



**IN THE COURT OF CRIMINAL APPEALS
OF TEXAS**

NO. WR-73,484-02

EX PARTE NEAL HAMPTON ROBBINS, Applicant

**ON APPLICATION FOR A WRIT OF HABEAS CORPUS
FROM CAUSE NO. 98-06-00750-CR-(2) IN THE 410TH DISTRICT COURT
MONTGOMERY COUNTY**

**COCHRAN, J., filed a concurring opinion in which PRICE and JOHNSON,
JJ., joined.**

CONCURRING OPINION

I join the majority opinion. I write separately to respectfully disagree with the State's contention that the plain language and legislative history of Article 11.073 "demonstrate a legislative intent to provide a remedy when there is a generally accepted scientific advance or breakthrough in a discipline of forensic science," rather than a change in the State's scientific expert's opinion.¹ I think that providing relief from "bad" scientific testimony and

¹ State's Brief at 11-12.

righting the wrong of *Robbins* was “the tipping point” for passing the statute.²

A. Our Prior Decision in *Robbins* was the Poster Child for Enacting Article 11.073.

1. The scientific and legal landscape before passage of Article 11.073.

Over the past decade, Texas has been a national leader in addressing wrongful convictions and recognizing how bad science can lead to bad convictions. During the past ten years, all three branches of Texas government have worked to ensure the scientific integrity of Texas criminal convictions and to reassure our citizens that Texas criminal trials are fundamentally fair and reach accurate results.

In 2001, the Texas Legislature enacted Chapter 64,³ which set up a procedure for post-conviction DNA testing. Then the Dallas District Attorney’s Conviction Integrity Unit began testing stored DNA from old rape convictions and assisting in the legal exoneration of those defendants whose DNA did not match that found at the crime scene.⁴

Those developments, plus the concern over “bad” arson science,⁵ led the Legislature

² See Jani Jo Maselli, *Junk Science and the New Habeas Law*, 51 HOUS. LAWYER 16, 16 (Feb. 2014) (“The tipping point in the passage of the statute was most likely the procedurally-complex case of Neal Hampton Robbins.”).

³ TEX. CODE CRIM. PROC. arts. 64.01-64.05.

⁴ See, e.g., *Ex parte Wallis*, No. AP-75586, 2007 WL 57969, at *1 (Tex. Crim. App. Jan. 10, 2007) (not designated for publication); *Ex parte Smith*, No. AP-75573, 2006 WL 3691244, at *1 (Tex. Crim. App. Dec. 13, 2006) (not designated for publication); *Ex parte Henton*, No. AP-75344, 2006 WL 362331, at *1 (Tex. Crim. App. Feb. 15, 2006) (not designated for publication) (based on exculpatory DNA test results, granting habeas relief to Dallas inmate who had been wrongly convicted of sexual assault).

⁵ Arson science came to the public’s attention after the execution of Cameron Todd Willingham and the concern that he may have been convicted of the capital murder of his three

to create the Texas Forensics Commission in 2005 to strengthen the use of “good” science in criminal proceedings and to investigate “allegations of negligence or misconduct” in forensic sciences.⁶ The increasing number of Texas exonerations led to the formation of (1) the Texas Innocence Project in 2007 by non-profit organizations working with students, and (2) the Texas Criminal Justice Integrity Unit in 2008 by the Court of Criminal Appeals to “review the strengths and weaknesses of the Texas criminal justice system” and to “bring about meaningful reform.”⁷ In 2011, the Legislature passed Article 38.20 to improve the reliability of photographic and live line-up procedures,⁸ based, in part, on the recommendations of the Criminal Justice Integrity Unit.⁹

children based on outmoded arson theories and techniques. *See Hon. Juan Hinojosa & Lynn Garcia, Response, Improving Forensic Science Through State Oversight: The Texas Model*, 91 TEX. L. REV. 32 (2012) (noting that “the recommendations generated in the final report of the Willingham case have positioned Texas as a leader in improving the quality and reliability of fire and arson investigation. The discipline of arson investigation has undergone significant transformation over the last two decades as experts have learned more about the way fire behaves. This phenomenon has affected arson investigators in every state. However, no other state is taking such proactive measures as Texas.”); *see also* Peter A. Chickris & Mykal J. Fox, *Present Danger: Preventing Wrongful Convictions by Resolving Critical Issues Within Texas’s Criminal Justice System*, 52 S. TEX. L. REV. 365, 405 (2011) (recounting the facts leading to the conviction and execution of Willingham—as well as the subsequent exoneration of Ernest Willis—who was convicted on the basis of “faulty” arson science).

⁶ Texas Forensic Science Commission, *About Us*, <http://www.fsc.texas.gov/about>.

⁷ Texas Court of Criminal Appeals, Texas Criminal Justice Integrity Unit, <http://www.txcourts.gov/cca/texas-criminal-justice-integrity-unit.aspx>.

⁸ TEX. CODE CRIM. PROC. art. 38.20 (“Photograph and Live Lineup Identification Procedures”).

⁹ Texas Criminal Justice Integrity Unit, 2007 Annual Report of Activity, <http://www.cca.courts.state.tx.us/tcjiu/reports/TCJIU-2009-report.pdf> at 7 (“The TCJIU encourages law enforcement entities to follow the lead of Richardson, Dallas, and other jurisdictions that have

In 2009, the National Research Council, an arm of the National Academy of Sciences, published *Strengthening Forensic Science in the United States: A Path Forward*, its exposé of the shoddy forensics used in criminal proceedings.¹⁰ This report concluded that, with the exception of DNA, “no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.”¹¹ In other words, courts and juries were frequently relying on “junk” science in criminal proceedings.¹² The NAS report stated that “[n]ew doubts about the accuracy of some forensic science practices have intensified with the growing numbers of exonerations resulting from DNA analysis (and the concomitant realization that guilty parties sometimes walk free).”¹³

One of the report’s chapters dealt with concerns about medical examiners and

voluntarily reformed their eyewitness identification procedures. The TCJIU is collaborating with other members of the criminal justice system to develop legislation that will address this issue statewide.”).

¹⁰ NATIONAL RESEARCH COUNCIL, *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* (National Academies Press 2009) (“NAS Report”).

¹¹ *Id.* at 7.

¹² According to the NAS Report, the situation is “different in civil cases. Plaintiffs and defendants, equally, are more likely to have access to expert witnesses in civil cases, while prosecutors usually have an advantage over most defendants in offering expert testimony in criminal cases. And, ironically the appellate courts appear to be more willing to second-guess trial court judgments on the admissibility of purported scientific evidence in civil cases than in criminal cases.” *Id.* at 11.

¹³ *Id.* at 37.

coroners. It noted numerous deficiencies in the system¹⁴ and concluded, “It is clear that death investigations in the United States rely on a patchwork of coroners and medical examiners and that these vary greatly in the budgets, staff, equipment, and training available to them, and in the quality of services they provide.”¹⁵ Part of the problem noted in the NAS Report was that there is very little forensic pathology research, especially research conducted in collaboration with universities and medical schools.¹⁶ This led to an unhealthy reliance on law enforcement and prosecution policies and procedures rather than the best medical practices. Medical examiners, like other forensic experts, should not become the “handmaiden” of the legal system with “no significant uses beyond law enforcement.”¹⁷

In 1989, just as DNA testing arrived in criminal cases, one prominent scientist noted, “At present, forensic science is virtually unregulated—with the paradoxical result that clinical laboratories must meet higher standards to be allowed to diagnose strep throat than forensic labs must meet to put a defendant on death row.”¹⁸ Twenty-five years later, our forensic

¹⁴ These deficiencies included, among others,

- “inadequate expertise to investigate and medically assess decedents;”
- “inadequate technical infrastructure (laboratory support);”
- “inadequate training of personnel in the forensic science disciplines;”
- “lack of best practices and information standards;” and
- “lack of quality measures and control[.]”

Id. at 250-51.

¹⁵ *Id.* at 250.

¹⁶ *Id.* at 261-62.

¹⁷ *Id.* at 52.

¹⁸ Eric S. Lander, *DNA Fingerprinting on Trial*, 339 *Nature* 501, 505 (1989).

laboratories and scientists have not changed much. Because they are not subject to significant oversight or accreditation, it is not surprising to see “bad” science and “bad” scientific testimony in our courtrooms.

Meanwhile, Texas has continued its push to ensure that state-of-the-art science would assist in seeing that the guilty were convicted and the innocent were not, especially because more than half of all DNA exonerations involved unvalidated or improper forensic science.¹⁹ But as the Supreme Court has explained, the problem is not just that a general forensic field may be “bad” science, the problem also includes “bad” scientists.

Prosecution experts, of course, can sometimes make mistakes. Indeed, we have recognized the threat to fair criminal trials posed by the potential for incompetent or fraudulent prosecution forensics experts, noting that “[s]erious deficiencies have been found in the forensic evidence used in criminal trials. . . . One study of cases in which exonerating evidence resulted in the overturning of criminal convictions concluded that invalid forensic testimony contributed to the convictions in 60% of the cases.”²⁰

The DNA exonerations have shown that faulty forensic-science testimony may be due to either (1) insufficiently reliable forensic-science disciplines, such as toolmark and firearm evidence, bullet-lead analysis, analysis of hair or fibers, analysis of paint or explosives evidence, forensic odontology, and bloodstain analysis;²¹ or (2) insufficiently reliable expert

¹⁹ *Melendez–Diaz v. Massachusetts*, 557 U.S. 305, 319 (2009) (citing Garrett & Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1, 14 (2009)).

²⁰ *Hinton v. Alabama*, 134 S. Ct. 1081, 1090 (2014) (citation omitted).

²¹ See generally The NAS Report, *supra* note 10, at 127-83 (setting out and describing various forensic-science disciplines whose reliability has not been systematically established). The problem with most of these fields, according to the report, is that

testimony about an otherwise reliable forensic-science discipline.²² This second group may include incompetent experts, scientific charlatans, and experts who intentionally withheld scientific evidence, but an empirical study of the DNA exoneration cases shows that the majority of unreliable expert testimony falls into one of six categories:

- Non-Probative evidence presented as probative;²³
- Exculpatory evidence discounted;²⁴
- Inaccurate frequency or statistic presented;²⁵

they are based on observation, experience, and reasoning without an underlying scientific theory, experiments designed to test the uncertainties and reliability of the method, or sufficient data that are collected and analyzed scientifically.

Id. at 128.

²² See Margaret A. Berger, *The Impact of DNA Exonerations on the Criminal Justice System*, 34 J.L. MED. & ETHICS 320, 322 (2006) (noting investigations of forensic science “mistakes due to the incompetence or fraud of particular analysts,” some of which “have gone on for years,” concluding that “these alarming reports about the erroneous results issuing from crime laboratories reflect pervasive problems with regard to the hiring, training, supervision, and review of personnel”); see also Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 N.C. L. REV. 163, 165-69 (2007) (describing news reports of the Houston Police Department Crime Lab scandal and other forensic-evidence scandals and insufficient oversight efforts in various jurisdictions; “[s]ome of the crime lab failures involved incompetence and sloppy procedures, while others entailed fraud, but the extent of the derelictions—the number of episodes and the duration of some of the abuses, covering decades in several instances—precludes dismissal of the controversy as the errant work of only a ‘few bad apples’”).

²³ Garrett & Neufeld, *supra* note 19, at 16-17 (this category includes the inaccurate use of population data, suggesting that the rarity of finding “X” is much greater than it is; for example, an expert witness might testify that the rapist was blond, this defendant is blond and only an infinitesimal percentage of the population is blond, therefore the defendant probably is the rapist).

²⁴ *Id.* at 18 (for example, the expert suggests that when blood found at the scene does not match that of the defendant, it must not have been left there during the crime itself).

²⁵ *Id.* (for example, the expert inadvertently divides the frequency of finding “X” in half, suggesting that his finding has more significance than it actually does).

- Statistic provided without empirical support;²⁶
- Non-numerical statements provided without empirical support;²⁷ and
- Conclusion that evidence originated from defendant.²⁸

In general, the problem with these experts was one of “over-claiming” or scientific puffery.

As the Supreme Court has noted, what the government calls “neutral scientific testing” is not always as neutral or scientific as the government suggests.²⁹ “Forensic evidence is not uniquely immune from the risk of manipulation. . . . A forensic analyst responding to a request from a law enforcement official may feel pressure—or have an incentive—to alter the evidence in a manner favorable to the prosecution.”³⁰

In sum, the forensic-science problems that have led to wrongful convictions include both “bad” science and “bad” (although perhaps sincere and well-intentioned) scientists.³¹

²⁶ *Id.* (for example, the expert just “makes up” a statistical probability, such as the likelihood of this hair coming from someone other than the defendant is 1 in 10,000).

²⁷ *Id.* at 19 (for example, using such terms as “highly likely,” “very probably,” “consistent with,” when there was no empirical data to support any such conclusion).

²⁸ *Id.* at 20 (for example, an expert states that the bitemark on the victim was made by the defendant when there is no empirical data to support such a finding).

²⁹ *Melendez-Diaz v. Massachusetts*, 557 U.S. 305, 318 (2009).

³⁰ *Id.*

³¹ If the science is valid and reliable, but the scientist is not up to the task at hand, the problem is with his testimony, not with the science itself. See Simon Cole, *Where the Rubber Meets the Road: Thinking About Expert Evidence as Expert Testimony*, 52 VILL. L. REV. 803, 819-24 (2007) (“Judges assume that their work is done once they have ruled proffered evidence admissible or inadmissible” instead of assessing whether the expert’s testimony fits the task at hand).

Although *Daubert*,³² *Kelly*,³³ and *Nenno*,³⁴ have brought judicial gatekeeping and oversight to some of the underlying forensic-science disciplines, courts do not typically examine the specific opinions and conclusions that testifying experts reach or whether their inferences are supported by their data.³⁵ There is no screening of the expert’s case-specific inferences and opinions before the jury hears them. Yet it is precisely while the expert testifies that “the rubber meets the road,” and the jury hears claims about the purported scientific significance of the evidence in the particular case.³⁶

This Court has expressed its concerns about “junk” science in such cases as *Jordan v. State*,³⁷ and *Tillman v. State*³⁸— dealing with the unreliability of eyewitness identifications

³² *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

³³ *Kelly v. State*, 824 S.W.2d 568 (Tex. Crim. App. 1992).

³⁴ *Nenno v. State*, 970 S.W.2d 549 (Tex. Crim. App. 1998).

³⁵ *Cole*, *supra* note 31, at 819-24.

³⁶ *Id.*

³⁷ 928 S.W.2d 550 (Tex. Crim. App. 1996) (discussing the importance of assessing the reliability of scientific evidence and how trial judges must act as gatekeepers to weed out “junk” science; concluding that the scientific testimony of a psychologist on the reliability of eyewitness identification is relevant and may be admissible).

³⁸ 354 S.W.3d 425, 435-36 (Tex. Crim. App. 2012) (holding that psychologist’s testimony on the reliability of eyewitness testimony was both relevant and reliable, and thus should have been admitted); *see also State v. Esparza*, 413 S.W.3d 81, 94 (Tex. Crim. App. 2013) (Hervey, J., concurring) (expressing concern that defendants may be convicted on the basis of “junk” science if trial judges do not have the authority to *sua sponte* conduct a gatekeeping hearing into the scientific reliability of offered evidence; “The real losers of this decision will be criminal defendants convicted on “junk” science; the residents of the convicting county; the people that expended time, effort, and money at the original trial; and the State of Texas.”).

and the psychological factors that cause inaccurate identifications;³⁹ in the *Winfrey*⁴⁰ dog-scent line-up cases; in the context of psychologists testifying to a capital defendant's future dangerousness based on unreliable methods;⁴¹ in the admission of polygraph tests;⁴² and in the use of comparative bullet-lead analysis.⁴³ We have also recognized that sometimes the science is good, but the individual scientific testimony is "bad."⁴⁴

By 2009, the Texas Legislature, at the urging of the Innocence Project of Texas, began reacting to the problems of prior convictions based on bad scientific evidence. Senator John Whitmire sponsored Senate Bill 1976, a bill (after amendments) that is remarkably similar

³⁹ According to the Innocence Project, "[e]yewitness misidentification is the single greatest cause of wrongful convictions nationwide, playing a role in 72% of convictions overturned through DNA testing." Innocence Project, Eyewitness Misidentification, <http://www.innocenceproject.org/understand/Eyewitness-Misidentification.php>. According to one law review article, 82% of the first 38 Texas convictions that DNA exonerated were based on erroneous eyewitness identification. Chrickras & Fox, *supra* note 5, at 369.

⁴⁰ *Megan Winfrey v. State*, 393 S.W.3d 763 (Tex. Crim. App. 2013) (evidence that dogs alerted to defendant's scent and weak corroborating evidence legally insufficient to support capital-murder conviction); *Richard Winfrey v. State*, 323 S.W.3d 875 (Tex. Crim. App. 2010) (same).

⁴¹ *Coble v. State*, 330 S.W.3d 253, 270-80 (Tex. Crim. App. 2010) (forensic psychiatrist's testimony concerning defendant's future dangerousness was not sufficiently reliable to be admissible).

⁴² *Leonard v. State*, 385 S.W.3d 570 (Tex. Crim. App. 2012) (reversing probation revocation based on therapist's testimony that defendant failed to "show no deception" on five polygraph tests).

⁴³ *Gonzales v. State*, No. PD-1661-09, 2010 WL 711783 (Tex. Crim. App. Feb. 24, 2010) (not designated for publication) (Cochran, J., concurring).

⁴⁴ *See, e.g., Ex parte Coty*, 432 S.W.3d 341, 343 (Tex. Crim. App. 2014) (holding that a defendant may prove a due-process violation caused by the malfeasance of a forensic laboratory technician if he establishes an inference of falsity and proves that the "false" evidence was material to his conviction).

to the current Article 11.073 statute.⁴⁵ Although that bill was left pending in the House at the end of the session,⁴⁶ the bill analysis stated that Article 11.073

⁴⁵ That bill, introduced and then amended during the 81st regular session, read as follows:

Art.11.073 PROCEDURES RELATED TO CERTAIN SCIENTIFIC EVIDENCE.

- (a) This article applies to relevant scientific evidence that:
 - (1) was not available to be offered by the convicted person at the convicted person's trial; or
 - (2) discredits scientific evidence relied on by the state at trial.
- (b) A court may grant a convicted person relief on an application for a writ of habeas corpus if the convicted person files an application, in the manner provided by Article 11.07,11.071, or 11.072, containing sufficient specific facts indicating that:
 - (1) relevant scientific evidence is available and was not available at the time of the convicted person's trial because the evidence was not ascertainable through the exercise of reasonable diligence by the convicted person before the date of or during the convicted person's trial;
 - (2) the scientific evidence would be admissible under the Texas Rules of Evidence at a trial held on the date of the application; and
 - (3) the court finds that, had the scientific evidence been presented at trial, it is reasonably probable that the person would not have been convicted.
- (c) For purposes of Section 4(a)(1), Article 11.07, Section 5(a)(1), Article 11.071, and Section 9(a), Article 11.072, a claim or issue could not have been presented previously in an original application or in a previously considered application if the claim or issue is based on relevant scientific evidence that was not ascertainable through the exercise of reasonable diligence by the convicted person on or before the date on which the original application or a previously considered application, as applicable, was filed.
- (d) In determining whether relevant scientific evidence was not ascertainable through the exercise of reasonable diligence on or before a specific date, the court shall consider whether the scientific knowledge or method on which the relevant scientific evidence is based has changed since:
 - (1) the applicable trial date or dates, for a determination made with respect to an original application; or
 - (2) the date on which the original application or a previously considered application, as applicable, was filed, for a determination made with respect to a subsequent application.

⁴⁶ The Legislature did, however enact House Bill No. 498, which created the Timothy Cole Advisory Panel on Wrongful Convictions. Part of that panel's legislative mandate was to investigate "the effects of state law on wrongful convictions, as determined based on state statutes regarding . . . writs of habeas corpus based on relevant scientific evidence." Tex. H.B. 498, 2009 Tex. Gen. Laws 1256, 81st Leg. R.S. (2009).

would authorize courts to grant relief on writs of habeas corpus that, subject to criteria in the bill, raised relevant scientific evidence that was not available at the time of a trial or that discredited scientific evidence relied on by the prosecution at a trial.⁴⁷

The Bill Analysis also noted that this statute was needed because “the science surrounding arson investigations has changed dramatically in recent years” and “a technique used by the FBI to match the chemical signature of bullets has been discredited.” Thus, “[d]efendants who were wrongly convicted using these and any debunked science deserve a way to raise their claim before a court.”⁴⁸ The bill’s emphasis was based entirely upon general changes or advances in forensic sciences—bad science, not bad scientists.

In the next legislative session, Senator Whitmire again introduced his bill to enact a new Article 11.073.⁴⁹ During a House Committee on Criminal Jurisprudence hearing on the companion bill, HB 220, witnesses testified that molecular evaluation of paint chips, blood spatter testimony, arson, “dog bark cases,” and “satanic ritual abuse of children” might all

⁴⁷ House Research Organization, Bill Analysis, Tex. S.B. 1976, 81st Leg. R.S. (2009).

⁴⁸ *Id.* at 3. Testimony in the Senate Criminal Justice Committee also mentioned problems with serology evidence and firearms. Scott Henson testified before the House Committee on Criminal Jurisprudence and explained why the proposed statute dealt with all types of forensic science, rather than any specific field:

We don’t want to have to come back and ask y’all to pass a new law for, or a new chapter 65 for bullet lead analysis, and chapter 66 for arson, and chapter 67 for whatever the next thing is. And so what this [bill] does is create a mechanism to evaluate discredited scientific evidence without it being specific to one type of forensics.

SB 1976, House Committee on Criminal Jurisprudence, May 6, 2009.

⁴⁹ The bill was substantively the same as that introduced in 2009, but there were minor differences in the division of the subsections.

be areas of debunked scientific expertise subject to possible relief under the proposed bill. Once again, the onus was on bad forensic-science disciplines, not specific bad scientific testimony. Once again, the bill did not pass.

2. *Tipping point: the two events that led to the passage of Article 11.073.*

Two important developments occurred after the legislative session ended in May of 2011. First, we denied applicant relief on his original habeas corpus claim, which was based on the medical examiner’s change of opinion from Tristen’s death being “homicide” to her death being “undetermined.”⁵⁰ The legislative session ended on May 30, and we delivered our 5-4 opinion denying applicant relief on June 29. I wrote a dissenting opinion, lamenting that “[o]ur criminal justice system does not currently have any legal doctrine, much less a constitutional doctrine, into which this situation falls comfortably.”⁵¹ I suggested that

⁵⁰ *Ex parte Robbins*, 360 S.W.3d 446 (Tex. Crim. App. 2011).

⁵¹ *Id.* at 470 (Cochran, J., dissenting). The problem was not that the science of determining the cause of death had changed, but that the medical examiner who had done the autopsy and originally determined that Tristen’s death was a homicide had, after many more years of experience, reviewing additional scientific materials and the trial testimony, changed her opinion and agreed with four other pathologists—Dr. Bux, Dr. Carter, Dr. Wolf, and Dr. Wheeler—who had concluded that they could not scientifically determine the cause of Tristen’s death. *Id.* at 468. The legal problem is that the verdict was no longer reliable.

The result in this case is not “patently inaccurate.” Yet its accuracy is clearly open to dispute. How should the habeas case be resolved when the prior verdict might have seemed accurate at the time, but everyone later recognizes that it might not have been accurate because it was based upon scientific expertise that has been rejected—either by the scientific community or the original scientist herself?

Id. at 470-71. I had concluded that, since there was no statute that addressed the problem, courts should “fall back upon the wisdom and experience of the habeas judge—the ‘Johnny-on-the-Spot’ factfinder to whom we will defer whenever the record supports his essential factual findings.” *Id.* at 472. In this case, the trial judge had recommended granting relief and giving applicant a new trial. *Id.* at 473-76. A majority of the Court did not agree with the trial judge.

changes needed to be made to accommodate the situation in such cases:

Given the current legitimate concerns about the scientific reliability of forensic science used in American courtrooms, I think that the criminal justice system needs some jurisprudential mechanism to deal with cases in which a prior conviction was based upon scientific evidence that has subsequently been found to be unreliable, in whole or in a specific case.⁵²

The second development was our grant of relief in *Ex parte Henderson*,⁵³ under circumstances that were very similar to those in applicant’s original habeas case.⁵⁴ Just eighteen months after *denying* relief in applicant’s case when the medical examiner changed her opinion from “homicide” to “undetermined,” we *granted* Cathy Lynn Henderson relief on her claim when the medical examiner changed his opinion from “homicide” to “undetermined.” In that case, the dissent justly criticized the majority for failing to articulate

⁵² *Id.* at 471 (footnote omitted).

⁵³ *Ex parte Henderson*, 384 S.W.3d 833 (Tex. Crim. App. 2012).

⁵⁴ In *Henderson*, a majority of this Court granted relief in a short *per curiam* opinion, while Judge Price wrote a concurring opinion; I wrote a concurring opinion joined by Judges Womack, Johnson, and Alcala; Judge Alcala wrote a concurring opinion; Judge Keasler wrote a dissenting opinion joined by Presiding Judge Keller and Judge Hervey; and Judge Hervey wrote a dissenting opinion joined by Presiding Judge Keller and Judge Keasler. *Id.*

Cathy Lynn Henderson was convicted of the capital murder of the child for whom she babysat. At trial, the medical examiner had testified that the defensive theory that the child’s fatal head injury was from an accidental fall was “false” and “impossible,” but at the habeas hearing he testified that, based on new biomechanical studies, he could not determine whether the child’s injuries were caused by an accidental or intentional act. *Id.* at 833-34.

The only factual difference between the *Henderson* case and applicant’s is that, in the former, the medical examiner changed his opinion based on advances in the scientific field of biomechanics, while in the latter, the medical examiner changed her opinion based upon her eight additional years of experience in the field, reviewing additional materials, and consulting with other pathologists.

a clear legal basis for granting a new trial.⁵⁵ The three dissenters in *Henderson* echoed the four different dissenters in *Robbins* in agreeing that current Texas law lacked clarity in dealing with instances in which critical scientific evidence supporting the conviction—either the scientific field itself or the expert’s original opinion—had been discredited.

3. *The 2013 Legislative Enactment of Article 11.073.*

The *Robbins* and *Henderson* decisions were the judicial landscape in which Senator Whitmire introduced—“once more unto the breach, dear friends, once more”⁵⁶—his same habeas corpus bill to establish a legal mechanism to address claims of “false and discredited forensic testimony”⁵⁷ in 2013. The third time was a charm. And part of its charm may be attributable to (1) applicant’s post-conviction lawyer testifying to the Senate Criminal Justice Committee about the 2011 *Robbins* decision, and (2) testimony by the original District Attorney who had prosecuted applicant and who, after Dr. Moore changed her opinion concerning Tristen’s cause of death, agreed with the defense and the trial judge that applicant was entitled to a new trial.⁵⁸ The Bill Analysis to the 2013 bill, SB 344, emphasized this

⁵⁵ *Id.* at 852 (Keasler, J., dissenting); *id.* at 859 (Hervey, J., dissenting) (“Something is missing here. While the Court states that it accepts the trial court’s recommendation granting relief, it does so without providing any legal basis for that ruling, and I cannot find a ground upon which relief should be granted. And to justify its decision, the Court makes a quantum leap from ‘advances in science’ to granting relief, which presents a whole new dilemma for the criminal justice system and this case in particular.”).

⁵⁶ WILLIAM SHAKESPEARE, *HENRY V*, act 3, sc. I, line 1.

⁵⁷ House Research Organization, Bill Analysis, Tex. S.B. 344, 83rd Leg. R.S. at 2 (2013).

⁵⁸ See State’s Brief at 27-29 (summarizing the testimony at the March 12, 2013 meeting of the Senate Criminal Justice Committee).

Court's decisions and referenced applicant's case:

Recent case law and judicial opinion[s] have identified weaknesses in the current habeas corpus statute, noting issues that include the absence of statutory grounds upon which to grant relief, the speed of changing science that serves as the foundation of a conviction, and technical testimony that may change with scientific discovery. In one case, recanted testimony by a medical examiner established the basis of the state's case with respect to the cause and manner of death, without which it would not have obtained a conviction. The Texas Court of Criminal Appeals voted against granting a new trial, with the majority finding no path to habeas relief under current law. The question was raised as to how the criminal justice system should address scenarios in which the scientific experts sincerely thought something was true at the time they testified, but the science and the experts' understanding and opinions had changed.⁵⁹

It cannot be doubted that the Legislature had this very case in mind when it debated and enacted what is now Article 11.073. And, during the legislative session, Senator Whitmire told the Texas Tribune that "several recent Court of Criminal Appeals decisions may make [SB 344] more likely to pass."⁶⁰ The *Robbins* and *Henderson* cases raised "a novel and difficult issue for the criminal-justice system":

When scientific experts honestly and sincerely thought 'X' was true at the time they testified, but the science has changed or the experts' understanding of the science has changed and their opinions have changed, what cognizance of that change should the criminal justice system take long after a person has been convicted?⁶¹

⁵⁹ Bill Analysis, *supra* note 57, at 2-3 ("Supporters Say").

⁶⁰ Maurice Chammah, *Bill Addresses Changing Science in Criminal Appeals*, The Texas Tribune, Feb. 4, 2013, *available at* <http://www.texastribune.org/2013/02/04/criminal-justice-advocates-renew-call-flawed-scienc/>.

⁶¹ *Robbins*, 360 S.W.3d at 469 (Cochran, J., dissenting).

In *Robbins*, this Court chose finality over accuracy; in *Henderson* we did the opposite, and in 2013, the Texas Legislature also chose accuracy over finality by enacting Article 11.073.

B. The term “scientific knowledge” in Article 11.073 includes both general scientific advances and specific scientific testimony.

As noted above, wrongful convictions have been based on both a “bad” forensic-science discipline, e.g., bullet-lead analysis, and “bad” scientific testimony within a good forensic discipline. As Justice Scalia has stated, “[f]orensic evidence is not uniquely immune from the risk of manipulation,”⁶² or incompetence, or innocent errors, or cognitive bias. All of these problems are flaws relating to “bad” scientific testimony that may exist within a good forensic discipline.

This case involves “bad” scientific testimony based on insufficient experience.⁶³ The

⁶² *Melendez-Diaz v. Massachusetts*, 557 U.S. 305, 318 (2009).

⁶³ This is not the only case in which Dr. Moore’s conclusions had been questioned during the early years of her medical-examiner practice. She was the medical examiner in the Brandy Dell Briggs case and declared that the death of Ms. Briggs’s infant son was a homicide. *Ex parte Briggs*, 187 S.W.3d 458, 463 (Tex. Crim. App. 2005). Ms. Briggs originally pled guilty to injury to a child, but later filed a writ application alleging ineffective assistance of counsel for failing to retain an expert to read and interpret the child’s medical records. After other more experienced pathologists and doctors investigated and determined that the infant had suffered a natural death from septicemia originating with an undiagnosed urinary tract infection, Dr. Moore admitted that “another opinion from an outside source would be of utmost importance. . . . Someone with more experience (performed several autopsies on pediatric cases for years) and more expertise (in neuropathology and/or pediatric pathology or pediatrics) than I could help resolve the issues involved in this case.” *Id.* at 463 n.9. We noted in that case that “[t]he original pathologist is no longer with the Medical Examiner’s Office. Applicant introduced numerous official Harris County Medical Examiner’s Office ‘conduct counseling’ reports in the writ hearing concerning the purported deficient performance in various cases by the original pathologist.” *Id.*

In a parental-rights-termination case, Dr. Moore also declared that a child’s death was a “homicide due to complications from blunt force trauma to the abdomen, even though there were no bruises to her abdomen.” *In re J.L.*, 127 S.W.3d 911, 915 (Tex. App.—Corpus Christi 2004),

trial and habeas judge explicitly found that Dr. Moore

was not competent at the time of trial to offer objective and pathologically sound opinions as to cause and manner of death in this case. Her level of inexperience at the time of trial and her bias at that time toward the state are now evident. Moore's admissions that near the time of trial she was cited for defective and improper work and was evaluated as being biased in favor of the prosecution,⁶⁴ as well as Dr. Carter's statements concerning the turbulence in the ME office in 1998, the concern about Moore being perceived as a witness for one particular side, and that (at that time) Moore was making the transition to the neutral position of a forensic pathologist cast grave doubt on Moore's opinions at trial and the reasons she gave them. This is newly discovered evidence that could not have been previously discovered by applicant.

Dr. Moore's later re-evaluation of her opinion—putting aside advocacy for one party and seeking more information to reach a more accurate result—is the hallmark of “good” scientific methodology:

Scientists continually observe, test, and modify the body of knowledge. Rather

rev'd 163 S.W.3d 79 (Tex. 2005). The court of appeals reversed the termination of the mother's parental rights based on expert testimony that contradicted Dr. Moore's and had been given in the father's criminal prosecution. *Id.* at 918. The Texas Supreme Court reversed the court of appeals because that court had improperly taken judicial notice of the expert testimony in a different, criminal proceeding. 163 S.W.3d at 88-89. Based on the testimony admitted in the mother's civil case, the evidence was legally sufficient to support the termination of rights to the mother's other child. *Id.* Dr. Moore and her “homicide” cause-of-death opinions were questioned in other cases as well. Andrew Tilghman, *Several Autopsies by Former Examiner Reviewed*, HOUS. CHRON. July 22, 2004, <http://chron.com/news/houston-texas/article/Several-autopsies-by-former-examiner-reviewed-1520093.php>.

⁶⁴ The NAS Report notes that “cognitive bias” is a common source of errors in scientific testimony. It explains that

[s]uch cognitive biases are not the result of character flaws; instead, they are common features of decisionmaking, and they cannot be willed away. A familiar example is how the common desire to please others (or avoid conflict) can skew one's judgment if co-workers or supervisors suggest that they are hoping for, or have reached, a particular outcome.

NAS Report, *supra* note 10, at 122.

than claiming absolute truth, science approaches truth either through breakthrough discoveries or incrementally, by testing theories repeatedly.⁶⁵

It is not surprising, then, that the Texas Legislature would authorize this court to review convictions based upon an expert's "scientific knowledge" that the expert has since repudiated or contradicted based on her further testing, review, and experience. Indeed, what would not make sense is for the Legislature to be concerned about the reliability of general fields of forensic science, but unconcerned about the reliability of a forensic scientist's specific testimony. Regardless of whether a conviction is based on an unreliable field of science or unreliable scientific testimony, the result is the same: an unreliable verdict that cannot stand the test of time. It is built upon the shifting sands of "junk" science or a "junk" scientist, and it is the purpose of Article 11.073 to provide a statutory mechanism for relief and a retrial based upon "good" science and "good" scientific testimony.

With these additional comments, I join the majority opinion.

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⁶⁵ *Id.* at 112. The report explained the self-correcting nature of science which has had to develop means of revisiting provisional results and revealing errors before they are widely used. The processes of peer review, publication, collegial interactions (e.g., sharing at conferences), and the involvement of graduate students (who are expected to question as they learn) all support this need. Science is characterized also by a culture that encourages and rewards critical questioning of past results and of colleagues.

Id. at 125.