

**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.

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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

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

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

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.

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).

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.

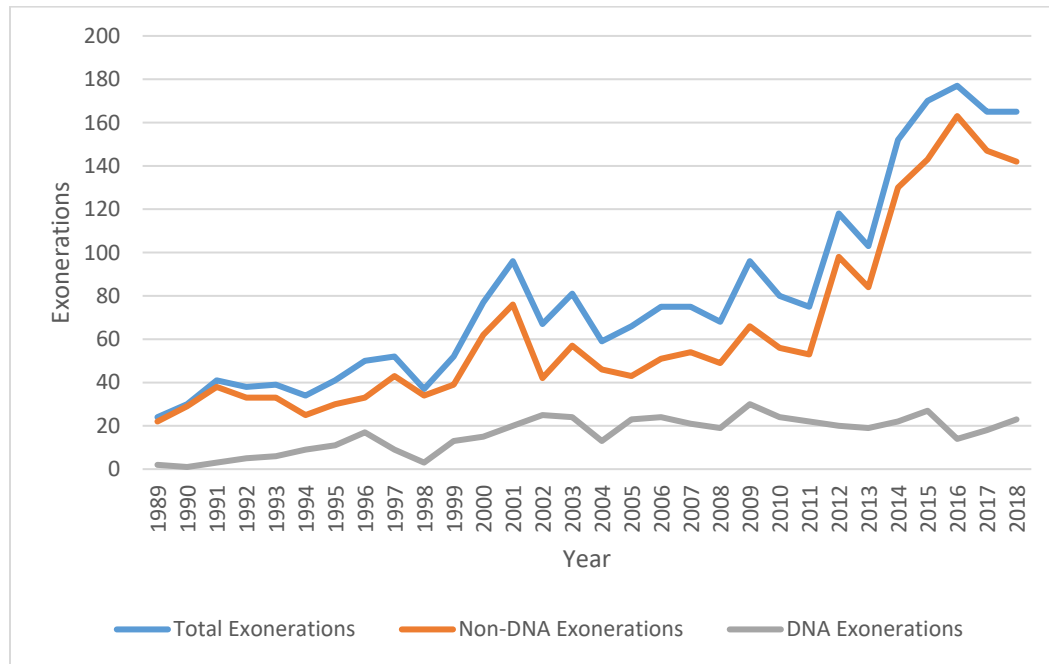
⁴⁸ The National Registry of Exonerations, “Detailed View” (last accessed 5 February 2020), online:

<https://www.law.umich.edu/special/exoneration/Pages/detailist.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 lead 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.

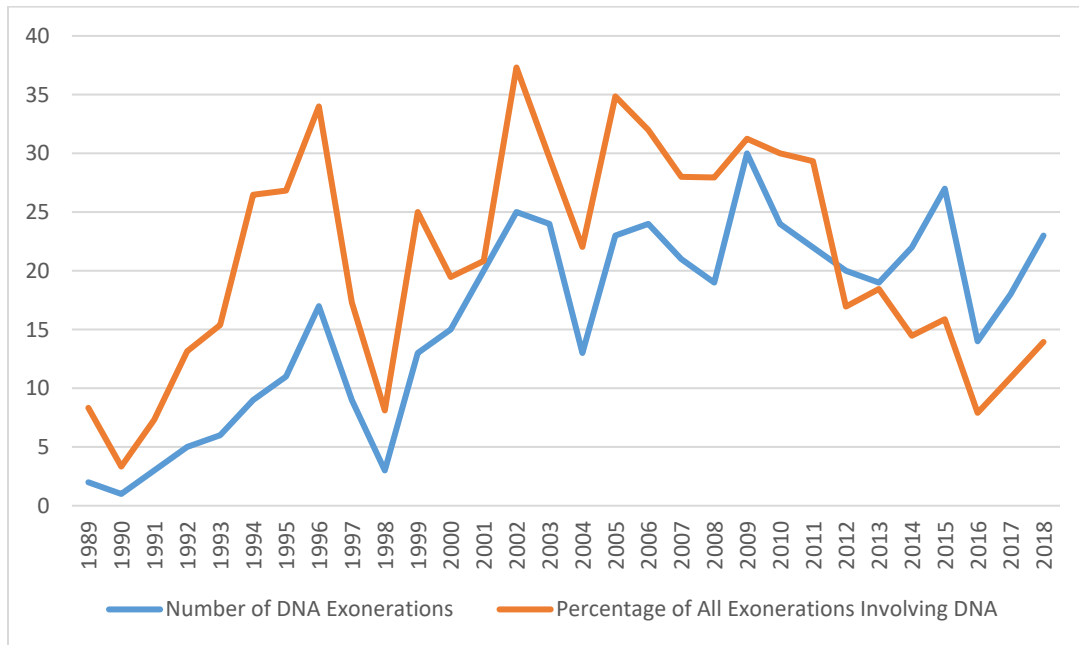
⁵¹ For a brief discussion of this issue, see Norris 1, *supra* note 1 at 206-211.

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.

⁵³The 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

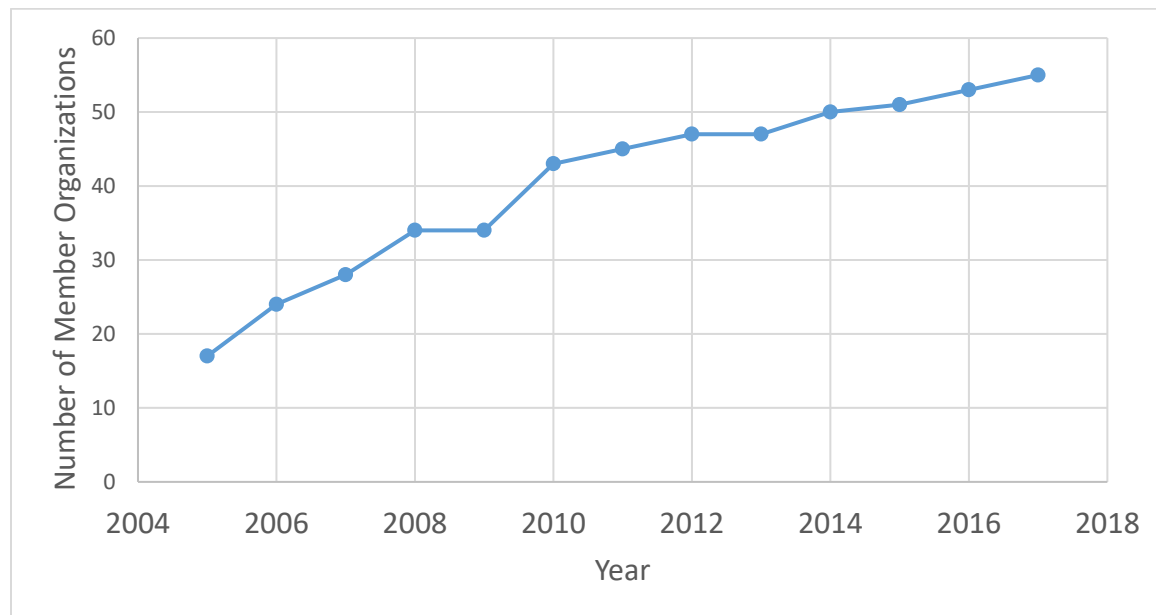
Exonerations tend to capture headlines and serve as the object of popular documentaries and fiction, and for good reason: they are intriguing, captivating human stories that make engrossing movies, shows, and books. However, they are but one element of the larger innocence movement, which relies heavily 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

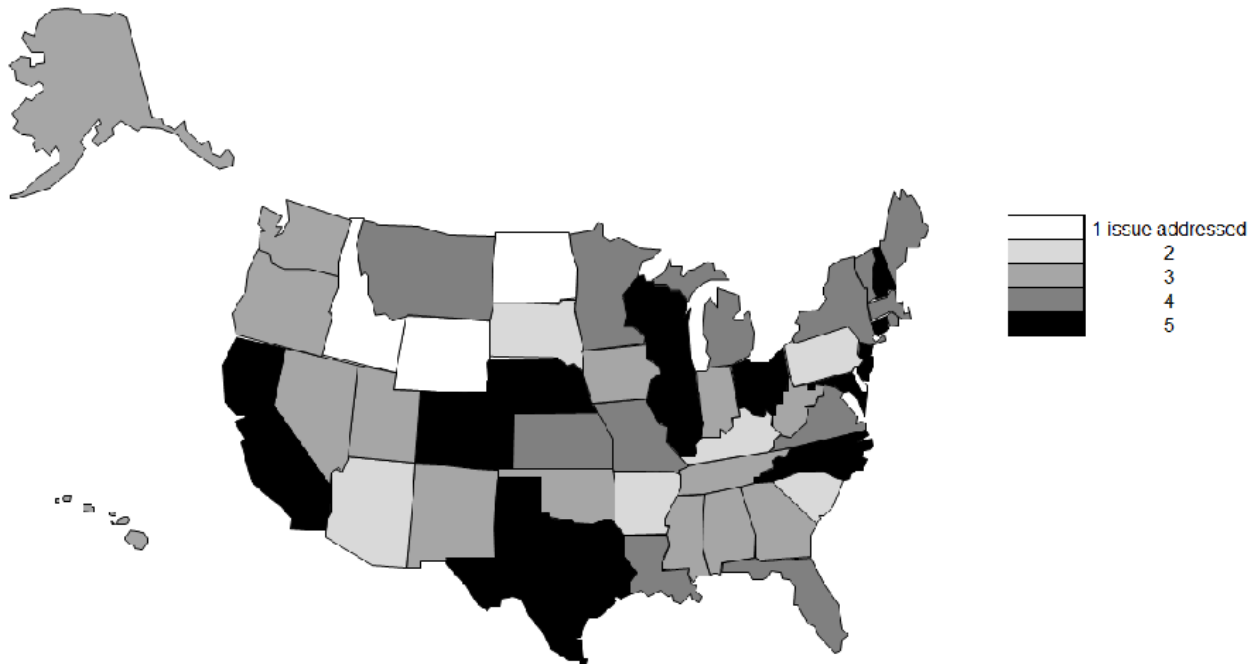
State	Eyewitness ID	Interrogation Recording	DNA Access	Preservation of Evidence	Compensation	Total Areas Addressed
AL	0	0	1	1	1	3
AK	0	1	1	1	0	3
AZ	0	0	1	1	0	2
AR	0	0	1	1	0	2
CA	1	1	1	1	1	5
CO	1	1	1	1	1	5
CT	1	1	1	1	1	5
DE	0	0	1	0	0	1

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

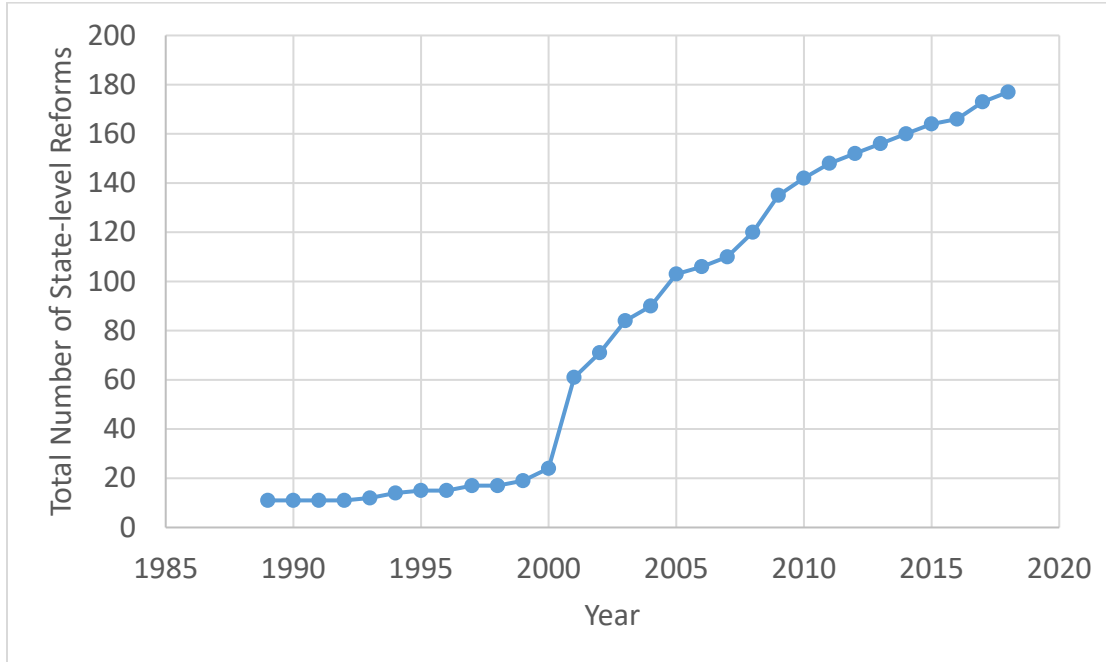
Figure 4 is a map of the United States, highlighting states by the number of policy areas they have addressed.

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 policies 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

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 convictions⁷⁶ is evidenced by its website, which provides several resources relevant to the innocence movement, including additional information and reports about eyewitness identification⁷⁷ and forensics, among other issues.⁷⁸ In recent years,

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, Sandra 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 convictions⁷⁹ 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](https://www.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 Holloway, "Conviction Review Units: A National Perspective" (2016), online:

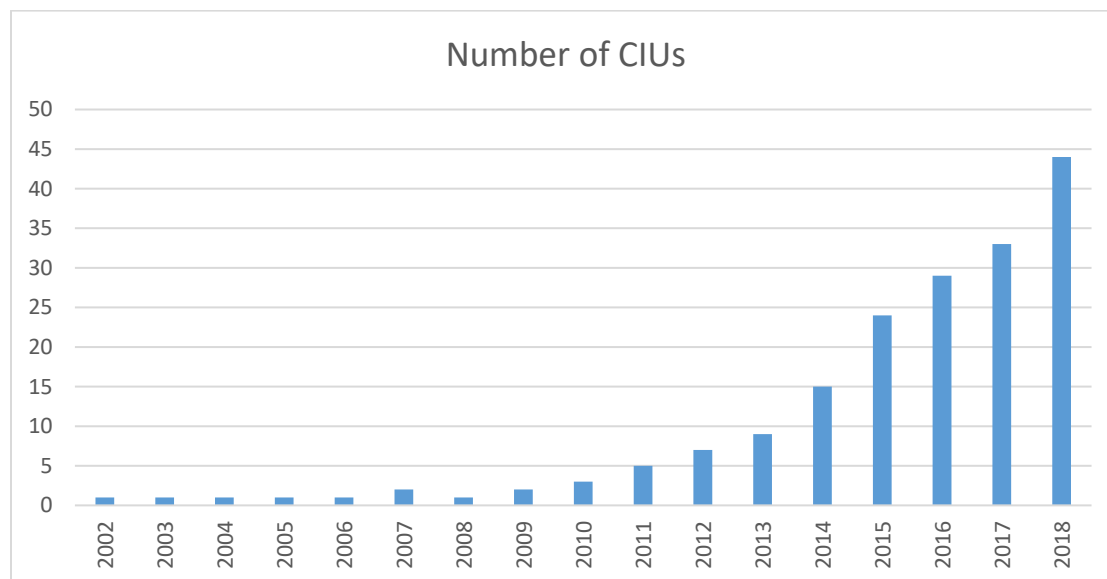
https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2615&context=faculty_scholarship.

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 exoneration. In 2018, CIUs were involved in fifty-eight exoneration, 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 exoneration involving a CIU.⁹⁶ Annual CIU-involved exoneration 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:

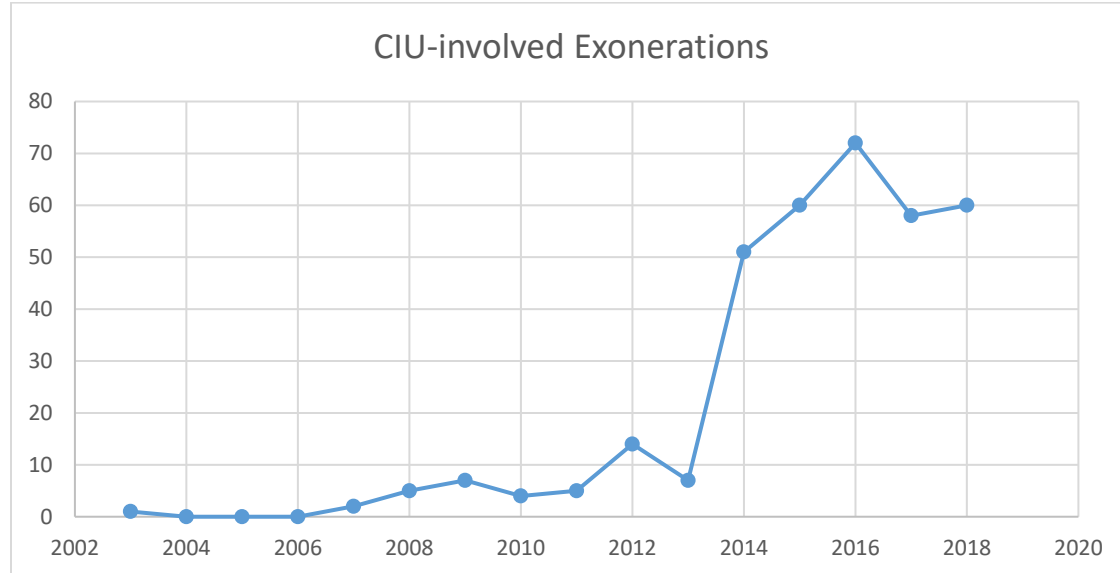
<https://www.law.umich.edu/special/exoneration/Documents/Exonerations%20in%202018.pdf>

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

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 Empirical 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 inmates¹¹¹ 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

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 Boys¹¹⁶ and the Central Park Five¹¹⁷—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

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/detailist.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-guilty>>.

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

[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

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>>.

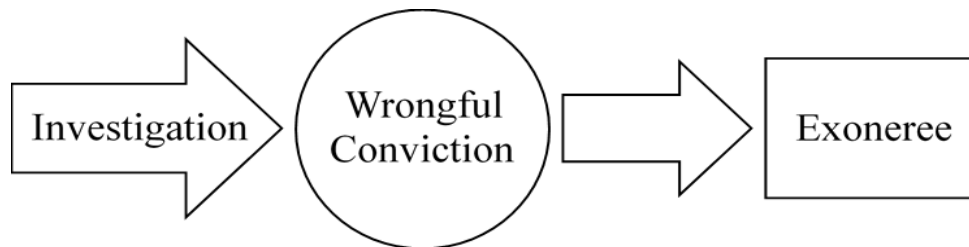
¹³⁵ Gross & O’Brien, *supra* note 104.

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 Sandra D Westervelt & Kimberly Cook, “The Albany Law Review: Foreword” (2012) 75 Alb L Rev 1223.

¹⁴² See for example, Westervelt & Cook, *ibid*; Sandra D. Westervelt and Kimberly J Cook, “Framing Innocents: The Wrongly Convicted as Victims of State Harm” (2010) 53 Crime L & Soc Change 259; Sandra 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

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.

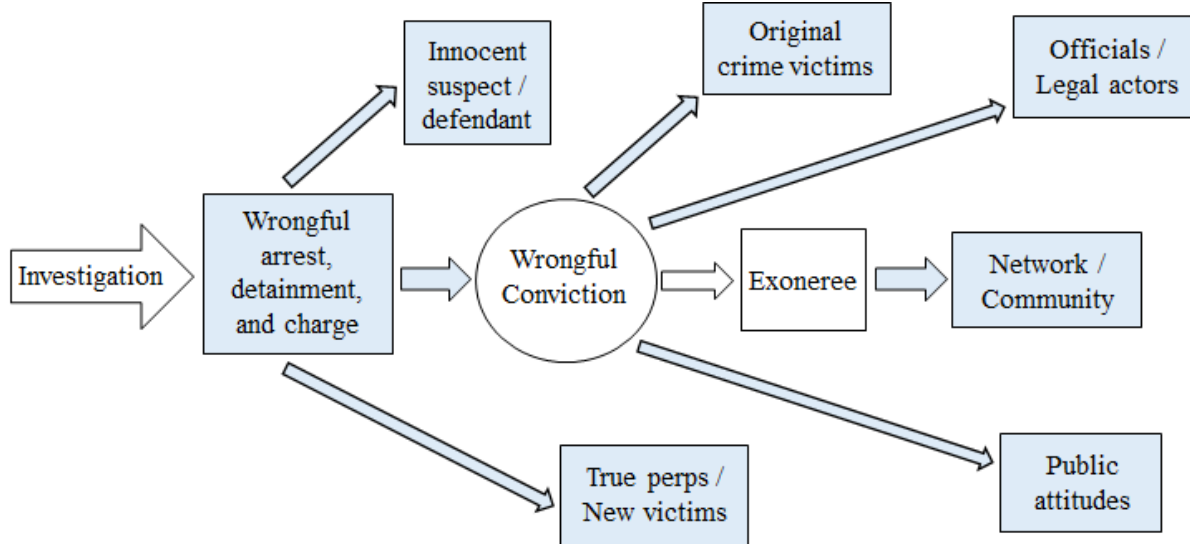
¹⁴⁷ Thompson & Baumgartner, *ibid.*

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 & Soc’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.

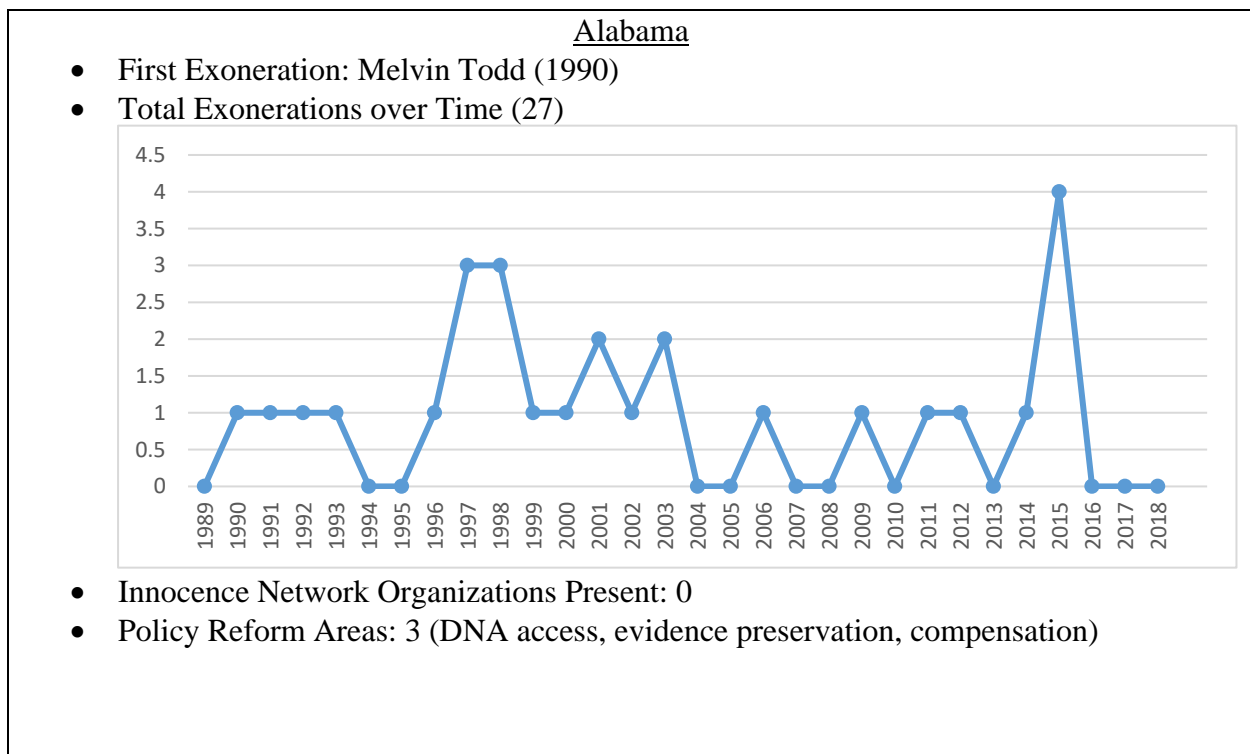
¹⁵³ We recognize that truly guilty individuals are sometimes erroneously exonerated, although the far greater problem almost certainly concerns the number of innocent individuals whose wrongful conviction will remain unrecognized.

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.

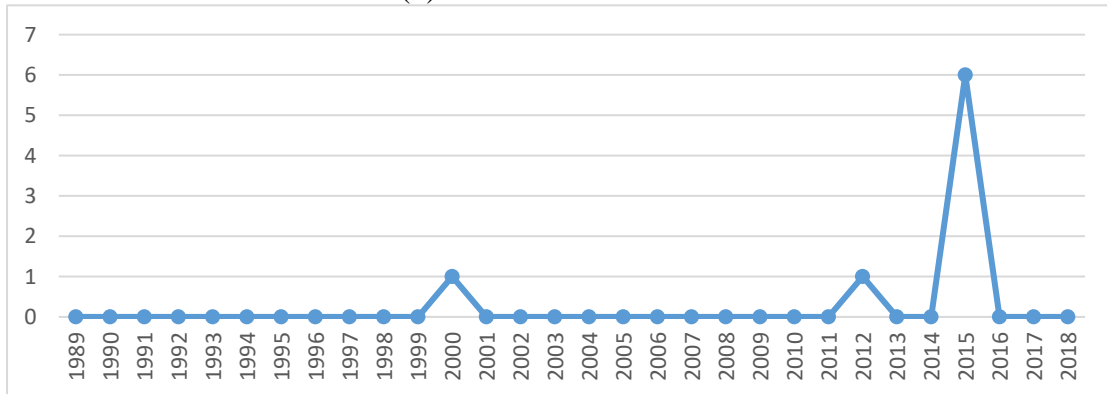
VI Appendix: State-By-State Summaries (1989-2018)¹⁵⁴



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

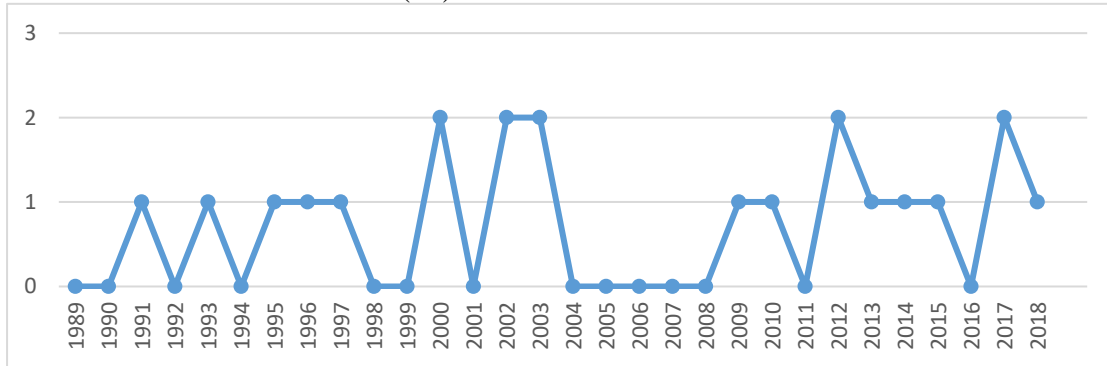
- First Exoneration: Layo Sinegal (2000)
- Total Exonerations over Time (8)



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

Arizona

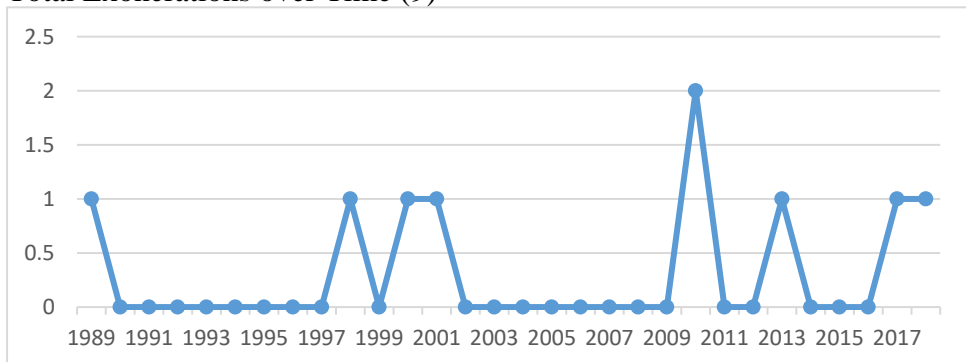
- First Exoneration: Ray Girdler (1991)
- Total Exonerations over Time (21)



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

Arkansas

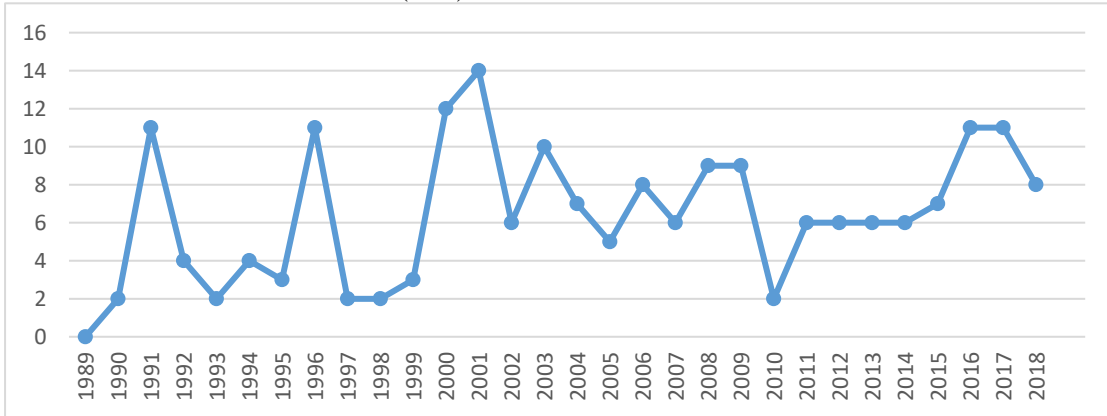
- First Exoneration: Scotty Scott (1989)
- Total Exonerations over Time (9)



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

California

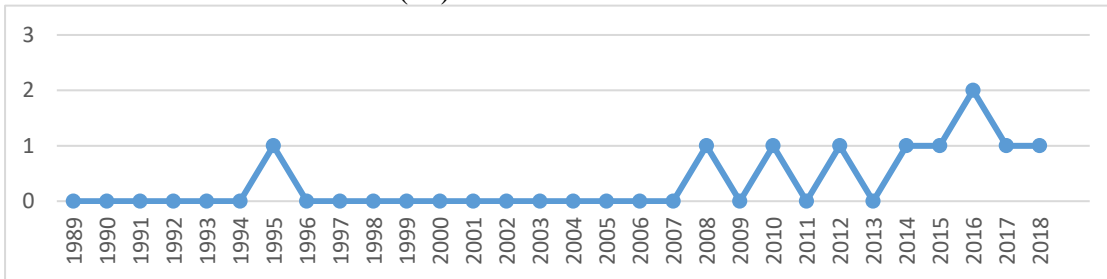
- First Exoneration: Marjorie Grafton and Tim Palomo (1990)
- Total Exonerations over Time (193)



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

Colorado

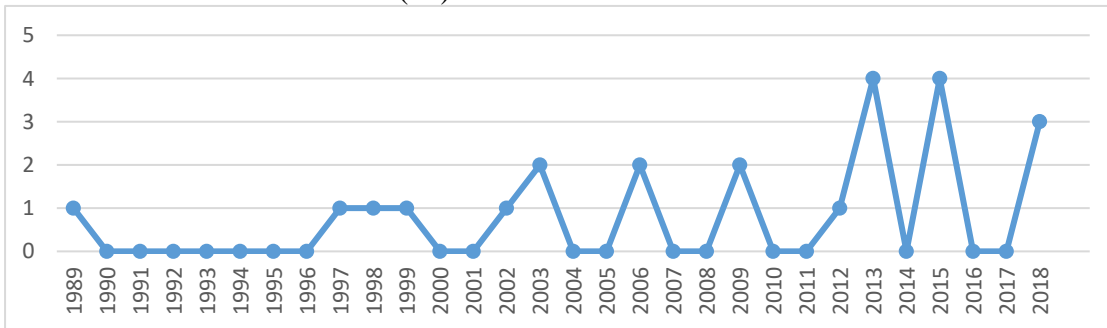
- First Exoneration: Alarico Joe Medina (1995)
- Total Exonerations over Time (10)



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

Connecticut

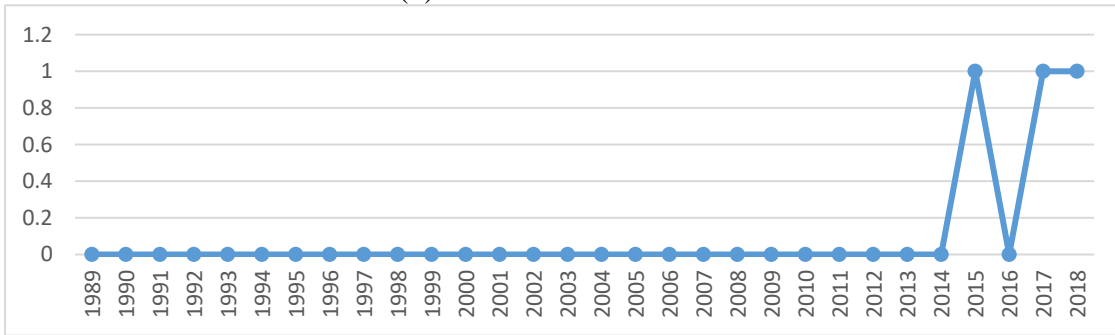
- First Exoneration: Benjamin Miller (1989)
- Total Exonerations over Time (23)



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

Delaware

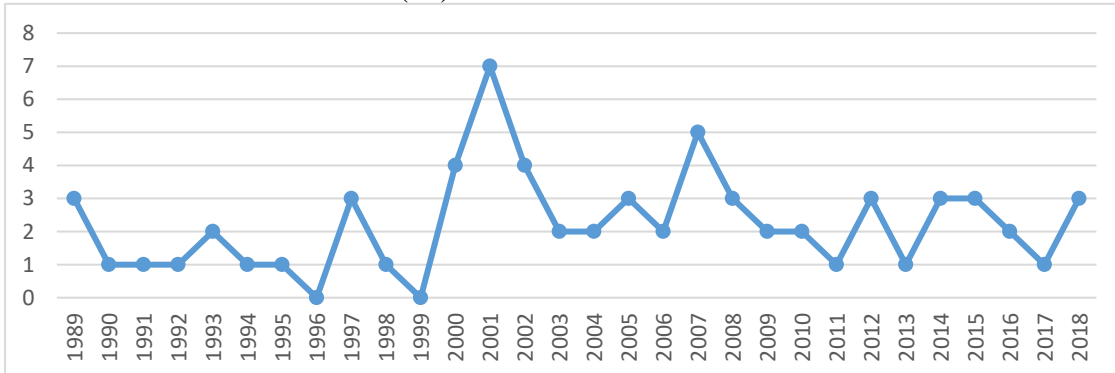
- First Exoneration: Jermaine Dollard (2015)
- Total Exonerations over Time (3)



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

Florida

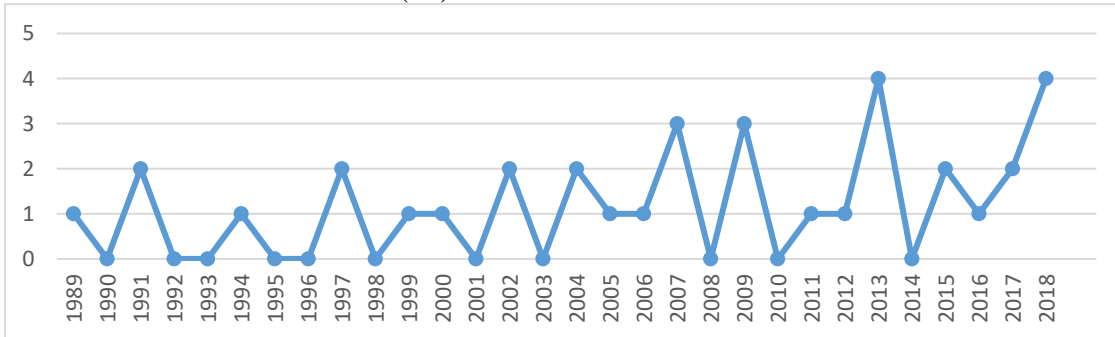
- First Exoneration: James Joseph Richardson (1989)
- Total Exonerations over Time (67)



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

Georgia

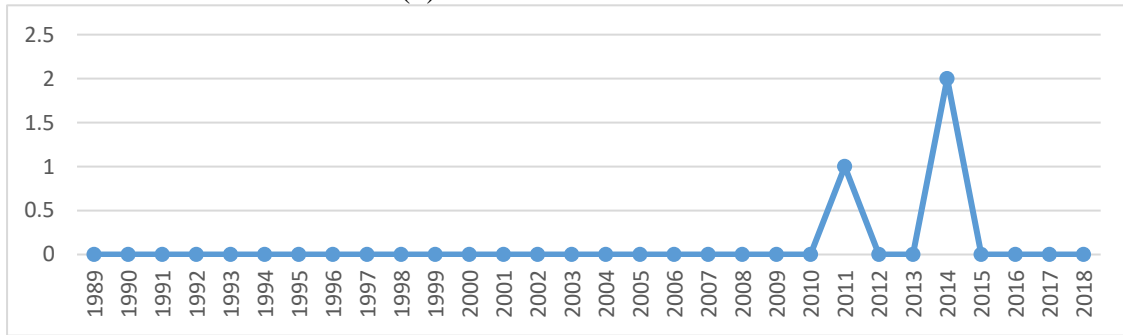
- First Exoneration: James Williams (1989)
- Total Exonerations over Time (35)



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

Hawaii

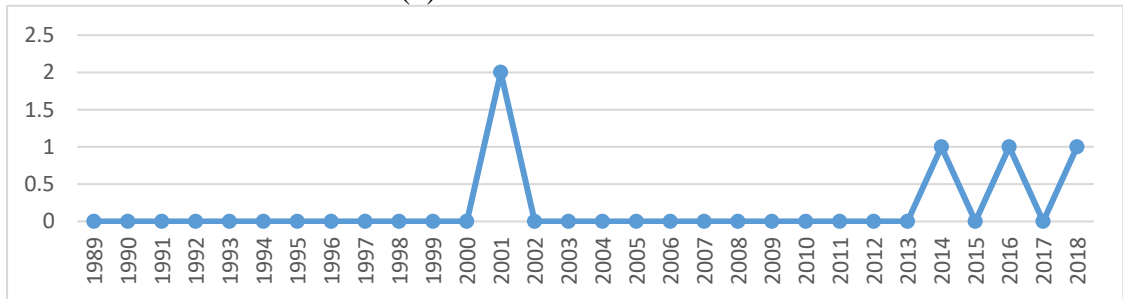
- First Exoneration: Alvin Jardine (2011)
- Total Exonerations over Time (3)



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

Idaho

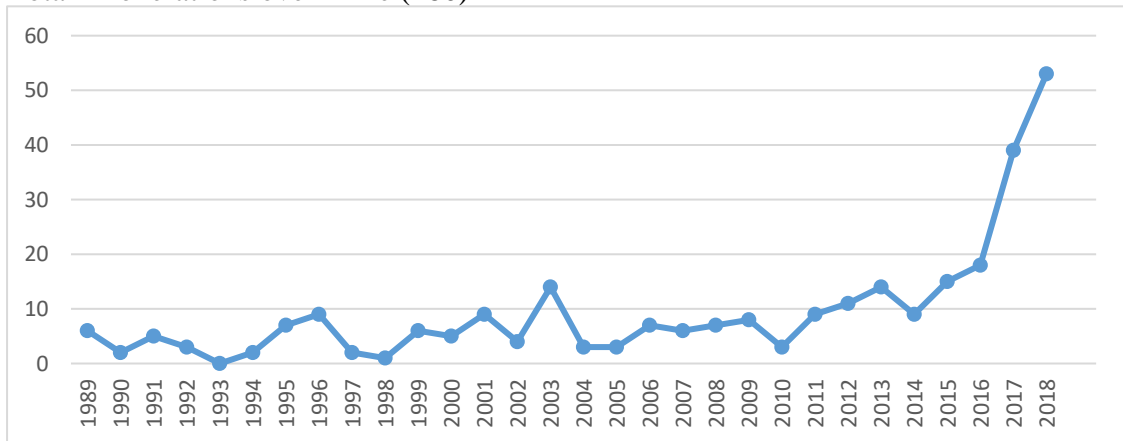
- First Exoneration: Donald Paradis (2001)
- Total Exonerations over Time (5)



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

Illinois

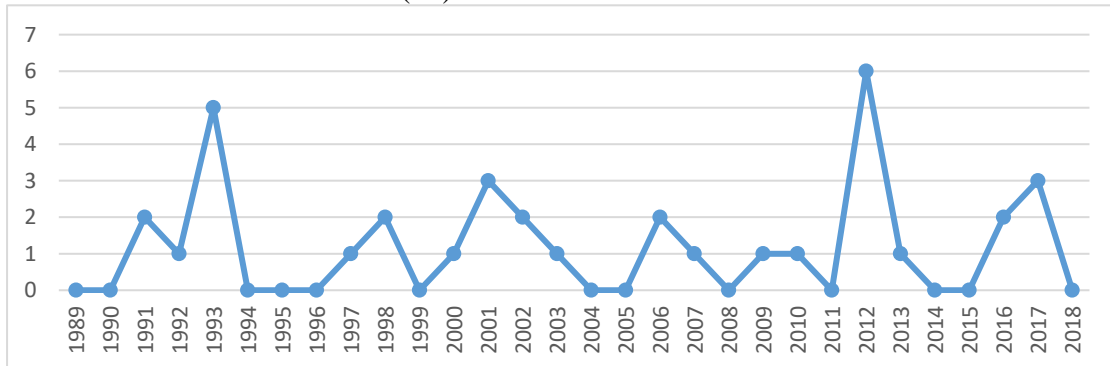
- First Exoneration: Gary Dotson (1989)
- Total Exonerations over Time (280)



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

Indiana

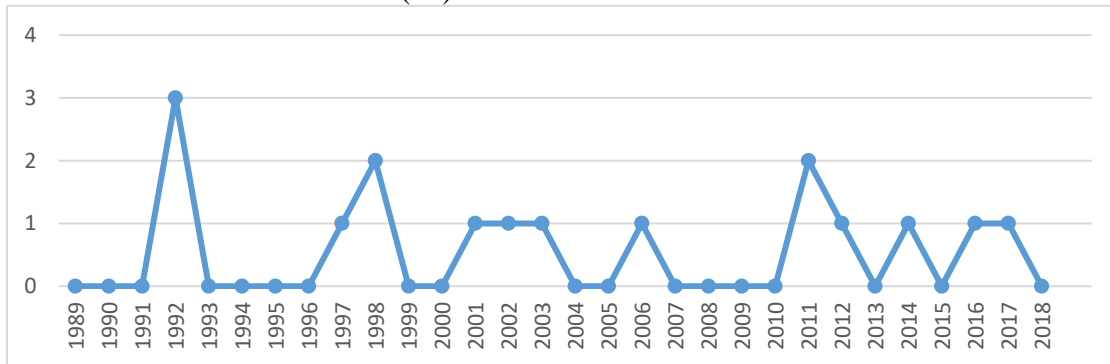
- First Exoneration: William DeMotte (1991)
- Total Exonerations over Time (35)



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

Iowa

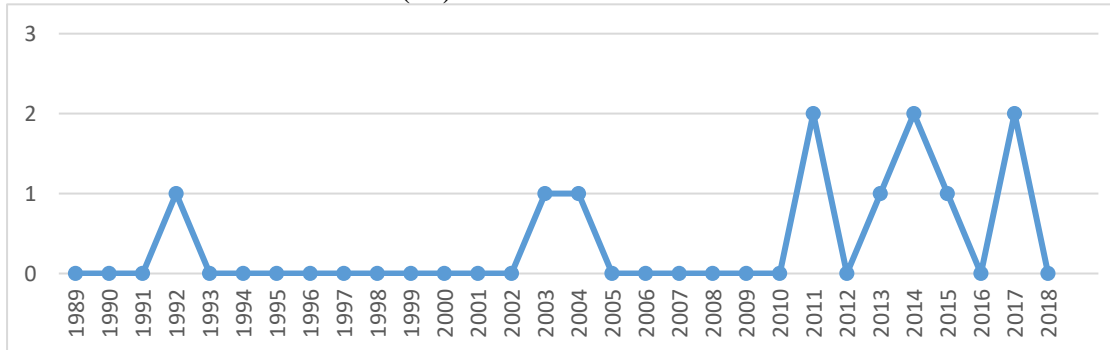
- First Exoneration: Anthony Davis and Donald Hannon (1992)
- Total Exonerations over Time (16)



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

Kansas

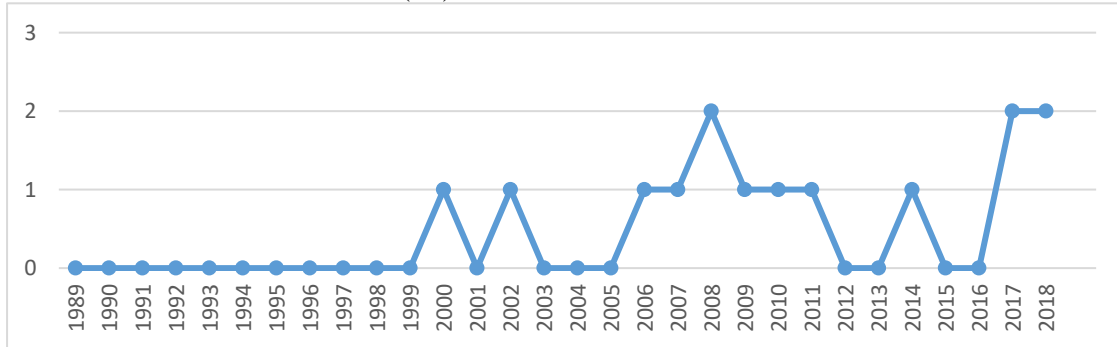
- First Exoneration: Joe Jones (1992)
- Total Exonerations over Time (11)



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

Kentucky

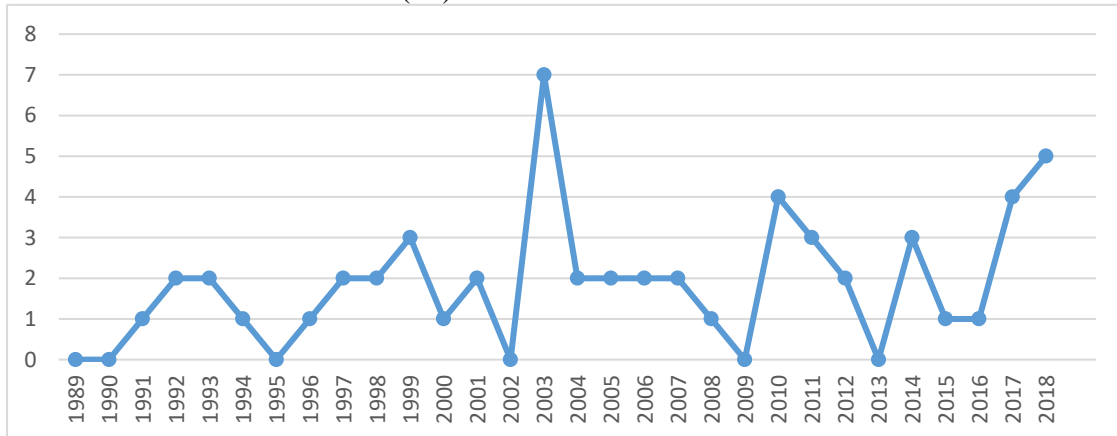
- First Exoneration: William Gregory (2000)
- Total Exonerations over Time (14)



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

Louisiana

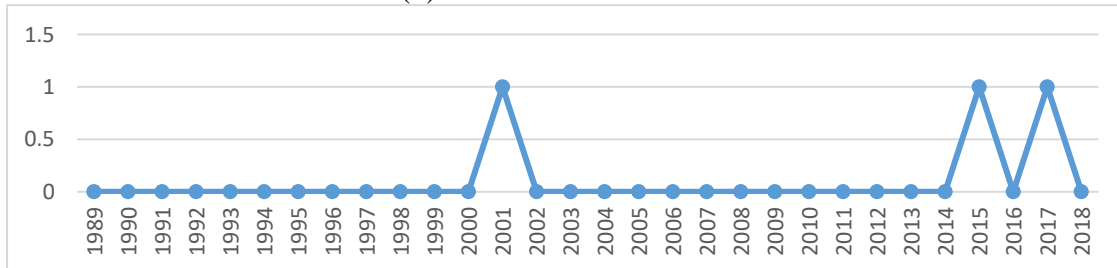
- First Exoneration: Isaac Knapper (1991)
- Total Exonerations over Time (56)



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

Maine

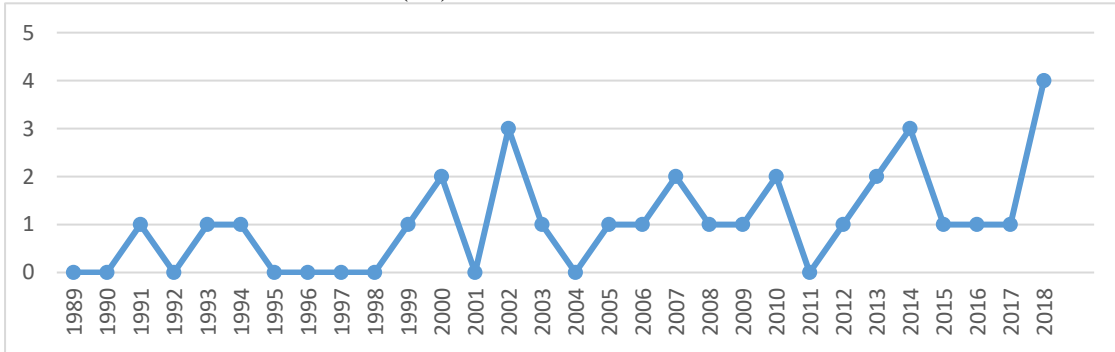
- First Exoneration: David McMahan (2001)
- Total Exonerations over Time (3)



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

Maryland

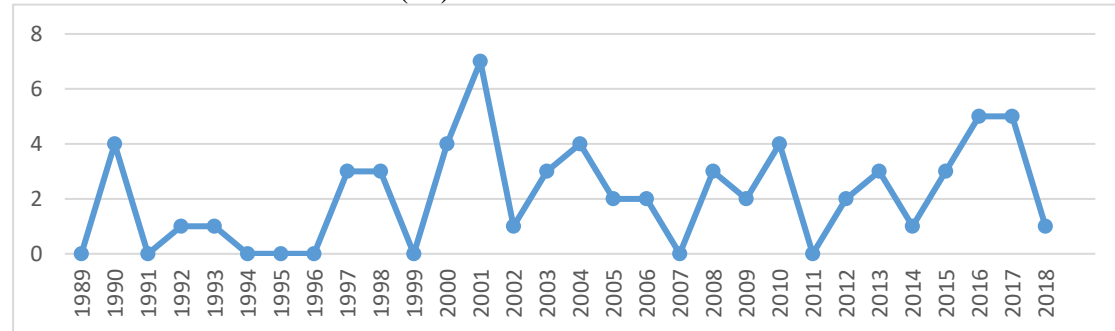
- First Exoneration: Sandra Craig (1991)
- Total Exonerations over Time (31)



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

Massachusetts

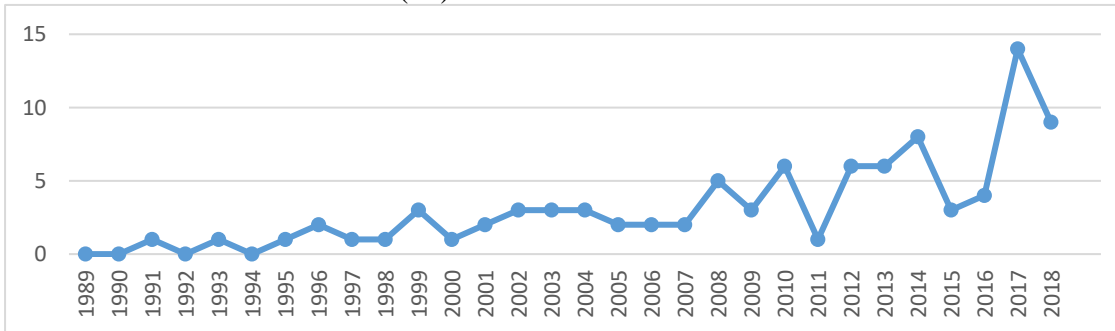
- First Exoneration: Louis Santos (1990)
- Total Exonerations over Time (64)



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

Michigan

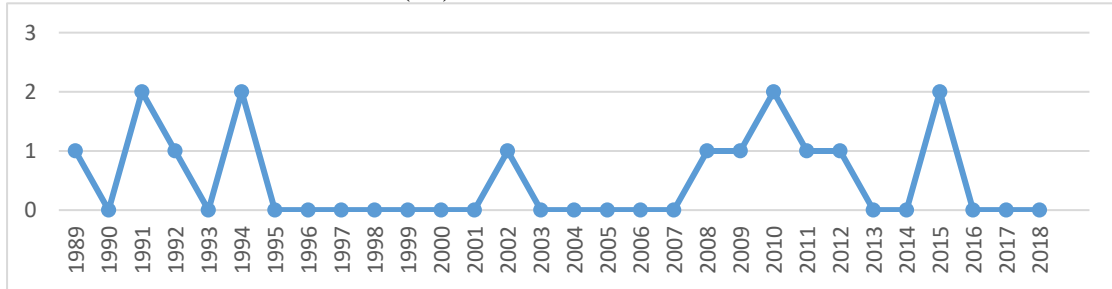
- First Exoneration: Laurie Moore (1991)
- Total Exonerations over Time (93)



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

Minnesota

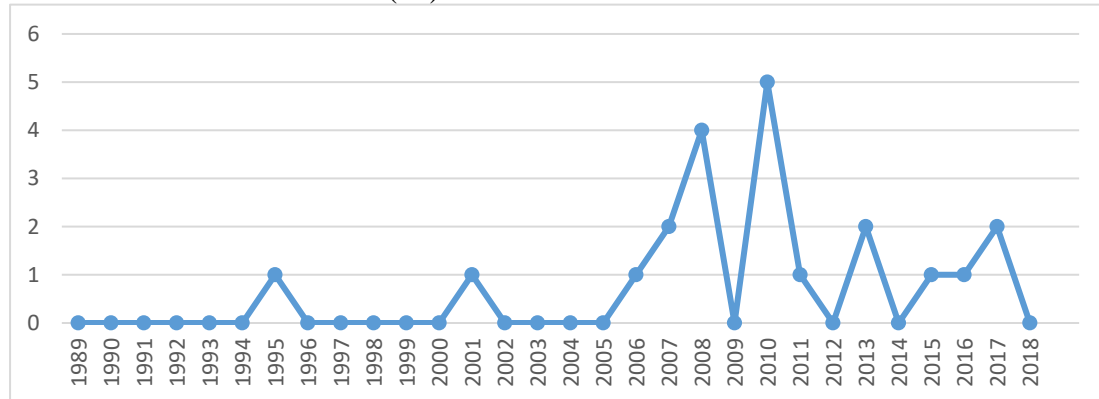
- First Exoneration: Richard Paul Dziubak (1989)
- Total Exonerations over Time (15)



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

Mississippi

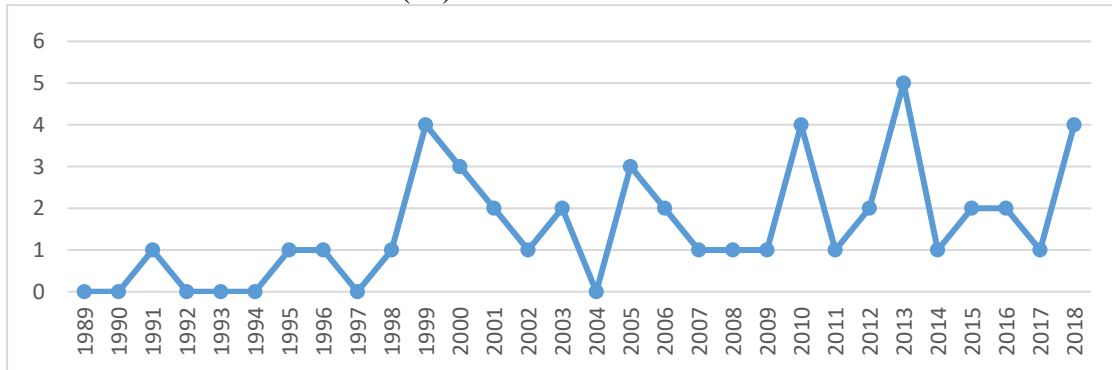
- First Exoneration: Sabrina Butler (1995)
- Total Exonerations over Time (21)



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

Missouri

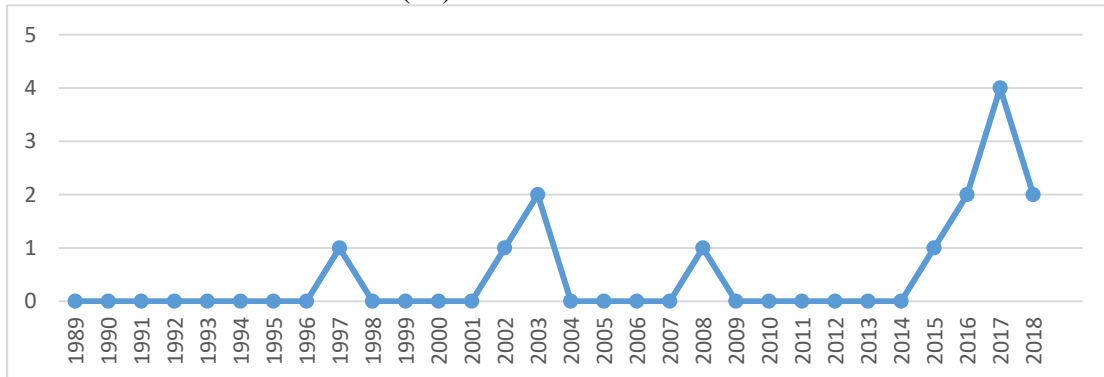
- First Exoneration: Patricia Stallings (1991)
- Total Exonerations over Time (46)



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

Montana

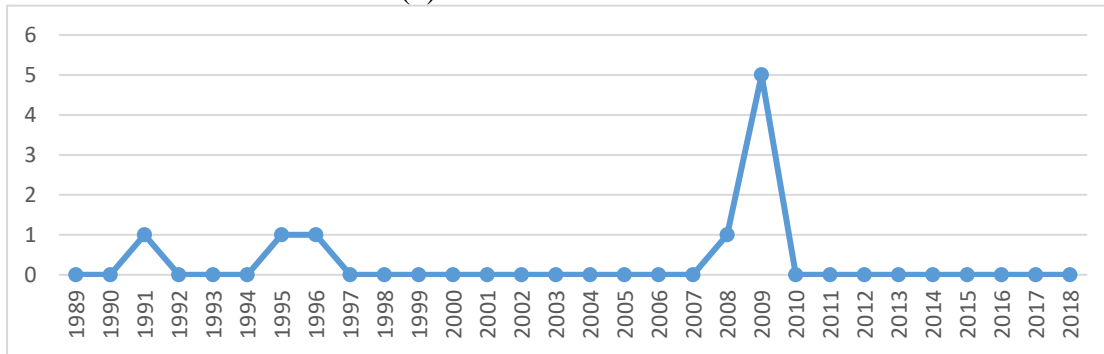
- First Exoneration: Chester Bauer (1997)
- Total Exonerations over Time (14)



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

Nebraska

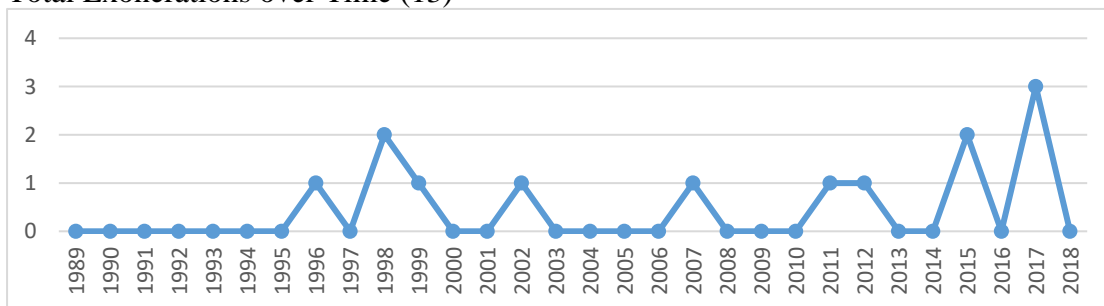
- First Exoneration: Darrel Parker (1991)
- Total Exonerations over Time (9)



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

Nevada

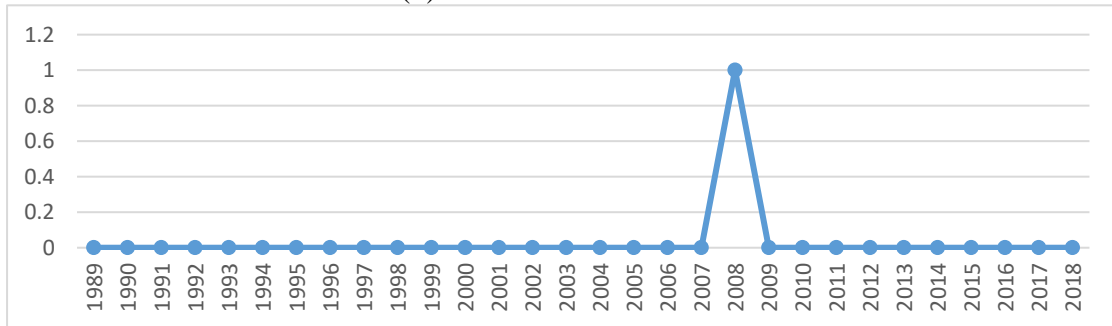
- First Exoneration: Roberto Miranda (1996)
- Total Exonerations over Time (13)



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

New Hampshire

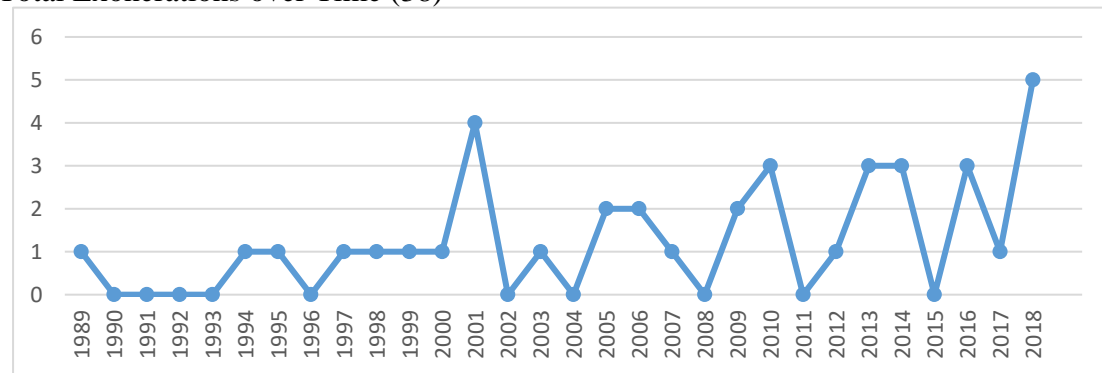
- First Exoneration: Roland Chretien (2008)
- Total Exonerations over Time (1)



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

New Jersey

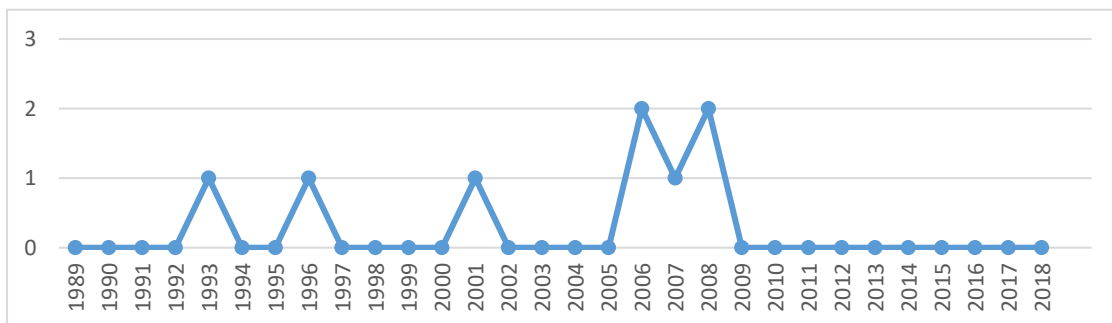
- First Exoneration: Damaso Vega (1989)
- Total Exonerations over Time (38)



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

New Mexico

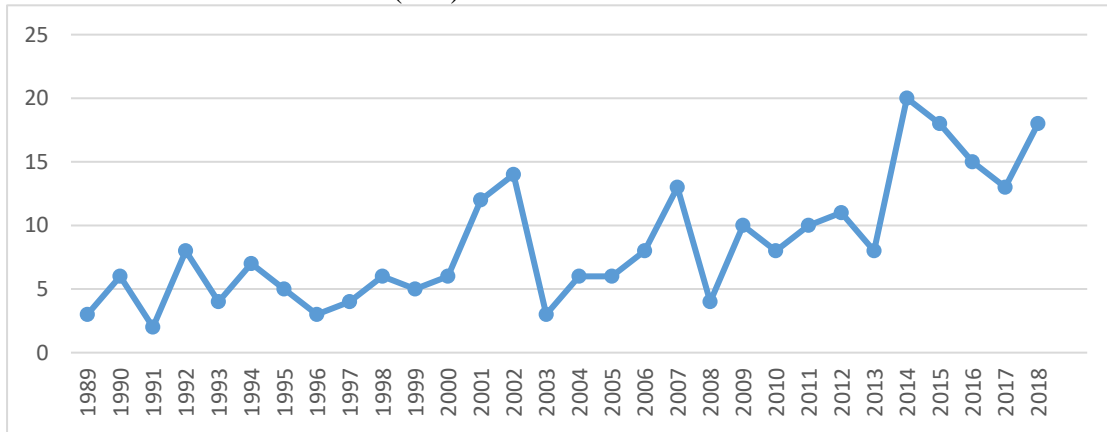
- First Exoneration: Gene Curtis Ballinger (1993)
- Total Exonerations over Time (8)



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

New York

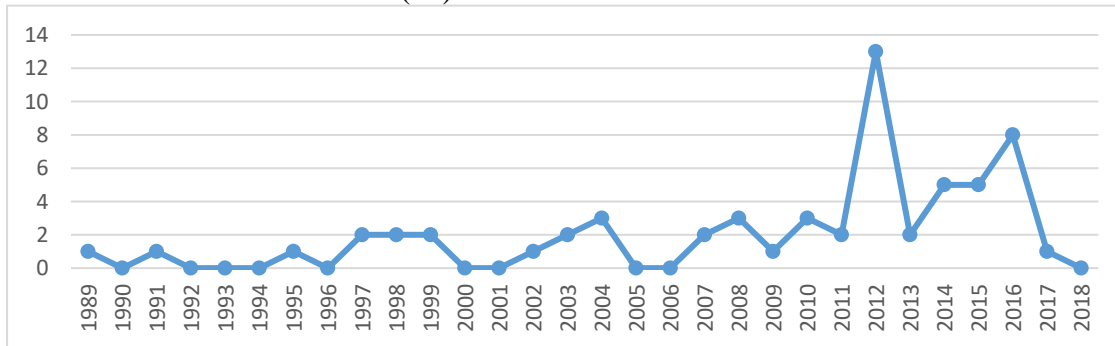
- First Exoneration: Bryan Blake (1989)
- Total Exonerations over Time (256)



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

North Carolina

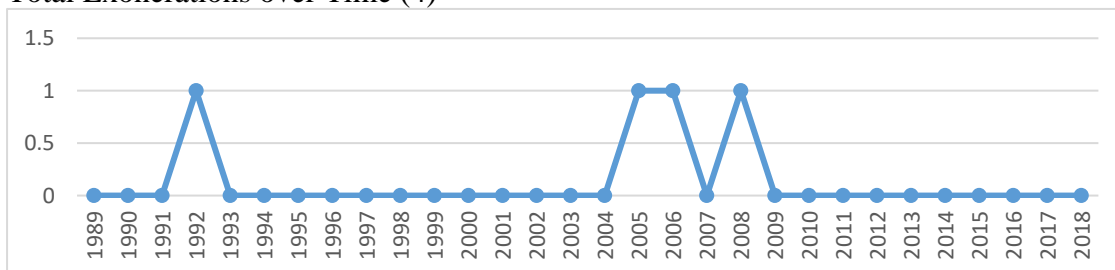
- First Exoneration: Thomas Shreve (1989)
- Total Exonerations over Time (60)



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

North Dakota

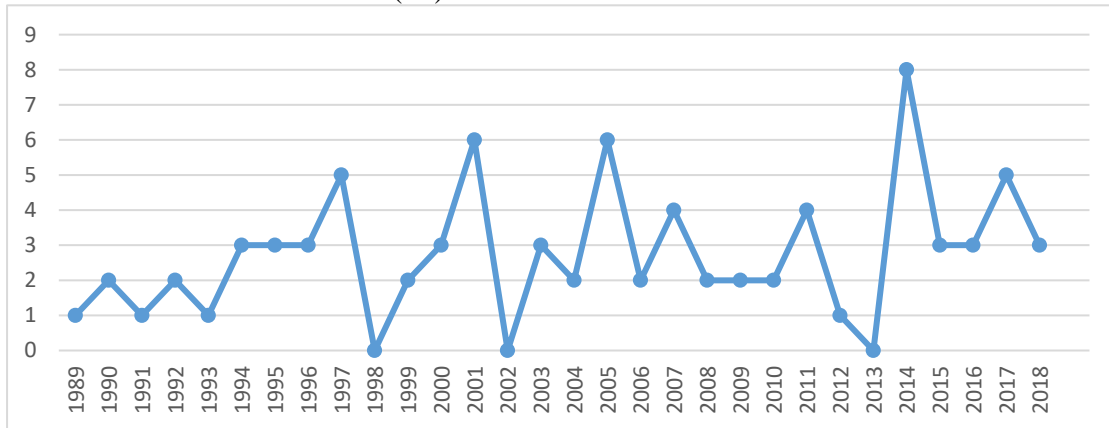
- First Exoneration: Richard McIntyre (1992)
- Total Exonerations over Time (4)



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

Ohio

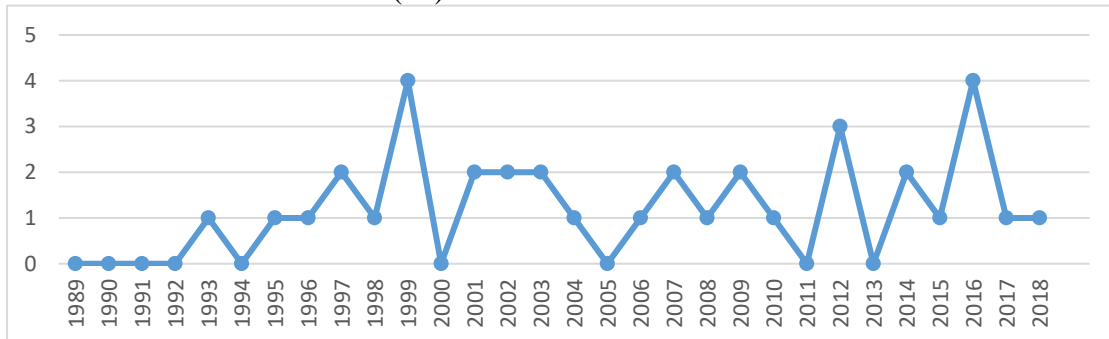
- First Exoneration: William Mueller (1989)
- Total Exonerations over Time (82)



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

Oklahoma

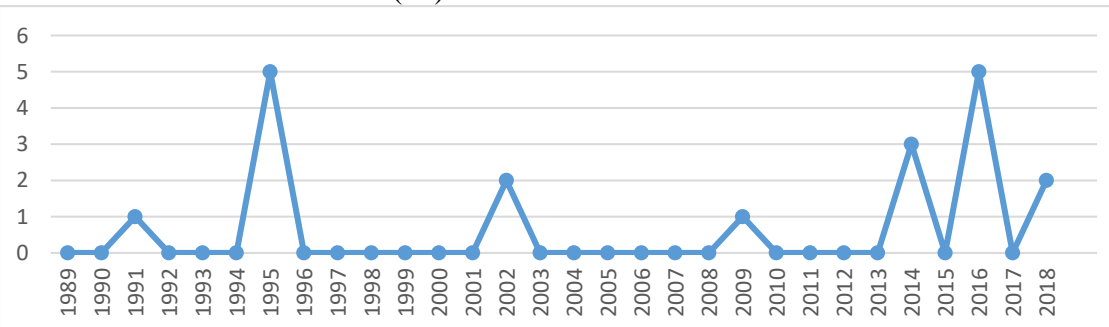
- First Exoneration: Gregory Wilhoit (1993)
- Total Exonerations over Time (36)



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

Oregon

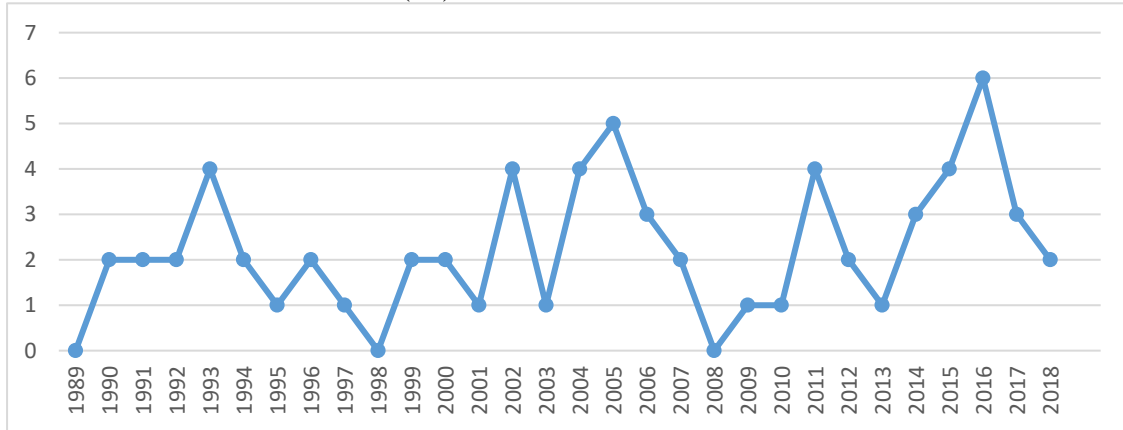
- First Exoneration: Santiago Ventura Morales (1991)
- Total Exonerations over Time (19)



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

Pennsylvania

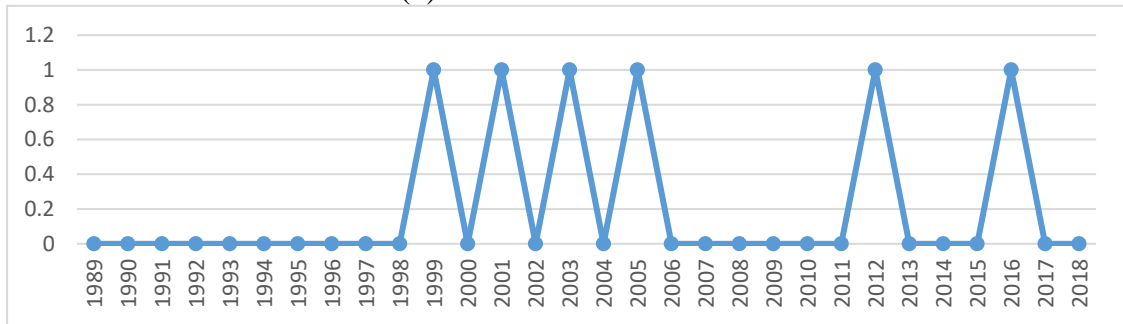
- First Exoneration: Matthew Connor (1990)
- Total Exonerations over Time (67)



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

Rhode Island

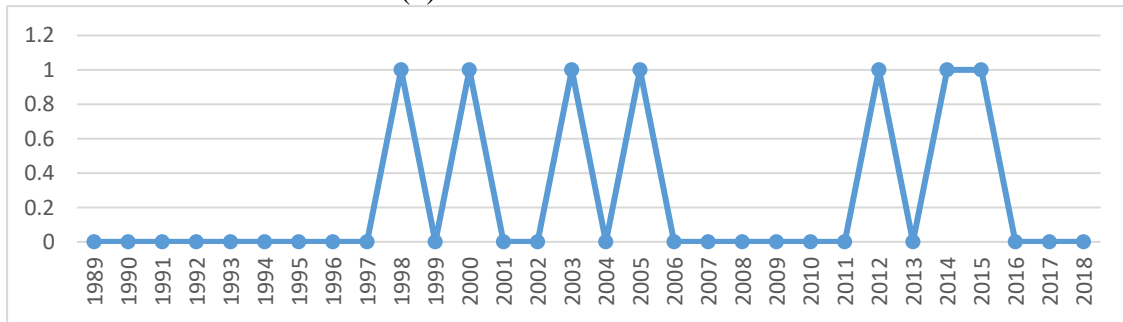
- First Exoneration: Paul Courteau (1999)
- Total Exonerations over Time (6)



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

South Carolina

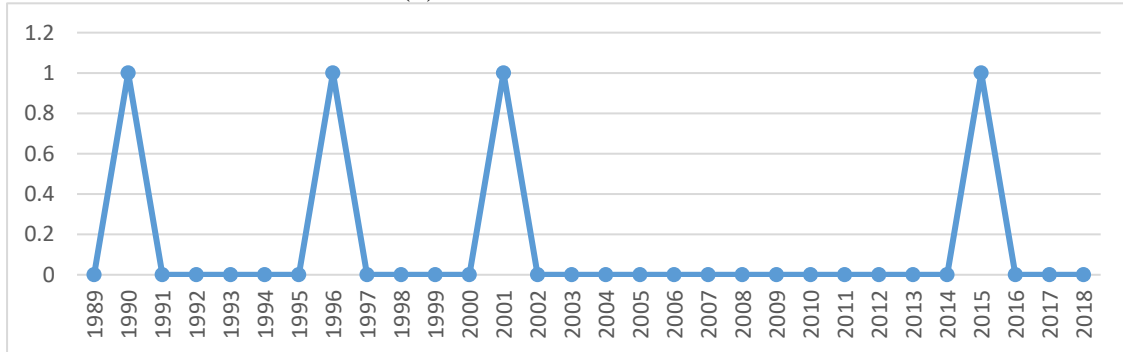
- First Exoneration: Perry Mitchell (1998)
- Total Exonerations over Time (7)



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

South Dakota

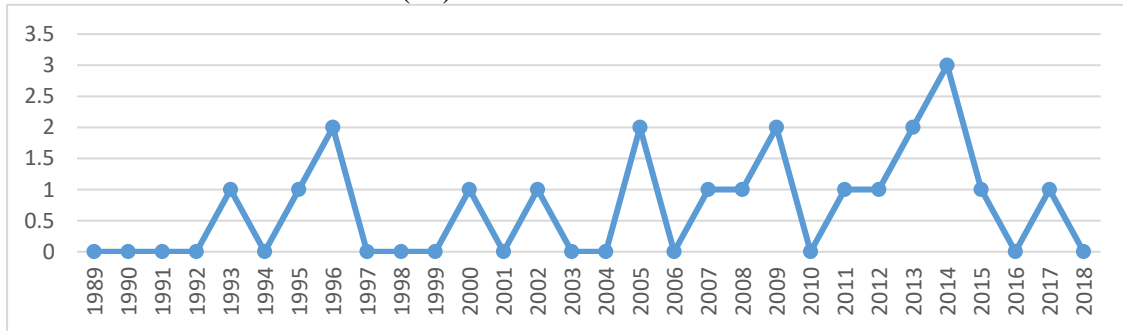
- First Exoneration: Anthony Rome, Sr. (1990)
- Total Exonerations over Time (4)



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

Tennessee

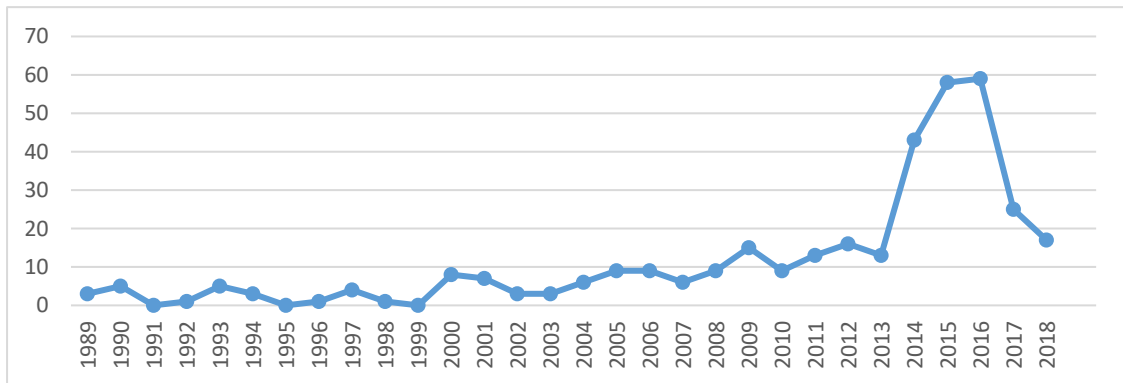
- First Exoneration: Frances Ballard (1993)
- Total Exonerations over Time (21)



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

Texas

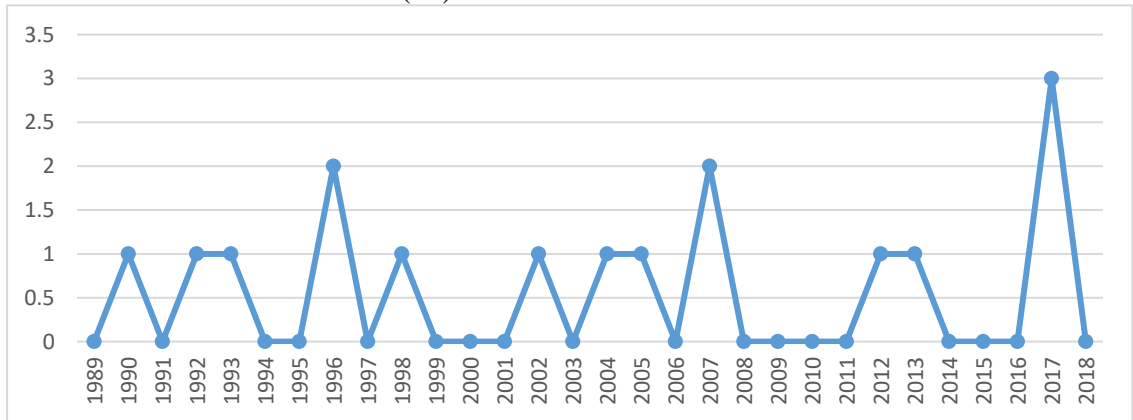
- First Exoneration: Alfred Williams (1989)
- Total Exonerations over Time (351)



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

Utah

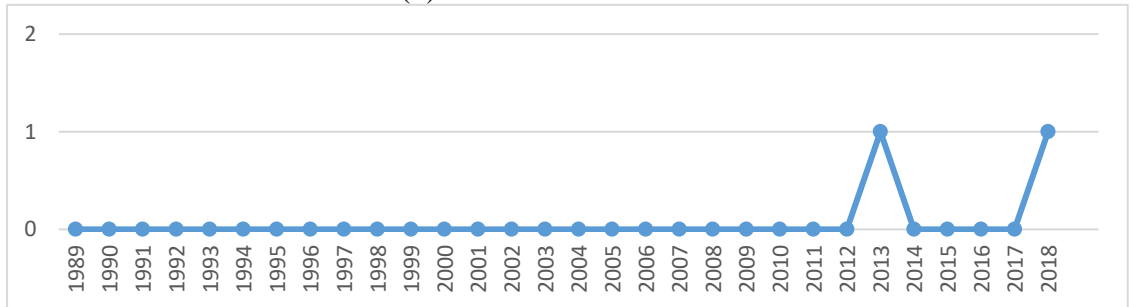
- First Exoneration: Paul Sheffield (1990)
- Total Exonerations over Time (16)



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

Vermont

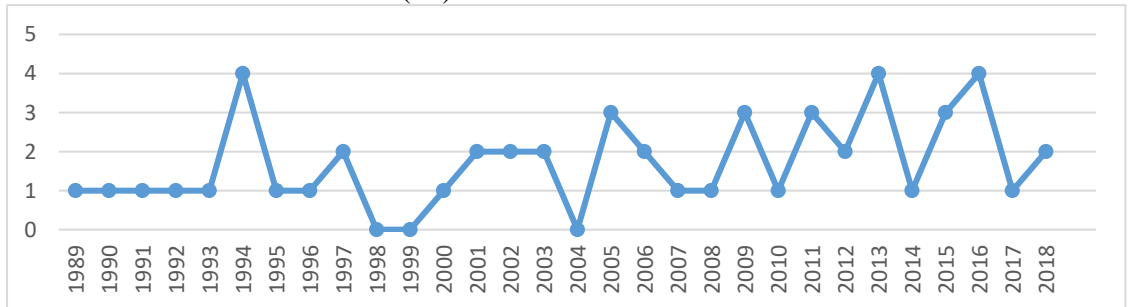
- First Exoneration: John Grega (2013)
- Total Exonerations over Time (2)



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

Virginia

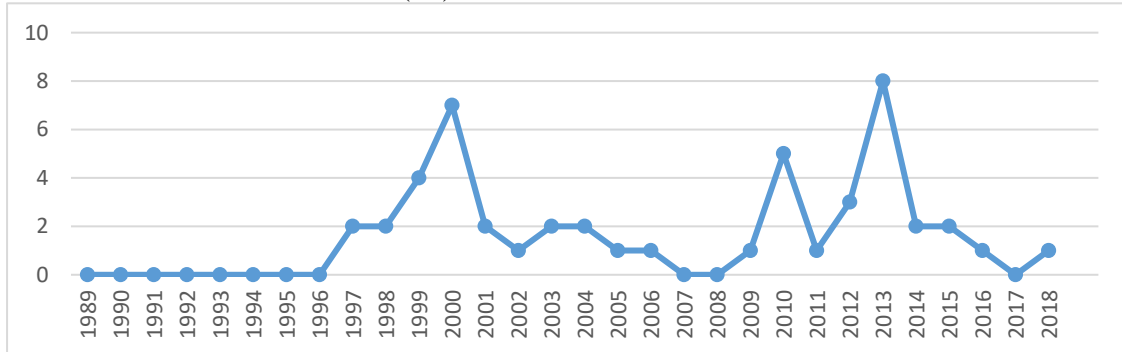
- First Exoneration: David Vasquez (1989)
- Total Exonerations over Time (51)



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

Washington

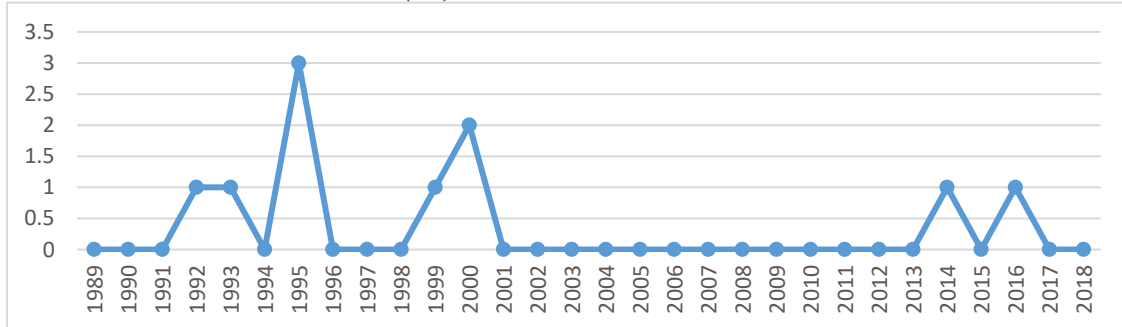
- First Exoneration: Connie Cunningham (1997)
- Total Exonerations over Time (48)



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

West Virginia

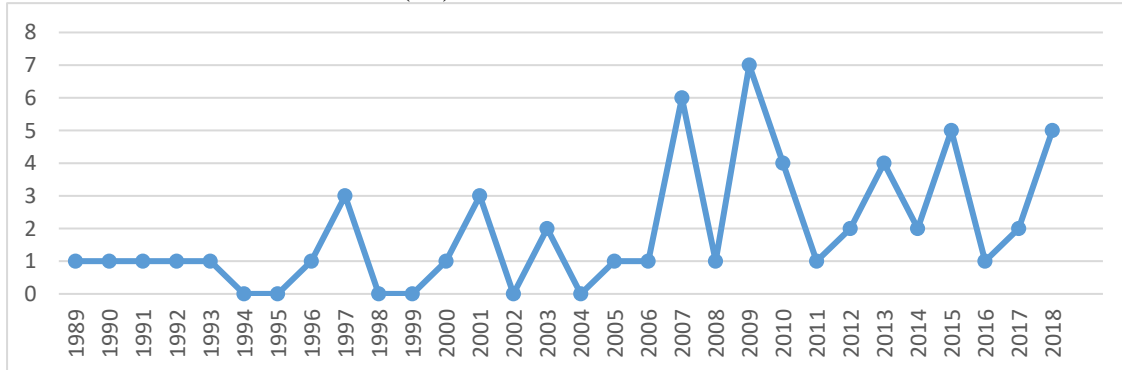
- First Exoneration: Glen Woodall (1992)
- Total Exonerations over Time (10)



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

Wisconsin

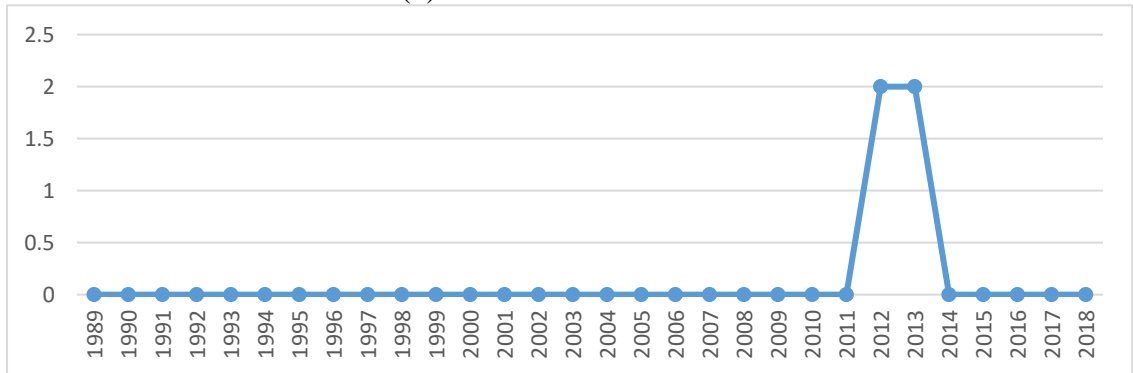
- First Exoneration: Peter Ambler (1989)
- Total Exonerations over Time (57)



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

Wyoming

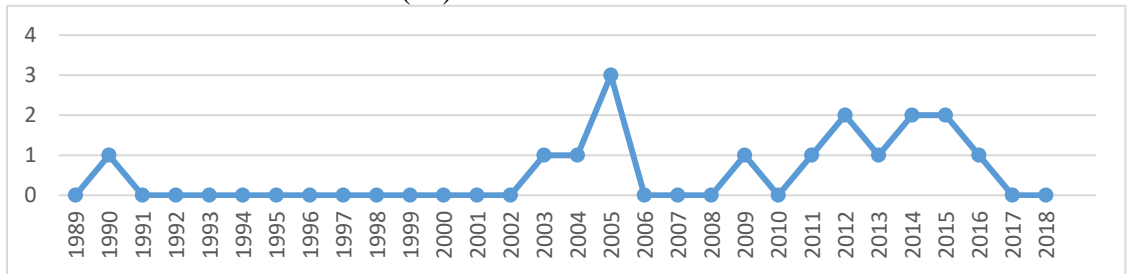
- First Exoneration: Troy Willoughby (2012)
- Total Exonerations over Time (4)



- 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)