

BUILDING THE INFRASTRUCTURE FOR “JUSTICE THROUGH SCIENCE”*: THE TEXAS MODEL

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I.	INTRODUCTION.....	712
II.	THE TEXAS FORENSIC SCIENCE INFRASTRUCTURE	715
	A. <i>The Texas Forensic Science Commission</i>	717
	B. <i>The Texas Criminal Justice Integrity Unit</i>	721
	C. <i>The Michael Morton Act Adopts Broad Prosecutorial Discovery</i>	722
	D. <i>The “Junk Science” Writ: Overturning Convictions Based on Invalid Science</i>	727
	E. <i>The Office of Capital and Forensic Writs</i>	728
	F. <i>Preserving and Testing Biological Evidence: Justice for Victims of Sexual Assault and Facilitating the Discovery of Wrongful Convictions</i>	730
III.	LOCAL INNOVATIONS BECOME NATIONAL MODELS.....	730
	A. <i>The Dallas District Attorney’s Office Invents Conviction Integrity Units</i>	731
	B. <i>Houston Removes its Crime Laboratory from the Police Department</i>	735
IV.	THE INFRASTRUCTURE IN OPERATION: STATEWIDE SYSTEMIC REVIEWS OF FORENSIC SCIENCE IRREGULARITIES	742
V.	CONCLUSION	746

* “Justice through Science” is the motto of the Texas Forensic Science Commission (“TFSC”). See TEX. FORENSIC SCI. COMM’N, <http://www.fsc.texas.gov/>; see also *infra* notes 45–69 and accompanying text. The authors owe a debt of gratitude to Lynn Garcia, General Counsel of the TFSC, for her insightful comments on an earlier draft of this Article.

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I. INTRODUCTION

Texas now leads the country in the enactment of important criminal justice reforms that have reduced incarceration while providing more effective crime control.¹ This fact may startle those who understandably regard Texas as a strictly “law and order” jurisdiction with harsh punishments and little regard for due process.² The state’s steadfast embrace of the death penalty tends to convey that image.³ For many years, Texas also led the way in mass incarceration.⁴ However, state legislators have worked steadily for almost 10 years adopting important innovations that have reduced the prison population and encouraged rehabilitation.⁵ Beginning in 2007, the state’s efforts cut its incarceration rate by 11%,⁶ resulting in the closures of several prisons.⁷ It has made similar strides in lowering the juvenile incarceration rate as well, reducing the juvenile prison population by 48% from 2007 to 2010.⁸

¹ See *infra* note 5; see also Editorial Board, *Texas Leads the Way in Needed Criminal Justice Reforms*, WASH. POST (Jan. 28, 2014), https://www.washingtonpost.com/opinions/texas-leads-the-way-in-needed-criminal-justice-reforms/2014/01/28/83919b72-879d-11e3-916e-e01534b1e132_story.html.

² In fact, a more nuanced view suggests that Texas has long balanced harsh punishment with greater procedural protections in a number of areas. See generally Adam M. Gershowitz, *Is Texas Tough on Crime but Soft on Criminal Procedure?*, 49 AM. CRIM. L. REV. 31 (2012) (discussing comparatively progressive Texas rules regarding jury trial rights, prosecutorial (but not defense) discovery requirements, defendant choice of judge or jury sentencing, protections in custodial interrogations, a broad exclusionary rule, and other procedural protections).

³ *Id.* at 33–36 (discussing state’s reputation for harsh punishments due to being the “capital of capital punishment”).

⁴ *Id.* at 36–38.

⁵ Texas’s success in reducing incarceration caught the attention of the national media in 2014. See, e.g., Editorial Board, *A Rare Opportunity on Criminal Justice*, N.Y. TIMES (Mar. 15, 2014), <http://www.nytimes.com/2014/03/16/opinion/sunday/a-rare-opportunity-on-criminal-justice.html> (noting that federal reforms are based on those begun in Texas which have been emulated in many states as well); Martha T. Moore, *Conservatives, Liberals Unite to Cut Prison Population*, USA TODAY (Mar. 17, 2014), <http://www.usatoday.com/story/news/politics/2014/03/16/conservatives-sentencing-reform/6396537/>; Olivia Nuzzi, *Prison Reform is Bigger in Texas*, DAILY BEAST (Apr. 12, 2014), <http://www.thedailybeast.com/articles/2014/04/12/prison-reform-is-bigger-in-texas.html> (addressing sentencing reform in criminal and juvenile law); Reid Wilson, *Tough Texas Gets Results by Going Softer on Crime*, WASH. POST (Nov. 27, 2014), <https://www.washingtonpost.com/blogs/govbeat/wp/2014/11/27/tough-texas-gets-results-by-going-softer-on-crime/>.

⁶ See Moore, *supra* note 5.

⁷ See Danny Kruger, *Why Texas is Closing Prisons in Favour of Rehab*, BBC MAG. (Dec. 1, 2014), <http://www.bbc.com/news/world-us-canada-30275026> (discussing Texas closure of three prisons due to reduced prison population brought about by increased drug rehabilitation for offenders).

⁸ The legislature changed sentencing policy in the juvenile system in similar fashion, leading to a dramatic decrease in the incarceration rate of juveniles from 2007 to 2011. See CHILDREN AT

A variety of circumstances coalesced to bring about these recent tectonic shifts in the Texas criminal justice landscape. Many credit the desire of state legislators to control criminal justice spending.⁹ Others point to a certain straightforward practicality in the state's culture that made it amenable to evidence-based approaches for addressing root causes.¹⁰ Either way, the notion of saving taxpayer dollars by decreasing the state's reliance on incarceration by turning to less expensive and more effective strategies for crime control, such as rehabilitative programs, seems to have carried the day.

This Article addresses another area of criminal justice reform in which the state has made great strides: reforms designed to prevent wrongful convictions, chief among them being innovations in state oversight and regulation of the practice of forensic science. Here, the politics of reform have unfolded quite differently. The dramatic reforms adopted by the legislature to prevent wrongful convictions, as is true of most reforms of this nature, are driven more by the need to maintain the public's faith in the integrity of the criminal justice system than by any desire to save money.¹¹ In a state that firmly supports the imposition of the death penalty, it is critical that its citizens believe in the fairness and accuracy of the criminal process. Wrongful convictions, especially in death penalty cases, deeply offend principles of moral decency. Forensic science scandals that undermine the legitimacy of murder convictions quickly threaten the capital punishment regime and the legitimacy of the entire criminal justice system. When news reports revealed the deep problems lurking in the Houston Police Department Crime Laboratory circa 2002, it did not take long for

RISK, THE STATE OF JUVENILE JUSTICE IN TEXAS: A ROADMAP TO IMPROVED OUTCOMES IN THE TEXAS JUVENILE JUSTICE DEPARTMENT, ADULT CERTIFICATION, AND MENTAL HEALTH 14–16 (2013), http://childrenatrisk.org/wp-content/uploads/2013/05/01_The-State-of-Juvenile-Justice.pdf (sponsored by the Texas Bar Foundation).

⁹ See Editorial Board, *supra* note 1.

¹⁰ See Kruger, *supra* note 7 (discussing how the state's "straightforward moral outlook" once led to tough criminal justice policy but has now shifted to more effective policy and crediting the state's "fiscal conservatism" for contributing to the shift); Wilson, *supra* note 5 (crediting the legislature's consultations with Tony Fabelo, an expert on evidence-based criminal justice policies, for shift to rehabilitative model of punishment). Fabelo is the Research Director for the Council of State Governments Justice Center which provides technical assistance to state and local governments to make efficient use of government resources in setting justice policies. For Dr. Fabelo's professional biography, see Staff, JUSTICE CTR., <https://csgjusticecenter.org/about-jc/staff/> (last visited Nov. 3, 2016).

¹¹ For example, the presiding officer of the first legislatively-created advisory panel to address wrongful convictions in the state viewed the legislation creating the advisory panel as a reflection of the state's commitment to "honor, integrity, and fairness." See TIMOTHY COLE ADVISORY PANEL ON WRONGFUL CONVICTIONS, REPORT TO THE TEXAS TASK FORCE ON INDIGENT DEFENSE iv (2010) [hereinafter TCAP REPORT], <http://www.tidc.texas.gov/media/25663/FINALTCAPreport.pdf>. As he explained, "The State of Texas is obviously concerned about wrongful convictions. Justice must be meted out fairly or it loses all meaning Our interest lies in serving justice fairly and effectively to ensure the integrity of the rule of law." *Id.*

city and state leaders to call for a moratorium on the imposition of death sentences based on testimony by the laboratory's analysts.¹²

This Article surveys the important reforms adopted by the Texas legislature to advance the quality of forensic science that form what we call the "infrastructure" of forensic science in the state. In all, the legislature put into place six key components that now form the Texas forensic science infrastructure: (1) the Texas Forensic Science Commission;¹³ (2) the Texas Criminal Justice Integrity Unit (a stakeholder committee that hosts discussion meetings and training programs);¹⁴ (3) the Michael Morton Act, which instituted expansive prosecutorial disclosure from pre-plea to post-conviction;¹⁵ (4) the "junk science" writ, a habeas petition that allows challenges to the forensic science used to obtain a conviction if new evidence undermines the validity of the evidence;¹⁶ (5) the Office of Capital and Forensic Writs, a statewide public defender for habeas petitions;¹⁷ and (6) state laws requiring the preservation and testing of biological evidence.¹⁸

The Article also describes two local innovations that have transformed the roles each institution plays in the criminal justice system and have become national models. The first innovation emerged from the shambles of the scandal-ridden Houston Police Department Crime Laboratory in the early 2000s.¹⁹ In 2014, the Houston Forensic Science Center took over the laboratory's operations under the supervision of a board of directors consisting of community volunteers.²⁰ The Dallas County District Attorney's Office originated the second innovation by establishing the country's first Conviction Integrity Unit in 2007.²¹ Prosecutors who work in the Dallas County Conviction Integrity Unit ("CIU"), as well as those in the other CIUs now established in the state's other large cities, play important leadership roles in shaping state policies to prevent wrongful convictions and advance the practice of forensic science.²² Moreover, both of these local innovations have transformed the cultures in their respective

¹² See SANDRA GUERRA THOMPSON, *COPS IN LABORATORY COATS: CURBING WRONGFUL CONVICTIONS THROUGH INDEPENDENT FORENSIC LABORATORIES* 207 (Carolina Acad. Press 2015).

¹³ See *infra* notes 45–69 and accompanying text.

¹⁴ See *infra* notes 70–78 and accompanying text.

¹⁵ See *infra* notes 79–115 and accompanying text.

¹⁶ See *infra* notes 116–26 and accompanying text.

¹⁷ See *infra* notes 114–21 and accompanying text.

¹⁸ See *infra* notes 122–24 and accompanying text.

¹⁹ See *infra* notes 143–81 and accompanying text.

²⁰ See *infra* notes 174–76 and accompanying text.

²¹ See *infra* notes 182–224 and accompanying text.

²² See *infra* notes 182–224 and accompanying text.

institutions from highly adversarial to ones that embrace collaboration with the defense bar.²³

While largely descriptive, the Article aims to provide some guidance for lawmakers in other states grappling with exonerations and crime laboratory scandals. With the experience of having observed the operation of the infrastructure for several years, we also draw some lessons about the challenges the state faces in the future.

II. THE TEXAS FORENSIC SCIENCE INFRASTRUCTURE

The story about how Texas came to lead the nation in criminal justice reforms has many leading figures. However, to understand why Texas—of all states—has adopted more reforms to prevent wrongful convictions than any other, one has to mention the avalanche of negative headlines from 2002 to 2009 surrounding two separate problems: (1) the Houston Police Department Crime Laboratory²⁴ and (2) the controversial execution of Cameron Todd Willingham, including Texas Governor Rick Perry’s decision not to grant his request for a stay of execution.²⁵ While the two situations were unrelated, they both laid bare the shoddy forensic science that supported many criminal convictions, and they both generated bad press at roughly the same time.²⁶

The problems in the Houston Police Department (“HPD”) Crime Laboratory came first, beginning in 2002, when news reports exposed its deplorable conditions.²⁷ Two years later, in 2004, a man named George Rodriguez walked out of prison after serving 17 years behind bars for a rape he did not commit.²⁸ Rodriguez became the first of several high-profile exonerations in which HPD Crime Laboratory analysts were found to have given invalid

²³ See *infra* notes 158–73 and accompanying text.

²⁴ See, e.g., Adam Liptak, *Worst Crime Lab in the Country—Or Is Houston Typical?*, N.Y. TIMES (Mar. 11, 2003), <http://truthinjustice.org/suttonDNA.htm>; Nick Madigan, *Houston’s Troubled DNA Crime Lab Faces Growing Scrutiny*, N.Y. TIMES (Feb. 9, 2003), http://www.nytimes.com/2003/02/09/us/houston-s-troubled-dna-crime-lab-faces-growing-scrutiny.html?_r=0; *Houston Crime Lab Only Reported Prosecution Friendly Evidence*, GRITS FOR BREAKFAST (Apr. 30, 2009), <http://gritsforbreakfast.blogspot.com/2009/04/houston-crime-lab-only-reported.html>.

²⁵ See David Grann, *Trial by Fire? Did Texas Execute an Innocent Man?*, NEW YORKER (Sept. 7, 2009), <http://www.newyorker.com/magazine/2009/09/07/trial-by-fire>.

²⁶ The Houston Police Department Crime Lab scandal broke out in 2002, but it continued unabated until 2011. See Liptak, *supra* note 24; Madigan, *supra* note 24. The publicity over Cameron Todd Willingham’s execution started in 2004. See *infra* note 40.

²⁷ See THOMPSON, *supra* note 12, at 1–33 (discussing the discovery of problems at the Houston Police Department Crime Laboratory and how invalid forensic evidence led to George Rodriguez’s wrongful conviction).

²⁸ *Id.*

scientific testimony.²⁹ The widespread and serious nature of the problems in the laboratory led one auditor to conclude that the Houston laboratory was “the paradigmatic example of a failed forensic agency.”³⁰ From the initial reports in 2002 until at least 2008, the Houston laboratory continued to generate scathing news stories.³¹

At about the same time that the HPD Crime Laboratory scandal unfolded in the early 2000s, Cameron Todd Willingham’s death penalty case was reaching the end.³² Willingham, a white man from Corsicana, Texas, had been convicted of capital murder by arson of his three young daughters who died in a house fire on a cold December morning, two days before Christmas, in 1991.³³ His conviction rested on the testimony of two arson investigators as well as that of a jailhouse informant.³⁴

After all of Willingham’s appeals had been exhausted, his court-appointed attorney asked Gerald Hurst, a leading fire investigator and fire scientist, to search for new evidence to include in a clemency petition.³⁵ In reviewing the evidence from Willingham’s trial, Hurst determined that the arson investigators’ testimony was based on invalid fire science and that the fire was most likely accidental.³⁶ Willingham filed a petition seeking clemency based on this new scientific evidence, which was unanimously denied by the Texas Board of Pardons and Parole.³⁷ Willingham’s lawyer then sought a stay of execution from Governor Perry, providing the same scientific proof that Willingham’s conviction had been secured through invalid forensic testimony. On Willingham’s scheduled execution date, February 17, 2004, the governor denied the stay of execution “based on the facts of the case.”³⁸ Willingham was executed. He had begged his parents to never stop trying to vindicate him.³⁹

News stories after Willingham’s death caused many to believe that Texas had executed an innocent man, and Governor Perry’s decision to deny his

²⁹ *Id.*

³⁰ Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 N.C.L. REV. 163, 187–88 (quoting Michael R. Bromwich, the Independent Investigator hired by the City of Houston to conduct an audit of the HPD Crime Laboratory in the wake of news reports of problems in the laboratory).

³¹ See THOMPSON, *supra* note 12, at 205–11.

³² See Liptak, *supra* note 24; Madigan, *supra* note 24.

³³ See Grann, *supra* note 25.

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

petition for a stay of execution gained notoriety.⁴⁰ Whether Willingham was innocent or not, it is clear that the ostensible “scientific” evidence in his case was patently incorrect and not based on valid scientific principles. (Years after his execution, the jailhouse informant would recant, and other evidence came to light that the prosecutor in Willingham’s case had withheld exculpatory evidence, further intensifying doubts about his guilt.)⁴¹

Thus, in 2004, two important cases made headlines. That year, George Rodriguez was exonerated, bringing calls from two successive HPD Police Chiefs, the city’s mayor, and other public officials for a moratorium on executions in cases involving evidence produced by the HPD Crime Laboratory.⁴² This was the same year in which Willingham was executed, almost immediately raising questions about whether bad forensic science had caused a wrongful execution.⁴³ Following these scandals, state lawmakers enacted legislation that would dramatically improve the practice of forensic science and its use by the courts.⁴⁴

By 2005, the movement to prevent wrongful convictions took hold in the state and has not diminished to date. The legislature, as well as leaders in the state’s larger cities, has made paradigm-shifting changes in the administration of criminal justice generally, and especially in the area of forensic science. We will discuss each reform affecting forensic science in turn.

A. *The Texas Forensic Science Commission*

In 2005, a year after Willingham’s execution and Rodriguez’s exoneration, the Texas legislature created the Texas Forensic Science Commission (“TFSC”).⁴⁵ The TFSC, which adopted the motto “Justice through Science,” plays a critical role in regulating the practice of forensic science in the

⁴⁰ Soon after his execution, news reports began to question the validity of his conviction. See Steven Mills & Maurice Possley, *Man Executed on Disproved Forensics*, CHI. TRIB. (Dec. 9, 2004), <http://www.chicagotribune.com/news/nationworld/chi-0412090169dec09-story.html>. The full story appeared several years later in the *New Yorker* magazine article, see Grann, *supra* note 25, which was followed by other reports by national news outlets. See, e.g., *Texas May Have Executed Innocent Man*, NPR (Sept. 2, 2009), <http://www.npr.org/templates/story/story.php?storyId=112488253>; *Death by Fire*, PBS (Oct. 19, 2010), <http://www.pbs.org/wgbh/pages/frontline/death-by-fire/etc/introduction.html>.

⁴¹ See Tom Dart, *Texas Prosecutor Accused of Misconduct for Role in Famous Execution Case*, GUARDIAN (Mar. 19, 2015), <https://www.theguardian.com/us-news/2015/mar/19/texas-prosecutor-accused-misconduct-execution-case>; Maurice Possley, *A Dad was Executed for Deaths of His 3 Girls. Now a Letter Casts More Doubt.*, WASH. POST (Mar. 9, 2015), https://www.washingtonpost.com/politics/letter-from-witness-casts-further-doubt-on-2004-texas-execution/2015/03/09/d9ebdab8-c451-11e4-ad5c-3b8ce89f1b89_story.html.

⁴² See THOMPSON, *supra* note 12, at 207.

⁴³ See Mills & Possley, *supra* note 40.

⁴⁴ See *infra* notes 45–69 and accompanying text.

⁴⁵ See TEX. CODE CRIM. PROC. art. 38.01 (West 2005).

state. Only two other states in the country, New York and Delaware, have similar commissions with statewide reach, but those commissions have considerably narrower authority than the TFSC.⁴⁶

The TFSC consists of seven scientists, five drawn from the faculties of the state's public universities, two forensic scientists, and two attorneys, one who is a prosecutor and the other a defense attorney.⁴⁷ By law, the prosecutor must be chosen from a list of 10 candidates submitted by the Texas District and County Attorneys Association, and the defense attorney must be selected from a list of 10 submitted by the Texas Criminal Defense Attorneys Association.⁴⁸ The Governor appoints the chair and three members, the Lieutenant Governor appoints three members, and Attorney General appoints two members.⁴⁹

The TFSC has been granted broad power to ensure the integrity of the evidence produced in the state's crime laboratories.⁵⁰ Its enabling legislation grants the TFSC the authority to investigate allegations of "professional

⁴⁶ New York's commission only has authority to accredit laboratories. *See Commission on Forensic Science*, N.Y. ST. DIV. CRIM. JUST. SERVS., <http://criminaljustice.ny.gov/pio/boards/index.html> (last visited Nov. 3, 2016). Delaware also has a commission that is charged with providing "oversight and guidance," but it does not appear to be having as much success in fostering reform. *See Forensic Science Commission*, ST. DEL., <http://dshs.delaware.gov/forensics/forensic-science.shtml> (last visited Nov. 3, 2016); *see also* Michael Hall, *False Impressions*, TEX. MONTHLY (Jan. 2016) www.texasmonthly.com/articles/false-impressions/ (noting that the TFSC has had more success at bringing about reforms than similar commissions in New York and Delaware). California had a forensic science task force, but it is now defunct. *See AN EXAMINATION OF FORENSIC SCIENCE IN CALIFORNIA*, CAL. CRIME LAB. REV. TASK FORCE (Nov. 2009), http://oag.ca.gov/sites/all/files/agweb/pdfs/publications/crime_labs_report.pdf. Other states such as Virginia and North Carolina have advisory boards for their State Forensic Laboratories. The North Carolina advisory board provides advice and makes recommendations, but it does not have investigative authority, nor does it oversee the accreditation of laboratories or the certification of analysts. *See Forensic Advisory Board*, N.C. DEP'T OF JUSTICE, <http://www.ncdoj.gov/About-DOJ/Crime-Lab/Forensic-Advisory-Board.aspx> (last visited Nov. 3, 2016). The Virginia Forensic Science Board has broader authority, but its authority is limited to the laboratories operated by the state, not local police crime laboratories. *See Forensic Science Board*, VA. DEP'T OF FORENSIC SCI., <http://www.dfs.virginia.gov/about-dfs/forensic-science-board/> (last visited Nov. 3, 2016).

⁴⁷ *See* TEX. CODE CRIM. PROC. art. 38.01 § 3(a) (West 2015).

⁴⁸ *Id.* § 3(a)(2), (3).

⁴⁹ *Id.* § 3.

⁵⁰ The question of the Commission's jurisdiction became an issue in 2009 when the group planned to hold hearings to investigate the arson testimony used in Cameron Todd Willingham's case. *See supra* notes 44–45 and accompanying text. For an account of the controversy surrounding this issue, see *The Texas Forensic Science Commission and the Willingham Case*, INNOCENCE PROJECT (Sept. 14, 2010), <http://www.innocenceproject.org/the-texas-forensic-science-commission-and-the-willingham-case/>; Hall, *supra* note 46. In the end, the Commission was prohibited from investigating "'specific items of evidence that were tested or offered into evidence prior to' September 1, 2005." *The Texas Forensic Science Commission and the Willingham Case*, *supra*; *see also* Hall, *supra* note 46 (noting that the TFSC's "first case," the Willingham case, "nearly destroyed" the TFSC).

negligence or professional misconduct that would substantially affect the integrity of the results of a forensic analysis conducted by an accredited laboratory.”⁵¹ To this end, the TFSC requires all forensic laboratories to self-report any error or irregularity that might affect the integrity of a laboratory test. Any employee or person from outside of the organization may report a laboratory issue to the TFSC anonymously as well.⁵² The TFSC will ensure that laboratories implement corrective actions when appropriate in the wake of a reported incident.⁵³

The TFSC’s first investigation of professional negligence involved a complaint filed by the Innocence Project challenging the forensic evidence offered to convict Cameron Todd Willingham.⁵⁴ On the eve of the TFSC’s scheduled hearing, Governor Perry suddenly “fired” the chairman and two members of the TFSC and then appointed a prosecutor as chairman, who then effectively scuttled the investigation into the Willingham case.⁵⁵

Despite the controversy, the TFSC ultimately released a report discrediting the arson indicators used by fire investigators to convict Willingham and others.⁵⁶ The report did not consider whether the arson investigators had engaged in professional misconduct or negligence, as it was not clear whether the Commission had the authority to pursue such an investigation.⁵⁷ Rather, the 2011 report suggested 17 reforms to bring arson investigations into accord with modern science, and recommended that old arson convictions be reviewed.⁵⁸

Later that same year, the Texas Attorney General ruled that the TFSC did not have jurisdiction to review evidence that was tested or offered in court

⁵¹ TEX. CODE CRIM. PROC. art. 38.01 § 4(a)(3) (West 2015).

⁵² The requirement to report problematic incidents to the TFSC flows from standards for accreditation that laboratories must maintain, as reported by Lynn Garcia, General Counsel for the TFSC, in a telephone conversation with co-author Thompson on Aug. 18, 2016.

⁵³ This reporting process operates under the Commission’s authority to investigate complaints of professional negligence or malfeasance. TEX. CODE CRIM. PROC. art. 38.01 § 4(a)(1)–(2) (West 2015).

⁵⁴ See James C. McKinley, Jr., *Texas: Governor Fires Chairman of Forensic Science Committee*, N.Y. TIMES (Sept. 30, 2009), http://www.nytimes.com/2009/10/01/us/01brfs-GOVERNORFIRE_BRF.html?_r=0; Matt Smith & Ed Lavandera, *Perry ‘Squashed’ Texas Execution Probe, Ex-official Says*, CNN (Sept. 8, 2011), <http://www.cnn.com/2011/POLITICS/09/07/texas.execution.probe/>.

⁵⁵ McKinley, *supra* note 54; Smith & Lavandera, *supra* note 54.

⁵⁶ McKinley, *supra* note 54; Smith & Lavandera, *supra* note 54. For a more detailed analysis of the Willingham case, see Grann, *supra* note 25.

⁵⁷ See TEX. FORENSIC SCI. COMM’N, REPORT OF THE TEXAS FORENSIC SCIENCE COMMISSION: WILLINGHAM/WILLIS INVESTIGATION 5–7 (2011), <http://www.fsc.state.tx.us/documents/FINAL.pdf>.

⁵⁸ See *id.* at 39–52.

before 2005, the year the Commission was established.⁵⁹ Thus, the Willingham report had considered the scientific validity of the arson indicators without running afoul of the jurisdictional limitation outlined in the Attorney General's ruling. Although the future of the TFSC seemed to hang in the balance during these early years, ultimately the TFSC regained its footing and has grown in statutory authority and community stature ever since.

The TFSC's most important role is to regulate forensic laboratories by overseeing the state requirement that all forensic laboratories be accredited.⁶⁰ As of June 2015, the legislature transferred the authority to accredit laboratories to the TFSC from the Department of Public Safety, the state's police agency. It is critical that this function was removed from the organizational control of the state police and placed in the control of an organization independent of law enforcement that is directed by academic scientists.⁶¹

In addition, a new requirement will mandate that all laboratory analysts as of 2019 be individually licensed in their disciplines.⁶² The TFSC is charged with establishing qualifications for licensing including "(a) successful completion of education requirements; (b) specific coursework and experience, including instruction in courtroom testimony and ethics; (c) successful completion of an examination required or recognized by the commission; and (d) successful completion of proficiency testing to the extent required for crime laboratory accreditation."⁶³ Since 2015, this program has been guided by an advisory board of seven forensic scientists, one defense attorney, and one prosecutor, selected by their respective state professional organizations.⁶⁴

Through the TFSC's oversight of laboratory protocols and analyst qualifications, the TFSC has raised the overall quality of forensic science statewide. The TFSC also holds stakeholder conferences and training

⁵⁹ See Letter from Greg Abbott, Attorney Gen. of Tex., to The Honorable Nizam Peerwani, Presiding Officer, Tex. Forensic Sci. Comm'n (July 29, 2011), <https://texasattorneygeneral.gov/opinions/opinions/50abbott/op/2011/htm/ga-0866.htm>.

⁶⁰ The legislature transferred the authority to oversee laboratory accreditation from the Department of Public Safety, the state's law enforcement agency, to the TFSC, making it independent of law enforcement. See *Texas Forensic Science Commission Crime Laboratory Accreditation Program*, TEX. FORENSIC SCI. COMM'N, <http://www.fsc.texas.gov/texas-forensic-science-commission-crime-laboratory-accreditation-program> (last visited Nov. 3, 2016).

⁶¹ See THOMPSON, *supra* note 12, at 193–97 (discussing the importance of independence from law enforcement organizations to promote rigor in the accreditation process for crime laboratories).

⁶² See *Texas Forensic Science Commission Forensic Analyst Licensing Program*, TEX. FORENSIC SCI. COMM'N, <http://www.fsc.texas.gov/texas-forensic-science-commission-forensic-analyst-licensing-program> (last visited Nov. 3, 2016).

⁶³ *Id.*

⁶⁴ *Id.*

programs,⁶⁵ and participates in those held by other state organizations.⁶⁶ TFSC representatives also participate at the national level in forensic science reform.⁶⁷

The TFSC has also recommended against the use of one type of junk science in the state, which sets a precedent for its examination of other types in the future. In 2016, the TFSC recommended that bite mark evidence not be admitted in criminal cases until the techniques used are demonstrated to be reliable and valid.⁶⁸ Furthermore, the TFSC has facilitated important systemic reviews of past convictions when it has been discovered that a type of forensic evidence was unreliable.⁶⁹

B. *The Texas Criminal Justice Integrity Unit*

In 2008, Judge Barbara Hervey of the Texas Court of Criminal Appeals, formed an ad hoc group called the Texas Criminal Justice Integrity Unit (TCJIU), under the auspices of the Court of Criminal Appeals.⁷⁰ The group's goals are "to review the strengths and weaknesses of the Texas criminal justice system" and "to bring about meaningful reform through education, training, and legislative recommendations."⁷¹ The group has studied the causes of wrongful convictions, such as eyewitness identification practices, interrogations, and inadequate defense representation.⁷²

⁶⁵ See generally TEX. FORENSIC SCI. COMM'N, FOURTH ANNUAL REPORT 23 (Nov. 2014–Nov. 2015), [hereinafter FOURTH ANNUAL REPORT] <http://www.fsc.texas.gov/sites/default/files/documents/files/2015%20FSC%20Annual%20Report%20Posted%20Smaller%20Size.pdf>.

⁶⁶ The authors have attended meetings and symposia at which the General Counsel of the TFSC has spoken, such as a stakeholders meeting of the Texas Conviction Integrity Unit held in 2015.

⁶⁷ See FOURTH ANNUAL REPORT, *supra* note 65, at 25. The presiding officer of the TFSC, Dr. Vincent J. Di Maio, currently serves on the National Forensic Science Commission ("NFSC"), one of two members from Texas. The other Texas member of the NFSC is Judge Barbara Hervey, the founder and Chair of the Texas Conviction Integrity Unit. See *infra* notes 70–78 and accompanying text.

⁶⁸ See TEX. FORENSIC SCI. COMM'N, FORENSIC BITEMARK COMPARISON COMPLAINT FILED BY NATIONAL INNOCENCE PROJECT ON BEHALF OF STEVEN MARK CHANEY—FINAL REPORT 15–16 (2016), <http://www.fsc.texas.gov/sites/default/files/FinalBiteMarkReport.pdf>; see also Hall, *supra* note 46.

⁶⁹ See *infra* Part III.

⁷⁰ See *Welcome to the Texas Criminal Justice Integrity Unit*, TEX. JUD. BRANCH CT. OF CRIM. APP., <http://www.txcourts.gov/cca/texas-criminal-justice-integrity-unit.aspx> (last visited Nov. 3, 2016). Judge Hervey also serves as one of the state's two representatives on the National Forensic Science Commission. See FOURTH ANNUAL REPORT, *supra* note 65.

⁷¹ See *Welcome to the Texas Criminal Justice Integrity Unit*, *supra* note 70.

⁷² 2009 ANNUAL REPORT OF ACTIVITIES, TEX. CRIM. JUST. INTEGRITY UNIT 3 (2009), <http://www.txcourts.gov/media/253235/tcju-2009-report.pdf>.

With respect to forensic science, the group has undertaken to “reform[] the standards for collection, preservation, and storage of evidence” and “improve[] crime lab reliability.”⁷³ To that end, in 2009 the TCJIU surveyed state judges regarding their reactions to the National Academy of Sciences report, *Strengthening Forensic Science in the United States, A Path Forward* (the “NAS Report”), which was published in the same year.⁷⁴ The survey showed that state judges did not feel sufficiently educated in forensic science and the standards for admissibility.⁷⁵ Responding to that desire, the TCJIU has held judicial training programs, in conjunction with the TFSC.⁷⁶

The TCJIU has also convened stakeholders’ meetings to discuss concerns related to forensic science. One such meeting included a presentation by the TFSC’s General Counsel regarding the need to undertake a massive review of convictions involving DNA mixture evidence.⁷⁷ Although the FBI notified all laboratories about potential mixture analysis issues in May of 2015, to date, Texas is the only state that has undertaken such a review.⁷⁸

C. *The Michael Morton Act Adopts Broad Prosecutorial Discovery*

In 2009, the legislature built on the growing criminal justice reform momentum by creating a stakeholder group, including judges, legal experts, legislators, and law enforcement representatives, to advise the Texas Indigent Defense Commission regarding the causes of wrongful convictions and suggestions for preventing wrongful convictions.⁷⁹ The group, known as the Timothy Cole Advisory Panel on Wrongful Convictions (“TCAP”), was named for a Lubbock man who had been wrongly convicted and who had died of an asthma attack while incarcerated.⁸⁰ Cole, a 26-year old African-American Army

⁷³ *Id.*

⁷⁴ *Id.*; see also COMM. ON IDENTIFYING THE NEEDS OF FORENSIC SCIS. CMTY., NAT’L RES. COUNCIL, *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* (2009) [hereinafter *NAS REPORT*].

⁷⁵ *Id.* at 26–28.

⁷⁶ For a list of past training programs and meetings, see *TCJIU Meetings*, TEX. JUD. BRANCH CT. CRIM. APP., <http://www.txcourts.gov/cca/texas-criminal-justice-integrity-unit/meetings.aspx> (last visited Nov. 3, 2016).

⁷⁷ Both of the authors attended this meeting. For a discussion of the DNA mixtures review, see *infra* notes 250–59 and accompanying text.

⁷⁸ See *infra* note 258 and accompanying text.

⁷⁹ The Executive Director of the Texas Indigent Defense Commission (formerly known as the Texas Task Force on Indigent Defense) served as the TCAP’s presiding officer and the Commission’s staff supported TCAP’s work with research drafting and report production. See *TCAP REPORT, supra* note 11; *TIMOTHY COLE ADVISORY PANEL ON WRONGFUL CONVICTIONS, RESEARCH DETAILS* (2010), <http://www.tidc.texas.gov/media/25674/FINALTCAPresearch.pdf>.

⁸⁰ See *Timothy Cole*, INNOCENCE PROJECT, <http://www.innocenceproject.org/cases/timothy-cole/> (last visited Nov. 3, 2016). Co-author Thompson was a member of the advisory panel.

veteran, was enrolled at Texas Tech University when he was wrongly identified as a serial rapist dubbed the “Tech rapist.”⁸¹ Convicted on the basis of erroneous eyewitness testimony and false forensic testimony, he had served 23 years of a 25-year sentence for rape when he died in prison of an asthma attack.⁸² A court posthumously exonerated him on April 7, 2009, and Governor Perry pardoned him on March 1, 2010.⁸³

In 2010, the TCAP recommended six legislative reforms, two of which came to form part of the forensic science infrastructure: prosecutorial disclosure requirements and the “junk science” writ.⁸⁴ The TCAP identified prosecutorial discovery as a means of reducing wrongful convictions. At the time, the state’s discovery law severely restricted a defendant’s access to the prosecution’s evidence.⁸⁵ To access records, documents, or other evidence contained in prosecution files, criminal defendants were statutorily required to obtain a court order based on a showing of good cause.⁸⁶ Even then, the statute specifically excluded written witness statements and documents considered work product, such as police and laboratory reports, from pre-trial discovery.⁸⁷ Although many Texas district and county attorneys had voluntarily implemented open-file policies by 2013, the scope of discovery available under those policies varied from county to county and from prosecutor to prosecutor.⁸⁸ As a result, a defendant’s ability to obtain information from the State differed based on where the arrest occurred and who was assigned to prosecute the case.⁸⁹

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ See TCAP REPORT, *supra* note 11, at 30–31. For a discussion of the “junk science” writ, see *infra* notes 116–26 and accompanying text. The report also led to the adoption of a state-of-the art model policy on eyewitness identification and a requirement that police departments should adopt guidelines that comply with the model policy. See TEX. CODE CRIM. PROC. art. 38.20, § 3(b) (2011); MODEL POLICY ON EYEWITNESS IDENTIFICATION, http://www.lemitonline.org/publications/documents/ewid_final.pdf.

⁸⁵ See generally TEX. DEF. SERV. & TEX. APPLESEED, IMPROVING DISCOVERY IN CRIMINAL CASES IN TEXAS: HOW BEST PRACTICES CONTRIBUTE TO GREATER JUSTICE (2013) [hereinafter 2013 DISCOVERY REPORT], http://texasdefender.org/wp-content/uploads/tds_report.pdf (concluding that the Texas criminal discovery statute as it existed in 2013 did not comport with American Bar Association standards adopted in most other states).

⁸⁶ See *id.* at 8 (setting out text of former TEXAS CODE CRIM. PROC. art. 39.14 (current version at TEX. CODE CRIM. PROC. ANN. art. 39.14 (West 2015))).

⁸⁷ *Id.*; see also *Brem v. State*, 571 S.W. 2d 314, 322 (Tex. Crim. App. 1978) (holding that police reports were exempt from pre-trial discovery under former Art. 39.14 as work product). Of course, investigative reports that contained exculpatory material were nevertheless subject to disclosure under *Brady v. Maryland*, 373 U.S. 83, 87 (1963). See, e.g., *Ex parte Miles*, 359 S.W. 3d 647, 670 (Tex. Crim. App. 2012) (holding that investigative reports exempt from statutory discovery should have been disclosed because they contained exculpatory evidence).

⁸⁸ See 2013 DISCOVERY REPORT, *supra* note 85, at 5.

⁸⁹ *Id.*

The TCAP report alone was not sufficient, however, to bring about the needed reform. It also took two highly publicized exonerations in 2010 and 2011, respectively, both involving Texas prosecutors who withheld exculpatory evidence in violation of *Brady v. Maryland*,⁹⁰ to jolt the Texas legislature into taking action.⁹¹ One of those cases involved a white man named Michael Morton, who had spent almost 25 years in prison for the murder of his wife, before DNA testing both established his innocence and identified his wife's real killer.⁹² An investigation by the Innocence Project revealed that the prosecutor in that case, Ken Anderson, had failed to produce significant evidence of Morton's innocence both to the defense and the trial judge.⁹³ Anderson, who had since become a district judge, ultimately resigned his position, surrendered his law license and pleaded guilty to criminal contempt charges for withholding evidence in the Morton case.⁹⁴ He was sentenced to serve 10 days in jail, pay a \$500 fine, and perform 500 hours of community service.⁹⁵

In 2013, state lawmakers enacted the Michael Morton Act (the "Morton Act"), which created a state-wide open-file discovery policy that took effect in January 2014.⁹⁶ Morton's wrongful conviction had highlighted a fundamental weakness of the *Brady* doctrine: under *Brady*, prosecutors enjoy wide discretion to determine whether specific pieces of evidence qualify as exculpatory such that

⁹⁰ 373 U.S. 83, 87 (1963) (requiring prosecutors to disclose "evidence favorable to an accused . . . where the evidence was material to guilt or punishment").

⁹¹ These were the wrongful convictions of an African-American, Anthony Graves, and Michael Morton. For a brief description of the two cases, see TEX. APPLESEED & TEX. DEF. SERV., TOWARDS MORE TRANSPARENT JUSTICE: THE MICHAEL MORTON ACT'S FIRST YEAR 5-7 (2015) [hereinafter MORTON ACT REPORT], http://texasdefender.org/wp-content/uploads/Towards_More_Transparent_Justice.pdf.

⁹² See Brandi Grissom, *An Exoneration After Decades, and a Conviction*, N.Y. TIMES (Apr. 6, 2013), http://www.nytimes.com/2013/04/07/us/austin-man-found-guilty-in-killing-of-exonerated-mans-wife.html?_r=0. After Morton's release, Mark Norwood was convicted of Christine Morton's murder and indicted in the 1988 death of another Austin woman. *Id.*; see also Brandi Grissom, *Mark Norwood Indicted in Second Murder*, TEX. TRIB. (Nov. 9, 2012), <https://www.texastribune.org/2012/11/09/mark-norwood-faces-grand-jury-second-austin-murder/>.

⁹³ See Brandi Grissom, *Michael Morton's Conviction Comes to Define Anderson*, TEX. TRIB. (Feb. 3, 2013), <https://www.texastribune.org/2013/02/03/tough-crime-prosecutor-set-rare-court-inquiry>.

⁹⁴ See Jordan Smith, *Former DA Anderson Pleads Guilty to Withholding Evidence in Morton Case*, AUSTIN CHRON. (Nov. 8, 2013), <http://www.austinchronicle.com/daily/news/2013-11-08/former-da-anderson-pleads-guilty-to-withholding-evidence-in-morton-case/>.

⁹⁵ *Id.* Anderson served only five days of his prison sentence; county officials said he was released early for good behavior. See Claire Osborn, *How Ken Anderson was Released After Only Five Days in Jail*, STATESMAN (Nov. 15, 2013), <http://www.statesman.com/news/news/local/ken-anderson-released-from-williamson-county-jail/nbtKN/>.

⁹⁶ Michael Morton Act, S.B. 1611, 2013 Leg., 83rd Reg. Sess. (Tex. 2014), <http://www.legis.state.tx.us/BillLookup/History.aspx?LegSess=83R&Bill=SB1611>; 2013 Tex. Gen. Laws 106 (codified at TEX. CODE CRIM. PROC. ANN. art. 39.14 (West 2015)).

they must be disclosed to the defense.⁹⁷ The Morton Act did away with this prosecutorial discretion, mandating that the State must produce “as soon as practicable after receiving a timely request from the defendant” almost all relevant, non-privileged information about a case that is in the State’s possession or control.⁹⁸ Entities under contract with the State, such as forensics laboratories, for example, are considered to be part of the State for discovery purposes.⁹⁹ In particular, the statute requires production of police incident reports as well as written and recorded witness statements, “including witness statements of law enforcement officers”¹⁰⁰—items that had been considered exempt from discovery under prior law.¹⁰¹ And while the Morton Act allows prosecutors to release a document in redacted form, defense counsel must be notified of the redaction, and can request that a court determine whether the redaction was justified.¹⁰²

Subsection (h) of the Morton Act codifies the prosecution’s duties under *Brady*, stating that the State must disclose to the defendant any “exculpatory, impeachment, or mitigating” information that “tends to negate the guilt of the defendant or would tend to reduce the punishment for the offense charged.”¹⁰³ Importantly, Subsection (k) of the Morton Act takes this one step further by imposing an ongoing duty on the State to disclose *Brady* material without a request from the defense, even post-conviction. That subsection mandates that the State “promptly” disclose any newly obtained *Brady* material to the defendant or the court, whether it is discovered “before, during, or after trial.”¹⁰⁴

Since the passage of the Morton Act, Texas prosecutors and defense counsel have faced some challenges regarding implementation of the Act’s provisions.¹⁰⁵ The broad discovery requirement was intended to prevent prosecutorial misconduct, but it also affected the practice of forensic science by

⁹⁷ See, e.g., TEX. SENATE RESEARCH CTR., AUTHOR’S/SPONSOR’S STATEMENT OF INTENT, S.B. 1611, 2013 Leg., 83rd Reg. Sess. (2013), <http://www.legis.state.tx.us/tlodocs/83R/analysis/html/SB01611F.htm> (stating that “*Brady* is vague and open to interpretation, resulting in different levels of discovery across different counties in Texas”).

⁹⁸ TEX. CODE CRIM. PROC. ANN. art. 39.14(a) (West 2015).

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ See *supra* note 85 and accompanying text.

¹⁰² TEX. CODE CRIM. PROC. ANN. art. 39.14(c) (West 2015).

¹⁰³ *Id.* art. 39.14(h).

¹⁰⁴ *Id.* art. 39.14(k).

¹⁰⁵ See generally MORTON ACT REPORT, *supra* note 91 (noting issues encountered during the Morton Act’s first year of implementation, including instances of improper redactions or withholding of documents, discovery delays, and confusion among law enforcement officers regarding what they are required to provide to prosecutors under the Act).

imposing new disclosure obligations on forensic laboratories.¹⁰⁶ This has resulted in a need for Morton Act training among crime lab personnel, as well as concern regarding allocating the costs of complying with the Act's discovery requirements.¹⁰⁷ Nevertheless, Texas's criminal discovery statute, which had been one of the least robust in the country, is now considered a model for other states, as well as a step forward on the path to criminal justice reform.¹⁰⁸

It is worth noting as well that the legislature also significantly strengthened the enforcement of prosecutorial disclosure when, in 2013, it extended the statute of limitations for exonerees to file a grievance with the state bar against prosecutors who engage in misconduct.¹⁰⁹ Under the prior law, complaints had to be filed within four years of when the prosecutor engaged in the misconduct, or when concealed misconduct was discovered or should have been discovered.¹¹⁰ The new law, which was also enacted in response to the Morton exoneration,¹¹¹ provides that the four-year limitations period does not begin until the day the wrongly convicted individual is released from prison.¹¹² As a result, Texas death row exoneree Anthony Graves—who served more than 18 years in prison before being cleared of capital murder¹¹³—was able to file a complaint against the prosecutor who withheld evidence in his case, resulting in an unprecedented disbarment.¹¹⁴ The Morton Act, considered along with the strengthened enforcement of disclosure requirements and extended time for grievances to be filed against prosecutors who suppress evidence, should reduce

¹⁰⁶ See *supra* note 98 and accompanying text.

¹⁰⁷ See Terri Langford, *Costs and Questions as TX Implements New Discovery Law*, THE TEX. TRIB. (May 29, 2014), <https://www.texastribune.org/2014/05/29/michael-morton-act-driving-evidence-costs-das/> (stating that costs of providing discovery documents under the Act had been problematic for some law enforcement agencies); *The Michael Morton Act Five Months In: Too Much? Too Little? Too Soon To Tell*, GRITS FOR BREAKFAST (June 5, 2014), <http://gritsforbreakfast.blogspot.com/2014/06/assessing-michael-morton-act-five.html> (noting concern that crime lab employees need training in Morton Act disclosure requirements).

¹⁰⁸ See, e.g., N.Y. STATE BAR ASS'N., REPORT OF THE TASK FORCE ON CRIMINAL DISCOVERY 124 (2015), <https://www.nysba.org/WorkArea/DownloadAsset.aspx?id=54572> (recommending that New York follow Texas's lead by adopting criminal discovery reforms similar to those in the Morton Act).

¹⁰⁹ TEX. GOV'T. CODE ANN. § 81.072(b) (West 2013).

¹¹⁰ See Brandi Grissom, *Ken Anderson Responds to State Bar's Ethics Filing*, TEX. TRIB. (Nov. 5, 2012), <https://www.texastribune.org/2012/11/05/ken-anderson-responds-ethics-lawsuit/> (including text of prior state bar rule of disciplinary conduct).

¹¹¹ See Maurice Chammah, *Senate Passes Prosecutor Accountability Bill*, TEX. TRIB. (March 26, 2013), <https://www.texastribune.org/2013/03/26/senate-passes-prosecutor-accountability-bill/> (noting that legislative author of bill had said it was inspired by the Morton case).

¹¹² TEX. GOV'T. CODE ANN. § 81.072(b) (West 2013).

¹¹³ See MORTON ACT REPORT, *supra* note 91.

¹¹⁴ See Brian Rogers, *Prosecutor in Graves Case Disbarred in Rare Move*, HOUS. CHRON. (June 12, 2015), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Prosecutor-in-Graves-case-disbarred-in-rare-move-6324701.php>.

wrongful convictions. As Michael Morton told reporters after Governor Rick Perry signed the Morton Act into law, “This will make it much better for everybody else, so that what happened to me won’t happen to you.”¹¹⁵

D. The “Junk Science” Writ: Overturning Convictions Based on Invalid Science

The Timothy Cole Advisory Panel on Wrongful Convictions also recommended in 2010 that the legislature create a special writ of habeas corpus whereby courts would reconsider convictions that were based on forensic evidence later determined to be invalid.¹¹⁶ A year later, in 2011, Neal Hampton Robbins challenged his capital murder conviction, which rested almost entirely on the testimony of a medical examiner who had subsequently determined that her own trial testimony was not correct.¹¹⁷ The Court of Criminal Appeals rejected Robbins’s habeas petition, and, in so doing, created a firestorm of controversy that helped to motivate the enactment of the junk science writ.¹¹⁸

The advisory panel’s recommendation, combined with the problematic example of the Robbins case, apparently precipitated the 2013 statutory enactment of a “junk science writ” (as it is colloquially called) by the Texas legislature, the first of its kind in the country.¹¹⁹ The law expands the right of a prisoner to challenge his or her conviction on the basis of newly discovered evidence by allowing a claim on the grounds of “new scientific evidence.”¹²⁰ After further controversy over whether the new law applied to a situation where an expert changes her opinion, rather than relies on new scientific knowledge, like Robbins, the legislature in 2015 expanded the grounds of the writ to include

¹¹⁵ Brian Rogers, *New Law Forces Prosecutors to Turn Over Evidence Against Suspects*, HOUS. CHRON. (May 16, 2013), <http://www.houstonchronicle.com/news/houston-texas/houston/article/New-law-forces-prosecutors-to-turn-over-evidence-4522558.php>.

¹¹⁶ TACP REPORT, *supra* note 11, at ii; *see supra* notes 68–73 and accompanying text.

¹¹⁷ *See Ex parte Robbins*, 360 S.W.3d 446, 460–63 (Tex. Crim. App. 2011), *cert. denied*, 132 S. Ct. 2374 (2012).

¹¹⁸ *Id.* at 463; *see also ME Testimony False According to Science But Not Texas Law, or, Elsa Alcalá’s First Solo Dance Earns Spotlight*, GRITS FOR BREAKFAST (July 19, 2011), <http://gritsforbreakfast.blogspot.com/2011/07/me-testimony-false-according-to-science.html> (discussing the Court of Criminal Appeals rejection of Robbins’s petition).

¹¹⁹ S.B. 344, 2013 Leg., 83rd Reg. Sess. (Tex. 2013), <http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=83R&Bill=SB344>. S.B. 344 amended Chapter 11 of the Texas Code of Criminal Procedure to add Article 11.073. TEX. CODE CRIM. PROC. ANN. art. 11.073 (West 2015). *See generally* Sabra Thomas, Comment, *Addressing Wrongful Convictions: An Examination of Texas’s New Junk Science Writ and Other Measures for Protecting the Innocent*, 52 HOUS. L. REV. 1037 (2015) (providing a history and discussion of the passage of the junk science writ).

¹²⁰ *See* Thomas, *supra* note 119, at 1051.

changes in the scientific *conclusions* by a testifying expert.¹²¹ The court ultimately granted Robbins a new trial in 2015.¹²²

Almost immediately, litigants seized upon the new writ in cases that would not have been otherwise reviewable. Two months after the new writ became law, three of the four women known in the press as the “San Antonio four” relied on the writ to have their sexual assault convictions overturned.¹²³ Another defendant, Rigoberto Avila, used the new junk science writ to have his January 2014 execution postponed.¹²⁴ His murder conviction for the death of his girlfriend’s toddler was based on forensic testimony regarding the cause of the child’s fatal internal injuries.¹²⁵ On March 9, 2016, the Texas Court of Criminal Appeals sent the case back to the El Paso trial court to review Avila’s claim regarding the validity of that forensic evidence.¹²⁶

E. *The Office of Capital and Forensic Writs*

While the “junk science writ” opened the courthouse doors to defendants convicted on the basis of invalid forensic evidence, those defendants need legal counsel to assist them. Accordingly, the Texas Legislature in 2015 enlarged the mission of the Office of Capital Writs (“OCW”) to provide counsel for criminal defendants who have grounds to file junk science habeas petitions, and renamed the OCW as the Office of Capital and Forensic Writs (“OCFW”).¹²⁷

¹²¹ H.B. 3724, 2015 Leg., 84th Reg. Sess. (Tex. 2015), <http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=84R&Bill=HB3724>. H.B. 3724 amended Chapter 11 of the Texas Code of Criminal Procedure Article 11.073(d). TEX. CODE CRIM. PROC. ANN. art. 11.073(d) (West 2015).

¹²² See *Ex parte* Robbins, 478 S.W.3d 678, 680 (Tex. Crim. App. 2016). The State’s subsequent motion for a rehearing of Robbins’s case was denied. *Ex parte* Robbins, No. WR-73,484-02, 2016 WL 370157, at *1 (Tex. Crim. App. Jan. 27, 2016).

¹²³ See Michelle Mondo, *DA Drops ‘S.A. Four’ Cases*, SAN ANTONIO EXPRESS-NEWS (Nov. 15, 2013), <http://www.mysanantonio.com/news/local/article/DA-drops-S-A-Four-cases-4985664.php>.

¹²⁴ Linda Rodriguez McRobbie, *In Texas, a New Law Lets Defendants Fight Bad Science*, ATLANTIC (Feb. 28, 2014), <http://www.theatlantic.com/national/archive/2014/02/in-texas-a-new-law-lets-defendants-fight-bad-science/283895/>.

¹²⁵ *Id.*

¹²⁶ See Daniel Borunda, *Court Orders Review of El Paso Death Row Case*, EL PASO TIMES (Mar. 9, 2016), <http://www.elpasotimes.com/story/news/crime/2016/03/09/court-orders-review-el-paso-death-row-case/81558662/>.

¹²⁷ See S.B. 1743, 2015 Leg., 84th Reg. Sess. (Tex. 2015), <http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=84R&Bill=SB1743>. The idea was the brain child of Governor Perry’s criminal justice policy director who suggested that the legislature expand the OCW to include attorneys who specialized in both forensic science and habeas proceedings. She made the suggestion during a brainstorming discussion at a meeting of the Texas Criminal Justice Integrity Unit. Co-author Thompson attended this meeting.

Initially, the legislature created the OCW to handle capital writs in response to another long-simmering scandal. For years, Texas judges appointed post-conviction habeas counsel for indigent death row inmates from a list of so-called “qualified” counsel, some of whom had repeatedly missed crucial deadlines or filed embarrassingly inadequate writs of habeas corpus for their clients.¹²⁸ After multiple media reports regarding how these appointed attorneys had mismanaged or even forfeited their clients’ appellate rights,¹²⁹ the legislature in 2009 created the OCW as a public defense office for state death row appeals to provide the specialized habeas protection needed in cases involving forensic science irregularity.¹³⁰ As of September 1, 2010, Texas district court judges have been required to appoint the OCW attorneys to represent death-sentenced individuals in state post-conviction habeas proceedings.¹³¹

As mentioned above, the Texas state legislature in 2015 expanded the OCW’s duties to include filing state habeas petitions on behalf of inmates convicted on the basis of faulty forensic science and changed the office’s name.¹³² Under the new statutory provisions, OCFW lawyers are tasked with representing inmates in cases referred to the OCFW by the Texas Forensic Science Commission.¹³³ This expansion of the OCFW’s jurisdiction has been questioned, given that the legislature failed to provide the office with an increased budget to handle its new responsibilities.¹³⁴ However, the OCFW can refuse to accept either capital or forensic appointments if the office is overburdened or lacks sufficient resources to provide adequate representation.¹³⁵

¹²⁸ See, e.g., Lise Olsen, *Tardy Texas Lawyers in Capital Cases Still Paid Thousands*, HOUS. CHRON. (Apr. 19, 2009), <http://www.chron.com/news/houston-texas/article/Tardy-Texas-lawyers-in-capital-cases-still-paid-1739659.php>. See generally TEX. DEF. SERV., *LETHAL INDIFFERENCE* (2002), http://texasdefender.org/wp-content/uploads/Lethal-Indiff_web.pdf.

¹²⁹ See Olsen, *supra* note 128; see also Lise Olsen, *Slow Paperwork in Death Row Cases Ends Final Appeal For 9*, HOUS. CHRON. (Mar. 21, 2009), <http://www.chron.com/news/houston-texas/article/Slow-paperwork-in-death-row-cases-ends-final-1736308.php>.

¹³⁰ See Lise Olsen, *Texas Gets Office to Manage Death Row Appeals*, HOUS. CHRON. (July 27, 2009), <http://www.chron.com/news/houston-texas/article/Texas-gets-office-to-manage-death-row-appeals-1722871.php>.

¹³¹ TEX. CODE CRIM. PROC. ANN. art. 11.071 § 2(c) (West 2015); 2009 TEX. SESS. LAW SERV. Ch. 781 (S.B. 1091) (West).

¹³² Tex. S.B. 1743.

¹³³ TEX. CODE CRIM. PROC. ANN. art. 38.01, § 4(h) (West 2015).

¹³⁴ See *Bills Focused on Forensics, Habeas, Alter Post-Conviction Landscape*, GRITS FOR BREAKFAST (June 27, 2015), <http://gritsforbreakfast.blogspot.com/2015/06/bills-focused-on-forensics-habeas-alter.html>.

¹³⁵ TEX. GOV’T. CODE ANN. § 78.054(a) (West 2015).

F. Preserving and Testing Biological Evidence: Justice for Victims of Sexual Assault and Facilitating the Discovery of Wrongful Convictions

In the past, biological evidence used to obtain convictions might be destroyed at some point after the conviction was affirmed on appeal.¹³⁶ However, the use of DNA testing to discover wrongful convictions exposed the critical need to preserve this biological evidence for longer periods of time.¹³⁷ Thus, the Texas legislature now requires the preservation and storage of biological evidence for a period of 40 years or longer for cases in which the perpetrator is not apprehended, and until a defendant dies or completes the sentence, depending on the type of offense committed, for biological evidence used to obtain a conviction.¹³⁸

In addition, the legislature addressed the concern that too often biological evidence went untested, resulting in many unsolved sexual assault cases. To bring overdue justice to sexual assault survivors, Texas state law now requires the testing of all biological evidence collected in sexual assault cases.¹³⁹ To help pay for the testing of a large backlog of biological evidence specimens, the legislature imposed a tax on sexually-oriented businesses.¹⁴⁰

III. LOCAL INNOVATIONS BECOME NATIONAL MODELS

In Texas, criminal justice reform at the state level has been fueled by problems and innovations at the local level. In Dallas, for example, the successes of innocence projects in exonerating the wrongly convicted caught the attention of a newly elected District Attorney. In response, he decided to involve his prosecutors directly in the process of reviewing past convictions.¹⁴¹ In Houston, the scandals at the HPD Crime Laboratory brought about fundamental changes in the organizational structure of Houston's forensic laboratory.¹⁴² Thus, in the state's two largest cities, city leaders embarked on ambitious projects to improve the quality of criminal justice in ways that would impact the practice of forensic

¹³⁶ See, e.g., Lauren Kern, *Innocence Lost?*, HOUS. PRESS (Nov. 30, 2000), <http://www.houstonpress.com/news/innocence-lost-6563033> (describing how, in Texas, state law had allowed biological evidence to be destroyed after a certain time elapsed after conviction).

¹³⁷ See, e.g., Kevin Johnson, *Storage of DNA Evidence Crucial to Exonerations*, USA TODAY (Mar. 28, 2011), http://usatoday30.usatoday.com/news/nation/2011-03-28-crimelab28_ST_N.htm.

¹³⁸ TEX. CODE CRIM. PROC. ANN. art. 38.43(c) (West 2015).

¹³⁹ See TEX. GOV'T. CODE ANN. § 420.042 (West 2011).

¹⁴⁰ See TEX. BUS. & COM. CODE ANN. § 102.054 (West 2015); *Sexually Oriented Business Fee Frequently Asked Questions*, TEX. COMPTROLLER OF PUB. ACCTS., <https://www.comptroller.texas.gov/taxes/sobf/faq.php> (last visited Nov. 3, 2016).

¹⁴¹ See *infra* notes 143–52 and accompanying text.

¹⁴² See *infra* notes 182–224 and accompanying text.

science statewide. Indeed, both cities' projects have become national models as well.

A. *The Dallas District Attorney's Office Invents Conviction Integrity Units*

Craig Watkins, a defense attorney who had never served as a prosecutor, became the first African-American District Attorney for Dallas County, Texas, in 2006.¹⁴³ At the time, Dallas County had the largest number of DNA exonerations in the country,¹⁴⁴ and Watkins believed the District Attorney's Office could facilitate the process of finding additional wrongful convictions that had yet to be discovered.¹⁴⁵

To do this, Watkins developed an innovative approach to address the problem of wrongful convictions: he established the first "Conviction Integrity Unit" ("CIU") in the country in 2007.¹⁴⁶ In what would become a national model, he charged the prosecutors in this unit to partner with attorneys at the Innocence Project of Texas to review hundreds of old cases to ensure that innocent people had not been wrongly convicted.¹⁴⁷ The partnership gave the innocence project attorneys an unprecedented degree of access to police and prosecutor case files, as well as the power to subpoena key witnesses.¹⁴⁸ From the beginning, Watkins screened the prosecutors who would work in this unit to ensure that they demonstrated a dedication to ethical practice by asking applicants to discuss the ethical challenges of evidentiary disclosure.¹⁴⁹

Dallas County had so many exonerations in part because, unlike many other jurisdictions, the county had preserved its biological evidence rather than destroy it after cases had concluded.¹⁵⁰ The cases that Watkins identified for

¹⁴³ See Elizabeth Barber, *Dallas Targets Wrongful Convictions, and Revolution Starts to Spread*, CHRISTIAN SCI. MONITOR (May 25, 2014), <http://www.csmonitor.com/USA/Justice/2014/0525/Dallas-targets-wrongful-convictions-and-revolution-starts-to-spread>.

¹⁴⁴ See Mike Ware, *Dallas County Conviction Integrity Unit and the Importance of Getting It Right the First Time*, 56 N.Y.L. SCH. L. REV. 1033, 1035 (2012).

¹⁴⁵ See Wade Goodwyn, *Dallas DA to Review Decades of Convictions*, MORNING EDITION, NPR (Feb. 23, 2007), <http://www.npr.org/templates/story/story.php?storyId=7565610>.

¹⁴⁶ *Id.*

¹⁴⁷ See *Conviction Integrity Unit*, DALL. CTY. DIST. ATTORNEY, https://www.dallascounty.org/departments/da/conviction_integrity.php (last visited Nov. 3, 2016).

¹⁴⁸ Noah Fromson, *Conviction Integrity Units Expand Beyond Texas Roots*, TEX. TRIB. (Mar. 12, 2016), <https://www.texastribune.org/2016/03/12/conviction-integrity-units-expand-beyond-texas-roots/>.

¹⁴⁹ See CTR. FOR PROSECUTION INTEGRITY, *CONVICTION INTEGRITY UNIT: VANGUARD OF CRIMINAL JUSTICE REFORM* 6 (2014), <http://www.prosecutorintegrity.org/wp-content/uploads/2014/12/Conviction-Integrity-Units.pdf>.

¹⁵⁰ See Barber, *supra* note 143 (noting that Harris County, Texas, had destroyed most of its DNA evidence post-conviction, making it impossible for its CIU to review old cases in the same

review included many in which prosecutors had previously worked vigorously to defeat defendants' requests for DNA testing.¹⁵¹ As of 2014, the Dallas CIU was responsible for the release of 33 wrongly convicted people.¹⁵²

Prosecutors around the country followed Watkins's lead to establish over 25 such CIUs.¹⁵³ Fourteen of these CIUs have been announced since the start of 2014.¹⁵⁴ Although CIUs are estimated to operate in less than 1% of all local district and county attorney's offices,¹⁵⁵ in Texas, the trend to establish CIUs has caught on widely. The five largest urban centers in the state—Harris County (Houston), Dallas County (Dallas), Bexar County (San Antonio), Travis County (Austin), and Tarrant County (Fort Worth)—have CIUs in their District Attorney's Offices.¹⁵⁶ The newest CIU, in Tarrant County, was established in 2016 and has already uncovered one wrongful conviction.¹⁵⁷

While not directly impacting the quality of forensic science, the CIUs have uncovered problems with forensic evidence. For example, police departments around the country, including the HPD, have used notoriously unreliable drug field tests for many years.¹⁵⁸ The Department of Justice in 1978 declared that these tests were so unreliable that they "should not be used for evidential purposes," and their results continue to be inadmissible as evidence in most American jurisdictions.¹⁵⁹ The problem in Houston (and elsewhere) is that

way as Dallas County); Goodwyn, *supra* note 145 (commenting on the "treasure trove" of biological evidence Dallas County had preserved).

¹⁵¹ See Ware, *supra* note 144, at 1041–49 (summarizing illustrative Dallas County exonerations and describing "intransigence" on part of previous district attorneys who had opposed DNA testing).

¹⁵² See Barber, *supra* note 143.

¹⁵³ See JOHN HOLLWAY, UNIV. OF PA. LAW SCH., CONVICTION REVIEW UNITS: A NATIONAL PERSPECTIVE 10 (2016), http://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2615&context=faculty_scholarship.

¹⁵⁴ *Id.* at 11.

¹⁵⁵ See Fromson, *supra* note 148.

¹⁵⁶ *Id.*

¹⁵⁷ See Dawn Boswell, *Tarrant DA Examines Claims of Innocence, Wrongful Convictions*, STAR-TELEGRAM (Mar. 18, 2016), <http://www.star-telegram.com/opinion/opn-columns-blogs/other-voices/article66982412.html>. Unfortunately, medium-sized and smaller cities and towns have not had the wherewithal to establish CIUs, thus leaving huge gaps in the availability of conviction integrity reviews statewide. This is an issue that is somewhat filled by the statewide forensic reviews facilitated by state agencies. See *supra* Part III. Nonetheless, it would behoove state leaders to study methods for providing regional prosecution resources to facilitate ongoing reexamination of convictions in those areas.

¹⁵⁸ See Ryan Gabrielson & Tophers Sanders, *How a \$2 Roadside Drug Test Sends Innocent People to Jail*, N.Y. TIMES MAG. (July 7, 2016), http://www.nytimes.com/2016/07/10/magazine/how-a-2-roadside-drug-test-sends-innocent-people-to-jail.html?smid=tw-nytmag&smtyp=cur&_r=1.

¹⁵⁹ *Id.*

people—many of whom were actually innocent—were allowed to plead guilty to drug charges before confirmatory drug tests could be performed.¹⁶⁰

Fortunately, the Manager of the Controlled Substances Section of the Houston Forensic Science Center, James Miller, made it his practice to hold onto drug evidence, even following guilty pleas when the law would normally allow destruction of the evidence.¹⁶¹ He made it the laboratory's practice to test all drug evidence, and if those tests showed no controlled substances were present, he notified the District Attorney's Office accordingly.¹⁶²

These laboratory reports had gone unnoticed in the District Attorney's Office until early 2014 when Inger Chandler, the Chief of the Harris County District Attorney's CIU, got a tip from a reporter about the possibility that Houston might have wrongful convictions of this type.¹⁶³ The reporter had found 21 reported cases where courts had reversed drug convictions because the laboratory reports later showed no drugs were present.¹⁶⁴ Chandler's investigation uncovered hundreds of cases in which people pleaded guilty based on information that varied from the laboratory report, 212 of which indicated no controlled substances were present.¹⁶⁵ She then began the process of notifying defense counsel and defendants of the discovery, as is required under the Morton Act.¹⁶⁶ As described above, unlike other states, the Morton Act requires Texas prosecutors to notify defendants and defense counsel about exonerating information post-conviction.¹⁶⁷

In 2015, about one-third of the 149 exonerations in the country were Harris County drug cases in which people had pleaded guilty.¹⁶⁸ The 42 Harris County cases represent 89% of all the drug exonerations in 2015.¹⁶⁹ Since mid-2014 when Chandler began her investigation, the Harris County CIU has brought about 73 exonerations.¹⁷⁰

Working with the Houston Forensic Science Center,¹⁷¹ Chandler helped to implement a new policy to test drug evidence in the order in which it arrives at the lab. If the tests prove there are no illegal substances present, the public

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ See TEX. CODE CRIM. PROC. ANN. art. 39.14(h)–(k) (West 2015).

¹⁶⁷ *Id.*

¹⁶⁸ See NAT'L REGISTRY OF EXONERATIONS, EXONERATIONS IN 2015, at 1 (2016), http://www.law.umich.edu/special/exoneration/Documents/Exonerations_in_2015.pdf.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.* at 10.

¹⁷¹ See *infra* notes 192–224 and accompanying text.

defender's office is notified so its attorneys can file a writ to have the conviction reversed.¹⁷² The public defender's office, which handles most of the cases, gives priority to any cases in which someone is currently serving a sentence.¹⁷³

Prosecutors in the state's CIUs have also assisted legislatively-created stakeholder groups that study the causes of wrongful convictions by advocating for best practices and sharing information about their offices' innovative practices. The Dallas County CIU advocated for the adoption of best practices in eyewitness identification procedures used by the state's police departments.¹⁷⁴ The Tarrant County unit hosted a meeting of the Timothy Cole Advisory Panel on Wrongful Convictions, the state's first stakeholder group studying wrongful convictions, to demonstrate how its electronic discovery system allows most defense counsel to access their clients' case files by logging into a computer system established by the District Attorney's Office.¹⁷⁵ At a recent meeting of a second such stakeholder group, the chief of the Tarrant County CIU told the group about the office's new police informant tracking system that better enables the office to notify defense counsel about the backgrounds of police informants.¹⁷⁶

Thus, the Dallas CIU put in place a new and powerful mechanism for uncovering wrongful convictions, but CIUs have accomplished much more. When wrongful convictions are discovered, prosecutors in CIUs also conduct root causes analyses, along with other participants in the criminal justice system, such as public defenders, forensic laboratories, and the police.¹⁷⁷ They then play a proactive role in implementing local policies and practices to prevent wrongful convictions. Armed with the expertise of correcting root causes of wrongful convictions, CIU prosecutors have used their roles as a platform to educate the public, stakeholders, and the legislature about the ways that the criminal justice system may put innocent people at risk and the various methods to minimize those risks.¹⁷⁸ Perhaps most importantly, prosecutors in CIUs serve as role

¹⁷² See Jessica Lussenhop, *Why Harris County, Texas, Leads the U.S. in Exonerations*, BBC NEWS (Feb. 12, 2016), <http://www.bbc.com/news/magazine-35543898>.

¹⁷³ *Id.*

¹⁷⁴ See CTR. FOR PROSECUTION INTEGRITY, *supra* note 149, at 7.

¹⁷⁵ Co-author Thompson attended this meeting in Tarrant County when she served as a member of the Timothy Cole Advisory Panel for Wrongful Convictions.

¹⁷⁶ This was reported by Dawn Moore Boswell, the Chief of the CIU in Tarrant County at the June 28, 2016 meeting of the Timothy Cole Exoneration Review Commission in Austin, Texas, which co-author Thompson attended.

¹⁷⁷ See Inger H. Chandler, *Conviction Integrity Review Units: Owning the Past, Changing the Future*, CRIM. JUST., Summer 2016, at 14, 16, http://www.americanbar.org/content/dam/aba/publications/criminal_justice_magazine/v31/chandler.authcheckdam.pdf (describing how Texas CIU chiefs conduct procedural reviews to determine the root causes of wrongful convictions and "near misses").

¹⁷⁸ The Chief of the Harris County CIU spoke at a symposium on forensic science hosted by the Houston Forensic Science Center in 2015, for example, which was attended by the co-authors.

models for a new generation of prosecutors who are learning what ethical practice means in an office that strives to ensure the integrity of all convictions. As stated by the Chief of the Tarrant County Unit in a 2016 op-ed piece, “The criminal justice system must willingly engage in the sort of self-reflection essential to maintaining the public’s trust and advancing confidence in the processes that lead to convictions.”¹⁷⁹ The author of a national study of CIUs¹⁸⁰ (which he refers to as “Conviction Review Units” or CRUs) made this observation:

Sincere CRUs that conduct open and honest reviews of post-conviction claims of actual innocence stand as a triumph of truth and justice over procedural legal formality, and of collaboration over adversarialism, competitiveness, or bias. As such, they restore faith in our criminal justice system by practicing the highest ideals of truth and justice that are often preached, and often doubted.¹⁸¹

*B. Houston Removes its Crime Laboratory from the Police Department*¹⁸²

As has been typical in Texas, a scandal, this one of enormous proportions, served as a catalyst for another uniquely innovative reform. This time, recurring crises at Houston’s crime laboratory galvanized the community to make a dramatic departure from past practices. Problems of ineptitude, evidence contamination, mismanagement, and fraud at the HPD Crime Laboratory came to light following a series of news reports in 2002.¹⁸³ These

CIU prosecutors have testified at legislative hearings as witnessed by co-author Thompson. They have even published op-ed pieces in local newspapers explaining their role. See Boswell, *supra* note 157.

¹⁷⁹ See *id.* The chief of the CIU in Harris County, Texas, has recently commented on the greater cooperation with the defense bar in the review process. She wrote: “Interestingly, the unit has found that a collaborative approach to cases (prosecutors and defense attorneys working together) results in a more meaningful and comprehensive investigation. The Harris County unit has worked hand-in-hand with defense counsel in reviewing reports, reviewing evidence, locating witnesses, and conducting interviews.” See Chandler, *supra* note 177, at 15.

¹⁸⁰ See Michael R. Bromwich, *Crime Lab Proposal is a Major Step Toward Independence*, HOUS. CHRON. (Mar. 23, 2012), <http://www.chron.com/opinion/outlook/article/Crime-lab-proposal-is-a-major-step-toward-3430904.php?cmpid=emailarticle&cmpid=emailarticle> (describing the history of the HPD crime lab scandal that led to a proposal to remove lab from HPD control).

¹⁸¹ See HOLLWAY, *supra* note 153, at 11.

¹⁸² Both co-authors of this article are charter members of the Houston Forensic Science Center Local Government Corporation Board of Directors, with co-author Cásarez currently serving as board chair, and co-author Thompson acting as vice-chair.

¹⁸³ See, e.g., Nick Madigan, *Houston’s Troubled DNA Crime Lab Faces Growing Scrutiny*, N.Y. TIMES (Feb. 9, 2003), http://www.nytimes.com/2003/02/09/us/houston-s-troubled-dna-crime-lab-faces-growing-scrutiny.html?_r=0.

revelations led to a state audit as well as independent investigations, including one by former Justice Department Inspector General Michael Bromwich.¹⁸⁴ At least four men were exonerated after spending years in prison in part because of shoddy forensic testing and/or testimony by HPD laboratory analysts.¹⁸⁵ By 2003, the laboratory had earned the unsavory moniker of “worst crime laboratory in the country” from the *New York Times*.¹⁸⁶

For almost a decade, continual revelations about the HPD laboratory’s shortcomings generated bad press on a national scale.¹⁸⁷ Even the National Academy of Sciences (“NAS”) took note, prominently mentioning the HPD crime laboratory’s failures in its discussion of “errors and frauds” in its landmark 2009 NAS Report.¹⁸⁸

Fed up with the unceasing negative publicity and desirous to fix the troubled crime laboratory once and for all, then-Mayor Annise Parker, in 2011, embraced a proposal from HPD leadership to remove the laboratory from HPD control.¹⁸⁹ This proposal corresponded with the NAS Report’s repeated call for forensic laboratories to be independent from law enforcement, the achievement of which, the report explained, would foster a scientific research culture, reduce motivational and unconscious cognitive bias among laboratory analysts, and allow laboratory directors, rather than police chiefs, to set laboratory budget priorities.¹⁹⁰ Following negotiations among city leaders, HPD, and the Houston

¹⁸⁴ For a detailed account of how the HPD crime laboratory scandal unfolded over a decade, see THOMPSON, *supra* note 12, at 205–11.

¹⁸⁵ After serving 17 years for kidnapping and rape, George Rodriguez was released from prison in 2004 when DNA testing cleared him of the crime. *See id.* at 3–27. Josiah Sutton, who served three years for a rape he did not commit, was released in March 2003 and pardoned in 2004. *See id.* at 205. In 2008, subsequent DNA testing exonerated two men convicted of rape, Gary Alvin Richard (who spent 22 years in prison) and Ronald Gene Taylor (who served 12 years). HPD laboratory analysts had misrepresented the results of forensic testing at both of their trials. *See id.* at 209.

¹⁸⁶ Liptak, *supra* note 24.

¹⁸⁷ *See, e.g., Never-Ending Scandal: Will We Ever Fix HPD’s Crime Lab?*, HOUS. CHRON. (Aug. 18, 2011), <http://www.chron.com/opinion/editorials/article/Never-ending-scandal-Will-we-ever-fix-HPD-s-2132873.php> (reviewing a decade’s worth of headlines with respect to the HPD crime lab’s failures); Maurice Possley, Steve Mills & Flynn McRoberts, *Scandal Touches Even Elite Labs*, CHI. TRIB. (Oct. 21, 2004), <http://www.chicagotribune.com/news/watchdog/chi-041021forensics-story.html> (describing the HPD lab’s continuing problems).

¹⁸⁸ NAS REPORT, *supra* note 74, at 44–45.

¹⁸⁹ *See* THOMPSON, *supra* note 12, at 211–12.

¹⁹⁰ NAS REPORT, *supra* note 74, at 23–24, 183–85, 190–91. In particular, Recommendation 4 of the NAS Report called for public forensic laboratories to be removed “from the administrative control of law enforcement agencies or prosecutors’ offices.” *Id.* at 24. Not everyone supported the NAS’s call for crime laboratory independence. For example, the National District Attorneys Association (“NDAA”) in 2010 announced its opposition to any attempts to take crime laboratories away from the control of law enforcement. *See* RESOLUTION IN SUPPORT OF EFFORTS TO STRENGTHEN FORENSIC SCIENCE IN THE UNITED STATES, NAT’L DIST. ATTORNEYS ASS’N (2010),

Police Officers Union,¹⁹¹ the Houston City Council, in June 2012, approved the creation of the Houston Forensic Science Center, Inc. as a local government corporation¹⁹² tasked with operating an independent laboratory “to provide accurate and timely analysis of forensic evidence and related services.”¹⁹³

The laboratory, now a local government corporation, operates in similar fashion to a publicly-held corporation. Under this unique organizational structure, the corporation is governed by a nine-member board of directors composed of community volunteers who are nominated by the mayor and confirmed by the city council.¹⁹⁴ Given that board members need not be forensic

http://www.ndaa.org/pdf/NDAA_strengthen_forensic_science_resolution_4_10.pdf (stating that the “NDAA opposes proposals that would require crime laboratories to be independent, rather than autonomous, of law enforcement or prosecution agencies where they may be currently located”). Additionally, the International Association of Police Chiefs in 2009 adopted as its official policy that it “is strongly opposed to the removal of crime laboratories and other forensic services from law enforcement agencies.” See Joseph Polski, *Forensic Science: A Critical Concern for Police Chiefs*, POLICE CHIEF MAG., Sept. 2009, at 24–25.

More recently, an article in the *Police Quarterly* suggested that separating crime laboratories from police departments could have “serious unintended consequences” by limiting the flow of information between criminal investigators and laboratory analysts. See Edward R. Maguire, William R. King, William Wells & Charles M. Katz, *Potential Unintended Consequences of the Movement Toward Forensic Laboratory Independence*, 18 POLICE Q. 272, 275, 281–82 (2015). This conclusion overlooks well-documented research showing how scientific conclusions can be adversely affected when investigators share biasing information with forensic scientists. See, e.g., NAS REPORT, *supra* note 74, at 122–24; see also *Ensuring That Forensic Analysis is Based Upon Task-Relevant Information*, NAT’L COMM’N ON FORENSIC SCI. (Dec. 8, 2015), <https://www.justice.gov/ncfs/file/818196/download>.

¹⁹¹ For a description of these negotiations, see THOMPSON, *supra* note 12, at 212–14.

¹⁹² Under Texas law, “a local government corporation may be created to aid and act on behalf of one or more local governments to accomplish any governmental purpose of those local governments.” TEX. TRANSP. CODE ANN. § 431.101(a) (West 2011).

¹⁹³ See Houston, Tex., Res. No. 2012-17 (June 6, 2012), [http://www.houstonforensicscience.org/resources/\\$1\\$3.d0uqmU\\$cL.w2mdGZv91a6asV.PU.pdf](http://www.houstonforensicscience.org/resources/$1$3.d0uqmU$cL.w2mdGZv91a6asV.PU.pdf). Although the entity was originally named “Houston Forensic Science LGC, Inc.,” its name was changed to “Houston Forensic Science Center, Inc.” in 2014. MEETING OF BOARD OF DIRECTORS: MINUTES, HOUS. FORENSIC SCIENCE LGC, INC., (2014), <http://www.houstonforensicscience.org/meeting/577161cdulJ1qSigned.pdf>.

¹⁹⁴ See HOUS. FORENSIC SCIENCE LGC, INC., CERTIFICATION OF FORMATION (2012) [hereinafter CERTIFICATION OF FORMATION], [http://www.houstonforensicscience.org/resources/\\$1\\$Ceq3tCy9\\$yvywgiarbdoO0S.Sedtx.pdf](http://www.houstonforensicscience.org/resources/1Ceq3tCy9$yvywgiarbdoO0S.Sedtx.pdf). In an effort to shield the HFSC and its directors from political influences, a director may not be removed unless he or she has engaged in intentional, unlawful behavior that is related to his or her official duties. THOMPSON, *supra* note 12, at 214. Since its inception, the HFSC board of directors has reflected both ethnic and general diversity, as well as a variety of experience and expertise. *Id.* at 215–16. For example, the initial HFSC board consisted of licensed attorneys and academics with expertise in criminal law and wrongful convictions, business managers, a former judge, a retired assistant chief of police, and a former state legislator. *Id.* In 2015, Death Row exoneree Anthony Graves was named to serve on the board, the second Texas exoneree to do so. See Jon Schuppe, *How Anthony Graves Went from Death Row to Overseeing the Houston Crime Laboratory*, NBC

scientists themselves, the corporate governance structure provides for the creation of a Technical Advisory Group (“TAG”) of scientists to advise the board regarding best practices in scientific matters.¹⁹⁵

For most of its first two years of existence, the board dealt with transition issues, such as hiring an executive director, engaging Michael Bromwich to conduct a follow-up audit of the laboratory, appointing and meeting with TAG members, inviting community stakeholders to the board’s monthly open meetings, and negotiating with the HPD regarding which assets and divisions of the HPD laboratory would be transferred to the HFSC.¹⁹⁶ Finally, on April 3, 2014, pursuant to an interlocal agreement with the City of Houston, the HFSC took possession of designated HPD crime laboratory assets and assumed responsibility for the laboratory’s future operations.¹⁹⁷

Since that time, the HFSC has hired an exceptional group of qualified staff members to manage and operate the laboratory, including seven scientists with doctoral degrees, and more than 40 with master’s degrees.¹⁹⁸ The HFSC also expanded the range of forensic services it provides by adding a latent print division in 2014,¹⁹⁹ as well as a trace evidence division in 2015.²⁰⁰ In two years, seven of the eight laboratory divisions have been awarded international ISO accreditation: DNA/biology, controlled substances, toxicology, firearms, trace evidence, digital multimedia, and latent prints.²⁰¹

NEWS (June 27, 2015, 4:02 PM), <http://www.nbcnews.com/news/us-news/how-anthony-graves-went-death-row-overseeing-his-local-crime-n381891>.

¹⁹⁵ See CERTIFICATION OF FORMATION, *supra* note 194.

¹⁹⁶ See THOMPSON, *supra* note 12, at 216–20.

¹⁹⁷ *Id.* at 222.

¹⁹⁸ See HOUSTON FORENSIC SCIENCE CENTER, 2015 ANNUAL REVIEW 2 (2016) [hereinafter 2015 ANNUAL REVIEW] (on file with authors). In 2016, HFSC staff presented seven papers at the Academy of Forensic Sciences annual convention, the HFSC’s scientific training director was appointed to lead the U.S. delegation to the International Standards Organization’s Technical Committee on Forensic Sciences meeting in the Netherlands, and the HFSC executive director was consulted by the President’s Council of Advisors on Science and Technology. See MEETING OF BOARD OF DIRECTORS: MINUTES, *supra* note 193.

¹⁹⁹ See Press Release, Hous. Forensic Sci. Ctr., HFSC’s Latent Print Section Fully Certified (Feb. 11, 2016), <http://www.houstonforensicscience.org/news/1SDmIHceDLR5amFhfdE3dkA1A62XG.pdf>. In 2009, an external audit revealed so many problems with the HPD fingerprint comparison unit that it was shut down, and the city contracted with a private firm to provide fingerprint analyses. Moises Mendoza & Bradley Olson, *Major, Costly Overhaul Likely in HPD Fingerprint Unit*, HOUS. CHRON. (Dec. 1, 2009), <http://www.chron.com/news/houston-texas/article/Major-costly-overhaul-likely-in-HPD-fingerprint-1739953.php>.

²⁰⁰ See 2015 ANNUAL REVIEW, *supra* note 198, at 5.

²⁰¹ See Accreditation, HOUS. FORENSIC SCI. CTR., <http://www.houstonforensicscience.org/accreditation.php> (last visited Nov. 18, 2016).

Under HFSC leadership, the laboratory has also increased its productivity, reducing backlogs and improving turnaround times.²⁰² In February 2015, the HFSC made national headlines after eliminating a legacy backlog of approximately 6,600 untested sexual assault kits, some of which dated back to the 1980s.²⁰³ By January 2016, the HFSC had entirely eliminated backlogs in its controlled substances and firearms sections, two huge areas of work for the laboratory.²⁰⁴ This achievement is even more remarkable given that the HFSC employs the strict Department of Justice definition of “backlog,” which includes any evidence submission upon which testing is not completed within 30 days.²⁰⁵ Turnaround time for laboratory tests on drugs averaged 13 days in April 2016, whereas drug testing at the old HPD crime laboratory took months, and sometimes years.²⁰⁶ Efficiencies and streamlined processes implemented by laboratory managers reduced turnaround times on casework across all laboratory divisions by 25% in 2015²⁰⁷ and by 52% to date in 2016.²⁰⁸

Another unique feature of the HFSC lies in its commitment to transparency in its dealings with stakeholders and the public. The board meets each month in open session where board members are updated on the status of laboratory operations and where backlogs and other challenges are discussed candidly.²⁰⁹ Board meetings are videotaped, and the videos are posted on the HFSC’s website, where they can be viewed by all.²¹⁰ In the few instances in which complaints have been filed against the HFSC with the TFSC, laboratory management has engaged the City of Houston’s Office of Inspector General

²⁰² Press Release, Hous. Forensic Sci. Ctr., HFSC Works with HPD to Tackle Property Crimes in Houston, (Apr. 13, 2016), <http://www.houstonforensicscience.org/news/576be92e.pdf>. When it took over operations from HPD, the HFSC inherited a backlog of about 12,000 cases. *Id.*

²⁰³ See Katherine Driessen & Mike Morris, *Tests of Rape Kits Could Have Halted Future Attacks*, HOUS. CHRON. (Mar. 7, 2015, 10:49 PM), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Tests-of-rape-kits-could-have-halted-future-6121432.php>. These kits were outsourced for testing and then analyzed internally by HFSC examiners. *Id.*

²⁰⁴ See 2015 ANNUAL REVIEW, *supra* note 198, at 5.

²⁰⁵ See *id.* at 3 (listing HFSC’s goal of “all casework completed in 30 days”); see also NAS REPORT, *supra* note 74, at 39 (providing DOJ definition of “backlog”). Not all laboratories use such an aggressive definition of backlog, which makes comparisons difficult. See 2015 ANNUAL REVIEW, *supra* note 198, at 63.

²⁰⁶ See Meagan Flynn, *Would a City-County Merger Jeopardize Progress at Houston’s New and Improved Crime Lab?*, HOUS. PRESS (Apr. 7, 2016, 9:00 AM), <http://www.houstonpress.com/news/would-a-city-county-merger-jeopardize-progress-at-houstons-new-and-improved-crime-laboratory-8300007>.

²⁰⁷ 2015 ANNUAL REVIEW, *supra* note 198, at 2.

²⁰⁸ See HOUS. FORENSIC SCI. CTR., OPERATIONS REPORT 3 (2016) (on file with authors).

²⁰⁹ See *Our Meeting Archive*, HOUS. FORENSIC SCI. CTR., <http://www.houstonforensicscience.org/meeting-archives.php> (last visited Sept. 30, 2016).

²¹⁰ *Id.*

(“OIG”) to investigate the complaint and has waived attorney-client privilege so that the resulting OIG reports can be shared with the media, the public, and the TFSC.²¹¹ Ironically, by virtue of its transparency, the HFSC has occasionally suffered negative publicity simply because it owns up to challenges that are widely shared among crime laboratories, but are rarely, if ever, discussed in public.²¹²

Most impressively, the HFSC is the first crime laboratory in the country to implement blind quality control testing to gauge its analysts’ skill levels.²¹³ Although laboratory accreditation agencies require laboratory analysts to take periodic proficiency tests,²¹⁴ the usefulness of those tests has been questioned given that analysts know they are being tested.²¹⁵ It stands to reason that analysts will perform more carefully when they are aware they are being evaluated; accordingly, blind testing more accurately measures the quality of an analyst’s

²¹¹ See, e.g., Press Release, Hous. Forensic Sci. Ctr., City of Houston Inspector General Releases Report on Anonymous Complaint Filed Against Houston Forensic Science Center (June 10, 2016), <http://www.houstonforensicscience.org/news/1FG4MTnRIIXJWgJFE.crv0tgm21Nq.pdf>.

²¹² For example, after its reporter attended a public board meeting, a local television station in April 2016, reported that the HFSC was developing a “creeping” backlog of 333 sexual assault kits (meaning kits not completed by the laboratory within 30 days)—something that the board had been working openly to eliminate for several months. Jeremy Rogalski, *City’s Rape Kit Backlog Creeping Back Up*, KHOU (Apr. 4, 2016, 11:24 PM), <http://www.khou.com/news/investigations/citys-rape-kit-backlog-creeping-back/119672065>. The next month, county officials were shocked to learn that the Harris County Institute of Forensic Sciences had developed a backlog of more than 4,600 DNA cases, had tripled its overall backlog in three years, and had 148 sexual assault kits older than 60 days (the county laboratory’s SAK turnaround time goal). See Mihir Zaveri, *Harris County Crime Lab Faces Heavy Backlog of DNA Cases*, HOUS. CHRON. (May 12, 2016, 10:51 AM), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Harris-County-crime-lab-faces-heavy-backlog-of-7465797.php>. The existence of this backlog only came to light after laboratory management applied for a National Institute of Justice backlog-reduction grant for its DNA division. *Id.*

²¹³ See NAT’L COMM’N ON FORENSIC SCI., VIEWS OF THE COMMISSION OPTIMIZING HUMAN PERFORMANCE IN CRIME LABORATORIES THROUGH TESTING AND FEEDBACK 5–6 n.18 (2016) [hereinafter VIEWS OF COMMISSION] (listing the HFSC and the Netherlands Forensic Institute as examples of crime laboratories that have adopted blind testing); see also Press Release, Hous. Forensic Sci. Ctr., HFSC Adds Blind Test Samples into Workflow, Leading the Way Nationally (Sept. 14, 2015), <http://www.houstonforensicscience.org/news/576be9e2.pdf>.

²¹⁴ See, e.g., AM. ASSOC. FOR LAB. ACCREDITATION, R103—GENERAL REQUIREMENTS: PROFICIENCY TESTING FOR ISO/IEC 17025 LABORATORIES (2013), https://www.a2la.org/requirements/r103_2013.pdf (stating that “[r]esults from [proficiency testing] are an indication of a laboratory’s competence and are an integral part of the assessment and accreditation process”).

²¹⁵ See, e.g., Jennifer L. Mnookin et al., *The Need for a Research Culture in the Forensic Sciences*, 58 UCLA L. REV. 725, 771 (2011) (explaining that implementation of blind proficiency tests in forensic laboratories would “make casework better comport with scientific principles for the production of knowledge”).

regular casework.²¹⁶ The HFSC added blind quality control samples to its regular workflow in its toxicology, firearms and controlled substances divisions in 2015, and plans to include biology and latent prints by the end of 2016.²¹⁷ By designing and executing an innovative and ground-breaking blind testing program, the HFSC has received national recognition for its commitment to best scientific practices.²¹⁸

Nonetheless, the HFSC faces challenges due to some lingering public perceptions that associate the city's laboratory with incompetence.²¹⁹ Convincing Houstonians of the laboratory's independence and transformation has been made harder by the fact that most of the laboratory remains in the HPD building.²²⁰ This arrangement leaves much to be desired for another reason as well. The high-rise office space of HPD headquarters was not designed to house a wet laboratory.²²¹ The laboratory space is neither adequate nor large enough to house a forensic laboratory of the size needed by a growing city.

In the past, underfunding was a primary cause of the original HPD crime laboratory disaster, as it has been a cause of problems in forensic laboratories nationwide.²²² Today, like most forensic laboratories, the HFSC struggles to obtain adequate funding during a time of shrinking city coffers.²²³ Thus, while

²¹⁶ See, e.g., Jonathan J. Koehler, *Fingerprint Error Rates and Proficiency Tests: What They Are and Why They Matter*, 59 HASTINGS L.J. 1077, 1095 (2008) (stating that proficiency tests should be blind because "knowledge that one is being tested makes examiners more vigilant than when they are performing casework").

²¹⁷ Press Release, Hous. Forensic Sci. Ctr., HFSC Adds Blind Test Samples in Two More Disciplines (Dec. 16, 2015), <http://www.houstonforensicscience.org/news/1LaRAaicXJz8jqwPmMCIUIf9NgFmx.pdf>.

²¹⁸ See VIEWS OF COMMISSION, *supra* note 213.

²¹⁹ For example, in the most recent mayoral election, one candidate made closing the HFSC a major part of his platform, stating that taxpayers should not "prop up" a crime laboratory known for producing "shoddy work." See *Public Safety*, BILL KING FOR HOUS. MAYOR (Sept. 11, 2015), <http://www.billkingforhouston.com/issues/2015/september/11/public-safety.aspx>.

²²⁰ Press Release, Hous. Forensic Sci. Ctr., HFSC Changes Corporate Address (Jan. 6, 2016), <http://www.houstonforensicscience.org/news/576be971.pdf>. Although the HFSC changed its corporate address and moved three of its divisions to a nearby office building in 2016, the Center's wet laboratories remain in HPD headquarters. *Id.*

²²¹ *Id.*

²²² See, e.g., Ralph Blumenthal, *Officials Ignored Houston Lab's Troubles, Report Finds*, N.Y. TIMES (July 1, 2005), http://www.nytimes.com/2005/07/01/us/officials-ignored-houston-labs-troubles-report-finds.html?_r=0 (describing faulty HPD crime laboratory facilities, inadequate and untrained staff, as well as refusal of police chief to spend money to hire additional analysts or fix the laboratory's problems). See generally THOMPSON, *supra* note 12, at 37–39 (addressing the scandals in crime laboratories caused by choked budgets).

²²³ See, e.g., Mike Morris, *Turner Calls for Shared Sacrifice in Battling City's Financial Woes*, HOUS. CHRON. (Jan. 4, 2016, 11:29 PM), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Turner-calls-for-shared-sacrifice-in-battling-6736427.php> (noting that in 2016, Houston's mayor called for streamlined city spending to reduce the city's \$126 million budget deficit).

Houston achieved national acclaim just a few years ago by creating an independent crime laboratory,²²⁴ the more important question may be whether the laboratory will have the wherewithal going forward to build on its early successes.

IV. THE INFRASTRUCTURE IN OPERATION: STATEWIDE SYSTEMIC REVIEWS OF FORENSIC SCIENCE IRREGULARITIES

Having erected an elaborate infrastructure to support the practice of forensic science, the state has been in a unique position to respond to large-scale problems that develop whenever a problem with a forensic discipline is discovered. In addition to its role implementing regulations prospectively to improve the quality of forensic investigations, the TFSC has also examined entire forensic disciplines to determine whether they measure up to today's scientific standards.²²⁵ When particular areas of forensic science are found to be scientifically invalid, the Commission has partnered with other agencies and groups, including the state fire marshal and the Innocence Project of Texas ("IPOT"), to conduct retroactive reviews of Texas convictions that were based, at least in part, on faulty evidence or testimony.²²⁶ To organize these large-scale reviews of old convictions, the TFSC has mobilized criminal justice stakeholders representing all facets of the forensic science infrastructure to work cooperatively.²²⁷ In the most recent instance, the Texas Criminal Justice Integrity Unit called a meeting of prosecutors (mostly from CIUs), public defenders, innocence project representatives, academics, and others to meet with the General Counsel of TFSC so that the entire group could learn about a forensic science problem and to devise strategies for conducting the large-scale systemic review.²²⁸

As a result, the TFSC has been described as one of the most important forensic science reform groups in the nation²²⁹—a remarkable accomplishment given that the Commission's mission was almost derailed by politics in relation to the Willingham case described above.²³⁰

²²⁴ See, e.g., Roger Koppl & E. James Cowan, *Steps to Take to Resolve Crime Lab Problems*, INDEP. INST. (May 21, 2012), <http://www.independent.org/newsroom/article.asp?id=3327> (describing Houston as a city "on the right track" by virtue of its decision to create an independent crime laboratory); see also David A. Harris, *Houston Ahead of Curve in Forensic Science*, HOUS. CHRON. (Jan. 18, 2013, 7:47 PM), <http://www.chron.com/opinion/outlook/article/Houston-ahead-of-curve-in-forensic-science-4206722.php>.

²²⁵ See generally Hall, *supra* note 46, at 102–05, 150–55.

²²⁶ *Id.*

²²⁷ *Id.*

²²⁸ See *infra* notes 250–59 and accompanying text.

²²⁹ See Hall, *supra* note 46, at 105.

²³⁰ See *id.*; see also Mills & Possley, *supra* note 40 (discussing the execution of Cameron Todd Willingham on disproved forensics).

After the controversy over the Willingham case, the TFSC decided to ensure that other cases involving questionable arson testimony were reviewed. The TFSC reached out to the state fire marshal's office, and asked it to re-examine arson convictions where unscientific methods may have been used.²³¹ Not only did the state fire marshal agree, but he also accepted an offer from the IPOT to assist in the case review.²³² After initially contacting 1,085 Texas defendants who had been convicted of arson, IPOT lawyers identified 33 arson convictions that warranted further investigation.²³³ By 2014, nine of those cases had been reviewed by an advisory panel of legal and forensic experts assembled by the state fire marshal and IPOT, and five of those nine convictions were found to rely on scientifically unsound arson techniques.²³⁴ In June, 2016, a district court ruled that the defendant in one of those cases had presented overwhelming evidence of actual innocence,²³⁵ and in November 2016, the Court of Criminal Appeals affirmed this finding and granted relief.²³⁶

Three years after organizing the arson project, the TFSC implemented a similar re-examination of Texas convictions in which microscopic hair analysis linked a defendant to a crime scene.²³⁷ The TFSC announcement followed the FBI's decision to review cases in which its examiners testified about hair and fiber evidence, based on concerns that those examiners frequently overstated their findings in ways that benefited the prosecution.²³⁸ The Commission's decision made Texas the first state to institute a statewide review of convictions

²³¹ See Brandi Grissom, *Forensic Panel Calls for Review of Past Arson Cases*, TEX. TRIB. (Sept. 9, 2011, 2:15 PM), <https://www.texastribune.org/2011/09/09/science-panel-agrees-review-past-arson-evidence/>.

²³² See Hall, *supra* note 46, at 152.

²³³ See Maurice Chammah, *Arson Reviewers Expect Small Number of Problem Cases*, TEX. TRIB. (Jan. 25, 2013, 12:20 PM), <https://www.texastribune.org/2013/01/25/arson-reviewers-expect-small-number-problem-cases/>.

²³⁴ See Chuck Lindell, *Abbott: Review of Old Arson Cases Is Legal*, AUSTIN AM.-STATESMAN (Apr. 7, 2014, 11:17 AM), <http://www.statesman.com/news/news/abbott-review-of-old-arson-cases-is-legal/nfTL3/>.

²³⁵ See Brantley Hargrove, *Sonia Cacy Found to Be Innocent*, TEX. MONTHLY: DAILY POST (June 6, 2016), <http://www.texasmonthly.com/the-daily-post/sonia-cacy-found-innocent/>.

²³⁶ See *Ex parte Cacy*, No. WR-85, 420-01, 2016 Tex. Crim. App. Unpub. LEXIS 982 (Tex. Crim. App. Nov. 2, 2016).

²³⁷ See Jordan Smith, *Hair Analysis: The Root of the Evidence Problem*, AUSTIN CHRON. (Jan. 13, 2014, 3:10 PM), <http://www.austinchronicle.com/daily/news/2014-01-13/hair-analysis-the-root-of-the-evidence-problem/>.

²³⁸ See *id.*; see also Hall, *supra* note 46, at 153. In 2015, the FBI admitted that FBI hair examiners had exaggerated their findings in more than 90% of trial transcripts that were reviewed. *FBI Testimony on Microscopic Hair Analysis Contained Errors in at Least 90 Percent of Cases in Ongoing Review*, FED. BUREAU OF INVESTIGATION (Apr. 20, 2015), <https://www.fbi.gov/news/pressrel/press-releases/fbi-testimony-on-microscopic-hair-analysis-contained-errors-in-at-least-90-percent-of-cases-in-ongoing-review>.

that involved hair microscopy testimony and reflected the Commission's concern that many Texas hair examiners had received FBI training.²³⁹

To assist with the case review, the Commission again appointed a team of subject matter experts that included crime laboratory, law enforcement, IPOT, prosecution, and public defender representatives.²⁴⁰ The TFSC also created a protocol in conjunction with the Texas Criminal Justice Integrity Unit²⁴¹ to notify affected parties in cases where problematic hair evidence or testimony factored significantly in the case outcome.²⁴² As of November 2015, the team had reviewed 11 out of 287 cases in which hair evidence positively linked a defendant to a crime scene, and found testimony that amounted to “notifiable error[.]” in five of those convictions.²⁴³

In another national first, the TFSC, in 2016, recommended that state trial judges should exclude bite-mark evidence as a means of identification in criminal trials.²⁴⁴ The call for a moratorium came after a six-month TFSC investigation concluded that forensic odontology, commonly known as bite-mark analysis, currently lacks an adequate scientific foundation.²⁴⁵ The Commission launched its bite-mark investigation after the national Innocence Project filed a complaint on behalf of Steven Chaney, who had been convicted in 1987 of a Dallas murder based in large part on the testimony of a forensic dentist.²⁴⁶ Chaney's conviction was set aside in 2015 after the dentist recanted his testimony, describing it in a sworn statement as “scientifically unsound.”²⁴⁷ In its investigation, the TFSC also identified at least 35 other Texas cases for review where bite-mark evidence was utilized.²⁴⁸ While Texas judges are not legally obligated to follow the TFSC's moratorium recommendation, the Commission's action attracted national headlines and was described as a “major credibility blow” to a forensic

²³⁹ Smith, *supra* note 237.

²⁴⁰ *Id.*

²⁴¹ The Texas Criminal Justice Integrity Unit was created by Judge Barbara Hervey of the Texas Court of Criminal Appeals in 2008 to address problems in the criminal justice system. Jordan Smith, *A Dose of Integrity for Texas Criminal Justice*, AUSTIN CHRON. (June 27, 2008), <http://www.austinchronicle.com/news/2008-06-27/640107/>.

²⁴² See FOURTH ANNUAL REPORT, *supra* note 65, at 17–18.

²⁴³ *Id.* at 18.

²⁴⁴ See Erik Eckholm, *Texas Panel Calls for an End to Criminal IDs via Bite Mark*, N.Y. TIMES (Feb. 12, 2016), <http://www.nytimes.com/2016/02/13/us/texas-panel-calls-for-an-end-to-criminal-ids-via-bite-mark.html>.

²⁴⁵ *Id.*

²⁴⁶ See Hall, *supra* note 46, at 104.

²⁴⁷ *Id.*

²⁴⁸ See Eckholm, *supra* note 244.

discipline that has been responsible nationally for at least 24 wrongful arrests and convictions.²⁴⁹

Finally, in yet another statewide reassessment, the TFSC, in 2015, announced it was facilitating a review of thousands of convictions that were based on incorrect statistical interpretations of DNA mixtures—samples that include more than one person’s DNA.²⁵⁰ The problem with mixtures came to light in May 2015, when “the FBI notified the public that it had identified some errors in the population data used to generate statistical calculations when analyzing DNA cases by crime laboratories around the country.”²⁵¹ The changes in the population statistics were not expected to have any material impact on the statistics derived in criminal cases, but in the process of recalculating some old cases, it was discovered that older cases involving complex DNA mixtures had not been interpreted according to currently acceptable standards.²⁵² In some cases, the use of the proper laboratory protocols could materially affect the statistical conclusion about whether a particular defendant’s genetic material was included in a DNA mixture left at a crime scene.²⁵³

When this problem with the calculation of DNA mixtures came to light, accrediting organizations called on crime laboratories to review old cases to ensure that the miscalculations had not brought about any wrongful convictions.²⁵⁴ The Texas laboratories, in turn, looked to the TFSC to facilitate such reviews.²⁵⁵ The Commission brought together the various stakeholders to collaborate on a solution.²⁵⁶ As a result, forensic scientists, prosecutors, defense lawyers, and judges worked together with the TFSC to develop a plan to examine past cases, notify those affected, and, if appropriate, provide legal representation to those who may have been wrongly convicted.²⁵⁷ The Texas Indigent Defense Commission supported the case reviews by providing funding for a coordinated team of attorneys “to provide assistance to indigent defendants [] affected by the

²⁴⁹ Paul J. Weber, *Texas 1st State to Recommend Court Ban on Bite Mark Evidence*, FORENSIC MAG. (Feb. 16, 2016, 1:15 PM), <http://www.forensicmag.com/news/2016/02/texas-1st-state-recommend-court-ban-bite-mark-evidence>.

²⁵⁰ See, e.g., Gabrielle Banks, *Texas Leading Massive Review of Criminal Cases Based on Change in DNA Calculations*, HOUS. CHRON. (Jan. 30, 2016, 11:21 AM), <http://www.houstonchronicle.com/news/houston-texas/houston/article/Texas-leading-massive-review-of-criminal-cases-6796205.php>; Hall, *supra* note 46, at 153–54.

²⁵¹ TEX. FORENSIC SCI. COMM’N, CLARIFICATION REGARDING THE TERM “CURRENT AND PROPER MIXTURE INTERPRETATION PROTOCOLS” (2016), <http://www.fsc.texas.gov/sites/default/files/Clarification%20on%20current%20and%20proper%20mixture%20interpretation%20protocols.pdf>.

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ See Banks, *supra* note 250.

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ *Id.*

new guidance promulgated regarding testing and reporting protocols for DNA mixtures.”²⁵⁸ According to Barry Scheck of the national Innocence Project, these efforts earned Texas the distinction of being the first—and, as of early 2016, the only—state to deal with this enormous issue in a systematic and proactive fashion.²⁵⁹

V. CONCLUSION

Challenges surely remain, but the creation of an infrastructure of forensic science has already vastly improved the quality of forensic evidence in the state. Texas has produced the largest number of exonerations of any state.²⁶⁰ While sobering, the volume of exonerations also reflects the outstanding progress the state has made in developing the resources necessary to uncover and correct past injustices. From post-conviction prosecutorial discovery, to the appointment of specialized habeas counsel, to the junk science writ and stakeholder cooperation and training, the state has put into place many of the necessary elements for righting the wrongs of the past on a large-scale, statewide basis.

The significant role of the Texas Forensic Science Commission also cannot be overstated. The Commission has not only been integral to implementing statewide systemic reviews of convictions involving flawed science, but it has also elevated the level of forensic science practice in crime laboratories statewide through accreditation, licensing, training, and investigations of irregularities and malfeasance.²⁶¹ The Commission’s leadership in declaring certain types of evidence to be insufficiently reliable for use in court, as occurred recently with bite-mark evidence,²⁶² has also improved administration of justice in the criminal courts.

Other groups and innovations have also contributed to the overall process of improvement. The Texas Criminal Justice Integrity Unit organizes training programs to implement the needed changes in how forensic science intersects with the legal system, and the group also facilitates stakeholder meetings on particular issues of concern.²⁶³ Local innovations such as conviction integrity units within District Attorney’s Offices produce another important

²⁵⁸ E-mail from Jim Bethke, Exec. Dir., Tex. Indigent Def. Comm’n, to Professor Sandra Guerra Thompson (Aug. 11, 2016) (on file with authors).

²⁵⁹ *Id.*

²⁶⁰ See *Exonerations by State*, NAT’L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/Exonerations-in-the-United-States-Map.aspx> (last updated Oct. 13, 2016). These numbers grew dramatically in the wake of the discovery of wrongful guilty pleas in drug cases. See *supra* notes 158–73 and accompanying text.

²⁶¹ See *supra* notes 45–69 and accompanying text.

²⁶² See *supra* notes 244–49 and accompanying text.

²⁶³ See *supra* notes 70–78 and accompanying text.

source of expertise and proactive problem-solving.²⁶⁴ Finally, Houston has taken the lead by transforming its troubled crime lab into one that is independent of law enforcement, transparent in its operation, and excellent in its quality assurance and efficiency.²⁶⁵ The result is a synergistic relationship in which stakeholders work collaboratively toward the common goals of uncovering wrongful convictions, as well as preventing new ones.

This synergy also makes it feasible for the legislature to begin another round of reforms by forming yet another stakeholder group to study wrongful convictions. Most recently, the legislature established the Timothy Cole Exoneration Review Commission (“TCERC”), a second group named for exoneree Timothy Cole.²⁶⁶ It began work in 2015, and plans to re-examine what else can be done to improve forensic science, along with other causes of wrongful convictions.²⁶⁷

All the judicial training programs and stakeholder meetings appear to have made the judiciary more receptive to prisoner petitions challenging forensic evidence. In June 2016, the Court of Criminal Appeals postponed the impending execution of a man convicted in the death of his two-year-old daughter.²⁶⁸ The conviction and death sentence largely rested on evidence of “[s]haken [b]aby [s]yndrome.”²⁶⁹

In this manner, Texas has created a continuing cycle of legislatively-created stakeholder collaboration leading to state and local innovations and the development of expertise, leading to calls for greater reforms and more stakeholder collaboration. This process has brought about many fundamental

²⁶⁴ See Noah Fromson, *Conviction Integrity Units Expand Beyond Lone Star State Roots*, TEX. TRIB. (Mar. 12, 2016, 6:00 AM), <https://www.texastribune.org/2016/03/12/conviction-integrity-units-expand-beyond-texas-root/>.

²⁶⁵ See *supra* notes 189–224 and accompanying text.

²⁶⁶ See *supra* notes 79–89 and accompanying text. The TCERC is made up of 11 members, including 4 legislators, a gubernatorial appointee, and representatives of various criminal justice government bodies and stakeholder organizations, including appointments from the Texas Judicial Council and the Texas Indigent Defense Commission. See Johnathan Silver, *Commission Begins Study of Wrongful Convictions*, TEX. TRIB. (Oct. 29, 2015, 5:42 PM), <https://www.texastribune.org/2015/10/29/commission-begins-work-prevent-wrongful-conviction/>. The TCERC was created under the auspices of the Texas Judicial Council, the policy making arm of the judicial branch, and is administratively attached to the Office of Court Administration. *Timothy Cole Exoneration Review Commission*, TEX. JUDICIAL BRANCH, <http://www.txcourts.gov/organizations/policy-funding/timothy-cole-exoneration-review-commission/> (last visited Nov. 3, 2016).

²⁶⁷ See *id.*

²⁶⁸ Johnathan Silver, *Appeals Court Halts Texas Man’s Execution in Shaken Baby Syndrome Case*, TEX. TRIB. (June 17, 2016, 8:21 AM), <https://www.texastribune.org/2016/06/17/appeals-court-halts-east-texas-mans-execution/>.

²⁶⁹ *Id.* The court also put a stop to the use of “dog scent lineup[s],” which were found to be a bogus form of ostensibly scientific evidence. See *Winfrey v. Texas*, 323 S.W.3d 875, 884 (Tex. Crim. App. 2010).

statutory and local reforms in the practice of forensic science, and governing its use in court.