frankfurter's deep involvement in the Sacco-Vanzetti case created a difficulty. He became a major actor in the case by strongly criticizing the trial's fairness in the nationally respected Atlantic Monthly magazine,[148] followed with a popular book.[149] The article "offered proof after proof that Katzmann, with [judge] Thayer's support, had undermined the integrity of the criminal justice system in this case."[150] Frankfurter's dispassionate legal analysis "probably had more impact than any of the hundreds of pieces written on the case in the 1920's" and forced Massachusetts's governor to "appoint a committee to review all the evidence in the case."[151] Frankfurter's position was quickly and publicly attacked by none other than Dean John Henry Wigmore, who supported Borchard's efforts in 1912.[152] Their bitter exchange raised a cloud over

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American cases "to show that the District Attorney in the Sacco and Vanzetti case was quite wrong in his assumption that 'it can't happen here.'"). Borchard letter to Edmund Pearson, 13 January 1933, *ibid* at 112/1076.

[146] On political trials and wrongful convictions, see C Ronald Huff et al*, Convicted but Innocent: Wrongful Conviction and Public Policy* (Thousand Oaks: Sage, 1996) 21-27; Ron Christenson, *Political Trials: Gordian Knots in the Law,* 2nd ed (New Brunswick: Transaction Books, 1999); Paul Averich, *The Haymarket Tragedy* (Princeton: Princeton University Press, 1984); Michael R Belknap, *Cold War Political Justice: The Smith Act, The Communist Party, and American Civil Liberties* (Westport: Greenwood Press, 1977); Christina E Wells, "Fear and Loathing in Constitutional Decision-Making" (2005) 2005 Wis L Rev 115.

[147] Arthur M Schlesinger, Introduction to Louis Joughin & Edmund M Morgan, *The Legacy of Sacco & Vanzetti,* rev 1976 (Princeton, Princeton University Press, 1948).

[148] Felix Frankfurter, "The Case of Sacco and Vanzetti" Atlantic Monthly (March 1927), online: <https://www.theatlantic.com/magazine/archive/1927/03/the-case-of-sacco-and-vanzetti/306625/>; Melvin I Urofsky, Felix Frankfurter, *Judicial Restraint and Individual Liberties* (Boston: Twayne Publishers, 1991) [*Urofsky*].

[149] Felix Frankfurter, *The Case of Sacco and Vanzetti: A Critical Analysis for Lawyers and Laymen* (Boson: Little, Brown, 1927).

[150] Urofsky, *supra* note 149 at 23.

[151] Urofsky, *ibid* at 23-24. In fact, Borchard, apparently working in tandem with Frankfurter, called for a review commission in a letter to Governor Lowell Fuller in which he wrote "not as a radical sympathizer with the convicted men, but as a person interested in the preservation of our legal institutions. This depends on earning and retaining the respect of the public for those institutions. In a democracy, the confidence of the public in the fair and unbiased administration of justice lies close the to roots of orderly government" (21 April 1927) from the Yale Archives, Borchard papers as quoted in Barry C Scheck and Peter J Neufeld, "Toward the Formation of 'Innocence Commissions' in America" (2002) 86:2 Judicature 98 at 105.

[152] Urosky, *ibid.*

Borchard's desire to dedicate the book both to Wigmore and Frankfurter, whose support meant so much. Borchard asked his friend Felix for permission and the book was indeed dedicated to these rivals, perhaps *reinforcing* the connection between the Sacco-Vanzetti miscarriage of justice and innocence denial.[153]

Innocence scholars who reflexively invoke Borchard's mantra to link their studies to an established research genealogy may ignore the gulf between Borchard's era and our own. But stopping to consider that distance helps us better understand the phenomenon we label the innocence movement.[154] As Borchard's ideas were shaped by the social and political cast of his times so too are ours. A close look at the young Progressive scholar's compensation statute in 1912 shows a law with liberal and humane goals but with many constricted features.[155] In his commentary, Borchard wrote:

> The right to the relief is discretionary only. …The relief is limited to the *pecuniary* injury, thus excluding all compensation for *moral* injury, which, in case of conviction for crime, is generally the more serious element of injury. This limitation follows, in general, the European statutes and has as its object the restriction to its narrowest limits (while acknowledging the principle) of a demand on the State Treasury.[156]

Borchard's law would indemnify for time spent in jail awaiting trial but would deny relief if the claimant "committed *any* offense against the United States."[157] Such a pinched statute is miserly compared to more generous exoneree compensation provisions in modern statutes.[158]

The difference between Borchard's narrowly drawn bill and more expansive recent legislation marks the gulf between Progressive Era "liberal-conservative" concepts of social justice and an innocence movement created in the shadow of the civil rights movement. Whilst some conservatives, moved by the gross injustice of wrongful conviction have supported and initiated

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[153] Wigmore, *supra* note 82. Wigmore "a friend of Judge Thayer's, exploded in a bitter, racist, reactionary, and totally inaccurate attack on Frankfurter in the conservative 'Boston Transcript'", Urofsky, *supra* note 149 at 24. Frankfurter's reply "'pulverized' Wigmore" according to Harvard Law School colleague, *ibid*.

[154] See Keith A Findley, "Toward a New Paradigm of Criminal Justice: How the Innocence Movement Merges Crime Control and Due Process" (2008) 41 Tex Tech L Rev 133 (innocence movement espouses neutral "reliability model" situated between control and due process models); Daniel Kroepsch, "Prosecutorial Best Practices Committees and Conviction Integrity Units: How Internal Programs are Fulfilling the Prosecutor's Duty to Serve Justice" (2016) 29 Geo J Leg Ethics 1095 (line between prosecution and defense orientations blurring with conviction integrity units).

[155] For a review of the conservative nature of Borchard's draft exoneree compensation bill in 1912, see text and notes, Part IV *supra* notes 77 - 81.

[156] Edwin M Borchard, "For Relief to Persons Erroneously Convicted" (1912) 3 J Am Inst Crim L & Criminol 792 (emphasis in original).

[157] *Ibid* at 792-93 (emphasis in original).

[158] See Robert J Norris, (2012) "Assessing Compensation Statutes for the Wrongly Convicted" 23:3 Crim Just Pol'y Rev 352.

innocence reforms,[159] the greater number of innocence movement pioneers are defense-oriented liberals who were inspired by the movement for racial equality.[160] However one parses the collective litigation, advocacy and scholarship concerning wrongful conviction as a movement, the complexity of present-day innocence activity far outstrips anything that Borchard could have conceived of, not due to personal failings, but because horizons are limited by the eras in which we live. Contemporary innocence concerns with the psychological effects of wrongful conviction or the policy activism of exonerees, for example, were inconceivable in Borchard's time.[161] I would update my previous argument that structural justice system features foreclosed an innocence movement in Borchard's day,[162] to suggest that his era's social and political ethos also constrained innocence reforms in the early twentieth century.

The basic lesson – that errors of justice *do* occur – was forgotten during the decades of the U.S. tough-on-crime politics that produced mass incarceration,[163] suggesting that resistance to see errors of justice reflects ideology.[164] As Keith Findley explained, "[t]he innocence cases have exposed as self-deception our longstanding belief that the criminal justice system does all it can to guard against convicting the innocent, and that mistakes, rarely if ever made, are anomalous rather than systemic."[165] The greatest lasting effect of Borchard's work, more meaningful than his causal analysis or perhaps even his advocacy for compensating the wrongfully convicted, is to refute the impulse of those who deny the existence or salience of wrongful convictions. Edwin Montefiore Borchard was a rationalistic, Progressive era legal scholar who may have believed that his proof, once offered, would eradicate belief in the justice system's inerrancy. We should, however, be aware that innocence denial is a belief that arises in each era.[166] In this light an essential function of the innocence movement is to press the case,[167] – to paraphrase Borchard's Preface and to stress

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[159] See Jon B Gould, *The Innocence Commission: Preventing Wrongful Convictions and Restoring the Criminal Justice System* (New York: New York University Press, 2008); Christine C Mumma, "The North Carolina Innocence Inquiry Commission: Catching Cases that Fall Through the Cracks", in Zalman & Carrano, *supra* note 68 (referring to the innocence advocacy of North Carolina Justice I Beverly Lake).

[160] See Harry Kreisler, "A Passion for Justice: Conversation with Peter Neufeld" (Interview, 2001), online: <http://globetrotter.berkeley.edu/people/Neufeld/neufeld-con0.html>; Harry Kreisler, "DNA and the Criminal Justice System: Conversation with Barry Scheck" (Interview,2003), online: <http://globetrotter.berkeley.edu/people3/Scheck/>; University of Michigan Faculty Biography, Samuel R Gross, online: <https://www.law.umich.edu/FacultyBio/Pages/FacultyBio.aspx?FacID=srgross>. See Robert J. Norris, *Exonerated: A History of the Innocence Movement* (New York; NYU Press, 2017) 167-180 (debate among innocence movement pioneers regarding whether innocence is a civil-rights movement).

[161] See Zieva Dauber Konvisser and Ashley Werry, "Exoneree Engagement in Policy Reform Work: An Exploratory Study of the Innocence Movement Policy Reform Process" (2017) 33:1 J Contemp Crim Just 43; Jennifer Wildeman et al, "Experiencing Wrongful Convictions" (2011) 50 J Offender Rehabilitation 411.

[162] Zalman, Borchard, *supra* note 4.

[163] Meltsner, *supra* note 130; see Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness,* rev ed (New York: The New Press, 2012).

[164] See for example, D Michael Risinger, "Innocents Convicted: An Empirically Justified Factual Wrongful Conviction Rate" (2007) 97 J Crim L & Criminol 761 [*Risinger*].

[165] Keith A Findley, "Defining Innocence" (2010) 74 Alb L Rev 1157 at 1157-1158.

[166] Risinger, *supra* note 164.

[167] As is done in the United States by the National Registry of Exonerations, online:

the goal of his "innocence project" – that "innocent men" *are* convicted, that it *is* a physical possibility, it *happens* in the world, and that it *is* something to worry about.

<http://www.law.umich.edu/special/exoneration/Pages/about.aspx>.

Miscarriages of Justice in Canada: Causes, Responses, Remedies

By Dr. Kathryn M. Campbell, Professor of Criminology, University of Ottawa, Canada

Toronto: University of Toronto Press, 2018

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This book covers a great deal of material related to wrongful conviction or as the book terms it miscarriages of justice. As the subtitle says, the book deals with the causes, responses, and remedies. There is a wealth of information in the book that could serve as an introduction to this very important topic. It would be appropriate as a textbook for a course for undergraduates or even graduates or law students who want to learn about what causes wrongful convictions and how to prevent them from happening in the future. In that sense the book is a successful venture written by a very knowledgeable person and presented in a logical, thorough way.

It also contains some useful tables dealing with various aspects of wrongful convictions. It lists many of the known wrongful convictions in Canada, when they occurred, how long the people served and what compensation they received, if any. There are other tables that present the factors involved in wrongful convictions and the relevant commissions and the guidelines for judges. All of these tables are in the Canadian context. Even those who are already familiar with the issue of wrongful convictions and who might not need most of this book to inform them will find these table helpful. They are a definite contribution.

The author, Kathryn Campbell, has an undergraduate degree in psychology, a PhD in criminology, and a law degree. She is also the director of Innocence Ottawa, a student-run innocence project at the University of Ottawa. Campbell is thus extremely well suited to deal with the very complicated issues in law, psychology and the intersection of the two as they relate to wrongful convictions. This is best shown in the chapter on eyewitness identification, which is generally accepted to be the factor that is present more than any other in cases of wrongful conviction. The chapter presents in some detail the research by psychologists indicating the fallibility of human memory and then moves on to ways in which the identification process can be improved to reduce errors. Research has shown that presenting photos sequentially rather than simultaneously tends to lead to fewer false identifications. Having discussed this, the author then notes that some jurisdictions now require that photo lineups be done this way. Campbell also describes both American and Canadian case law related to the issue of eyewitness identification. She raises the complex issue of whether juries should hear from experts about the problems with eyewitness identification. Some people feel that juries must be warned about relying too much on an eyewitness, but others feel that having an expert testify about it goes too far. Campbell points out that American courts often allow expert testimony on this while Canadian courts rarely if ever

do. This is an excellent discussion of the research and issues related to eyewitness identification. Campbell is to be congratulated for this chapter.

The chapter on forensic and other expert testimony also reflects the author's knowledge of law, psychology and research methods. The various kinds of forensic evidence are described in some detail, with their weaknesses highlighted and made more forceful by the use of examples from actual Canadian cases. The issues are pretty much the same in all of them. There is a lack of scientific rigour in the testing and even more important, almost no systematic demonstrations that the tests are valid or reliable. For example, firearm experts claim that they can tell what gun fired a particular bullet, but this claim is rarely if ever subject to random testing. If they were given twenty bullets from twenty different guns, could they really match bullets with guns? Maybe they could, but there is no convincing evidence to support this. Hair analysis is even more questionable and is now largely replaced by DNA analysis. The discussion makes it clear that with a few exceptions, forensic evidence must be relied on with caution. It is well established that inaccurate or overstated forensic evidence is one of the most prevalent factors that lead to wrongful convictions.

I should mention that there is another side to this issue. Some prosecutors and crowns complain that TV programs such as CSI have made jurors expect strong forensic evidence in every case. When there is no such evidence, it has become (they say) hard to get convictions. On the other hand, CSI has also probably made jurors believe even more in the value of forensic evidence and rely on it more than they should.

One omission in the chapter is that there is little discussion of the role played by bias on the part of forensic experts. Most of the forensic laboratories are run by police forces and even if they are independent most of their work comes from the police or the crown rather than from the defence. Because of this, those working in the labs may have a tendency, deliberate or inadvertent, to favour the prosecution. Certainly this has been shown in many cases, in which the forensic experts tend to overstate the evidence against the accused. It was one of the major reasons Guy Paul Morin was wrongly convicted. Despite giving bias too little attention, this is a very good chapter.

A positive feature of the book is that it deals with cases other than just murder. Most of those involved in innocence projects, including Innocence Canada, focus almost entirely on wrongful convictions for murder. This is because they are presumably the worst miscarriages of justice, and because typically those convicted are still incarcerated which is not true for most other crimes. But it is almost certain that the vast majority of wrongful convictions are for lesser crimes, partly because there are so many more of them and partly because legal counsel is typically less involved and perhaps less skilled. Most of those accused of theft or minor assault and other such crimes cannot afford their own lawyers. They will often confess just to get it over with, especially if they are minors who are told they can go home to their parents. These instances of wrongful conviction collectively may do far greater harm than the relatively few cases involving murder, but these lesser cases are rarely litigated or even noticed. While this book does not spend much time on them either, at least it mentions some of them in the tables.

While many of the topics are covered well, there are some problems with the book. The writing is complicated and rather heavy. This is reinforced by the format and structure provided by the publisher. The text takes up full pages interrupted by only a few tables and no illustrations or photos. Unfortunately, all of this makes for hard going.

On a more substantive issue, I think the choice of "miscarriage of justice" rather than "wrongful convictions" is a mistake. The author makes an argument for the term she chose, but I believe that for most people miscarriages of justice can include all sorts of cases other than conviction when the person was innocent. Inadequate counsel, biased juries, improper interviews, and all sorts of other factors that end in a conviction may taint the verdict and make it a miscarriage of justice even if the accused did commit the crime. Moreover, improper sentences, unreasonable denial of parole, unjustified arrests, and lengthy detentions are all miscarriages of justice that have nothing to do with the focus of the book.

A notable omission in sections dealing with the causes of wrongful convictions is that there is too little attention spent on the role of prejudice and bias. The courts have acknowledged that jurors may be biased against black people, Indigenous people, those of varying sexual orientations - indeed against any minority group that is the object of discrimination. It is also the case that the police may be influenced by bias in whom they target as likely criminals and whom they then focus on as they pursue their investigation. It might have been useful to point out as just one example that is especially relevant in Canada the disparity in incarceration rates between Indigenous and others. Indigenous men are far more likely to be in prison than white men, and the difference is even greater for women, with Indigenous women being ten times as likely to be incarcerated. Similar but smaller disparities exist for other minority groups compared to whites. This factor is difficult to identify once a trial is finished but it surely plays a role in many wrongful convictions.

I would like to have seen more attention paid to the difference between Canadian and American systems as they relate to wrongful convictions. There is a drastic difference in how jurors are chosen. In Canada ordinarily prospective jurors are asked no questions. If the judge allows it, they can be questioned about possible bias. But the questioning is very limited, with just a few or even just one question allowed. In contrast, American courts allow extensive questioning about all sorts of issues. This makes jury selection much more complex in the United States. Yet there is no evidence that American juries are fairer and less biased than Canadian ones.

Another difference relating to how wrongful convictions are overturned in the two countries is the role of DNA. The Innocence Project is the most successful and well-known organization in the United States working to reverse wrongful convictions. It deals exclusively with exonerations through DNA testing and has managed to get hundreds of exonerations (and in some cases to confirm guilt) through up-to-date DNA analysis. Similar organizations in Canada rarely deal with DNA. Innocence Canada has had only a few cases in which DNA was a key issue. It seems that at least in the past Canadian investigators, police and others, have been more scrupulous in testing whatever samples are available. Perhaps with more and more knowledge of the usefulness of DNA analysis, this will change and courts in both countries will be certain to do whatever tests are possible.

Finally, it would have been useful to have a discussion of how wrongful convictions are reversed. It could have been made clear that it is a long, complex and tedious process. Once someone has been convicted, in practice if not in law, the burden of proof of innocence shifts. An appeals court or the federal CCRG has to be convinced that the person was wrongly convicted. It is not sufficient to raise some doubt, because considerable deference is given to the verdict in the original trial. Thus, the typical exoneration takes many years during which the convicted person usually remains in prison. Those interested in wrongful convictions would have benefited from a description of this process.

As a hopeful aside, after this book was published, the Attorney General and Justice Minister of Canada announced that one of his top priorities would be the establishment of a federal commission to deal with wrongful convictions. This would be a big step forward since now identifying cases and trying to get them reversed has fallen to various non-profit groups. This should be the job of the federal government. It would be great if this were to occur.

In sum, despite some weaknesses, this is a good introduction to the field of wrongful convictions. It is a serious, scholarly book that relies on legal, psychological, and criminological research. There are 54 pages of notes and 27 pages of bibliography. The book deals with all of the issues well. It highlights the problem of wrongful convictions, describes in considerable detail the causes of these miscarriages of justice, and then to some extent discusses what remedies might be possible. There are no easy answers and it is to her credit that Campbell does not offer any. Rather she spells out the current situation and provides some ways in which it might get better. Because it is a somewhat difficult read, the book seems most appropriate as an overall introduction to the area for students and perhaps law students. Scholars may also find it useful since it covers so much material. It is certainly a substantial contribution to the field.