

UPDATE ON LEGAL ISSUES RELATED TO FORENSIC SCIENCE

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T. R. EVID. 702

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.

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

- 1. The underlying scientific theory must be valid;**
- 2. The technique applying the theory must be valid; and**
- 3. The technique must have been properly applied on the occasion in question.**

CHANGING SCIENTIFIC EVIDENCE

- *Ex parte Robbins*, 360 S.W.3d 446 (2011), *cert. denied* May 14, 2012)
- QUESTION: HOW SHOULD COURTS RESPOND TO CHANGES IN SCIENCE UNDERLYING CONVICTIONS

Robbins Majority Opinion (5-4 Vote)

- **Majority concluded that because Robbins “failed to prove that the new evidence unquestionably establishes his innocence,” he was not entitled to relief on his claim of actual innocence**

Robbins Majority

- Despite all experts agreeing that Dr. Moore's findings and testimony were incorrect, majority refused relief because none of the experts affirmatively proved that "Tristen could not have been intentionally asphyxiated." Majority concluded Robbins did not "have a due process right to have a jury hear Moore's re-evaluation."

Judge Cochran Dissenting

- Discussed her “extremely serious concern” about the increased “disconnect between the worlds of science and of law” that allows a conviction to remain in force when the scientific basis for that conviction has since been rejected by the scientific community.
- Judge Cochran said “[f]inality of judgment is essential in criminal cases, but so is accuracy of the result - an accurate result that will stand the test of time and changes in scientific knowledge.”

New Statute Concerning Writs Based on New Scientific Evidence

- **Art. 11.073. Procedure Related to Certain Scientific Evidence.**

(a) This article applies to relevant scientific evidence that:

- (1) was not available to be offered by a convicted person at the convicted person's trial; or**
- (2) contradicts scientific evidence relied on by the state at trial:**

(b) A court may grant relief if . . . :

(A) relevant scientific evidence is currently 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; and

(B) the scientific evidence would be admissible under the Texas Rules of Evidence . . . ; and

(2) the court . . . finds that, had the scientific evidence been presented at trial, on the preponderance of the evidence the person would not have been convicted.

(c) For purposes of a subsequent writ, a claim or issue could not have been presented 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 making a finding as to 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 field of scientific knowledge, a testifying expert's scientific knowledge, or a scientific method on which the relevant scientific evidence is based has changed since . . .

**Ex Parte Robbins (Robbins II)
478 S.W.3d 678 (2014),
rehearing denied (2016)**

- **Robbins case reconsidered under Art. 11.073 and relief granted.**

Robbins II Majority Opinion (5-4 Vote)

Majority held Medical Examiner's reconsideration of her opinion was new scientific evidence that contradicted scientific evidence relied upon by the state at trial.

Ex Parte Henderson,
246 S.W.3d 690 (2007)

- **Child dies of head injury. Henderson says she dropped child. Medical Examiner testified that it was impossible for child's brain injuries to have occurred in the way Henderson stated. Medical Examiner says child's injuries resulted from a blow intentionally struck by Henderson.**

Ex Parte Henderson

- Henderson submits evidence that recent advances in biomechanics suggest that it is possible that Brandon's head injuries could have been caused by an accidental short-distance fall. Additionally, Medical Examiner submitted an affidavit which recanted his testimony.
- Court majority held that Medical Examiner's re-evaluation of his opinion is a material exculpatory fact and ordered the trial court to further develop the evidence.

Ex Parte Henderson,
384 S.W.3d 833 (2012)

- Court finds new scientific evidence shows that a short distance fall could have caused the head injury.
- Court finds new scientific evidence did not establish that Henderson was actually innocent but that it did establish a due process violation.

THEORY OF SHAKEN BABY SYNDROME

- **Theory is that the following factors prove a child was shaken:**
- **The triad:**
 - **Subdural hematoma**
 - **Retinal hemorrhages**
 - **Brain swelling**
- **Absence of any other explanation or an explanation deemed inconsistent with the injuries.**

THE CHANGING SCIENCE:

- **Scientific advances have disproven the claim that nothing can cause the triad except shaking**
- **Biomechanical research has disproven the hypothesis that shaking alone can cause serious brain injury and death with SDH and RH**
- **Scientific advances have undermined the hypothesis the last person with the child must have been the abuser - the injuries cannot be timed**
- **Scientific advances have disproven the claim that the injuries had to have been caused by force equal to a multi-story fall or car crash**

***Ex Parte Spencer*, 337 S.W.3d 869 (2011)**

- **“We will consider advances in science and technology when determining whether evidence is newly discovered or newly available, but only if the evidence being tested is the same as it was at the time of the offense. Thus, the science or the method of testing can be new, but the evidence must be able to be tested in the same state as it was at the time of the offense.”**

Expert Testimony on Reliability of Eyewitness Identification Procedures

Tillman v. State, 354 S.W.3d 425
(2011)

The court held that psychology is a legitimate field of study and the reliability of eyewitness identification is a legitimate subject within the area of psychology

ART. 38.20. PHOTOGRAPH AND LIVE LINEUP IDENTIFICATION PROCEDURES

Each law enforcement agency shall adopt, implement, and as necessary amend a detailed written policy regarding the administration of photograph and live lineup identification procedures in accordance with this article.

Dog Scent Discrimination
Winfrey v. State,
323 S.W.3d 875 (2010)

“ . . . scent-discrimination lineups, when used alone or as primary evidence, are legally insufficient to support a conviction.”

“ . . . dangers inherent in the use of dog tracking evidence can only be alleviated by the presence of corroborating evidence.”

False Testimony on Testing Regarding Sexual Attraction to Children

*In the Matter of M.P.A.,
364 S.W.3d 277 (Tex. 2012)*

**65% accuracy rate not sufficient
reliability for admission in evidence.**

Polygraph Evidence

Leonard v. State, ___ S.W.3d ___, 2012 WL 715981 (2012), rehearing granted.

- Court held that the fact that the defendant failed polygraphs was admissible in probation revocation hearing.
- Dissent argued: “We should not permit or condone ‘trial by polygraph’ or ‘revocation by polygraph’”

Leonard v. State,
385 S.W.3d 570 (2012), on rehearing

- **Evidence of failed polygraphs found inadmissible.**
- **Polygraph exams were not reliable and were not the sort of inadmissible evidence “reasonably relied upon” by experts.**

EX PARTE SONIA CACY

Cacy convicted of an arson murder based on false lab report that claimed there was gasoline on her uncle's clothing.

FBI ADMITS FLAWS IN HAIR ANALYSIS OVER DECADES

“The Justice Department and FBI have acknowledged that nearly every examiner in an elite FBI forensic unit gave flawed testimony in almost all trials in which they offered evidence against criminal defendants over more than a two-decade period before 2000.”

**Washington Post
April 18, 2015**

BITE MARK EVIDENCE

From the Texas Tribune, February 12, 2016:

“The Texas Forensic Science Commission on Friday recommended that prosecutors temporarily stop using bite-mark evidence in criminal cases until questions are answered about its scientific validity.”

DNA MIXTURE INTERPRETATION

A problem has been identified in DNA mixture interpretation. The cases involved complex DNA mixtures, usually with difficult evidentiary samples such as gun swabs, steering wheel swabs, items of clothing, or other examples of “touch DNA” where multiple people may have contributed DNA to the sample.