

No. \_\_\_\_\_

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**IN THE SUPREME COURT OF THE UNITED STATES**

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KOSOUL CHANTHAKOUMMANE,  
*Petitioner,*

VS.

TEXAS,  
*Respondent.*

ON PETITION FOR WRIT OF CERTIORARI TO THE  
TEXAS COURT OF CRIMINAL APPEALS

Trial Cause No. W380-81972-07-HC2  
Writ Cause No. WR-78,107-02

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**APPENDIX**

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Date: December 31, 2020

Respectfully submitted,

/s/ Carlo D'Angelo

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Attorney for the Petitioner

APPENDIX A  
Decision of the Texas Court of Criminal Appeals, denying relief,  
WR-78,107-02, October 7, 2020



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

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**NO. WR-78,107-02**

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**EX PARTE KOSOUL CHANTHAKOUMMANE, Applicant**

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**ON APPLICATION FOR WRIT OF HABEAS CORPUS  
CAUSE NO. W380-81972-07-HC2 IN THE 380<sup>TH</sup> DISTRICT COURT  
COLLIN COUNTY**

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***Per curiam.* NEWELL, J., filed a dissenting opinion in which RICHARDSON and WALKER, JJ, joined.**

**ORDER**

This is a subsequent application for writ of habeas corpus filed pursuant to the provisions of Texas Code of Criminal Procedure Article 11.071, § 5.

In October 2007, a jury convicted Applicant of the offense of capital murder for murdering a person in the course of committing or attempting to commit robbery. TEX. PENAL CODE § 19.03(a)(2). Specifically, Applicant was convicted of murdering and robbing real estate agent Sarah Walker on July 8, 2006, in a model home where she

worked in McKinney, Texas. The medical examiner who conducted the autopsy testified at trial that Walker sustained several blunt force injuries to her head, multiple bruises on her face, a broken nose, fractured teeth, defensive wounds, a bite mark on her neck, and 33 stab wounds. DNA evidence placed Applicant at the crime scene. Applicant's blood, either alone or in a mixture, was found in numerous areas inside the model home and under Walker's fingernails.

Walker's ring and newly purchased Rolex watch were missing when her body was found. Photographs taken from a bank surveillance video showed Walker wearing the watch and ring an hour and a half before her murder. The State presented evidence that Applicant was in financial trouble at the time of the offense, which it offered as a motive for robbing Walker.

Two eyewitnesses — realtor Mamie Sharpless and her husband Nelson Villavicencio — also placed Applicant at the crime scene. Sharpless called the McKinney police department the day after the murder to report the details of a suspicious encounter they had with a man outside the model home before the offense. She reported that they had driven to the area to meet a man who had called Sharpless from a pay telephone that morning asking to view a townhome. The man said his name was "Chan Lee" and he was relocating from North Carolina. When they arrived at the townhome, no one was there, so they waited in their car until a man driving a white Mustang passed by them and parked in front of the model home. As the man was walking toward the model

home, they drove up and asked him if he was Chan Lee. The man answered "no." Sharpless described him as a muscular Asian male with a buzz cut, about 5' 7" to 5' 9" tall, and wearing a blue shirt. She reported that the white Mustang was parked in front of the model home when they left the area about an hour later, which was just prior to the discovery of Walker's body.

During the State's investigation, Sharpless and Villavicencio consented to undergo hypnosis by a Texas Ranger to see if they could provide any additional details. They were unable to provide additional information, but Villavicencio assisted a forensic sketch artist with a composite sketch of the suspect after his hypnosis session. The composite sketch was released to the public along with a description of the suspect's white Mustang. The State presented both eyewitnesses at trial, who identified Applicant and testified about their encounter with him. Their trial testimony was consistent with their original reports, but for variances in their estimation of Applicant's height.

Another female realtor provided information to police which led to the apprehension of Applicant two months after Walker was murdered. The realtor, who had previously helped Applicant find an apartment, reported that Applicant came to her home the night before the instant offense and repeatedly banged on her doors. At the time of his arrest, Applicant had healing wounds on his hands and arms. Applicant admitted being in the model home on the day of the offense and provided other details that corroborated the accounts of Sharpless and Villavicencio.

The State presented testimony from a dental expert, Brent Hutson, who testified that he examined Applicant and made impressions of his teeth. Hutson testified that he compared Applicant's teeth with the bite mark and concluded that Applicant made the bite mark on Walker's neck "within reasonable dental certainty beyond a doubt." The State mentioned the bite mark in its closing argument at the guilt phase to show the brutality of the offense.

The jury answered the special issues submitted pursuant to Texas Code of Criminal Procedure Article 37.071, and the trial court, accordingly, set punishment at death. This Court affirmed Applicant's conviction and sentence on direct appeal. *Chanthakoummane v. State*, No. AP-75,794 (Tex. Crim. App. Apr. 28, 2010) (not designated for publication).

Applicant filed his initial application for a writ of habeas corpus in the trial court on April 5, 2010. This Court denied relief. *Ex parte Chanthakoummane*, No. WR-78,107-01 (Tex. Crim. App. Jan. 30, 2013) (not designated for publication). Applicant then exhausted his federal post-conviction appeals without relief, after which the trial court set an execution date for July 19, 2017.

On January 13, 2017, Applicant filed in the trial court this subsequent application for a writ of habeas corpus.<sup>1</sup> Applicant has raised four claims for relief, all based on

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<sup>1</sup> Applicant filed in the trial court a second subsequent application for a writ of habeas corpus on May 13, 2019. That application remains pending in this Court.

purportedly recent advances in science that he alleges have discredited the State's eyewitness testimony, bitemark evidence, and DNA evidence used against him at trial, including a claim that he is actually innocent.

Applicant presented evidence from Stephen Lynn, Ph.D., a forensic psychologist with expertise in hypnosis, to discredit the trial testimony of Sharpless and Villavicencio. He presented evidence from Dr. C. Michael Bowers, a forensic odontologist, to show that the scientific community has now disavowed individualized bitemark pattern matching. And Applicant relied on two discoveries that were made in the scientific field of DNA analysis in 2015 to discredit the DNA evidence presented at trial: (1) errors in the Federal Bureau of Investigation's DNA database; and (2) flawed statistical methodology utilized by the Texas Department of Public Safety in DNA mixture cases.

On June 7, 2017, we held that Applicant "satisfied the successive filing requirements of Article 11.071, § 5." We stayed the execution and remanded the cause to the trial court for review of the issues raised.

After holding a hearing, the trial court signed findings of fact and conclusions of law recommending that relief be denied. We have reviewed the record, and we agree that Applicant is not entitled to relief.

In his first claim, Applicant asserts that the State's use of discredited sciences at trial entitles him to relief under Article 11.073. Article 11.073 provides that an applicant is entitled to post-conviction relief if he can prove that:

- (1) 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;
- (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 must make findings of the foregoing and also find that, had the scientific evidence been presented at trial, on the preponderance of the evidence the person would not have been convicted.

Art. 11.073(b)(1) & (2). Applicant is also subject to the diligence standards set forth in Article 11.073(c) & (d):

(c) For purposes of . . . Section 5(a)(1), Article 11.071 . . . 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 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 [the trial or the date on which the initial application or a previously considered application was filed.]

Applicant has failed to meet these requirements. At the evidentiary hearing, the State presented recalculated DNA statistics under the current standards. The statistical calculations matching Applicant's DNA profile in the single-source samples did not change. Although the statistical calculations in the mixed source samples changed,



Applicant was still included as a contributor to those samples. The recalculated results continue to show that Applicant was at the crime scene and that his DNA was under Walker's fingernails. Thus, Applicant has failed to demonstrate that, had the recalculated DNA results been presented at trial, on the preponderance of the evidence he would not have been convicted. Art. 11.073(b)(2).

Further, Bowers's bitemark testimony at the evidentiary hearing was consistent with our opinion in *Ex parte Chaney*, 563 S.W.3d 239 (Tex. Crim. App. 2018), in which we recognized the scientific community's changed standards discrediting bitemark comparisons. Under the new standards, Hutson's bitemark comparison testimony would not have been admissible. However, we agree with the trial court's assessment that, even without the bitemark comparison testimony, the jury still would have convicted Applicant based on the strength of the remaining evidence. *See* Art. 11.073(b)(2).

Finally, Applicant has failed to establish that the critiques against hypnotism in a forensic setting contained in recent scientific studies were not known and available at the time of Applicant's trial, pursuant to Article 11.073(b)(1)(A). State's witness David Spiegel, M.D., a psychiatrist with expertise in hypnosis, disputed Applicant's contention that recent studies have changed the field of scientific knowledge. Spiegel testified at the evidentiary hearing that the same myths and risks associated with using hypnosis to assist with memory recall have been well known in the scientific field since at least the mid-1980s. Spiegel's testimony was corroborated by the State's introduction of studies and

articles from that time period.

In his second and third claims, Applicant asserts that the bitemark evidence, hypnotically enhanced testimony, and DNA evidence presented at his trial constitute false evidence that the State used to secure his conviction and death sentence in violation of his Fourteenth Amendment rights to due process and a fundamentally fair trial. In these claims, Applicant must show by a preponderance of the evidence that (1) false evidence was presented at his trial and (2) the false evidence was material to the jury's verdict. *See Ex parte De La Cruz*, 466 S.W.3d 855, 866 (Tex. Crim. App. 2015), *citing Ex parte Weinstein*, 421 S.W.3d 656, 659, 665 (Tex. Crim. App. 2014). Whether evidence is false turns on whether the jury was left with a misleading or false impression after considering the evidence in its entirety. *Weinstein*, 421 S.W.3d at 665-66. We review factual findings concerning whether a witness's testimony is false under a deferential standard, but we review *de novo* the ultimate legal conclusion of whether such testimony was "material." *See id.* at 664. False testimony is "material" only if there is a "reasonable likelihood" that it affected the judgment of the jury. *Id.* at 665.

The trial court found that the DNA evidence and eyewitness testimony were not false. The trial court found that the recalculated DNA statistics still showed that Applicant was at the crime scene and his blood was under Walker's fingernails. Further, the recalculated DNA statistics did not weaken the overall strength of the evidence linking Applicant to the murder. The trial court also found that the trial testimony of

Sharpless and Villavicencio was consistent with their pre-hypnosis accounts. We defer to the trial court's findings, which are supported by the evidence.

The trial court found that Hutson's testimony identifying Applicant as the source of the bitemark was false, but that it was not material because it "played a minimal role" in linking Applicant to Walker's murder. Based on a *de novo* review, we agree. The bitemark comparison testimony was not the linchpin of the State's case. The linchpin of the State's case was the DNA evidence found at the scene and under Walker's fingernails. The State also relied on Applicant's admissions, the eyewitness accounts, and other circumstantial evidence linking Applicant to the murder. Due to the combined strength of this evidence, Applicant has failed to show a reasonable likelihood that the bitemark comparison testimony affected the jury's judgment. *Cf. Ex parte Chaney*, 563 S.W.3d 239 (Tex. Crim. App. 2018). In sum, because the State's evidence was either not false or not material, Applicant has failed to show that he is entitled to relief.

Finally, with regard to his actual innocence claim, Applicant has a "Herculean" burden to prove by clear and convincing evidence that no reasonable juror would have convicted him based on the new evidence. *Ex parte Elizondo*, 947 S.W.2d 202, 210 (Tex. Crim. App. 1996); *Ex parte Brown*, 205 S.W.3d 538, 545 (Tex. Crim. App. 2006). We agree with the trial court's conclusion that Applicant failed to meet this burden. Applicant is not entitled to relief.

Accordingly, we adopt the trial court's findings of fact and conclusions of law, and

we deny relief on all of Applicant's claims.

IT IS SO ORDERED THIS THE 7<sup>th</sup> DAY OF OCTOBER, 2020.

Do Not Publish

APPENDIX B  
Exhibits in Support of Applicant's Writ of Habeas Corpus,  
Cause No. WR-78,107-02

Curriculum Vitae

Steven Jay Lynn  
Distinguished Professor of Psychology  
Director, Psychological Clinic  
Binghamton University (SUNY)  
Binghamton, New York, 13902  
Office: (607) 777-4946; Home: (607) 724-0374  
Fax: (607) 777-4890; e-mail: [stevenlynn100@gmail.com](mailto:stevenlynn100@gmail.com)

December, 2016

EDUCATION

NIMH Postdoctoral Fellowship, Clinical Psychology. Lafayette Clinic, Detroit, Michigan, 9/76-9/77.

Ph.D., Indiana University, 1976. Major: Clinical Psychology. Minor: Sociology.

Predoctoral Clinical Internship. Alameda County Mental Health Services, Oakland, California, 9/72-9/73.

B.A., University of Michigan, 1967. Major: Psychology. Minor: Economics.

CURRENT POSITIONS

Distinguished Professor, Psychology Department, Binghamton University, Binghamton, NY, 5/10-present.

Inaugural Editor and Editor, *Psychology of Consciousness: Theory, Research, and Practice* (APA Journal), 4/13-present.

Book Series Editor, Wiley Blackwell, Great Myths of Psychology, 9/10-present.

Director, Psychological Clinic, Binghamton University, Binghamton, NY, 1/07-present.

Director, Laboratory of Consciousness and Cognition and the Center for Evidence-Based Therapy (Treatment arm of the Laboratory of Consciousness and Cognition), 9/96-present.

Faculty, International Institute of Psychotherapy and Applied Mental Health, Cluj-Napoca, Romania, 8/04-present.

Independent Practice, Clinical Psychology, Binghamton, NY 13905, 1996-present.

PROFESSIONAL CERTIFICATION AND LICENSES

Diplomate in Clinical Psychology, American Board of Professional Psychology (ABPP), 8/01-present.

Diplomate in Forensic Psychology, American Board of Professional Psychology (ABPP), 8/00-present.

Diplomate in Psychological Hypnosis, American Board of Psychological Hypnosis (ABPH), 9/93-present.

Licensed Psychologist: State of New York, License # 012996, 3/97-present.

### HONORS AND DISTINCTIONS

#### *Editorial and Reviewer Involvements*

Inaugural Editor and Editor, *Psychology of Consciousness: Theory, Research, and Practice* (initiated new APA journal), 4/13-present.

#### Current Editorial Appointments

Consulting Editor, *Journal of Abnormal Psychology* (since 1989)  
Consulting Editor, *Clinical Psychological Science*  
North American Editor, *Contemporary Hypnosis and Integrative Medicine*  
Editorial Board, *Imagination, Cognition and Personality*  
Associate Editor, *International Journal of Clinical and Experimental Hypnosis*  
Editorial Board, *Journal of Applied Consciousness Research*  
Advisory Editor, *American Journal of Clinical Hypnosis*  
Associate Editor, *Sleep and Hypnosis*  
Editorial Board: *Romanian Journal of Hypnosis and Cognitive Behavioral Psychotherapies*  
Editorial Board, *Open Access Journal of Forensic Psychology*  
Editorial Board, *Transylvanian Journal of Psychology*  
Editorial Board, *Romanian Journal of Psychotherapy*  
Associate: *Behavioral and Brain Sciences*

#### Past Editorial Appointments

Clinical Section Editor, *American Journal of Clinical Hypnosis*, 3/96-02  
Consulting Editor, *Journal of Threat Assessment*, 3/99-2005 (journal no longer published)  
Editorial Board, *Scientific Review of Mental Health Practice*, 10/00-2012 (journal no longer published)  
Editorial Board, *Mind-Behavior Self-Regulation* (journal no longer published)  
Advisory Editor, *Current Thinking and Research in Brief Therapy: Solutions, Strategies, and Narratives*, Brunner/Mazel, 1/95-2004  
Editorial Advisory Board, *Journal of Cultic Studies: Psychological Manipulation and Society*, 2/95-2009  
Advisory Editor, *Psychological Hypnosis*, 1/92-95  
Advisory Board, *Hypnosis Internet List*, 3/96-2004  
Consultant, *Consumer Reports: On Health*, 12/2004-2009

Guest Editor of Journal Special Issues

*Imagination, Cognition, and Personality* (2010-2011), "Mindfulness and Acceptance"  
*International Journal of Clinical and Experimental Hypnosis* (2011), "Hypnosis: The Sociocognitive Perspective"  
*Contemporary Hypnosis* (2008), "A Festschrift for John Chaves"  
*Contemporary Hypnosis* (2008), "The Hidden Observer Reexamined"  
*American Journal of Clinical Hypnosis* (2002), "Hypnosis and Assessment"  
*International Journal of Clinical and Experimental Hypnosis* (2000), "Hypnosis as an Empirically Validated Treatment"  
*Current Directions in Psychological Science* (1997), "Memory as the Theater of the Past: The Psychology of False Memories"  
*American Journal of Clinical Hypnosis* (1994), "The Interface of Research and Clinical Practice."

Book Series Editor (with Scott O. Lilienfeld, co-editor), Great Myths in Psychology, Wiley-Blackwell, 9/10-present. Responsible for acquiring and editing seven books.

Book Series Editor. Trauma, Memory, Hypnosis, and Dissociation, American Psychological Association, 3/95-9/99. Responsible for acquiring and editing four books.

Nominated, Editor. *Journal of Abnormal Psychology*, 1/99; 9/2009.

Review Panel. NIH (NCCAM), Pain Center Grant Proposals, 11/29-12/1, 2010.

*Fellowship in Professional Organizations and Leadership*

Fellowship in Professional Organizations.

American Psychological Association  
 American Psychological Society (Charter Fellow)  
 American Association for Applied and Preventive Psychology  
 American Academy of Forensic Psychology  
 Society for Clinical and Experimental Hypnosis  
 Commission for Scientific Medicine and Mental Health  
 American Academy of Clinical Psychology  
 Institute for Science in Medicine  
 "Honor Member," Association for the Advancement of Experimental and Applied Hypnosis, Spain.

President. American Psychological Association, Division 30 (Society of Psychological Hypnosis), 89-90.

*Awards and Distinctions for Scholarship, Creativity, and Professional Activity*

Ernest R. Hilgard Award. *American Journal of Clinical Hypnosis*, 2015. Best paper, Historical Topic on Hypnosis.



Award for Best Theoretical or Applied Paper, Annual Meeting of the American Psychological Association, Division 30 (Society of Psychological Hypnosis), American Psychological Association, 2014.

Clark L. Hull Award. *American Journal of Clinical Hypnosis*, 2014. In recognition of scientific excellence in writing on experimental hypnosis.

Prose Award. The American Publishers Award for Professional and Scholarly Excellence, Honorable Mention, 2010 for *The 50 Great Myths of Popular Psychology: Shattering Widespread Misconceptions about Human Behavior* (Lilienfeld, Lynn, Ruscio), Wiley-Blackwell.

Ranked 49<sup>th</sup> on list of "Top Producers of Scholarly Publications in Clinical Psychology Ph.D. Programs" out of an initial group of 1,927 faculty. Based on total of books, peer reviewed articles, and chapters (2000-2004) (Steward, Wu, & Roberts, 2007, *Journal of Clinical Psychology*).

William S. Kroger Award. *American Journal of Clinical Hypnosis*, 2010. In recognition of the "Best paper on Hypnosis, Behavioral Medicine, and Health Psychology," published in the *American Journal of Clinical Hypnosis*, 2010.

Award for Distinguished Contributions to Professional Hypnosis, American Psychological Association, Division 30 (Society of Psychological Hypnosis), 2007. In recognition of "eminent and enduring contributions to the advancement of professional hypnosis."

President's Award for Mentoring, Society for Clinical and Experimental Hypnosis (SCEH), 2005.

Chancellor's Award, State University of New York, and *University Award for Excellence in Scholarship and Creative Activities*, 2002-2003.

Award for Excellence in Research and Scholarship, The Research Foundation, State University of New York, 2003.

Award for Distinguished Contributions to Scientific Hypnosis, American Psychological Association, Division 30 (Society of Psychological Hypnosis), 2002. In recognition of "eminent and enduring contributions to the advancement of scientific hypnosis."

President's Award, for "outstanding contributions to the science and practice of hypnosis," SCEH, 1999.

Milton H. Erickson Award for Scientific Excellence, American Society of Clinical Hypnosis, 1995.

Arthur Shapiro Awards, SCEH, for the best book published during 1996. *Casebook of clinical hypnosis* (Lynn, Kirsch, & Rhue, 1996); for the best book published during 1994, *Dissociation: Clinical and theoretical perspectives* (Lynn & Rhue, 1994), also selected as a main selection of the Behavioral Science Book Service; for the best

book published during 1993, *Handbook of clinical hypnosis* (Rhue, Lynn, & Kirsch, 1993), also selected as one of the best health science books of 1993 by Doody's Annual Review; and for the best book published during 1991, *Theories of hypnosis* (Lynn & Rhue, 1991).

Best Applied Paper Award, APA Division of Psychological Hypnosis, 2000.

Henry Guze Awards, for the best scientific papers published during 1982 and 1986, SCEH.

### *Contributions to the Judicial System*

Expert in case (State of New Jersey versus Clarence McKinley Moore) heard by New Jersey Supreme Court, which overturned their earlier decision to admit hypnotically elicited testimony if procedural guidelines are followed, and ruled to per se bar hypnotically elicited testimony, August, 2006. Expert opinion cited in the court ruling.

*R. v. Robert Baltovich* (2004). Testimony in this case became foundational for the Supreme Court of Canada's decision to ban all hypnotically elicited testimony.

Namree Louth v. Dr. Pierre LeRoy: Declaration filed, State of Delaware Department of Justice, 1992. Affidavit instrumental in changing the law in Delaware so that doctors can be prosecuted for any sexual advances towards patients, even when the women do not make their failure to consent known.

## GRANT ACTIVITY

### *Funded Grants and Research Support*

Binghamton University Research Incentive Award, \$5,000 (2015-2016).

Co-Investigator, "Advancing collaboration, pedagogy, adaptive infrastructure and the science through the Interdisciplinary Tobacco Use Research Program," Academic Program and Faculty Development Fund, with Gerri Britton, Gray James, and Sean McKittrick, \$44,000 (2010-2012).

PI, "Campus Preschool and Elementary School Research Project," Evo-S, \$28,250 (2011-2012).

Co-Investigator, "Dissociation and Sleep," Zon/MW, Holland, with Harald Merckelbach and Timo Giesbrecht, \$354,008 (2009-2013).

Faculty Sponsor, "Identifying the Mechanisms of Action in Mindfulness Based Cognitive Therapy," with Sean Barnes (student, PI), Francisco Varlera Grant, Mind-Life Institute, \$15,000 (2009-2010).

Binghamton University Research Incentive Award, \$5,000 (2008-2010).

Evo-S Pilot Research Grant Program, "Mindfulness Based Cognitive Therapy"

(\$1,901), "Body Image Modification: Development of a Mindfulness and Hypnosis Treatment" (\$2, 250), "Adaptive Responding to Severe Stress: Does Posttraumatic Growth Facilitate Recovery?" (\$1,800) (2009).

Consultant, "Mental Imagery to Reduce Motor Deficits in Stroke." National Institute of Health (NCCAM, 1 R21 AT002138-01A1), \$1,012,000 (2004-2009).

PI, "Enhancing Suggestibility: Compliance vs. Imagery." National Institute of Mental Health (1 R01 MH67483-01), \$376,556 (2003-2005).

Co-Investigator, "Mental Imagery to Reduce Motor Deficits in Stroke: An fMRI Approach," The Emory University Center for Research on Complementary and Alternative Medicine in Neurodegenerative Diseases (NIH NCAM 5P30AT00609), \$35,000 (2002-2003).

Co-PI, "The Ohio University/Binghamton University Sexual Assault Risk Reduction Program," Ohio Department of Mental Health, \$110,607 (1997-1998).

The Society for the Psychological Study of Social Issues, "High risk pregnancy, PTSD, and psychopathology," \$2,000, with student Jane Stafford (2000-2001).

The Society for the Psychological Study of Social Issues, "Children's eyewitness memory for an ecologically valid event," \$2,000, with student Elisa Krackow (1999-2000).

PI, "A Modified Delphi-Poll of Hypnosis Experts," American Psychological Association, Division of Psychological Hypnosis (30), \$3,000 (1997-1998).

### PROFESSIONAL POSITIONS

Distinguished Professor, State University of New York at Binghamton, 5/10-present.

Director, Psychological Clinic, Binghamton University, 1/07-present.

Faculty, International Institute for the Advanced Studies of Psychotherapy and Applied Mental Health, Cluj-Napoca, Romania, 8/04-present.

Visiting Professor, Maastricht University, Maastricht, Netherlands, 5/10-7/10.

Professor, State University of New York at Binghamton, 9/96-4/10.

Professor, Ohio University, Department of Psychology, 5/86-8/96.

Associate Professor, Ohio University, Department of Psychology, 5/82-4/86.

Assistant Professor, Ohio University, Department of Psychology, 9/77-4/82.

Acting Psychology Director, Health Recovery Services, Athens, Ohio, 7/88-8/88; 7/89-8/89; 6/90-8-90; 7/91-8/91.

Clinical Supervisor, Health Recovery Services, Athens, Ohio, 12/94-2/96.

Clinical Supervisor, Ohio University College of Osteopathic Medicine, 1/92-12/94.

Examiner, Shawnee Forensic Center, Portsmouth, Ohio, 1/93-8/96.

Supervising Psychologist, Athens Mental Health Center, Athens, Ohio, 1978-1992.

Licensed Clinical Psychologist, Independent Practice, Athens, Ohio, 12/77-8/96;  
Binghamton, New York, 2/97-present.

NIMH Postdoctoral Clinical Fellow, Lafayette Clinic, Detroit, Michigan, 9/76-9/77.

Adjunct Assistant Professor, Wayne State University, Detroit, Michigan, 9/76-9/77.

Visiting Assistant Professor, Indiana University, Department of Psychology, summer,  
1976.

Executive Director, Monroe County Group Homes, Inc., Bloomington, Indiana, 10/73-  
5/75.

Psychology Intern, Alameda County Mental Health Services, Oakland, California, 9/72-  
9/73.

## BIBLIOGRAPHY

### *Highlights of Publication Activity*

Total publications, including “in press” and books under contract: 374. Citation classics (Google Scholar), publications cited 100 or more times = 27 (includes 6 publications cited 200 or more times); H-index = 52 (52 publications cited at least 52 times); i-10 index (number of publications cited 10 or more times) = 180; total citations 9960+.

APA, APS, and *Behavioral and Brain Sciences* publications: *Psychological Review* (1); *Psychological Bulletin* (6; 3 major articles and 3 commentaries/replies); *American Psychologist* (4), including invited “Science Watch” article and invited obituary; *Perspectives in Psychological Science* (3); *Journal of Abnormal Psychology* (13); *Journal of Personality and Social Psychology* (8); *Current Directions in Psychological Science* (3+Preface to Special Issue); *Clinical Psychology Review* (3), *Journal of Consulting and Clinical Psychology* (1); *Review of General Psychology* (1); *Behavioral and Brain Sciences* commentaries (4); *Frontiers in Psychology* (2). Publications based on master’s theses and doctoral dissertations directed: 39.

Note: \*indicates a student or former student co-author.

### *Books*

Green, J.P., & Lynn, S.J. (under contract, in progress). *CBT stepped care for smoking cessation: Finding the winning edge with mindfulness, hypnosis, and NRT*. Chichester, UK: Wiley.

David, D., Lynn, S.J., & Montgomery, G. (Eds.) (under contract, in progress). *Evidence-based psychotherapy: The state of the science and practice*. New York: Wiley-Blackwell.

Lilienfeld, S., Lynn, S.J., Ruscio, J., & Beyerstein, B. (under contract, in progress). *50 great myths of popular psychology: Shattering widespread myths and misconceptions about human behavior 2<sup>nd</sup> ed.* New York: Wiley-Blackwell.

Lynn, S.J., & Lilienfeld, S.O. (under contract, in progress). *Off the rails: Psychotherapy gone wrong and the road to evidence-based treatment*. New York: Wiley-Blackwell.

Lynn, S. J. O'Donohue, W., & Lilienfeld, S. O. (Eds.) (2015). *Health, happiness, and well-being: Better living through psychological science*. New York: SAGE.

Lilienfeld, S.O, Lynn, S.J., & Lohr, J. (Eds.) (2015). *Science and pseudoscience in clinical psychology 2<sup>nd</sup> ed.* New York: Guilford Press.

Cardeña, E., Lynn, S. J., & Krippner, S. (Eds.) (2014). *Varieties of anomalous experience: The state of the science, 2<sup>nd</sup> ed.* of *Varieties of anomalous experience: Examining the scientific evidence*. Washington, DC: American Psychological Association.

Lilienfeld, S.O., Lynn, S.J., Namy, L., & Wolf, N. (2014). *Psychology: From Inquiry to understanding (3<sup>rd</sup> Ed.)*. Boston: Pearson.

Lilienfeld, S. O., Lynn, S. J., Namy, L., & Wolf, N. (2011). *Psychology: From inquiry to understanding (2<sup>nd</sup> Ed.)*. Boston: Pearson.

Lynn, S. J., Rhue, J., & Kirsch, I. (2010). *Handbook of clinical hypnosis, 2nd ed.* Washington, D.C.: American Psychological Association (completely revised).

David, D., Lynn, S. J., & Ellis, A. (2010). *Rational and irrational beliefs: Clinical, research, and theoretical perspectives*. New York: Oxford Press.

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Lilienfeld, S., Lynn, S.J., Namy, L., & Wolf, N. (2009). *Psychology: A framework for everyday thinking*. Boston: Pearson.

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### Psychopathology, Trauma, and Psychotherapy

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### Mindfulness, Acceptance, and Well-Being

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\*Williams, J. & Lynn, S. J. (2010). Acceptance: An historical and conceptual review. *Imagination, Cognition, and Personality*, 30, 5-56. (Special issue on acceptance and mindfulness; based on doctoral dissertation)

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### Science, Pseudoscience, Popular Science, and Anomalous Experience

Cardena, E., Lynn, S.J., & Krippner, S. (in press). The psychology of anomalous experience: A rediscovery. *Psychology of Consciousness: Theory, Research, and Practice*.

Lilienfeld, S.O, & Lynn, S.J. (in press). You'll never guess who wrote that: 75 surprising authors of psychological publications. *Perspectives in Psychological Science*.

Lilienfeld, S.O., & Lynn, S.J. (in press). Pseudoscience in clinical psychology. In A. Wenzel (Ed.). *Sage encyclopedia of abnormal and clinical psychology*. New York: Sage.

Lynn, S.J., \*Ellenberg, S., \*Gautam, A., & Lilienfeld, S.O. (in press). *Hypnosis: Science, pseudoscience, and nonsense*. In A. Kaufman, & J. Kaufman (Eds.), *Pseudoscience: The conspiracy against science*. Cambridge, MA: MIT Press.

Lynn, S.J., & Evans, J. (in press). Hypnosis produces mystical-type experiences in the laboratory: A demonstration proof. *Psychology of Consciousness: Theory, Research, and Practice*.

Lilienfeld, S.O., Lynn, S.J., & Lohr, J. (2015). Science and pseudoscience in clinical psychology: Initial thoughts, reflections, and considerations. In Lilienfeld, S.O, Lohr, J. M., & Lynn, S.J. (Eds.), *Science and pseudoscience in clinical psychology* 2<sup>nd</sup> ed. New York: Guilford Press.

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Lilienfeld, S.O., Lynn, S.J., & Ammirati, R.J. (2015). Science versus pseudoscience. In R. Cautin, & S. O. Lilienfeld (Eds.), *Encyclopedia of clinical psychology*. New York: Wiley Online Library.

Lilienfeld, S.O., Ritschel, L.A., Lynn, S.J., Cautin, R.L., & Latzman, R.D. (2015). *The science-practice gap*. In R. Cautin, & S. O. Lilienfeld (Eds.), *Encyclopedia of clinical psychology*. New York: Wiley Online Library

Appelle, S., Lynn, S.J., Newman, L., & \*Malaktaris, A. (2014). Alien abduction experiences. In Cardeña, E., Lynn, S. J., & Krippner, S. (Eds). *Varieties of anomalous experience: The state of the science*, 2<sup>nd</sup> ed. of *Varieties of anomalous experience*:



*Examining the scientific evidence.* Washington, DC: American Psychological Association.

Cardeña, E., Krippner, S., & Lynn, S.J. (2014). Anomalous experiences: An integrative summary. In Cardeña, E., Lynn, S. J., & Krippner, S. (Eds). *Varieties of anomalous experience: The state of the science, 2<sup>nd</sup> ed.* of *Varieties of anomalous experience: Examining the scientific evidence.* Washington, DC: American Psychological Association.

Cardeña, E., Lynn, S. J., & Krippner, S. (2014). Anomalous experiences in perspective. In Cardeña, E., Lynn, S. J., & Krippner, S. (Eds). *Varieties of anomalous experience: The state of the science, 2<sup>nd</sup> ed.* of *Varieties of anomalous experience: Examining the scientific evidence.* Washington, DC: American Psychological Association.

McCann, J., Lynn, S.J. Lilienfeld, S.J., Mccann, J., \*Shindler, K., & Hammond, T. (2014). Expert witness testimony: Science and nonsense. In S.O. Lilienfeld, S.J. Lynn, & J. Lohr (Eds.), *Science and pseudoscience in clinical psychology 2<sup>nd</sup> Ed.* New York: Guilford.

Lilienfeld, S. O., Lynn, S. J., & Beyerstein, B. L. (2010). Misconceptions of mind: Origins and implications for psychotherapy. David, D., Lynn, S. J., & Ellis, A. *Rational and irrational beliefs: Clinical, research, and theoretical perspectives.* New York: Oxford Press.

Lilienfeld, S. O., Lynn, S.J., Ruscio, J., & Beyerstein, B. (2010). Busting big myths in popular psychology. *Skeptical. (Invited)*

Lilienfeld, S. O., Lynn, S. J., Ruscio, J., & Beyerstein, B. (2010). The top ten myths of popular psychology. *Scientific American Mind. (Invited)*

Lilienfeld, S.O., Lynn, S.J., & Ruscio, J. & Beyerstein, B.L. (2010). Mythbusting in introductory psychology courses: The whys and the hows. *Excellence in Teaching, Chapter 11, 55-61.*

Lynn, S. J., \*Cleere, C., \*Accardi, M., & \*Krackow, E. (2010). Near death experiences: Out-of-body and out-of-mind? *Psychology of Religion and Spirituality, 2, 117-118. (Invited commentary)*

Lilienfeld, S.O., Fowler, K., Lohr, J., & Lynn, S.J. (2005). Pseudoscience, nonscience, and nonsense in clinical psychology: Dangers and remedies. In N. Cummings, & G. Koocher (Eds.), *Destructive trends in mental health: The well-intentioned road to hell.* New York: Brunner/Routledge.

Lilienfeld, S. O., Lynn, S.J., & Lohr, J. (2003). Pseudoscience is alive and well. *Scientific Review of Mental Health Practices, 2, 108-118.*

Lilienfeld, S.O., Lynn, S.J., & Lohr, J. (2003). Science and pseudoscience in clinical psychology: Initial thoughts, reflections, and considerations. In Lilienfeld, S.O, Lohr, J. M., & Lynn, S.J. (Eds.), *Science and pseudoscience in clinical psychology.* New York: Guilford Press.

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Appelle, S., Lynn, S.J., & Newman, L. (2000). The alien abduction experience: Theoretical and empirical issues. In E. Cardena, S.J. Lynn, & S. Krippner (Eds.), *The varieties of anomalous experience: Examining the scientific evidence*. Washington, DC: American Psychological Association.

Mills, A., & Lynn, S.J. (2000). Past-life experiences. In E. Cardena, S.J. Lynn, & S. Krippner (Eds.), *The varieties of anomalous experience*. New York: American Psychological Association. (Presents a skeptical perspective based on suggested false memories and cultural scripts)

Cardena, E., Lynn, S.J., & Krippner, S. (2000). Anomalous experiences in perspective. In E. Cardena, S.J. Lynn, & S. Krippner (Eds.), *The varieties of anomalous experience: Examining the scientific evidence*. Washington, DC: American Psychological Association.

#### Obituaries, Forewords, Prefaces, and Editorials

Lynn, S.J., Woody, E.Z., Montgomery, G., & Gaudiano, B. (in press). Editorial: Hypnosis: Contributions to psychological science and practice. *Psychology of Consciousness: Theory, Research, and Practice*.

Honeycutt, J. M., & Lynn, S. J. (2010-2011). Special issue overview. *Imagination, Cognition, and Personality*, 30 3-3. . {Special issue on mindfulness and acceptance.

Lynn, S. J., & Kirsch, I. (2009). Obituary: John F. Chaves (1941-2008). *American Psychologist*, 64, 50.

Lynn, S.J. Introduction to the special issue in honour of John F. Chaves. (2008). *Contemporary Hypnosis*, 24(3-4), 111-113.

#### *Lynn and Kirsch in memorium of John Chaves*

Lynn, S.J. (2003). Foreword. In M. Yapko, *Trancework: An introduction to the practice of clinical hypnosis*. New York: Brunner/Mazel.

Lynn, S.J., Council, J., & \*Green, J.P. (2002). Guest Editorial: Assessing hypnotic responsiveness in clinical and research settings. *American Journal of Clinical Hypnosis*, 44, 181-184. (Special issue on hypnotizability and assessment)

Kirsch, I., & Lynn, S.J. (1995). Foreword. In T.X. Barber, *Hypnosis: A scientific approach* (Master Series Edition). New York: Jason Aronson.

Lynn, S.J. (1995). Nicholas Spanos: A fixed star. *Contemporary Hypnosis*, 12,

3-33. (Invited article, special issue memorializing the late Nicholas Spanos)

Lynn, S.J. (1994). The interface of hypnosis research and clinical practice. *American Journal of Clinical Hypnosis*, 37, 81-83. (Guest editorial for special issue)

Lynn, S.J., & Rhue, J. (1994). Preface. In S.J. Lynn, & J. Rhue (Eds.), *Dissociation: Clinical and theoretical perspectives*. New York: Guilford Press.

#### SELECTED ADDRESSES/EVENTS (1995-present)

Invited speaker, "Forensic Hypnosis." Annual Conference on Forensic Psychology. University of Maastricht, Maastricht, Netherlands.

Invited speaker, "Hypnosis: Science, Pseudoscience, and Nonsense." Annual Conference on Attention and Performance. Brussels, Belgium.

Invited plenary speaker, "An integrative model of hypnosis: 35 years of research. Annual meeting of the Toward a Science of Consciousness Convention, Helsinki, Finland, 2015.

Keynote Speaker, "Reflections on False Memories: Hypnosis, Suggestion, and Popular Culture," Memory Symposium, Signe & Ane Gyllenbergs Foundation, Helsinki, 2014.

Invited Address, "Forensic Hypnosis: A Research and Personal Perspective," American Psychological Association, Honolulu, Hawaii, 2013.

Invited Mentor, "Speed Mentoring Event," American Psychological Association, Honolulu, Hawaii, 2013.

Webinar, "Hypnosis: Science and Nonsense," Sponsored by Michael Yapko, Ph.D., October 25, 2012.

Intensive 5-day seminar, "Modern Clinical Hypnosis," presented to the Institute of Psychiatry and Psychotherapy, Moscow, 2012.

Keynote Address, "Frontiers of Hypnosis," 41<sup>st</sup> Annual Congress of the Australian Hypnosis Society, Adelaide, Australia, 2011.

Invited Mentor, "Speed Mentoring Event," American Psychological Association, Washington, D.C., 2011.

Invited Address, "Popular Psychology, the Media, and the Classroom," American Psychological Society, Society for the Teaching of Psychology, Washington, D.C., 2011.

Invited Address, "Hypnosis and Suggestion: Science and Nonsense," University of Maastricht, May 2009.

Special Invited Address for Distinguished Contributions to Professional Hypnosis (Division 30, American Psychological Association), "Hypnosis and Neuroscience: A Sociocognitive Perspective." American Psychological Association, San Francisco, 2007.

Keynote Speaker, "Science, Nonsense, and Pseudoscience in Clinical Psychology," Annual Conference of the Romanian Psychological Society, Cluj-Napoca, Romania, 2006.

Invited Speaker, "Memory, Suggestion, and Hypnosis," Society for Research in Applied Memory and Cognition, "Bethfest," a day-long meeting in honor of the lifetime contributions of Elizabeth Loftus, Wellington, New Zealand, 2004.

Invited Speaker, "Suggestion, Suggestibility, and Expectations." International Congress of Psychology, Beijing, China, 2004.

Keynote address, "Understanding Ericksonian Hypnosis: Insights from Cognitive, Social, and Clinical Psychology." Annual Conference of British Society of Medical, Clinical, Dental and Experimental Hypnosis and the Royal Society of Medicine, London, England, 2003.

Keynote Address, Fourth World Skeptics Conference, "Problematic Memory Recovery Techniques in Psychotherapy." Burbank, CA., 2002.

Special Invited Address for Distinguished Contributions to Psychological Hypnosis (Division 30, American Psychological Association). "Hypnosis and Response Sets." American Psychological Association, San Francisco, CA., 2001.

Keynote Speaker, "Hypnosis as an Empirically Supported Adjunctive Treatment: An Examination of the Evidence." First joint meeting of the International Society of Hypnosis and the Society for Clinical and Experimental Hypnosis, Munich, Germany, 2000.

Featured Speaker, "Who's Who in American Hypnosis." Annual Meeting of the American Society of Clinical Hypnosis, St. Louis, Mo., 1998.

Keynote Speaker, "Rendering the Implausible Plausible: Narrative, Imagination, and Suggestion." Conference on Believed-in-Imaginings, Clark University, Worcestershire, MA., 1997.

Invited Speaker, "Hypnosis, Pseudomemories, and Clinical Guidelines: A Sociocognitive Perspective." NATO Advanced Studies Institute, Recollections of Trauma: Scientific Research and Clinical Practice, Port-Bourgenay, France, 1996.

Keynote Speaker, "Hypnosis, Trauma, and Memory Narratives." Annual Meeting of the Australian Society of Clinical Hypnosis, Perth, Australia, 1996.

Master Lecture, "Noniatrogenic Hypnosis Techniques in the Treatment of Trauma." First Annual Conference on The New Traumatology, Clearwater, FL., 1996.

Keynote Address, "Fantasy-proneness, psychopathology, and dissociation." Conference on Trauma, Loss, and Dissociation: Foundations for the 21st Century Study of Traumatology, Alexandria, VA., 1995.

Keynote Address, "Hypnosis and False Memories." Second Annual Symposium on Suggestion and Suggestibility, Rome, Italy, 1995.

I have presented over 200 additional papers at national and international meetings. The titles of these papers are available upon request.

### MEDIA REPRESENTATION

#### *Movie and Television Interviews/Projects*

Consultant, "The Secret Life of Walter Mitty," 20<sup>th</sup> Century Fox Films (2009, movie released 2013); National Geographic Channel, "The CIA Secret Experiments" (2008); History Television, Canada, "UFO's The Secret History" (presented skeptical position regarding hypnosis and suggested UFO experiences, 2008); Vision TV, APTN, Canada, "The Moncla Memories" (documentary on the created memories of a claimed "UFO abductee," 2007); Academy Award nominated documentary, "Capturing the Friedman's," New York Times article that covered my false memory research (with Joseph Green) shown "on screen;" ABC's 20/20, "Glossolalia" (I presented a skeptical position, 2000); Discovery Channel, "Past Lives" (I presented a skeptical position, 1999); "Assignment" (TVNZ-New Zealand, "Total Recall" (hypnosis and recovered memories, 1998); Eye to Eye, CBS, "Lay hypnotists" (1995); CBS Morning Show, "Fantasy-proneness" (1988).

#### *Selected Newspaper, Magazine/Internet Articles*

Article featured research in the New York Times (78 surprising authors of psychological science, 2016), APS Observer, "Blurred concepts of consent: Psychological research captures the distorted notions underlying many sexual assaults on college campuses" (2014); article on why psychotherapy appears to work (even when it doesn't) featured on APS web-site, Huffington Post.com, Research Digest.com (2014); scholarly work cited and referred to in *Wikipedia* article on Dissociative Disorders (2012-present); New Scientist magazine (quoted regarding media influence on "multiple personalities," 2013); ABC News Radio.com (quoted regarding Romney not remembering incident of alleged bullying of a child, 2012); NEWS MEDICAL (quoted in article on fantasy and dissociative identity disorder, 2012); APS ObserverXpress; Los Angeles Times HealthCanal.com; Science Codex.com; Eureka! com; Science News.com; Psych Central.com; APS Website-- "Fragmented Sleep, Fragmented Mind" (quoted or research cited regarding sleep and dissociation, 2012); article entitled, "Fragmented Sleep, Fragmented Personality cited in LA times (2012); ABC news, "Therapist Accused of Implanting Satanic Memories" (quoted regarding ease of implanting false memories, 2011); American Psychological Society Website (video featured of talk presented at annual convention, "The Media, Popular Psychology, and the Classroom, 2011);" *American Psychological Association Monitor* feature article, "Hypnosis Today" (hypnosis and smoking cessation, 2011 work cited); American Psychological Society Website features 1 myth/month based on our book on popular myths of psychology (2010); Cited as expert in *Wikipedia* articles on "Hypnosis" (2009-present) and "Hypnotherapy" (2009-present); eSkeptic (online, 10 psychology myths, 2010); *American Psychological Association Monitor*, "Mythbusting Psychology Style" (2010); Binghamton University Magazine, "Don't Believe Everything You Remember," (2010); *U.S. News and World Report* (online, psychology myths, 2009); *Behavior Therapist.com* (myths of psychology, 2009); *Mark and Mercedes in the Morning* (online, psychology myths, 2009); *Scientific American Mind* (hypnosis research, 2008);

*Huntington Beach Independent* (expert testimony cited in Donna Prentice Murder Case, 2008); *Pravda*, Slovakia (alien abduction stories, presented skeptical position, 2008); APA Online, "Psychology Matters" (hypnosis and pain relief, 2008); *Los Angeles Times* and *Chicago Tribune* (hypnosis and past life age regression, 2006); *New Yorker Magazine* (Is psychology a science? 2005); *Allure Magazine* (hypnosis and placebos, 2005); *Baltimore Sun* (hypnosis and pain relief, 2005); *Science Daily* (enhancing suggestibility, 2005); *Psychology Today* (role of fantasy in everyday life, 2004); *Psychology Matters* (APA Online, hypnosis for relief and control of pain, 2004); *Los Angeles Times* (increasing hypnotic suggestibility, 2004); *APA Monitor* (report on the "Bethfest in honor of Elizabeth Loftus, 2004"); *Social Work Today* ("energy therapies," 2004); *Washington Post Magazine* (science and pseudoscience, 2003); *New York Review of Books* (pseudoscience in psychology, 2003); *Chronicle of Higher Education* (pseudoscience and psychotherapy, 2003); *Psychology Today* (hypnosis and alien abduction narratives, 2003); *Skeptical Inquirer* (report on World Skeptic's Conference, 2002); *Newsweek* (anomalous experiences, 2001); *Science News* (cover article on science of anomalous experiences, 2001); *Chan Magazine* (anomalous experiences, 2001); *Science Daily Magazine* (hypnosis and smoking cessation, 2000); *Web M.D.* (hypnosis and smoking cessation, 2000); *Science News* (cover article, the "unseen hand of the unconscious," 1999); *Skeptic* (hypnosis and false memories, 1999); *Bottom Line* (daydreaming, 1998); *APA Monitor* (warnings and false memories, 1998); *New York Times* (false memories and hypnosis, 1998); *Family Circle* (daydreaming, 1997); *London Times* (sexual abuse and false memories, 1997); *Self* (daydreaming, 1995); *Current Consumer and Lifestyle Studies* (daydreaming, 1994); *Vogue Magazine* (daydreaming, 1993); *Circle K* (daydreaming and fantasy, 1993); *Sydney (Australia) Times* (involuntary responses and hypnosis, 1991); *Walking* (fantasy, 1990); *APA Monitor* (negative effects and hypnosis, 1990); *Boston Globe Sunday Magazine* (fantasy-proneness, 1989); *Psychology Today* (fantasy-proneness, 1989, feature article); *Columbus Dispatch* (hypnosis and memory, 1989); *Ottawa Citizen* (fantasy, 1989); *OMNI Magazine* (cover article on fantasy-proneness, 1989); *New York Times* (feature article in science section, fantasy-proneness, 1988)

### CLINICAL AND SUPERVISORY EXPERIENCE

*Director of the Psychological Clinic* (1/07-present). Binghamton University. Administer a psychological clinic that provides services to approximately 65 child and adult clients who are assessed and treated by 30 clinical psychology graduate students closely supervised by clinical faculty and community supervisors.

*Forensic Consultant* (1983-present) Provide consultation to attorneys and serve as an expert witness on a national and international basis (Canada) in capital crime cases in which hypnosis has been used to "refresh" eyewitness testimony, in cases in which it is alleged that hypnosis was used in a coercive manner, and in personal injury, insanity (NGRI) and competence evaluations.

*Licensed Clinical Psychologist in Independent Practice*, Athens, Ohio (1977-8/96); Binghamton, New York (2/97-present).

*Clinical Supervisor* (1996-present). Binghamton University Psychological Clinic. Provide clinical supervision to 3-4 graduate students each semester.

*Forensic Examiner (1/93-8/96).* Shawnee Forensic Center, Portsmouth, Ohio. Shawnee is a regional, state supported forensic evaluation center. Conduct forensic evaluations and present expert testimony to the court pertinent to issues regarding insanity (NGRI) and competence to stand trial.

*Supervising Psychologist (1/95-2/96).* Health Recovery Services, Athens, Ohio. Serve as a supervisor of online clinical staff at an outpatient treatment facility for adolescent and adult substance abusers.

*Clinical Supervisor (1/92-12/94).* Ohio University College of Osteopathic Medicine. Provide supervision to medical students on clinical interviewing skills and on simulation interviews with "practice patients" who role-play medical problems with a psychosocial component.

*Supervising Psychologist (1978-1991).* Athens Mental Health and Development Center (AMHC), Athens, Ohio. AMHC is a 250-bed state hospital. Supervised clinical psychology graduate students and staff in assessment and psychotherapy. Training and presentations at case conferences; individual and group co-therapy with graduate students. Consultant to staff on the Intensive Treatment Unit and the Geriatrics Ward (8 hours/week).

*Acting Psychology Director (7/88-8/88; 7/89-8/89; 6/90-8-90; 7/91-8/91)* Health Recovery Services, Athens, Ohio. Served as acting director of psychological services and provided consultation and supervision of staff and psychological evaluations at a residential treatment program for adolescent substance abusers.

*Consultant and Trainer (1985-6/88).* American Lung Association of Ohio, Columbus, Ohio. Developed training manual for cognitive-behavioral hypnosis smoking cessation workshops conducted on a statewide basis, conducted workshops, trained workshop leaders.

*Consultant (1978-1979).* Tri-County Mental Health and Counseling Services, Athens, Ohio. Consultant to the executive director and staff on program planning, court referred evaluations, and inservice training.

*NIMH Postdoctoral Clinical Fellow (9/76-9/77).* Lafayette Clinic, Detroit, Michigan. Adult Outpatient Department. Specialized training and service in areas of group, family and individual therapy, assessment, neuropsychological testing and evaluation, behavior and sex therapy. Therapy with pain patients in the Biofeedback Clinic.

*Executive Director (1973-1975).* Monroe County Group Homes, Inc., Bloomington, Indiana. First director of a multi-service agency that provided a group home for 10 delinquent and pre-delinquent male adolescents. In addition, placement of 5-8 delinquent and pre-delinquent female adolescents in individual community foster homes. Focus on family therapy, parent training, group therapy, and aftercare and follow-up services. Supervision of practicum students in the Counseling and Guidance Program, Indiana University.

*Intern (9/72-9/73).* Alameda County Mental Health Services, Oakland, California. Placements included the following: (1) Highland Hospital, Oakland, California. Adult Inpatient Service. Individual and group therapy, diagnostic assessment; (2) Probation Guidance Clinic, San Leandro, California. Individual, group, and family therapy with adult

and juvenile offenders; intervention, testing and evaluations for the court, case and community consultation regarding forensic cases; (3) Berkeley Suicide Prevention Center, Berkeley, California. Training and resource person; senior volunteer.

#### TEACHING EXPERIENCE (BINGHAMTON UNIVERSITY)

##### *Graduate teaching*

Behavior Therapies (2009-2011), Advanced Seminar in Hypnosis (2007-2008), Psychotherapy Practicum (1996-2006), Psychopathology (1997-2007), Advanced Clinical Skills/Practicum (2004-2005). Hypnosis Seminar (1998-1999), Personality Assessment (1997-1998)

##### *Undergraduate Teaching*

Psychotherapy: Models and Methods (2000-2009), Behavior Disorders (1996-1997)

#### MAJOR FORENSIC CASES AND AMICUS BRIEFS

*Dowling v. Beard* (2013). Retained by Office of the Federal Public Defender for the Middle District of Pennsylvania. Contributed report detailing the pitfalls of hypnosis for memory recovery in proceedings relevant to capital murder conviction. Stay of execution petition ultimately denied. State of Pennsylvania Supreme Court refused to hear his appeal on a related criminal charge. Case featured on "Forensic Files" television series.

*Appelle v. Paul Shanley* (2009). Contributed to amicus brief proffered by The International Committee of Social, Psychiatric, Psychological, Cognitive Science, Neuroscience, and Neurological Scientists, which challenged the "accepted" status of repressed memories in the scientific community in a case of claimed repressed memories of sexual abuse later recalled in adulthood. Filed in case relevant to appeal of Shanley conviction for rape of 6-year old boy in Boston suburb parish in the 1980s. Supreme Judicial Court of Massachusetts affirmed conviction.

*Varnum v. Brien* (2008). Contributed to an amicus brief for the Iowa Supreme Court in a marriage equality case in which the defense attorneys argued that expert testimony should be excluded because the experts for the prosecution had no documented expertise in the scientific literature regarding the effectiveness of gay parents in rearing children. Unanimous decision of the Iowa Supreme Court held the state's limitation of marriage to opposite-sex couples violated the equal protection clause of the Iowa Constitution.

*People v. Donna Prentice* (2008). Consultant to defense attorneys and expert witness in case involving hypnotically assisted recall of child events related to a missing persons case nearly 30 years in the past. Case initially resulted in a hung jury and was retried. On retrial, during which I testified, the result was a mistrial (10-1 for innocent). The case was presented on Dateline NBC television.

*Taus v. Loftus et al.* (2005). Contributed to an amicus brief for the California Supreme



Court urging the Court to review a case involving Dr. Elizabeth Loftus's investigation of a widely publicized case of purportedly repressed memories.

*Larry Mayes, Jr. vs. The City of Hammond Indiana* (2005). Retained by law firm of Johnnie Cochrane, Peter Neufeld, and Barry Sheck. Served as expert witness at trial. Evaluated evidence suggesting that the plaintiff was hypnotized before she made an eyewitness identification of the defendant 18 years earlier. The hypnosis was not disclosed to the court at the time of the original trial. Recent DNA evidence exonerated the defendant. Jury award of \$9.5 million dollars.

*R. v. Robert Baltovich* (2004). Consulted with Canadian defense attorney James Lockyer and testified at hearing regarding the use of hypnosis in eyewitness investigation in case of Robert Baltovich accused of murdering his girlfriend. Based, in part, on this hearing, the appeals court in Toronto ruled for the defense to set aside an earlier guilty verdict and ordered a retrial of Baltovich after eight years in prison. In March 2008, the judge urged a jury to direct a verdict of not guilty, after the Crown did not call more than 50 witnesses, citing "new developments." This case became foundational for the Supreme Court of Canada's decision to ban all hypnotically elicited testimony in federal courts.

*State of New Jersey v. Clarence McKinley Moore* (2004). Consulted with defense attorneys and wrote affidavit in case involving hypnotically elicited eyewitness testimony in a case of traumatic sexual assault. Case successfully appealed for reasons of "inadequate defense." Defendant was freed after 15 years on death row. Testified for defense on the issue of the admissibility of hypnotically elicited testimony, with procedural safeguards, before judge, with testimony videotaped for the New Jersey Supreme Court. Judge ruled, for the defense, that hypnotic testimony was not admissible, even with safeguards. The New Jersey Supreme Court ruling quashed the possibility of retrial based on hypnotic testimony. Case was written up in the *New Jersey Law Review*, with expert opinion cited.

*Daly v. Monroe Clinic, et al.* (2003). Provided deposition and testimony in civil malpractice suit for plaintiff regarding memory recovery and the creation of dissociative identity disorder. The jury found the clinic and doctors were not negligent.

*Sawyer v. Middlefort* (2001). Provided deposition and testified for plaintiff in civil trial regarding false memories, dissociation, and the biasing effects of hypnosis in "recovering memories" in a case of dissociative identity disorder. Jury awarded plaintiff \$5, 000, 000 in second largest civil award in a "false memory" case.

*Jennifer Jackson, et al. v. General Motors Corp., et al.* (1999). Provided deposition for defense on issue of the reliability of hypnosis-assisted recall.

*Gardner v. Galetka, 494 U.S. 1090, 1990* (1999, in progress). Affidavit submitted as part of a Petition for a Writ of Habeas Corpus by a Person in State Custody ("death row"), submitted to the Utah Supreme Court, and testified at evidentiary hearing. Issue: Reliability of hypnotic recall in a "close up" shooting event. The court directed Gardner to file a post-conviction petition in state court and agreed to hold the federal petition in abeyance pending state court resolution. State court ultimately rejected the petition: Gardner executed, June, 2010 by firing squad in highly publicized case.

*Hess and Wausau Insurance Companies v. Wisconsin Patients Compensation Fund and Fernandez, Circuit Court Branch 3, Marathon County, Wisconsin (1999).* Testified for plaintiff in civil trial regarding biasing effects of hypnosis in “recovering memories” in a case of dissociative identity disorder. Jury awarded plaintiff \$875, 000, lawyers awarded fee recovery in excess of \$1,000,000.

*People v. John Stephens, Orange County Case No. 97WF1825 (1999).* Provided report for defendant on hypnotic procedures used on witness in capital murder case. Case was dismissed.

*Nadean Cool v. Kenneth Olsen (1997).* Testified for plaintiff in civil trial regarding biasing effects of hypnosis in “recovering memories” in a case of dissociative identity disorder. Settlement of 2.4 million dollars awarded to plaintiff. Case featured on “60 Minutes.”

*Miller v. Calderon, number CV 91-2652-KN (1996).* Declaration filed for defendant, California Supreme Court. Issue: Is hypnotic eyewitness recall reliable?

*Church of Scientology International v. Fishman, Geertz, U.S. District, Central District of California No. 91-6426 HLH (Tx). (1995).* Declaration filed regarding whether a person can lie during hypnosis. Church of Scientology dropped the case against Fishman and Geertz in civil defamation trial.

*Regina v. Michael Szyjewicz. (1995).* Declaration for defendant filed in Canadian criminal sexual assault case in which it was alleged that the plaintiff was hypnotized and, therefore, could not resist sexual advances.

*Namree Louth v. Dr. Pierre LeRoy (1992).* Declaration filed, State of Delaware Department of Justice, 1992. Issue: What accounted for a woman’s apparent failure to resist sexual advances following hypnotic relaxation procedures? Wrote affidavit for plaintiff in a case that changed the law in Rhode Island so that doctors can be prosecuted for any sexual advances towards women, even when the women do not make their failure to consent known.

### LEADERSHIP AND SERVICE

*Binghamton University Psychology Department Service*

Director, Psychological Clinic, Binghamton University, 1/07-present.

Faculty Senate (*Elected For Three Terms*). State University of New York, Binghamton, 9/03-2009.

Fellow, College in the Woods, Binghamton University, 9/2009-present.

Undergraduate Committee. 9/96-6/97; 9/04-present.

Institutional Review Board, Binghamton Psychiatric Center, Faculty Representative, 1996-present.

Promotion and Tenure Committees (wrote reports): Deanne Westerman (2015), Matthew Johnson (2012), Brandon Gibb (2012), Meredith Cole (2008, research, with Dick Pastore), Ken Kurtz (2006, teaching), Matthew Johnson (2005, research),\_Caroline Pepper (2002, research).

Chair, Psychology Department, Executive Committee, 10/01-6/02.

Department Colloquia Committee. 9/98-2002.

Nominated Faculty for Awards/Prepared Documentation: Meredith Coles, Chancellors Award for Excellence in Scholarship and Creative Activities, 2014; Brandon Gibb, Chancellors Award for Excellence in Scholarship and Creative Activities, 2013; Stephen Lisman, Distinguished Teaching Professor, 2008; Patricia Rourke, Provost's Adjunct Teaching Award, 2008; Joseph McCann, Provost's Adjunct Teaching Award, 2007; Mark Lenzenweger, Chancellors Award for Excellence in Scholarship and Creative Activities, 2004, 2005.

Resource Committee. 9/97-6/98; 9/04-9/07, 9/2013-present.

Chair, Preliminary Exam Committee. 9/00-6/02; 9/04-9/07.

Liaison to APA, Committee on Accreditation (assisted in revising APA site visit report and organizing site visit). 3/03-3/04.

Representative to Annual Clinical Director's Meeting. 2/04

Chair, Clinical Selection Faculty Search Committee. 9/98-5/99.

Faculty Merit Committee, 1999.

*Leadership and Service: National and International Level*

Faculty, International Institute of Psychotherapy and Applied Mental Health, Cluj-Napoca, Romania, 8/04-present.

Consultant, Behavioral Science Workgroup, National Institute of Mental Health (NIMH), National Advisory Mental Health Council, 2000.

Board of Directors, American Board of Psychological Hypnosis, 9/93-9/98.

Executive Committee, Society for Clinical and Experimental Hypnosis; Liaison, American Psychological Association, 1/90-98.

Executive Committee, American Psychological Association, Division 30, 1986-1999.

American Psychological Association, Ad Hoc Committee on Revising the Ethics Code, 1993.

President, Division 30 (Psychological Hypnosis), American Psychological Association, 1989.

Member at Large (Elected), American Psychological Association, Division 30 Executive Committee, 8/92-8/96.

Task Force on Child Abuse, American Psychological Association, Division 30, 1991.

Chair, Workshops, Meeting of the Society for Clinical and Experimental Hypnosis, 1994.

Chair, Scientific Affairs Committee, American Psychological Association, Division 30, 1/92-1997.

Chair, Awards Committee, American Psychological Association, Division 30, 1/92-6/96.

Chair, Scientific Program, Meeting of the American Psychological Association, Division 30 (Psychological Hypnosis), 1987.

Chair, Workshops, Meeting of the American Psychological Association, Division 30, 1985, 1986.

Chair, Workshops, Meeting of the Society for Clinical and Experimental Hypnosis, 1995.

Consultant, American Lung Association of Ohio, Columbus and Athens, Ohio, 1985-1988.

Chair/Coordinator, Joint hypnosis workshop, Co-sponsored by APA Division 30, Division 17 (Counseling Psychology) and the Missouri Psychological Association, 1985.

Program Committee, Scientific Program, Meeting of the American Psychological Association Division 30, 1986.

Research Committee, Society for Clinical and Experimental Hypnosis, 1986.

#### ACADEMIC, RESEARCH, AND FORENSIC POSITIONS OF FORMER STUDENTS

Sean Barnes, Clinical Research Psychologist, Denver Veterans Administration Medical Center, Denver, Co.

John Brentar, Director, Morrissey/Compton Educational Center, and Adjunct Clinical Professor, Stanford University, Department of Psychiatry

Amanda Deming, Psychologist, Counseling Center, Cornell University

Rachael Fite, Postdoctoral Fellow, Department of Psychiatry, University of Medicine and Dentistry of New Jersey, now at Psychological Associates, Somerville, NJ.

David Frauman, formerly Associate Clinical Professor, Department of Psychiatry, Indiana University Medical School; currently in independent practice in Indianapolis, IN.

Jeffrey Gfeller, Professor, Department Chair, Psychology Department, St. Louis

University

Joseph P. Green, Professor, Psychology Department, Ohio State University,  
Lima Campus

Jane Hamel-Lambert, Associate Professor, Department of Family Medicine, Ohio  
University College of Osteopathic Medicine

Michael Hallquist, Assistant Professor, University of Pennsylvania, Department of  
Psychology (Fall, 2015)

Joshua Knox, Ph.D., Psychologist, Baylor University Counseling Center, Houston, TX

Elisa Krackow, Associate Professor, West Virginia University, Psychology Department.

Steven Kvaal, Associate Professor, former Director of Graduate Studies, School of  
Psychology, Roosevelt University

James MacKillop, Professor and Peter Boris Chair in Addictions Research, Department  
of Psychiatry and Behavioral Neurosciences, Mc Master University

Cornelia Mare Pinnell, Professor, Arizona School of Professional Psychology

Daniel Martin, formerly Assistant Professor, Department of Psychiatry Psychology  
Section, Division of Substance Abuse, Yale University School of Medicine;  
currently director of MRAC, Cambridge, MA, which creates research programs  
that encompass psychology, engineering, and neuroscience.

Abigail Matthews, Assistant Professor for Behavioral Medicine and Clinical Psychology,  
Director, Eating Disorders Program University of Cincinnati Department of  
Pediatrics

Cindy Matyi, Assistant Professor at Ohio University, Chillicothe

Jodi Aronoff McKibben, Research Assistant Professor at the Center for the Study of  
Traumatic Stress, Department of Psychiatry at Uniformed Services University of  
the Health Sciences; research psychologist at the Department of Psychiatry, F.  
Edward Herbert School of Medicine

Eric Meyer, Texas A& M Health Science Center and Central Texas Veterans Health  
Care System-Waco VA Medical Center, Assistant Professor, Department of  
Psychiatry and Behavioral Medicine at Texas A & M Health Science Center

Matthew Milano, President and CEO, Decision Strategy, Inc.

Andrew Molteni, Visiting Assistant Professor, Skidmore College, Saratoga Springs, NY

Bryan Myers, Graduate Coordinator and Professor, University of North Carolina,  
Wilmington

Michael Nash, Professor, Psychology Department, University of Tennessee

Jeffrey Neuschatz, Chair, Professor, Psychology Department, University of Alabama,  
Huntsville

Eric Pihlgren formerly a researcher at the Substance Abuse Research Division,  
Department of Psychiatry and Behavioral Neurosciences, Wayne State  
University, Detroit, MI; currently an independent practitioner in Birmingham, MI.

Judith Rhue, Professor, Department of Psychosocial Medicine, Ohio University College  
of Osteopathic Medicine

Susan Rose, Honorary Adjunct Assistant Professor of Psychology and Education at the  
Teacher's College of Columbia University and the Director, Child and Family  
Center, William Alanson White Institute, NY

David Sandberg, Professor, Psychology Department, California State  
University at Hayward

David Segal, Head of Human Resources Division of the B.A. in Behavioral Sciences and  
former Chair of Teaching Affairs, College of Management and Academic Studies,  
Tel Aviv, Israel

Harry Sivec, Clinical Assistant Professor of Psychiatry, Northeast Ohio Medical  
University, Rootson, Ohio

John M. Snodgrass, Research Assistant Professor, Psychiatry Department,  
University of Michigan Medical Center

Jane Stafford, Associate Professor, Director of the Applied Clinical Psychology Graduate  
Program, Psychology Department, University of South Carolina, Aiken

Scott Stanley, Research Professor, University of Denver, Denver Center for  
Marriage and Family Therapy

Holly VanderHoff, Director of Counseling Center, Assistant Dean for Student Affairs  
and Assistant Professor of Psychiatry in the Department of Psychiatry and  
Behavioral Sciences, State University of New York Upstate Medical University,  
Syracuse, NY

John W. Weekes, Adjunct Research Professor of Addictions and Forensic Psychology,  
Carleton University and Senior Research Manager, Statistics and Data  
Development Research Branch, Correctional Service of Canada

John Williams, Project Director at Western Psychological Services, Los Angeles, CA.

Nataliya Zelikovsky, Assistant Professor, LaSalle University, PA., Adjunct Assistant  
Professor of Pediatrics, University of Pennsylvania School of Medicine

## **AFFIDAVIT OF STEVEN JAY LYNN**

### **Background**

I was consulted as an expert by Attorney Gregory W. Gardner on November 21, 2016 in order to provide a summary of key scientific findings regarding the use of investigative hypnosis to interview eyewitnesses in the matter of THE STATE OF TEXAS VS. KOSUL CHANTHAKOUMANE. As a backdrop to the presentation of these findings, it is first necessary to discuss certain myths of memory and the reconstructive nature of everyday memories. A sizable corpus of research indicates that (a) not all events are encoded in memory in the first place; (b) memories that are encoded decay over time; (c) memories are influenced by current beliefs, expectations, and moods; (d) everyday memories can often be characterized as a patchwork of accurate and inaccurate recollections; (e) hypnosis holds the potential to increase inaccurate or false memories and inflate confidence in inaccurate recall; and (f) the use of hypnosis when entered into the courtroom can increase the likelihood of producing erroneous testimony that can sway the jury and potentially engender a miscarriage of justice.

### **Summary of qualifications and experience**

I am a licensed Psychologist in the States of New York, and am presently employed as a Distinguished Professor of Psychology at Binghamton University (SUNY), where I have been on the faculty since 1996. I have published or in press more than 370 books, articles, and chapters on the following subjects: hypnosis; clinical, cognitive, and forensic science, including memory, belief, and suggestibility; dissociation, trauma, and psychopathology; fantasy-proneness, imagination, and daydreaming; assessment, and psychotherapy; and pseudoscience and anomalous experience. My work has garnered more than 10,000 citations (Google Scholar, December 30, 2016).

I received my Bachelor's degree from the University of Michigan in 1967, where I majored in Psychology and minored in Economics. I completed a pre-doctoral clinical internship at Alameda County Mental Health Services in Oakland, California from 1972 to 1973, and completed my Ph.D. work at Indiana University in 1976, with a major in Clinical Psychology and a minor in Sociology. I thereafter completed an NIMH post-doctoral fellowship in Clinical Psychology at the Lafayette Clinic in Detroit, Michigan. I am certified as a Diplomat in Clinical Psychology and Forensic Psychology from the American Board of Professional Psychology and a Diplomat in Psychological Hypnosis from the American Board of Psychological Hypnosis. I am a past president of the American Psychological Association division of Psychological Hypnosis, and I presently serve as a fellow in seven professional organizations, including the American Psychological Association, the American Psychological Society, the American Association for Applied and Preventative Psychology, the Society for Clinical and Experimental Hypnosis, the Commission for Scientific Medicine and Mental Health, and the American Academy of Clinical Psychology. I am currently the editor of *Psychology of Consciousness: Theory, Research and Practice*, and I serve as the North American Editor of *Contemporary Hypnosis and Integrative Medicine*. I presently serve on the editorial board of more than ten different organizations and journals, including the *International Journal of Clinical and Experimental Hypnosis* and the *American Journal of Clinical Hypnosis*, and from 1995 through 1999, I served as book series editor for the American Psychological Association for the series entitled, *Trauma, Memory, Hypnosis and Dissociation*. I currently serve as a Wiley-Blackwell book series editor for the series entitled, *Great Myths of Psychology*. I have published extensively in the area of hypnosis and human memory, and my publications are summarized in my curriculum vitae. I have been admitted as an expert witness in psychology, hypnosis and



memory in several states, including in the matter of *State of New Jersey v. Clarence Moore*, which resulted in the abandonment of the “Hurd” guidelines.

### **Myth that Memory Works Like a Video Recorder**

One significant development in the scientific study of psychology is the decline and fall of the popular theory that memory is a vast, permanent, and potentially accessible storehouse of information. Unfortunately, in the matter at hand, this is exactly the notion the hypnotist, Mr. Richard Shing, conveyed to Ms. Mamie Sharpless, as revealed in the following statement in the transcribed record of his hypnosis session: “You know, your mind has a couple faces to it. You have your conscious mind then your unconscious – your sub-conscious mind. Not unconscious [unintelligible - 00:17:20] for a second. [Laughter]

MAMIE SHARPLESS: Right, subconscious.

RICHARD SHING: Your sub-conscious is -- is kind of uh stores things for you that you go back and get and recall. Your conscious mind, like it's just less [dysfunctional] every day, all this kind of stuff. And things that you want to store, you store back there, some maybe.

Later, Mr. Shing makes the following statement, again prior to hypnosis:

“But what happens to us in a traumatic situation is that all those senses are just at their peak performance. Your eyesight is as sharp as it can be, and your hearing is as keen as it can be, and your smell and all that. So when someone is in a -- and the best analogy I know is like when someone has ever been in a wreck, they'll say, “Boy, you know, I can see this, I can remember to this day,” or some people talk about when Kennedy was assassinated, some people talk about now 9/11, “I know exactly where I was and what I was doing and when I seen that on TV.” It's because it stuck on our memory because it was such a tragedy... Now likewise if you're in an accident sometimes, your subconscious mind might know everything that happens but it's not

going to let your conscious mind know it because we know what stress does to the body.

[00:02:00] RICHARD SHING: So our minds are very powerful and they know just how much it can let you have, and if you can cope with it, they'll let a few more things creep in. "Oh, I do remember that, I do remember now them getting me out of that car and helping, and I remember my leg was hurt and I got trapped and they had to cut that uh metal away," or whatever..."

These statements strongly convey the misconception that there is a part of the mind, the so-called "subconscious," which not only faithfully records "everything that happens," but also acts as a gatekeeper of what rises above the threshold of consciousness. Unfortunately, this depiction is not at all how the mind works. Even in cases of emotionally compelling, so-called *flashbulb memories*, which Mr. Shing refers to, which are marked by a seemingly photographic quality, recollections often change substantially over time, as documented by studies of the catastrophic breakup of the space shuttle Challenger, the trial verdict of football star O. J. Simpson (Schmolck, Buffalo, & Squire, 2000), and the September 11, 2001 attacks (Hirst, Phelps, & Meksin, 2015). I will opine below that hypnosis can distort flashbulb memories. Not only can memories change over time, but false memories also can persist over time, for months (Laney, Bowman Fowler, Nelson, Bernstein, & Loftus, 2008), and remain highly distorted for at least a year and a half (Zhu et al., 2012).

In short, this interaction with the hypnotist, prior to the induction of hypnosis, clearly implies that hypnosis can access information that is recorded in memory but is not available under ordinary circumstances. In 2010, Lilienfeld, Lynn, Ruscio, and Beyerstein (2010) list as one of the "50 great myths of popular psychology" the notion that "human memory works like a tape recorder or video camera, and accurately records the events we've experienced" (p. 65). Or in the matter at hand, research refutes the idea that there exist a separate aspect of the mind that

somehow records whatever transpires, maintains the recording permanently, and serves up what is hidden when hypnosis is implemented.

There exists a virtual consensus among cognitive scientists that memory is fallible, quirky, and reconstructive in nature. The vagaries of memory contradict the view that memories are stored in pristine form; it is now widely recognized that what is recalled is rarely, if ever, a true “snapshot” of a witnessed event. This includes events that an eyewitness recalls with a high degree of confidence, which can be inaccurate or seriously distorted (Brewer & Wells, 2011; Howe, 2013; Loftus, 2013). As of 2016, of the 336 criminal defendants exonerated on the basis of DNA testing, about 71% were convicted largely on the basis of inaccurate eyewitness testimony (Bushnell & Sinha, 2016).

Since the trial of Mr. Chanthakoummane, it has become abundantly clear that non-hypnotic suggestive procedures can implant false memories of complex events, such as riding in a hot air balloon, being the victim of bullying, being subjected to a vicious animal attack, and committing a crime, in approximately 20% to 80% of participants (e.g., Garry & Wade, 2005; Lindsay, Hagen, Read, Wade, & Garry, 2004; Mazzoni, Loftus, Seitz, & Lynn, 1999; Shaw & Porter, 2015). Moreover, false memories can persist over time, for months (Laney, Bowman Fowler, Nelson, Bernstein, & Loftus, 2008), and even remain highly distorted for at least a year and a half (Zhu et al., 2012).

Memory errors are particularly likely to occur when memories are hazy, disjointed, or completely unavailable. Confabulation--the tendency to fill in memory gaps, such as when information is not encoded, with information that is not necessarily accurate--is a hallmark of normal human memory. Nevertheless, memory errors are not often random. What is recalled at any particular time seems to be highly dependent on witnesses' current beliefs, inferences, and

expectancies about what was experienced in the past (see Hirt, McDonald, & Markman, 1998 for a review). Often, memories are consistent with witnesses' "best guesses" based on past learning and experiences, projected future experiences, and views of the self and others. Studies (see Hirt, Lynn, Payne, Krackow, & McRea, 1999; Lynn & McConkey, 1998) have demonstrated that when individuals lack memories for specific events, they, often quite unconsciously, engage in a process of hypothesis-testing that increases the likelihood that what will be recalled will be consistent with their hypotheses regarding what occurred. Memories of witnessed events can be highly inaccurate and biased by past experiences, beliefs, and expectations.

Another source of memory errors is imagining events. Numerous studies now show that asking people to imagine events can create false memories or increase confidence in the likelihood that a particular event occurred. This latter phenomenon is known as imagination inflation (Garry, Manning, Loftus, & Sherman, 1996; Sharman & Scoboria, 2009). The phenomenon of imagination inflation can even extend to *actions* a person comes to believe they have undertaken. For example, Lampinen, Odegard, and Bullington (2003) found that some participants reported incorrectly they had engaged in actions that they in fact only imagined. Over successive imagination trials, participants' false recollections more closely approximated true recollections in terms of sensory details, emotion, and contextual details.

In the case of Ms. Sharpless, Mr. Shing provided the following suggestion: "I want you to be able to recall the – in your mind's eye, what you just spoke about, that you'll be able to recall the vehicle description, the Mustang, even this Asian male, that you'll be able to clearly remember that even after you come out of hypnosis." Of course, the mind does not have an "eye," and when Mr. Shing makes such reference, and averring that Ms. Sharpless will "clearly remember," he is not only inviting Ms. Sharpless to imagine what she witnessed, thereby

increasing the risk of false recollection, but also increasing the likelihood that she will be confident in her recollection regardless of memorial accuracy.

Throughout the hypnosis, Mr. Shing, when prompting recall, suggests that Ms. Sharpless revisits the scenes she witnessed in her “mind’s eye.” For example, at another point during hypnosis, Mr. Shing states: “I want you to refocus in on the car and I want you to -- get yourself in position. You see yourself in your mind’s eye approaching the car from the rear of the white Mustang. You’re seeing it. It’s closest to you. You can see that it’s Texas license plates. Can you make out any numbers or letters?”

MAMIE SHARPLESS: No.

RICHARD SHING: In your mind’s eye, you’re looking at it from the back and then you’re looking at it from the front. You see the color of the plate?”

In the case of the hypnosis of Mr. Villavicencio , Mr. Shing makes similar reference to the mind’s eye, relating it to images, and says, “When I say something about “in your mind’s eye, let this image develop,” thereby clearly encouraging the use of “creative imagery.” Later, Mr. Shing provides the following suggestions: “I want you now to remove yourself in your mind’s eye, the image of this person. This image will become [unintelligible - 01:33:11] slow motion to you now and your, this image of this person will be freeze-framed in your memory and you will be able to recall this image in your mind’s eye by merely closing your eyes, you’ll be able to see this person very clearly and just [unintelligible - 01:33:39] as you do on the day of July the eighth, 2006. You’ll be able to do that. [01:34:00] So this image that you see, make sure that it is very sharp and distinct. Maneuver yourself. Do you see this image as clearly and as distinctly as you can? When you do that, let me know by raising and lowering your left index finger.”

The “mind” clearly cannot freeze-frame images, much less memories, or view what transpires in slow motion, nor can eyewitnesses actually “make sure images are sharp and distinct” at will without using creative imagination, which does not necessarily hew to reality, simply at the behest of a hypnotic suggestion. Such suggestions also place very strong demands for recall and imply that whatever is recalled will truly mirror reality.

Scientists now know that not even people with superior autobiographical memories are immune to false memories. Patihis et al. (2013) identified participants with extraordinary memories, including the ability to provide the dates of well-known public events and to accurately name significant public events given only a date. These “memory athletes” were just as likely to produce false memories in response to a variety of methods designed to bring them about as were people selected for their perfectly normal memories.

### **The Prevalence of the Myth of Permanent Memory**

While few, if any, contemporary experts would not avidly refute the myth of the permanence of human memory, recent surveys since the trial document the *continued* prevalence of this myth among the general population, undergraduate students, and jurors. For example, in 2014, Patihis and colleagues (Patihis et al., 2014, Study 2) reported that two thirds (66.7%) of undergraduate participants sampled agreed to some extent with the statement that “[m]emory of everything experienced is stored permanently in the brain, even if we can’t access all of it,” while a similar rate of 69.6% of participants recruited from the general public responded affirmatively to some extent to the same question. When Alvarez and Brown (2002) worded the question in a somewhat more restrictive way (“[p]recise records of all our experiences are permanently stored in the brain”), a lower yet still sizable percentage (31%) of the U.S. public endorsed the question affirmatively. Simons and Chabris (2011) reported that 47.6% of

respondents in the community responded affirmatively to the question, “[o]nce you have experienced an event and formed a memory of it, that memory does not change.” Simons and Chabris found that when the question was worded, “[h]uman memory works much like a video camera, accurately recording the events we see and hear so that we can review and inspect them later,” 46.9% of a sample drawn from Mechanical Turk responded affirmatively (Simons & Chabris, 2012), as did 63% of a sample acquired by SurveyUSA (Simons & Chabris, 2011).

As the above studies reveal, a broad swath of the U.S. population continues to believe – incorrectly -- that memory features are recorded or laid down on a permanent basis. Can the same be said about potential jurors? Schmechel and colleagues (Schmechel, O’Toole, Easterly, & Loftus, 2006) surveyed over a thousand potential jurors in the District of Columbia and found that “46% of potential jurors believe that the witness on the stand is effectively narrating a video recording of events that she can see in her “mind’s eye” (Schmechel et al., p. 2006). In fact, Mr. Shing used the term seeing images in the “mind’s eye” in the hypnosis of both parties he hypnotized.

Clifasefi, Garry, and Loftus (2007, pp. 60-61) contend there are three problems with the widespread view that memory operates like a video camera, storing information in the brain in something like a permanent video library. “First, subscribing to the video camera view means subscribing to the belief that we do not forget something so much as we temporarily cannot find where we have stored the information in our mental library. Secondly, with this view comes the belief that the right techniques might help us to tidy up the video library and find whatever it is we are trying to remember. Thirdly, holding this view of memory also means that one believes that once we find the missing video, remembering is a simple matter of replaying the information etched into the memory records.” The authors further aver, “There is no scientific support for

these views.”

It logically follows that people who hold these popular views about the mind and memory will be more likely to believe that their recollections are accurate, independent of their actual veracity, and that jurors who ascribe to this view are likely to place strong credence in memories recounted at trial. More specific to the matter at hand, if memory techniques based on this view are used to refresh witness recall, and jurors similarly believe that memory works like a video recorder, it follows that jurors will be more likely to find memories to be credible that are elicited by such techniques.

### **Risks of Hypnosis: A Conceptualization**

If memory produced lifelike mental replicas of past events, then there would be no need for special memory enhancement techniques such as hypnosis. Unfortunately, as I have argued, memories for past events are often absent, poor, or inaccurate, in whole or in part. If hypnosis were a reliable method of retrieving forgotten memories, then confidence in its use for the purpose of memory recovery or enhancement would be warranted. Yet this is not the case. Hypnosis compounds the ubiquitous memory errors that occur in everyday life. Many of the empirical studies reviewed support the possible memory-impairing effects of hypnosis.

By involving eye closure and by encouraging imagination, relaxation, and a reliving of the past, the use of hypnotic methods can discourage critical evaluation of suggested events and memories, lower report criteria for “memories,” and promote imagination inflation. According to Wagstaff (2008), “The most generally accepted explanation for the false memory effect is that because of the expectancies associated with hypnosis and pressure brought to bear by the investigating hypnotist to remember more, hypnotized witnesses sometimes adopt a more lax criterion for report (Wagstaff, 1999a, 1999b; Webert, 2003)” (p. 1286). Because many



individuals expect that hypnosis will increase the volume and accuracy of their memories, it increases motivation to search for memories and report imagined or vaguely recalled events or guesses as real memories (Scoboria, Mazzoni, & Kirsch, 2006). After all, if participants come to believe and expect that heretofore unrecalled events witnessed can be accessed following hypnotic procedures because the subconscious mind records everything, then it is understandable that they would conclude that their remembrances are accurate, regardless of their actual veracity.

The prevalence of positive expectancies about the power of hypnosis to facilitate memory comes into relief when recent survey research is considered. Patihis et al., 2014 (Study 2) recently reported that 64.3% of the general public endorsed the statement, “Hypnosis can accurately retrieve memories that previously were not known to the person” among samples in the United States (64.3%), Great Britain (65.5%), and India (78.0%). A sizable percentage of undergraduates in the United States similarly answered this question in the affirmative (44.6%; Patihis et al., Study 1; 43.5% Study 2). Closer to the matter at hand, in terms of beliefs about hypnosis in the forensic context, Simons and Chabris (2011) reported that as many as 55.4% of the U.S. general public agreed that “Hypnosis is useful in helping witnesses accurately recall details of crimes.” Despite these common and well-entrenched beliefs, the review in the next section indicates that hypnosis is not a reliable means of ascertaining the historical accuracy of a witnessed event.

### **Hypnosis and Memory: Empirical Studies**

**The risk of false or inaccurate memories.** Hypnosis increases the sheer volume of recall, resulting in more incorrect as well as correct information. When response productivity is controlled, hypnotic recall is no more accurate than non-hypnotic recall (Erdelyi, 1994, review of

34 studies; Steblay & Bothwell, 1994 review of 24 studies) and results in increased confidence for responses designated as "guesses" during a prior waking test (Whitehouse, Dinges, E.C. Orne, & M.T. Orne, 1988).

False memories are associated with hypnotic responsiveness, such that highly hypnotizable subjects tend to report more false memories than low hypnotizable persons. Nevertheless, even relatively non-hypnotizable participants, including witnesses of live and videotaped events, report false memories (see Lynn, Myers, & Malinoski, 1997). The fact that some low suggestible individuals report hypnotically elicited false memories implies that suggestive elements inherent in recall retrieval procedures jeopardize recall, independent of responsiveness to hypnosis (E.C. Orne, Whitehouse, Dinges, & M. T. Orne, 1996). Moreover, highly suggestible individuals are vulnerable to suggested memories in nonhypnotic as well as hypnotic conditions.

Critics (Brown, Schefflen, & Hammond, 1998) have claimed that many extant studies are flawed because they are: (a) based on sterile laboratory research that uses personally irrelevant stimuli far removed from real-life, emotionally laden events; (b) employ relatively short retention intervals, often testing subjects on the same day they are exposed to laboratory stimuli; (c) rely solely on a forced-choice recall test procedures that are "predisposed to produce biased, unreliable data" (p. 299); and (d) test for hypnotically created memories during hypnosis, instead of following hypnosis (p. 330).

A 2006 study (Krackow, Lynn, & Payne, 2005-2006) addressed these criticisms by evaluating emotional "flashbulb-type" (see above) real-life memories of the death of Princess Diana, first three days after her death, and then after an 11-12 week period. Only participants who initially reported an emotional reaction to her death and provided complete narratives of

their recollections were included in the data analyses. Task motivated subjects, simply instructed to do their best to recall the details of her death, and subjects in which the initial context of recall was reinstated, were more consistent in their recall of events than subjects who were hypnotized to augment their recall.

In 1995, the American Society of Clinical Hypnosis (ASCH) issued guidelines for the use of hypnosis to improve or recover memories (Hammond et al., 1995). This document suggested that hypnosis could be used with no special risks when the procedures were not accompanied by inappropriately suggestive questions. Two studies respond directly to this contention by independently assessing the effects of hypnosis and misleading questions. Scoboria and his associates (Scoboria et al., 2002) found that hypnosis and misleading questions independently decreased the accuracy of memory reports and decreased “don’t know” responses. Interestingly, the effects of misleading questions exceeded the effects of hypnosis, but the two effects were additive. Although Scoboria, Mazzoni, and Kirsch (2006) found that hypnosis did not compromise memory, it did not improve memory either: only misleading questions reduced memory accuracy and “don’t know” responses. The reason for the discrepancy between studies may be associated with the fact that the latter study was conducted in a group rather than in an individual test setting (as is the case in the matter at hand), like the initial study. Although the evidence regarding the independent effects of hypnosis versus misleading questions is equivocal, research to date does not support the contention that hypnosis enhances recall relative to waking conditions or protects against the effects of misinformation.

The weighty effect of misleading questions and methods goes a long way toward explaining why some studies find no differences in memories across hypnotic and non-

hypnotic procedures. In many of these investigations, misleading questions and procedures are included in both hypnotic and non-hypnotic conditions (see Lynn, Neuschatz, Fite, & Rhue, 2001).

**The risk of enhanced and unwarranted confidence.** As alluded to above, one significant concern regarding hypnosis is that it inflates recall confidence. If a witness confidently believes that a false memory mirrors reality, and has problems distinguishing pre- and post-hypnotic memories, then effective cross-examination might prove difficult or impossible. In fact, the combination of pre-trial preparation and hypnosis can produce resistance to cross-examination in laboratory studies (Spanos, Gwynn, Comer, Baltruweit, & DeGroh, 1989). Because of the high degree of credibility usually accorded by the layperson to hypnotic procedures, and the witnesses' confidence in the truthfulness of the memories, triers of fact could mistakenly conclude that an essentially false narrative was essentially true

Recent scientific literature reviewed since the trial supports and expands these concerns. Lynn, Malaktaris, Barnes, and Matthews (2009, updated, 2013) reported that in 23 studies, hypnotized subjects either expressed greater confidence in recollections during or after hypnosis compared with subjects in nonhypnotic conditions, or hypnotized subjects expressed confidence in the validity of pseudomemories they had previously denied. In nine studies, hypnotic and non-hypnotic conditions were comparable in terms of recall confidence. The consistency of the evidence indicates that hypnosis can augment confidence ranging from a very small to a great extent.

**Hypnotically elicited memories can be resistant to change and be highly malleable.** Research also indicates that reports of hypnotically elicited pseudo-memory can be obdurate and recalcitrant to modification. For example, Bryant and Barnier (1999) conducted two experiments

testing participants for recall of their second birthday, an age widely recognized by cognitive scientists as the cutoff of infantile amnesia (Malinoski & Lynn, 1999).

In Study 1, all of the highly suggestible hypnosis participants who reported a birthday memory during hypnosis (58%) maintained their reported memory, even after they were told (accurately) that reliable scientific evidence has demonstrated that immature neurological development precludes accurate recall of events at 2 years of age. However, less than half (38%) of the highly suggestible participants who were not hypnotized and initially reported a memory maintained their memory after they were provided with scientific evidence regarding early memories.

In Study 2, all subjects who reported a memory following hypnosis maintained their belief in the reported memories in the face of challenging information. Whereas low suggestible participants instructed to fake hypnosis (simulators) reported less confidence with each report of their pseudomemory, non-simulating participants maintained their belief in their reported memory across three assessment periods.

In a third study of early memories, Marmelstein and Lynn (1999) found that participants reported earlier memories during hypnosis than they did both prior to hypnosis and following (nonhypnotic) instructions to recover memories over a 2-week period. Although one third of participants reported memories prior to the cutoff of infantile amnesia (i.e., age 2), following nonhypnotic suggestions that they could recall earlier memories, two thirds of hypnotized participants reported such memories.

In a fourth study that highlighted the plasticity of hypnotically recalled events, Green (1999) found that after a brief 3-minute self-hypnosis experience, coupled with the insinuation that hypnosis improves memory, participants reported earlier autobiographical memory reports ( $M =$

29.5 months) compared with participants who received instructions for relaxation ( $M = 37.9$  months) or counting/visualization ( $M = 48.9$  months). Nearly 40% of the “hypnotized” participants reported a highly implausible memory for an event that reportedly occurred at or before 12 months of age.

**Prehypnotic warnings do not increase accuracy beyond nonhypnotic recall.** Research has also shown that even when participants are *warned prior to hypnosis* about the imperfections of hypnotically elicited recall, such warnings are only occasionally effective. Studies that have examined the protective effects of providing individuals with prehypnotic “warnings” about the imperfections of hypnotically elicited recall do not inspire much confidence in their use. Burgess and Kirsch (1999) found that warnings mitigated some of the memory distortions associated with hypnosis but did not improve recall above and beyond a nonhypnotic condition. Neuschatz, Lynn, Benoit, and Fite (2003) found that repeated warnings that hypnotic and nonhypnotic memories are not necessarily accurate did not improve recall relative to a nonhypnotic condition. Green, Lynn, and Malinoski (1998) warned participants that hypnosis could lead to false memories and found that these participants were less likely to accept the false suggestions that they had been awakened by a noise in the night the previous week than an unwarned control group (38% vs. 75%). Nevertheless, warned participants who accepted the false belief were *even more likely* to continue to endorse the false belief after hypnosis (75% vs. 58%).

**Procedural guidelines.** Given converging and evidence, it is not surprising that increasing concerns have been raised about the admissibility of hypnotically elicited testimony, even when procedural guidelines are followed. Procedural guidelines and safeguards were first elaborated by the New Jersey Supreme Court in State v. Hurd, 432 A.2d 86 (1981). Since that

time researchers – including Martin Orne himself, who was the original proponent of the guidelines – have concluded that hypnotically-elicited testimony is *so unreliable that no array of procedural safeguards can outweigh the inherently biasing effect of hypnosis*. Certainly, no research to date has shown that safeguards can ensure the accuracy of hypnotically enhanced recollections or reliably produce recall that is more accurate than recollections that are not hypnotically enhanced. Although an early proponent of safeguards, Orne himself came to believe that even the safeguards he himself articulated are not sufficient to prevent hypnotized witnesses from confusing false memories with recall of prehypnotic observations. In 1984, Orne wrote that, “hypnosis *should not be used* to prepare a witness to testify in court, such as in an attempt to improve the recall of a previously unreliable or uncertain witness” (Orne et al., 1984, p. 171, 205).

Years after certain courts relied on the Hurd decision to guide its analysis of hypnosis evidence, the Supreme Court of New Jersey in 2006 found this and other arguments, including many of those presented in this document, to be compelling, causing the court to abandon the Hurd Guidelines (State v. Moore). In Moore, the court concluded that the guidelines it previously espoused were not longer adequate to ensure the reliability of hypnotically refreshed testimony, and that such testimony should no longer be permitted in criminal proceedings.

Still, some of the guidelines can be of use in evaluating pre-versus-post hypnotic testimony. For example, it is standard forensic practice to record all contacts with the witness before, during, and after hypnosis. In this case, such a transcript of what transpired after hypnosis is illuminating and noteworthy. Specifically, after hypnosis, Mr. Shing spoke with Ms. Sharpless about bringing in a forensic artist. Ms. Sharpless stated with reference to her eyewitness identification, “I just know he’s Asian,” after which Mr. Shing offers the highly

suggestive statement in response "... You know, there are certain features that Asians have."

This comment could well have led Ms. Sharpless to develop a highly stereotypic image/memory of Mr. Chanthakoummane, which influenced the sketch that was generated and increased her confidence in the accuracy of her identification.

**Lack of correlation between emotional significance and reliability of memory.**

Mr. Shing's prehypnotic talk regarding trauma, alluded to above, implied that if a perception of an event had emotional significance for the subject, the long-term memory of the event will be stored in the original form in a permanent fashion. This notion has been seriously undermined by empirical studies, in addition to the flashbulb memory studies cited above. For example, in another study of US veterans of the Gulf War, Operation Desert Storm, Southwick, Morgan, Nicolaou, and Charney (1997) found that 88% of veterans recounted a different response regarding a traumatic event (for example, sniper fire) they experienced 2 years after their service, compared with 1 month after their return, and 61% of veterans experienced more than 1 changed memory. Accordingly, contrary to the implication of Mr. Shing, the emotional significance of an event does *not* necessarily increase the accuracy of a witness's recall.

**Conclusions**

It is fair to say that today a virtual consensus exists among cognitive scientists and the larger psychological community that hypnosis imposes risks of false memory creation and that hypnosis further carries a risk of unwarranted confidence in memories, with attendant risks of grievous errors in eyewitness identification. Developments in the field of psychological hypnosis have not only reinforced the perception in the scientific community that memory is fallible under ordinary circumstances and that hypnosis increases the risk of false memories, but also have: (a) documented the persistence of hypnotically elicited improbable or false memories,



even in the face of challenging information; (b) revealed and brought into relief the high degree of plasticity of hypnotically-induced memory reports; (c) shown that the induction of hypnosis, independent of leading questions, can engender inaccurate recall; and (d) demonstrated that hypnosis can produce recall that is inconsistent over time in relation to highly emotionally salient events.

Several additional developments are equally noteworthy. First, courts across the country, including the New Jersey court that originally approved of the Hurd guidelines described in Dr. Orne's testimony, have shifted to better reflect the more recent scientific status of hypnosis and to underline the risks inherent in hypnotic procedures for revivifying memories. Additionally, there is now an abundance of evidence that (a) imagination can inflate false recall, (b) the mind does not operate like a video recorder and the "subconscious" does not store memories permanently, and, therefore, (c) an eyewitness cannot replay memories and assume that what is recalled accurately reflects the way the events actually unfolded.

65. In conclusion, given the new information about the risks of hypnosis, serious consideration should be given to the possibility that a miscarriage of justice was perpetrated in the case of Mr. Kosul Chanthakoumane.

Signed under the pains and penalties of perjury January 3, 2017.

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Date Rec'd 10-08-99		Tray No.		Date and Time Wanted		Date Shipped	
Patient Rosou Chanthahaummane						Date Written	
Address 6023337						Mail to Facility?	
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Bridge Size	50	Temple Style	20	Temple Length	145	PLASTIC METAL OR COMB <input type="checkbox"/>	
SPECIAL INSTRUCTIONS						SIGNATURE/INSPECTOR	
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Morrison YI						Lenses	
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						OTHER	
Billing Date	REFERENCE		No		7131	TOTAL \$	
	Bldg. Loc. No.	Invoice Number					

Faxed 10/11/99

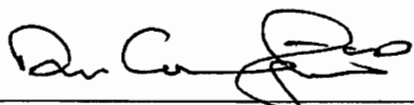


Morrison Youth Inst 3930  
 N.C. DEPARTMENT OF CORRECTION  
 NASH CORRECTIONAL CENTER • OPTICAL PLANT  
 ALT. HWY. 64 W. • NASHVILLE, NC 27856  
 PH: (252) 459-6200 • NC TOLL FREE 1 (800) 388-1353 • FAX: (252) 459-7400

Date Rec'd 7/10/06		Tray No.		Date and Time Wanted		Date Shipped	
Patient Kosau Chantaboummare						Date Written	
Address 0023337						Mail to Facility?	
City				State			
DISTANCE		SPHERE	CYLINDER	AXIS	PRISM	BASE	DECENTRATION IN OUT
	R	-4.25	-1.00	180			
	L	-4.75	-1.75	180			
							BAL-SAFE
							SAFETY 3 OMM <input type="checkbox"/>
							COLOR TINT OR COATING
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	L						HARD RESIN
PD Far 63		D.B.I		LENS SIZE (BOX) & SHAPE			
Near							
NAME or CAT NO. of (Enclosed) (To Come) (Supply) FRAME or MTG. and COLOR						ASSEM <input type="checkbox"/>	
Brown						EDGE ONLY <input type="checkbox"/>	
						UNICUT <input type="checkbox"/>	
						EDGE FOR <input type="checkbox"/>	
Bridge Size 52	Temple Style 20	Temple Length 145	PLASTIC METAL OR COMB <input type="checkbox"/>				
SPECIAL INSTRUCTIONS						SIGNATURE/INSPECTOR	
Lt Int Dw Campbell						DATE	
CHARGED TO						Lenses	
						Frame or Mtg.	
						Misc.	
						SUB TOTAL	
						OTHER	
Billing Date	REFERENCE		No 7097				
	Bldg. Loc No	Invoice Number					
TOTAL						\$	



N.C. DEPARTMENT OF CORRECTIONS  
 NASH OPTICAL PLANT  
 ALT. HWY. 64 W. • NASHVILLE, NC 27856  
 PH: (252) 459-6200 • NC TOLL FREE 1 (888) 388-1353 • FAX: (252) 459-7400

Date Rec'd		Tray No.		DPUS No. <b>0023337</b>		Date Shipped	
Patient Name <b>Prasou Chanthahoumane</b>						Date Written <b>4-26-02</b>	
Order Name & No. <b>MORISON CORR 3930</b>						Mail to Facility? <input checked="" type="checkbox"/>	
DISTANCE		SPHERE	CYLINDER	AXIS	PRISM	BASE	BAL-SAFE
	R	-4.25	-1.25	180			SAFETY 3 DMM <input type="checkbox"/>
	L	-5.00	-1.75	180			COLOR TINT OR COATING
ADD		SEGMENT POWER	HEIGHT	PD		INDICATE STYLE OF MULTI-FOCAL DESIRED	
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R				63		SINGLE VISION	
L							
NAME or CAT NO. of (Enclosed) (To Come) (Supply) FRAME or MTG. and COLOR						BIFOCAL STYLE	
Grey						TRIFOCAL STYLE	
Eye Size (A)		Bridge (DBL)		Temple Length		OTHER LENSES:	
52		20		140			
SPECIAL INSTRUCTIONS						SIGNATURE/INSPECTOR	
						DATE	
CHARGED TO						Lenses	
						Frame or Mtg.	
						Misc.	
						SUB TOTAL	
						OTHER	
						TOTAL \$	
Billing Date		REFERENCE		DATE			
		Fac. Loc. No. Invoice Number		<b>4/26/02</b>			

*boxed 4.29.02*

These eyeglasses have been deemed medically necessary and are being issued to you from the Polunsky Unit Medical Department. Upon your signature of this form it will be noted in your chart that these were issued. Administrative policy states that an offender may only have one pair of prescription eyeglasses in their possession. Therefore, you must turn in any other eyeglasses previously issued before the new pair can be issued. It is the responsibility of the above-referenced offender to keep eyeglasses in their possession at all times and to maintain eyeglasses in proper condition suitable for wearing. If this pair of eyeglasses is a renewal, you must turn in the old pair before the replacement is issued.


▶▶▶The following instructions will help you take the best care of your eyeglasses◀◀◀

- 1) You are allowed one (1) pair of eyeglasses every 24 months regardless of whether they are lost, stolen or broken. If you require a new pair of glasses before the end of 24 months, you will have to pay for them. At this time, the cost is under \$20 for single vision glasses.
- 2) When in the shower, leave the eyeglasses in your house to eliminate the possibility of losing them or having them stolen.
- 3) Keep your prescription with your eyeglasses case at all times.
- 4) Plastic lenses scratch easily. Run water over the lenses before using cloth to dry them.

Once you have received your glasses, if there are any problems please address your sick call request to a nurse giving adequate information about the problem you are having. "I received my glasses and can't see out of them" is not adequate information and will only delay efforts to have your problem corrected. Please give as much information as possible and bring your glasses with you when you are laid in for an appointment.

Please note that free world glasses are not allowed to be sent to the Polunsky unit without prior written permission from the Warden. If you arrive at the Polunsky with free world glasses already, they cannot be repaired by UTMB or TDCJ.

SHIP TO: <b>UTMB</b> <b>Estelle RMF</b> <b>254 FM 3478</b> <b>Huntsville, TX 77320</b> <b>Attn: Optometry</b>	UNIT: Ea/12-DR 12044	PATIENT: Chanthakoummare, Kosou PATIENT NO: 999529	DATE: 7/3/09	P.O. NO.:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">LENS TYPE</th> <th colspan="2">SPECIAL INSTRUCTIONS:</th> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>PLASTIC</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>POLYCARBONATE</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>GLASS</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>CLEAR</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>HARD COTE</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>ROLL &amp; POLISH</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>ULTRAVIOLET</td> <td></td> <td></td> </tr> <tr> <td></td> <td>FT 28</td> <td></td> <td></td> </tr> <tr> <td></td> <td>FT 35</td> <td></td> <td></td> </tr> <tr> <td></td> <td>7x28</td> <td></td> <td></td> </tr> <tr> <td></td> <td>8x35</td> <td></td> <td></td> </tr> </table>	LENS TYPE		SPECIAL INSTRUCTIONS:		<input checked="" type="checkbox"/>	PLASTIC			<input type="checkbox"/>	POLYCARBONATE			<input type="checkbox"/>	GLASS			<input checked="" type="checkbox"/>	CLEAR			<input type="checkbox"/>	HARD COTE			<input type="checkbox"/>	ROLL & POLISH			<input type="checkbox"/>	ULTRAVIOLET				FT 28				FT 35				7x28				8x35							
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UNIT:  <b>82/TL-DIR</b>  <b>12A-06</b>						PLASTIC <input checked="" type="checkbox"/>					
						POLYCARBONATE <input type="checkbox"/>					
						GLASS <input type="checkbox"/>					
						CLEAR <input checked="" type="checkbox"/>					
PATIENT: <b>Chantra Koummane, Kosoul</b>						HARD COTE <input type="checkbox"/>					
						ROLL & POLISH <input type="checkbox"/>					
						ULTRAVIOLET <input type="checkbox"/>					
						FT 28 <input type="checkbox"/>					
PATIENT NO: <b>999529</b>						FT 35 <input type="checkbox"/>					
DATE <b>10/5/14</b>						7x28 <input type="checkbox"/>					
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70F		Grey		48		24					
TEMPLE		SPATULA				CABLE					
5314											
REFRACTIONIST SIGNATURE / PHONE NO. 											

~~Glasses, etc  
212) 535-4022  
Kevin~~

~~Price: \$ 267.35  
8.95 Priority mail  
276.30~~

~~Plastic, scratch resistant, UV protection, Verilite (polycarbonate) with transitions (grey)~~

~~Armani Exchange  
AX 3023 (Black)  
\$58.00~~



001794



001795







2006 Dallas, TX

APPENDIX C

Transcript of Testimony of Dr. Steven Lynn at trial court evidentiary hearing,  
Cause No. W380-81972-07-HC2

**REPORTER'S RECORD**

VOLUME 2 OF 6 VOLUMES

TRIAL COURT CAUSE NO. 380-81972-07

COURT OF CRIMINAL APPEALS NO. WR-78,107-02

STATE OF TEXAS	)	IN THE DISTRICT COURT
	)	
vs.	)	COLLIN COUNTY, TEXAS
	)	
KOSOUL CHANTHAKOUMMANE	)	380TH JUDICIAL DISTRICT

---

**WRIT OF HABEAS CORPUS HEARING**

---

On the 16th day of July, 2018, the following came on to be heard in the above-titled and numbered cause, and the following was had before the Honorable Benjamin N. Smith, Judge Presiding, held in McKinney, Collin County, Texas.

Proceedings reported by computerized stenotype machine; Reporter's Record produced by Computer-Assisted Transcription.

KARLA KIMBRELL, Texas CSR #3790  
 Official Court Reporter - 380th Judicial District Court  
 2100 Bloomdale Road, McKinney, Texas 75071  
 (972) 548-4661

## APPEARANCES

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5	Mr. Gardner admitted pro hac vice.....						6	2
6	State provides missing page of transcript and will provide complete interrogation video						7	2
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8	<b>APPLICANT'S</b>							
9	<b>WITNESSES</b>							
		<b>DX</b>	<b>CX</b>	<b>RDX</b>	<b>RCX</b>	<b>VD</b>		<b>VOL</b>
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## EXHIBIT INDEX

STATE'S EXHIBIT NO.	DESCRIPTION	OFFERED/ADMITTED	VOL.
1	Publication	6/7	2
2	Publication	6/7	2
3	Publication	6/7	2
4	DPS investigative hypnosis data report	6/7	2
5	Hypnosis form	6/7	2
6	Media release	6/7	2
7	Statement - Sharpless	6/7	2
8	Statement - villavicencio	6/7	2
9	Email - Barbara Johnson	6/7	2
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1	Curriculum Vitae/Bowers	6/7	2
2	Affidavit - Bowers	6/7	2
3	Printout/PowerPoint-Bowers	6/7	2
4	Curriculum Vitae/Lynn	6/7	2
5	Affidavit - Lynn	6/7	2
6	Printout/PowerPoint-Lynn	6/7	2
7	Curriculum Vitae/Carlson	6/7	2
8	Forensic Files/Thumb drive	6/NA	2

1 (Open court; Applicant present)

2 **PROCEEDINGS**

3 THE COURT: All right. This is Ex Parte:  
4 Kosoul Chanthakoummane, 380-81972-07. This is a Code of  
5 Criminal Procedure, Article 11.071, Section 5, subsequent  
6 writ of habeas corpus on remand from the Court of Appeals  
7 for an evidentiary hearing.

8 Both sides ready to proceed?

9 MS. SMITH: State's ready, Your Honor.

10 MR. ALLEN: Defense is ready.

11 THE COURT: I'd ask the attorneys to  
12 please state your names for the record.

13 MR. D'ANGELO: Good morning, Your Honor.  
14 Carlo D'Angelo on behalf of the Petitioner.

15 THE COURT: Good morning.

16 MR. GARDNER: Good morning, Your Honor.  
17 Greg Gardner on behalf of Mr. Chanthakoummane.

18 MR. ALLEN: Good morning, Judge. Eric  
19 Allen on behalf of Mr. Chanthakoummane.

20 MR. D'ANGELO: Judge, may I speak to one  
21 matter of housekeeping with respect to Mr. Gardner?

22 THE COURT: All right.

23 MR. D'ANGELO: We have a motion that I  
24 filed requesting pro hac vice status for Mr. Gardner. I  
25 don't know if there's a ruling yet on that, but before we



1 go on the record and before Mr. Gardner engages in the  
2 unlawful practice of law in the state of Texas, I would  
3 just like to see that motion addressed, please.

4 THE COURT: I did sign the order admitting  
5 Mr. Gardner pro hac vice on Friday. Does not appear that  
6 it's been processed by the Clerk yet, but I did sign the  
7 order, so unless there's an objection, he is admitted.

8 MR. D'ANGELO: Thank you, Your Honor.

9 MR. ROLATER: John Rolater for the State  
10 of Texas.

11 MS. SMITH: Lisa Smith for the State of  
12 Texas.

13 Your Honor, the parties have reviewed  
14 each others exhibits and in large part in agreement  
15 about their admissibility. We thought just in the  
16 interest of efficiency, we would like to offer to  
17 pre-admit those exhibits that we've agreed on, that way  
18 we can just use them with witnesses without going  
19 through and establishing predicates and such.

20 So the State will offer State's Exhibits  
21 1 through 11. They have previously been tendered to  
22 defense counsel.

23 MR. GARDNER: Your Honor, Defense would  
24 argue -- offer Exhibits 1 through 8. I believe there's  
25 going to be an objection to 8. 1 through 7 are

1 unobjected to. We have them in a binder for you.

2 MS. SMITH: Yes, Your Honor. State's  
3 objection to Defense 8 is that it's a video of Forensic  
4 Files T.V. show program, our objection to it is that it's  
5 hearsay.

6 Also, State will have two more exhibits  
7 tomorrow that we'll be offering in through our two  
8 experts, they will be furnishing them when they arrive.

9 THE COURT: The Applicant has no objection  
10 to State's 1 through 11?

11 MR. ALLEN: That's correct, Your Honor.

12 THE COURT: State's 1 through 11 are  
13 admitted.

14 State has no objection to Applicant's 1  
15 through 7?

16 MS. SMITH: That's correct, Your Honor.

17 THE COURT: Exhibits 1 through 7 are  
18 admitted.

19 State's exhibits are marked for  
20 identification as "State's Exhibit". The Applicant's  
21 exhibits are marked as "Exhibit".

22 MS. SMITH: Your Honor, I just wanted to  
23 bring one more thing to the Court's attention before we  
24 start. With the parties' agreement, the State offered  
25 the judge an opportunity to view the videos along with

1 the transcript that goes with the interrogation video. I  
2 think the judge might be one of the pages from the  
3 transcript, so I wanted to offer that to the court, it  
4 was Page 36. It was missing from mine, so I thought it  
5 might be missing from yours. Also, when reviewing the  
6 interrogation video this weekend, it's a copy of the  
7 video that's already in evidence from the trial. It's  
8 missing the last, like, two minutes of the interrogation,  
9 so we'd like to offer in -- we've obtained another copy  
10 that's a complete copy, but the audio and video quality  
11 is not as good, so we would like to offer both in to  
12 evidence when we get that second copy, if the defense has  
13 no objection.

14 MR. ALLEN: We have no objection, Your  
15 Honor.

16 THE COURT: All right. It's admitted.

17 MR. ALLEN: I do have a technical question  
18 for purposes of both clarity and brevity, two of our  
19 experts prepared PowerPoint presentations, I would just  
20 need a cord so I can put it up on the screen. I didn't  
21 bring one because I wasn't sure --

22 THE COURT: What kind of cord do you need?

23 MR. ALLEN: USB cord.

24 THE COURT: Is that the only sort of  
25 output that your laptop has?

1 MR. ALLEN: Yes.

2 THE COURT: It doesn't have HDMI or VGA?

3 MR. ALLEN: No.

4 THE COURT: I don't believe we can  
5 accommodate that request, however, if you would like  
6 to -- I can provide you with a flash drive, you can copy  
7 onto that and I can publish any materials from my  
8 computer.

9 MR. ALLEN: That would be fine, Your  
10 Honor. Actually, you're the trier of fact, right, so we  
11 could just follow along, I can say "Next slide" and we're  
12 all on the same page. I can probably send that to --  
13 they have a hard copy of it as well.

14 THE COURT: Okay. If the State has  
15 objected to Exhibit 8, the objection being hearsay --

16 MS. SMITH: Yes, Your Honor.

17 THE COURT: -- Exhibit 8 is not admitted  
18 at this time. If Applicant would like to make an attempt  
19 to establish a predicate for admissibility, certainly,  
20 you may do so, or otherwise make an argument that the  
21 contents in and of themselves establish some exception to  
22 the hearsay rule. Either way, you may proceed with that  
23 attempt or argument as you will, at a time that is  
24 convenient for you. The Applicant having the burden at  
25 this hearing, I would ask Applicant to call your first

1 witness, unless you'd like to make an opening statement.

2 MR. D'ANGELO: For record purposes, Judge,  
3 would the Court permit us to at least make a record  
4 proffer of that exhibit so that we have it on file for  
5 further proceedings in this matter?

6 THE COURT: All right.

7 MR. D'ANGELO: Thank you.

8 MR. ALLEN: Your Honor, I would ask if I  
9 could remain seated during my presentation of the  
10 evidence?

11 THE COURT: That's fine.

12 MR. ALLEN: In terms of an opening  
13 statement, I'll be brief. We have three witnesses that  
14 we'll be calling here today in accordance with the Court  
15 of Criminal Appeals' remand in this case. We have  
16 testimony from Dr. Bowers, who will testify about the  
17 bite mark evidence, we'll have Dr. Lynn, who will testify  
18 about hypnosis, and we have Dr. Carlson, who will testify  
19 generally about eyewitness testimony, but specifically  
20 about in-court identification and cross-racial  
21 identification. We believe this testimony will assist  
22 you in finding good cause to grant the writ in this case.

23 And if we can just get a drive, I can  
24 make a copy of that and we can go on because the first  
25 witness has the PowerPoint.

1 THE COURT: Ms. Smith or Mr. Rolater,  
2 would you like to make an opening statement?

3 MS. SMITH: Your Honor, the State agrees  
4 with defense counsel that bite mark science has changed  
5 and is new. We don't agree that it would have altered  
6 the outcome of this trial. We agree that the DNA science  
7 has changed. We have re-evaluated that evidence, and,  
8 again, the new results would not have affected the  
9 outcome of the trial.

10 Lastly, the hypnosis, we do not agree the  
11 science has changed, and we don't think it would have  
12 changed the outcome of the trial.

13 The State will have two witnesses to  
14 present today or tomorrow, former prosecutor Curtis  
15 Howard and DNA analyst Stacy McDonald. And we'll have,  
16 hopefully, Dr. Spiegel here on another occasion as our  
17 hypnosis expert.

18 THE COURT: I don't believe I heard,  
19 Mr. Allen, you indicate that there was any intention of  
20 presenting testimony with respect to the DNA issue, and  
21 based on the State's opening, I think that there's a  
22 question in my mind whether that issue is being conceded.  
23 I believe when I read the materials, the State of Texas  
24 has conceded that the methodology used for that test has  
25 been found to be unreliable; is that accurate?

1 MS. SMITH: That's an accurate statement,  
2 Your Honor.

3 THE COURT: Mr. Allen, I have the flash  
4 drive here if you'd like to retrieve it.

5 MS. SMITH: Thank you, Your Honor.

6 THE COURT: All right. Does either side  
7 invoke the Rule?

8 MS. SMITH: The State does not, Your  
9 Honor.

10 MR. ALLEN: The Defense does not, Your  
11 Honor.

12 THE COURT: Please call your first  
13 witness.

14 MR. ALLEN: We would call Michael Bowers,  
15 Your Honor.

16 THE COURT: Sir, could you please come up  
17 to the table to be sworn.

18 Sir, please raise your right hand for me.  
19 (Witness sworn)

20 THE COURT: Thank you, sir. Please have a  
21 seat.

22 whenever you're ready.  
23  
24  
25

1                   **CHARLES MICHAEL BOWERS,**  
2   having been first duly sworn, testified as follows:

3                   **DIRECT EXAMINATION**

4   BY MR. ALLEN:

5         Q.    Please state your name for the record, please.

6         A.    Charles Michael Bowers, B-o-w-e-r-s.

7                   MR. ALLEN:  Can I approach the witness,  
8   Your Honor?

9                   THE COURT:  Yes.

10         Q.    Have to go low tech today.  Did you do a  
11   PowerPoint presentation for your testimony here today?

12         A.    Yes, I did.

13         Q.    Does that appear to be full and accurate copy  
14   of what you did?

15         A.    I recognize the first and last page and what's  
16   in between is very familiar, yes.

17         Q.    And the first page -- let's first talk about  
18   your credentials, where did you graduate undergrad?

19         A.    I went to the University of Southern  
20   California for quite a while, I graduated, bachelors  
21   degree in 1971 in psychology, then I continued into the  
22   dental school program and graduated in 1975 with a DDS.  
23   And since then, I've taken postgraduate courses in  
24   medical education because of my faculty position at USC.  
25   And I have a JD degree from California, I'm a member of



1 the bar but I've never practiced law.

2 Q. And in terms of dentistry, what is your  
3 education as it relates to dentistry?

4 A. I'm sorry, what's my reputation?

5 Q. Your education.

6 A. Four years of dental school in the -- I'm  
7 sorry, are you asking about forensic dentistry?

8 Q. Yes.

9 A. Dentists do not have Masters programs that  
10 qualify them with a degree. We generally learn on the  
11 job training. Most forensic dentistry involves applying  
12 dental expertise, X-rays and knowledge of dental anatomy  
13 to the identification of unknown individuals, fire  
14 victims and skeletonized remains and accident victims  
15 and things like that. The training involving human  
16 identification in the area of bite mark using human  
17 teeth, evidence created by -- possibly being created by  
18 human teeth is generally reviewed in short courses and  
19 seminars and annual meetings. I obtained sufficient  
20 experience to take the certification board exam put on  
21 by the American Board of Forensic Odontology, I believe  
22 was in the -- 1989, and I passed that board exam, which  
23 required certain number of cases and affiliation with a  
24 forensic -- coroner's office, and so I became a, quote,  
25 certified forensic dentist in '89. Since then, I've

1 gone through the usual routine of education by attending  
2 annual meetings of the professional organizations  
3 involving forensics.

4 MR. ALLEN: The next slide, Judge.

5 A. Today's goals.

6 Q. Do you have any current memberships?

7 A. Yes. I'm a fellow of the American Academy of  
8 Forensic Science, which is an overall concerted  
9 multi-disciplinary group that has about six or seven  
10 thousand members. There's a pathologist and  
11 criminologist, been a fellow since the early '90s. I'm  
12 certified as a senior crime scene analyst by the IAI,  
13 which is International Association of Identification,  
14 which is like a crime scene group. There are not too  
15 many dentists that are members of that, but primarily  
16 law enforcement crime scene people. And that's about  
17 it. I used to be a member of the ABFO, where I was  
18 certified, but I resigned from that group in 2011, I  
19 believe it was.

20 Q. Have you been in private practice as a  
21 dentist?

22 A. I have been and still am. I have a small  
23 dental practice in California.

24 Q. How long have you been in private practice?

25 A. A long time. Forty-two years, I think it is.

1 Q. And do you do any teaching?

2 A. I have a voluntary teaching position at USC.  
3 Now they're calling me an adjunct associate clinical  
4 professor.

5 Q. And what do you teach there?

6 A. I give seminars occasionally on forensic  
7 dentistry.

8 Q. Okay. Have you had any articles published or  
9 books published in the area of forensic dentistry?

10 A. Over the years I've had peer-reviewed articles  
11 published either as a co-author or single author. There  
12 are a couple of journals involving forensic science, one  
13 is The Journal of Forensic Sciences, and the other is  
14 Forensic Science International. I have about 10  
15 articles in those, varying categories that have been  
16 published. I'm involved in the creation of a couple of  
17 training textbooks and some other textbooks involving  
18 forensic dentistry and forensic testimony. I think  
19 there's about five or six of those that I had published  
20 over the years.

21 Q. Have you ever testified in court before?

22 A. Yes, I have. I've been qualified in three or  
23 four states regarding forensic dentistry, and I've been  
24 in court maybe 50 times.

25 Q. Okay.

1           MR. ALLEN: Your Honor, at this point we'd  
2 ask that Dr. Bowers be qualified as an expert.

3           MS. SMITH: State has no objections to his  
4 qualifications.

5           THE COURT: He's accepted.

6           MR. ALLEN: Next slide, please.

7           A. Okay. I'm here to talk about the bite mark  
8 evidence and testimony that was presented in the  
9 original case. I'll try to discuss some of the history  
10 of bite marks in the United States and how it's  
11 developed and evolved to its current status. I want to  
12 discuss a little bit about what bite mark matching is  
13 and that's pattern matching, has nothing to do with DNA  
14 analysis, it's looking at shapes. Predominantly,  
15 bruises on victims -- bruises and skin, obviously, on  
16 victims of violent crime. I will briefly mention  
17 scientific reviews in testing that over the last 10  
18 years has changed the status of bite mark identification  
19 from pattern matching from something that was considered  
20 novel and reliable back in the late '70s to where now  
21 bite mark identification, which is meant as positive  
22 identification of a single human being from a bite mark  
23 in skin, is not considered reliable. Little bit about  
24 the research, just one slide about case law that  
25 reflects the fact that bite mark -- positive bite mark

1 identification as has been -- has been admitted in a  
2 number of cases, and later DNA analysis has proven that  
3 the defendant was innocent. Now, I'm showing that just  
4 as an example of -- experts have come in and tried and  
5 stated that they could identify someone from a bite mark  
6 but apparently, the bite mark wasn't as reliable as they  
7 attested to.

8 Q. Okay. So that's what you hope to accomplish  
9 today with your testimony?

10 A. Yes, just an overview on what the status today  
11 is of bite mark analysis.

12 MR. ALLEN: Next slide, please.

13 Q. What are the two postulates of bite mark  
14 analysis in regards to skin?

15 A. Well, it boils down to two simple assumptions.  
16 When I was training in the early '80s, bite marks were  
17 described to me as being something like a fingerprint.  
18 The postulate that up until probably 10 years ago, the  
19 bite marks were reliable for identification requires,  
20 one, that the assumption that everyone's teeth are  
21 unique. Now that has to do not regarding the ways --  
22 way we look when we smile, our teeth, the arrangement  
23 and front teeth and lower teeth and things like that, it  
24 has to do with the biting edges of those teeth, the  
25 surface of the teeth that come in contact during biting

1 of an object have been claimed to be unique. And the  
2 other is the fact that the -- you have to assume that  
3 skin is an accurate impression material, or substrate.  
4 I don't think we can argue -- would argue that enamel is  
5 probably pretty good substrate or object for someone's  
6 teeth to leave tooth edges in an accurate manner, but  
7 the reality of skin being a good impression material has  
8 been the biggest issue over the last few years regarding  
9 criticism of bite mark analysis.

10 MR. ALLEN: Next slide, please.

11 A. This is just human adult dentition 101. It's  
12 just a overview of what some of the terms are. Class  
13 characteristics of objects that are found at crime  
14 scenes, autopsy remains, or whatever you want, various  
15 legal settings, or police settings, class characteristic  
16 is something that identifies it as a certain type and  
17 human teeth is -- showing this slide, I've got black  
18 outlines, not of the entire teeth, but just taken from  
19 an image of dental models. It's the outline of the  
20 edges of the teeth. So the adult width of the arch is  
21 shown here between 30 and 40 -- there's a --  
22 millimeters, which indicates there's a range of  
23 dimensional widths in the human species. So we can see  
24 that on the top of the screen, just below the numbers 30  
25 and 40, those are the maxillary teeth. The first two

1 teeth in the middle are called central incisors, they're  
2 the largest width. So the lower arch down towards the  
3 bottom of the page, those front teeth are generally  
4 about half as wide as the upper teeth. So if we're  
5 looking at a class characteristic of teeth marks, and if  
6 we're asked to determine if it's a human, these are some  
7 of the general descriptors that we would have to see in  
8 the evidence to reach an opinion.

9 MR. ALLEN: Next slide, please.

10 A. Okay. So here we have a bite mark. This is  
11 an experimentally made bite mark. This is a bite from a  
12 colleague of mine, his teeth, biting into a pig's ear.  
13 It's demonstrative -- the literature calls -- tries to  
14 describe what a prototypical human bite mark in skin is  
15 going to look like. The case work does not support  
16 accurate images very often since the bruising and live  
17 tissue is -- generally can be distorted, and it doesn't  
18 take the actual shape of the object, the teeth as  
19 consistently as what it can do in the lab. So the thing  
20 to look at in this slide is the, what we call two  
21 opposing C shapes, one across the top of the slide, and  
22 one opposing it along the bottom of the slide. The  
23 ruler that is placed here is very important in terms of  
24 photographic requirements, photo crime scene evidence.  
25 This L-shaped ruler was developed about 25 years ago,

1 it's become very popular, and there's a centimeter scale  
2 on this ruler. Just as far as the variability of what  
3 kind of three dimensional impressions you can get biting  
4 into skin hard enough takes a lot of pressure. You can  
5 see on the lower C-shaped arch, we can actually  
6 determine the individual teeth. The skin in this pig's  
7 ear mimicks the shapes of those teeth marks. The  
8 C-shape on top of the screen -- I keep using my finger  
9 and I don't know whether you can see it on your screen,  
10 sorry, the top shows less detail and more even teeth in  
11 the 3D, or 3-dimensional, bite mark that was made in the  
12 lab. This particular case does not have any 3  
13 dimensional features from the autopsy photos of the  
14 injury. This would be the best case scenario type of  
15 bite mark.

16 Q. The picture in this case is -- was conducted  
17 in a lab by one of your colleagues on, I assume, a dead  
18 pig?

19 A. Yes. We wrote a procedure manual on how to  
20 use Photoshop and how to re-introduce dental -- or  
21 digital imaging to looking at photographic evidence  
22 about 15 years ago, and this is one of -- from one of  
23 the pages of that procedures manual.

24 MR. ALLEN: Next slide, please.

25 A. You can punch the numbers one more time. This



1 is just to show you that we're -- because we have a  
2 known biter here, the accuracy of determining which  
3 teeth make which marks in a three dimensional pattern,  
4 just indicates these numbers are teeth numbers. One  
5 more time, please. Very good.

6 Q. So what do these -- what do those numbers  
7 indicate?

8 A. Those numbers indicate the tooth numbering  
9 system that we use in the United States. Because the --  
10 when we have a photograph of a bite mark and we have  
11 models of a number of suspects, or dental models, in  
12 order to group -- in order to test correlation, the bite  
13 mark advocates take the models, or an image of the edges  
14 of the teeth and rotate them upside down and place them  
15 over the photograph of the injury. So in this slide,  
16 what we're looking at is numbers of 6 -- going from  
17 right to left, tooth number 6, 7, 8, 9, 10, 11 at the  
18 top and so forth on the bottom.

19 Q. Okay.

20 MR. ALLEN: Next slide, please.

21 Q. How would you test these postulates, or have  
22 they been tested?

23 A. Well, for many years, the opinions became very  
24 strong that particularly due to the number of cases  
25 that -- where bite mark testimony was accepted, first

1 case in California was in 1975, case named Marx, the  
2 testing of these postulates, these assumptions, any  
3 testing in the medical field, there's a couple terms,  
4 couple three terms to remember. One, has it been tested  
5 to be valid? Does the method measure what it purports  
6 to say? validity testing of human bite marks into skin  
7 has never been sufficiently established. There's  
8 considerable dialogue about what that means.  
9 Reliability. So we've got validity issues with bite  
10 marks that's been thoroughly discussed in the state of  
11 Texas in the last three or four years, and the other  
12 aspect of that discussion, reliability, can multiple  
13 examiners reach the same opinion using the same methods.  
14 Bite mark matching, generally, some people think it's  
15 got the worst reputation, meaning the experts never  
16 agree with themselves. And some of the proficiency, or  
17 arguably, almost proficiency testing that's gone on  
18 within the small bite mark community proves the fact.  
19 So reliability, reproducible, can the same results, same  
20 methods by multiple examiners show up in the literature  
21 and the answer to that is it doesn't. And the history  
22 of bite mark analysis, the Europeans introduced it in  
23 the literature in the late -- during 1960. There were a  
24 number of college professors -- excuse me, college  
25 dentists at the time that expressed a lot of doubt that

1 it could be used to the extent that it gradually came to  
2 be used for, meaning to eliminate all the other  
3 population of the human race and say these teeth, this  
4 mark that's transferred onto this skin bite teeth is  
5 indeed and without a doubt, or with reasonable medical  
6 scientific certainty, just this one individual. So the  
7 industry you can't -- in the U.S. developed, like I  
8 said, really strongly in the '70s. There's only about a  
9 hundred forensic -- certified forensic dentists in the  
10 country associated with the ABFO, and apparently, only  
11 about half of those individuals have anything to do with  
12 bite marks at this point regarding identification.  
13 They've recently over the last, since 2013, determined  
14 that the testimony that was brought forth in this  
15 particular case originally would no longer be allowed,  
16 meaning that you cannot positively identify just one  
17 individual. On the application of identifying bite mark  
18 on victims of assault is still valuable. The reason  
19 it's valuable is because it can lead first responders to  
20 collect DNA from saliva that's been transferred onto  
21 either the skin or the object of the victim. Pattern  
22 comparison, teeth and bruises are -- I've gone under  
23 extensive scrutiny, not so much within a small group of  
24 dentists who have been able to produce scientific or  
25 empirical testing to support what they do, but the

1 review of other scientific agencies has been highly  
2 critical over the last -- since 2009.

3 MR. ALLEN: Next slide please.

4 Q. What is the current scientific -- oh, have you  
5 had a chance to -- do you know anything about the Texas  
6 Forensic Science Commission and their discussion of bite  
7 mark evidence?

8 A. I didn't participate in that, but I certainly  
9 followed as close as I could. I believe it's the Texas  
10 legislature created -- well, created the Forensic  
11 Science Commission and one of the first cases was to  
12 look at a bite mark case. The Commission was  
13 multi-disciplinary in its panel, not just dentists and  
14 held hearings for both advocates and critics of bite  
15 mark identification, and came to a strong conclusion  
16 that the empirical data necessary to positively identify  
17 someone from a bruise shouldn't be considered  
18 admissible. I believe this was, this date, I think is  
19 correct in 2016, and the slide determines some of the  
20 weaknesses that they determine. And they were concerned  
21 about having case review within the state of Texas that  
22 used this type of evidence originally.

23 MR. ALLEN: Next slide, please.

24 A. If you look at this slide at the bottom, PCAST  
25 is one of the -- PCast is one of the -- governmental arm

1 of the executive branch in Washington, D.C., it's the  
2 President's Council of Science and Technology, and they  
3 have a history of reviewing all aspects of science,  
4 biology, engineering. Their membership are made up of  
5 the who's who of high levels of academia. They took  
6 on -- they took a strong look at bite mark -- or they  
7 took a strong look on what we could call police forensic  
8 science techniques, fingerprints, ballistics, any type  
9 of pattern left on an object. So if you've watched CSI  
10 movies or shows, you may have heard of Locard's  
11 Principle where one object comes in contact with another  
12 object, something is left over. Well, impression  
13 matching would also include shoe prints and things like  
14 that. So PCAST work, spent a couple of pages on looking  
15 at bite marks, along with these other pattern  
16 disciplines and lumped it all together, they simply said  
17 it's a feature comparison method where you have object  
18 A, object B, how -- what the similarity is between those  
19 two objects within the -- with no data, no population  
20 studies, bite mark advocates intuitively determine what  
21 they think is unique. There's no guidelines in  
22 existence that talk about quantitative requirements of  
23 how much -- what a match actually is, determining how  
24 many numbers of teeth and so on and so forth, so PCAST  
25 said that bite mark -- uses subjective interpretation

1 based on experience and training, and consider that not  
2 to be scientifically not accurate.

3 Q. Next slide.

4 A. This is a carry on from the previous brief  
5 comment about PCAST. You can read their determination.  
6 The bottom line is it wasn't sufficient -- successful  
7 proficiency testing, experience is not a substitute  
8 for -- for data that can lead to assurances that there  
9 is errors, unacceptable errors or mistakes can be made,  
10 so on and so forth. So this is an additional statement  
11 that they came out with.

12 Q. Was there an addendum to the report in 2017?

13 A. Yes. The addendum reiterated the fact that  
14 the practitioners in this particular field of bite mark,  
15 and colleagues of mine, haven't developed any literature  
16 to support what they do. They principally claim that  
17 they can use their own experience to determine what's  
18 safe and how accurate they are, and it really falls  
19 below the threshold as a scientific discipline that the  
20 courts are now becoming aware of, particularly in the  
21 state of Texas.

22 MR. ALLEN: Next slide, please.

23 Q. Are you familiar with the NAS Report 2009 as  
24 it relates to bite marks?

25 A. Yes, I am. National Academy of Sciences is a

1 congressional scientific arm, much like PCAST, it's been  
2 around for over a hundred years. The NAS used an  
3 intra-disciplinary, multi-disciplinary review of the  
4 entire field of forensic science. It took them two or  
5 three years. They finally published in 2009. I happen  
6 to have been cited by them and a couple of my papers in  
7 their section on bite mark analysis where I pretty much  
8 have written about what I have just been talking about  
9 today. NAS came up with statements that are common with  
10 what the Texas Forensic Commission and the PCAST people  
11 came up with, scientific basis is not present, and then  
12 they used the --

13 THE COURT: I'm sorry, having some  
14 technical issues.

15 THE WITNESS: I know what that's like.

16 A. So the NAS formed the -- put a framework  
17 together of what they expected, other matching  
18 disciplines, including bite marks, and they suggested  
19 significant improvement in our creation of additional  
20 research before it could be considered admissible.  
21 Before the NAS report on -- we were looking at  
22 predominant literature reviews of -- materials over the  
23 last 40 years, and predominantly the articles were case  
24 studies where one practitioner would write about one of  
25 their cases and how great the outcome was, so on and so

1 forth. The earliest papers like I mentioned from the UK  
2 had some serious doubts. And I have to -- I have to  
3 emphasize the number of practitioners in this field has  
4 dwindled. Next slide. All right. Just to highlight,  
5 series of significant studies into skin and its ability  
6 or inability to capture accurately impressions of teeth  
7 is this article from the Journal of Forensic Science in  
8 2009, and this shows the sample size -- the research  
9 focus was to use human skin a/k/a cadavers and use  
10 multiple replicas of dentition, or study models, of  
11 actual people. They didn't use straight teeth models,  
12 they used all sort of misaligned -- they tried to find  
13 teeth as crooked as they could possibly obtain. Various  
14 areas of the cadavers were, for want of a better word,  
15 injured by using dental models present in the skin, and  
16 then photographs of the injuries were taken, and then  
17 the models were studied for -- and compared to the  
18 various injuries from that study group and their results  
19 were, I think, show up on the next slide.

20 Q. What's significant about this slide?

21 A. This slide, it just -- well, the next slide  
22 shows you -- this is just, this is a bite mark  
23 comparison taken as an example from that 2009 study.  
24 They actually have 13 papers that pretty much took bite  
25 marks under a microscope and involving skin in



1 particular, and then later on dealing with all the human  
2 teeth unique. But this slide has a series of those  
3 mark, black outlined, we call them overlays, but they're  
4 just an exemplar from a number of different models used  
5 to place the bite mark. And then the L-shaped ruler  
6 shows you the dimensions. So they have life size  
7 exemplars of biting edges of teeth, they have a life  
8 size photograph of the injury pattern, and then  
9 digitally you can move those various models down over  
10 the bruising, which is just above the horizontal ruler,  
11 and take your best guess who fit, whose teeth fit better  
12 than the actual biter. So there's a series of articles  
13 and studies that duplicated this type of analysis and  
14 reached a level of data that really undermined the fact  
15 that the skin because of properties of skin, which we're  
16 going to get into here in a second, makes it impossible  
17 to consider skin injuries to be accurate enough to do a  
18 comparison.

19 Q. Next slide. What is the take away from this  
20 study in 2009?

21 A. There you go, it's right here. Bites in skin  
22 and the bite resulting from a bite mark, or study model,  
23 biting into the skin as you bite into different areas,  
24 say, of the cadaver, the impressions, or the bruising,  
25 these actually were three dimensional injuries that were

1 created in these cadaver subjects. The same set of  
2 teeth biting on various areas of the skin, the pattern  
3 of the injury varied. And then the second one, one  
4 dentition can match marks made from a totally different  
5 set of teeth. Now, this No. 2, in the DNA world,  
6 talking about profiling and something called a random  
7 match where someone else's DNA might be the same or a  
8 portion of the DNA might be the same in more than one  
9 people. For bite mark analysis, particularly in cases  
10 I've studied or been involved in over the years, there's  
11 never any mention of the possibility of a random match  
12 of someone else's two or three teeth were found to be in  
13 a bite mark -- could have made the same marks, so that's  
14 the take away here.

15 Q. And what about the, I guess, is this the most  
16 recent bite mark evidence in 2015?

17 A. These are comments. The one -- on the left is  
18 what I was talking about from the UK. You can see the  
19 dates, '74, '71, Devore. The topic of the slide is  
20 another way to study the differences or limitations of  
21 skin in terms of pattern is to take a inked stamp and  
22 place it on the skin and move your arm around. In  
23 dealing with actual cases where -- in homicide cases  
24 where there is obvious bite mark injury, we have no way  
25 of replicating what the position of those -- the

1 assailant and the victim were or the position was at the  
2 time of the action, that activity. So this page talks  
3 about ink stamps. And at the bottom right, the idea,  
4 and this particular study in 2010, Avon and Woods, they  
5 used -- surveyed experienced dentists and un-experienced  
6 dentists and sort of came to the opposing opinion that  
7 experience is sufficient to determine reliability and  
8 accuracy and the inexperienced people did just as well.

9 Q. Next slide. Can you talk a little bit about  
10 the disagreement among experts and what the error rate  
11 is?

12 A. Certainly. This is a topic I became  
13 interested in once I got more experience in looking at  
14 bite mark cases, not from my local jurisdiction in  
15 California, but from getting cases from outside my  
16 jurisdiction over and around the country, certain about  
17 the late -- about the middle '90s for me. The first two  
18 studies in '75 and '98 were experimental lab studies  
19 where participants were asked to correlate a number of  
20 models to have pattern injuries. They didn't have a  
21 large sample size, but it was clear the amount of  
22 reproducibility or the agreement was not very good, it  
23 was in the 50s or 60 percent. In 2009, I teamed up with  
24 Iain Pretty from the UK to look at actual case work that  
25 I had participated in, I'll talk about that in a little

1 bit. Then Avon. In 2016, Reesu. They all support the  
2 theory that that inter-examiner agreement is very low  
3 with bite mark people.

4 Q. Can you explain what you mean by inter?

5 A. Multiple examiners. If you have a group that  
6 you're studying, and studying their work product, the  
7 agreement amongst themselves is not scientifically  
8 acceptable, it's actually low, and they found out later  
9 on if they were retested, after a certain lapse of time  
10 with -- some of them actually change their opinions  
11 looking at the same evidence later on. So whether it  
12 supports the fact that the testing conclusions were very  
13 subjective, they didn't have any data really to produce  
14 a foundation of why they say what they actually  
15 determine to be their -- the degree of match that they  
16 testified to.

17 Q. Next slide, please. You talked a little bit  
18 about the method.

19 A. Yeah, because there was no -- the guidelines  
20 that existed did not give a framework of how you value  
21 or what the different types of identification value  
22 there are in these various type of injury patterns. No  
23 bite mark case ever looks the same from one case to  
24 another. The experimental testing proves that multiple  
25 bite marks on the body from the same set of teeth never

1 look the same either. But Iain Pretty came up with just  
2 a general categorical scale that possibly the  
3 practitioners could rely on to reach some agreement  
4 early on about how much detail is there or isn't there  
5 in a bite mark, and that's why this bite mark and  
6 severity scale was published. The practitioners, they  
7 felt, did not adopt it, but -- next slide, I'll show you  
8 the reasons of why this system actually had some value.  
9 We're trying to establish better or improve  
10 inter-examiner agreement -- first of all, let's talk  
11 about how much detail is there in any of these photos.  
12 These are actual cases. They're numbered top to bottom,  
13 left to right, 1, 2, 3, 4, 5, 6. So Iain came up with  
14 six categories, various reasons, No. 1, upper left,  
15 that's typically, we would call that a smoke ring,  
16 that's not diagnostic, really doesn't have any detail.  
17 You can see how individual teeth aren't present. 2, is  
18 a little better. 3, is not a -- it's not a prototypical  
19 bite mark in any of these cases, so the range goes from  
20 1 to 6 on the lower right where something has been torn  
21 off. That's the scale, 1 to 6. Next slide. So from my  
22 sample, which is not exactly randomly chosen because its  
23 cases I've been asked to work on, there were 25 cases  
24 that went to court, six were involved in DNA  
25 exonerations and had had bite marks brought in during

1 the original trial, the bite mark, a positive bite mark  
2 identification. Simple math, we've got 6 out of 25 that  
3 really went south as far as the bite mark examiners were  
4 inaccurate. Okay. Now, of the 25, 68 percent showed  
5 differences between the dentists. And the bottom line  
6 is slightly and actually -- I've always been shocked by  
7 the fact that the amount of disagreement existed -- I've  
8 learned that from reading the trial transcripts of these  
9 numerous cases, not numerous, but various cases I've  
10 worked on post conviction. Next.

11 Q. Further discussion.

12 A. So relating to that last little analysis, case  
13 work analysis. All right. Iain, I sent Iain all the  
14 photographs I had originally from these 25 cases, and I  
15 asked him to scale them using his scale, 1, 2, 3, 4, 5,  
16 6. Didn't give him any information at all, it's a blind  
17 study on his part. In his valuing those -- the amount  
18 of detail and trying to apply his scale found out that  
19 cases were -- that conviction had occurred and cases  
20 were later, the DNA exoneration had occurred, fell  
21 within the same value of the severity scale, meaning the  
22 bite marks were not the best. Coincidence? Maybe,  
23 maybe not, but I think it clearly emphasizes that one of  
24 the problems with the practitioners is that they brought  
25 in -- or they were asked -- they brought in bite mark

1 evidence that was of low quality, or not enough  
2 information, and over-testified to what they thought  
3 they saw. Now this little study here also is to show  
4 that the amount of agreement increased when -- in cases  
5 where the detail was greater, where the severity score  
6 was higher. So Iain and I, in one of our conclusions  
7 stated, well, part of the problem with lack of agreement  
8 is that the range of good, bad, or indifferent being  
9 brought into court and being testified to, that there  
10 weren't stringent enough means to determine what's the  
11 lowest threshold to a bite mark that you can talk about,  
12 what falls below it and what falls above it.

13 Q. So this person that developed the scale, you  
14 had sent him the bite marks from your cases, and he  
15 determined that they were around a 1 or a 2, is that a  
16 fair assessment?

17 A. Yes, he gave each one a certain value.

18 Q. Next slide, please.

19 A. So the other postulate, besides skin being  
20 inaccurate, the belief or the hope that skin's accurate,  
21 which it isn't, is how unique are humans. These two  
22 studies, the human adult teeth, these two studies looked  
23 at previous 1984 Rawson, Statistical Evidence, you can  
24 read it, for the individuality of the Human Dentition.  
25 okay. This individual came out with a high probability

1 that in his study conclusions that everyone's teeth were  
2 unique, and, in fact, so unique that you could use  
3 something called the probability rule to say if one  
4 tooth is crooked and the other tooth is crooked, the  
5 prevalence of each one in the human population was a  
6 certain number, multiply those together. If that sounds  
7 familiar that's what the DNA analysts use, but the 2011  
8 study by the same people that did the cadaver study said  
9 that statistical basis was -- was incorrect because  
10 teeth positions are not individually one tooth from the  
11 other independent of each other, so -- as opposed to DNA  
12 replication. So this '84 article was kind of the Magna  
13 Carta of justifying bite mark testimony for many years  
14 since -- let's just say -- so the Bushes had something  
15 to say about that. Human dentition in some cases is not  
16 unique. Next slide.

17 Q. Next slide, please.

18 A. -- particularly relating to tooth edges. This  
19 is a copy of the similarity or match rates, random  
20 matches of dentition taken from various groups, human  
21 groups.

22 Q. What are these two studies here, what are  
23 these studies from?

24 A. Well, this is from Peter Bush and Mary Bush  
25 and other associated colleagues of mine. They're



1 looking for how often you see similar or matching tooth  
2 patterns that study populations and the match rates do  
3 exist, as opposed to just ignoring the fact that -- just  
4 assuming that what it does is it conflicts with the  
5 dentists' statements that one of these teeth are unique,  
6 and they move on and make a determination from looking  
7 at one set of dental models, so that's the only person  
8 in the world that could have made that particular bite  
9 mark.

10 Q. Okay. Next slide, please. Can you talk about  
11 the skin research?

12 A. This is going to continue on what I previously  
13 talked about skin in cadavers, but the next slide I'll  
14 give you some of the medical terminology of what goes on  
15 with skin.

16 Q. Next slide.

17 A. Why skin, we can't use it as a pattern. No.  
18 1, these injuries generally are bruising, like I said  
19 prior, bruising is the disturbance of the microscopic  
20 vessels underneath the skin and bruising will  
21 necessarily, as it increases, maintain the shape of the  
22 object that struck it. And then the so-called  
23 biomechanics, these four top bulleted features of skin,  
24 viscoelasticity --

25 Q. What does that mean?

1           A.     That's where you push something into your skin  
2     and it makes a dent and then it disappears.  
3     Non-linearity.  When you flex your arm back and forth,  
4     you move certain long muscles, if you had a pattern,  
5     it's like using stamped ink tests.  If you have a  
6     certain pattern with your arm in one position as you  
7     move it, the muscles do not just push and pull like  
8     rubber bands, so they -- there's a good photo or  
9     diagram, later on I'll show you this.  Anisotropy,  
10    variations, skin stretches differently in one direction  
11    than another.  Hysteresis is rebounding, somewhat  
12    similar to viscoelasticity.  But, depending on the  
13    health of the individual, or the part of the anatomy  
14    that's impacted with, say, biting teeth, the indentation  
15    will survive or last for a period of time and then  
16    gradually reduce, so this comes out of the medical  
17    journals.  And really wasn't until the Bushes started  
18    writing their articles in 2009 that any of this showed  
19    up in the dental literature.

20           Q.     Next slide, please.  What are some of the  
21    problems you see with bite marks?

22           A.     This is just a summary.  If we only had cases  
23    where teeth had bitten into bubble gum, apples, dental  
24    material, I think we'd have a much more reliable means  
25    of studying in reaching an opinion.  This is scientific

1 data, but the problem with skin is it's extremely  
2 variable. Anatomic position. This slide really reviews  
3 what I've already talked about. Clothing. You can get  
4 bite marks through clothing. At least, the bruising  
5 underneath the clothing are rather dull, or look rather  
6 diminished, let's put it that way, but the clothing  
7 themselves can be a receptacle for salivary DNA. Bodily  
8 movement, you don't know the positions of individuals or  
9 dynamics who was doing what physically at the time of  
10 the attack, that influences the so-called pattern  
11 matching, and that's --

12 Q. Next slide.

13 A. -- it for that limitation. So if we wanted to  
14 know what stretch marks, when they were studied, started  
15 out in 1861, Langer lines, these are lines of movement  
16 and elasticity that varied around human anatomy. This  
17 is just a demonstrative educational slide.

18 Q. Next slide.

19 A. This goes to repeat what the discussion a  
20 little bit earlier about if you change the position of  
21 this leg, this is a cadaver study, legs have been moved  
22 from a straight position to an abducted position.

23 Q. What does abducted mean?

24 A. Abducted is to move away -- is to flex.

25 Q. What change do you see in that?

1           A.    Well, it's probably subtle. I think the most  
2   obvious difference if you'll look inside, if you'll look  
3   at the left photograph, okay, above the horizontal leg  
4   of the ruler, let's look at the lower teeth, the lower  
5   outline of the biting teeth, compare that to the bruise  
6   right above it. You can follow with me. Let's go  
7   across to the one on the right, that's the same set of  
8   teeth, above the horizontal ruler, same set of teeth,  
9   and look at the difference in the bruise shape. This  
10  speaks for itself actually. Now, it's impossible to do  
11  human studies on live people with bite marks like this.  
12  There's just isn't any research center in the country  
13  that's going to allow people, even if they were paid, to  
14  allow them to be bitten to this extent. That has been  
15  one of the difficulties from the very beginning why  
16  there's no research on this, it actually has a clinical  
17  basis to it. Actually been studies that used wax, pig  
18  skin, like we mentioned, certain types of silicon  
19  impression materials. So this study actually is human  
20  skin, which I think is as close to proper -- close to  
21  reality as you can get.

22           Q.    Next slide.

23           A.    Okay. So this is a quote coming out of the  
24  Houston Press, or out of the Forensic Commission. One  
25  the participants, Dr. Kessler had said that experts

1 can't agree with each other on identifying human bite  
2 marks in the first place, and that's been borne out by  
3 the organization, ABFO. They had three attempts to  
4 establish some correlation with proficiency testing with  
5 their membership, and the last time was about two or  
6 three years ago and it did not turn out well for them,  
7 so this opinion is coming out of Texas. Next slide.  
8 And this is a study that I just mentioned about, it was  
9 internal to the ABFO, about a hundred --

10 Q. What does PI stand for?

11 A. Personal injury cases were sent to the  
12 membership and they were asked some questions. What's  
13 the level of evidence necessary to determine if it's a  
14 bite mark? Good question. Is it a bite mark? What are  
15 the bite mark characteristics? So this is a proficiency  
16 test they put on. Next slide.

17 Q. What was the result?

18 A. Well, they got about, what did they get, 50 --  
19 45 percent response from the 90 active members, and what  
20 they came up with on the various cases, you can read the  
21 results, 90 percent -- in 20 cases, 90 percent agreed,  
22 they had 90 percent agreement if there was sufficient  
23 evidence. Okay. There were a hundred cases, only 20 of  
24 them they agreed with on that level. Next, 99 cases,  
25 51 percent agreed. So goes, so on and so forth. It

1 turned be out to be a telling result not supporting  
2 these bite mark applicants, some of them were  
3 applicants, I'm not sure if all of them were at this  
4 point.

5 Q. Next slide, please. What's the state of the  
6 discipline today?

7 A. Well, the significant review from outside the  
8 forensic community, that's PCAST, National Association  
9 of Science, Academies of Science, and I would include  
10 the Texas Forensic Science Commission. There hasn't  
11 been a court in the U.S. that has determined that bite  
12 marks are inadmissible. Case law, and a number still  
13 exists that brought or allowed bite marks to be brought  
14 into court over the previous decades, but the -- some of  
15 those records actually have used cases that ultimately  
16 ended up to be exonerations. So the review of this type  
17 of forensic evidence is on a case by case, state by  
18 state determination. There's really no regulation of  
19 forensic science in terms of at the national level, so  
20 that's why the answer so far from the research and from  
21 the case studies is that there's a lot of work that  
22 still needs to be done if it even can be done to allow  
23 these bite mark pattern matching opinions in today's  
24 courtroom.

25 Q. Let me see if I have this straight. There are

1 two assumptions that this bite mark analysis is based  
2 on; is that correct?

3 A. Yes.

4 Q. The two assumptions have not been  
5 scientifically validated?

6 A. That's correct.

7 Q. And most of the practitioners disagree  
8 about --

9 A. With each other.

10 Q. -- with each other. Next slide, please.

11 A. Just to touch on another case that had bite  
12 mark analysis, this -- I bring this in just to show that  
13 at least in these cases, they were certain they  
14 identified someone, and to some reasonable level of  
15 certainty, according to the legal ruling in that regard  
16 and ultimately the opinion was incorrect. Next slide.  
17 And here's a list of some of them. Next slide. Now  
18 let's look very brief look at this particular case's  
19 bite mark evidence. Next slide.

20 Q. You're talking about this particular case, you  
21 mean State of Texas versus Kosoul Chanthakoummane?

22 A. Yes, sir. Thank you. This is one of the  
23 multiple autopsy photos from this case. So right below  
24 this ruler, we've got, from left to right we have a  
25 laceration that comes in from about the 9 o'clock

1 position and then series of varying red dots, I can  
2 count 1, 2, 3, 4, and then another small laceration.  
3 And then below it, towards the bottom where the vertical  
4 line is, vertical bruise, small lacer -- hard to tell  
5 what it is, I don't think it's cut the skin, but you  
6 come up from the bottom, we have a relatively faint,  
7 somewhat C-shaped bruise right there. That's the  
8 physical evidence of the bite mark used in this case.  
9 So this is a model of the Defendant's upper teeth, I  
10 just want to show you how the outline of the edges of  
11 those teeth, I'm not going to do it in detail, but we  
12 start off with the skin -- this was described at the  
13 original trial, which has been accurately -- the skin  
14 and the model, placed a ruler in the model, on the  
15 scanner, take a picture, then you take this photograph  
16 and make sure all of these vertical and horizontal index  
17 marks are accurate. So if it's a centimeter ruler,  
18 horizontally you've got 1, 2, 3, 4, 5, you've got a  
19 ruler of five centimeters, so you want to make sure the  
20 image is correct dimensionally. Next slide. Using w  
21 Photo Shop, something, make a pattern or selection  
22 around the edges of the biting edges of the teeth that  
23 were -- would be appropriate. Bite marks tend to use  
24 upper and lower -- teeth that create bite marks are  
25 generally not more than 10 upper teeth or 10 lower



1 teeth, sometimes it's just six teeth on top and six  
2 teeth on bottom. For demonstrative purposes, I selected  
3 the six teeth on top here. You can see there's a  
4 considerable amount of misalignment. Some would argue,  
5 well, there's no one else's teeth in the world that  
6 would look like this, I won't speculate, but my outlines  
7 represent, I think, an accurate amount of area that  
8 would show in an object that these teeth bit. So let's  
9 go to the next slide. So the final stage is this slide,  
10 and we've got multiple rulers because as we take one  
11 evidence photograph with a ruler, and second on the  
12 evidence photograph with the ruler, we want to make sure  
13 the dimensions stay the same. But, ultimately, what  
14 we've got are the edges of the six upper teeth adjacent  
15 to what was termed at the original trial to be the upper  
16 bite mark indentations or bruising seen on the victim's  
17 skin. This is the best match, or this is the  
18 positioning of these upper teeth close to those bruises  
19 would show no correlation, as far as I'm concerned, but  
20 I'm trying to get these -- to associate these to where  
21 they would superimpose where the bruising -- and edges.  
22 If I could identify the type of teeth that were in the  
23 bruising, and I could take the equivalent teeth from the  
24 dental model and place them, overlap them and see how  
25 the pattern aligned, and in this case, it's what I could

1 come up with. So, I didn't use the lower bruising  
2 because there's no individual teeth marks, and it's  
3 simply a Grade 1 type of bite using lower teeth, so I  
4 wanted to just focus on the upper, but I don't see any  
5 match correlating the Defendant's teeth to this  
6 particular bite mark to any reasonable medical  
7 certainty.

8 Q. Is that your opinion, there's no match?

9 A. No, there's no match. I don't practice bite  
10 mark matching anymore, but there's no correlation of  
11 these two objects that I can see.

12 Q. If there were to be a match, the black area  
13 that purports to be his teeth would match up with the  
14 bruising, correct?

15 A. That's the way it's sounding in the trial  
16 transcript from the expert, and this is what I can come  
17 up with looking at the actual evidence.

18 Q. Based on your looking at this case, what did  
19 you review in order to look at this case and make that  
20 determination?

21 A. I looked at the photographs. I described  
22 where I got these photographs. I read doctor -- the  
23 doctor's trial transcript and his report. I'm just  
24 saying, what I'm saying very clearly, I want to make it  
25 very clear, let's put it this way, that the teeth don't

1 correlate -- if everything else was -- if we could  
2 discount the problems with skin and everything I've gone  
3 through in this discussion up to this point, all that  
4 taken care of, we could hypothetically say, well, if  
5 they did overlap, that would be a positive match, well,  
6 I don't believe that is scientifically possible, but  
7 what I'm trying to do here is simply try to reproduce  
8 what was described in the original court trial.

9 MR. ALLEN: Your Honor, I think, so the  
10 record is clear, when I asked to have him qualified as an  
11 expert, we'd ask he be qualified as an expert in forensic  
12 dentistry just so...

13 THE COURT: All right. He's accepted by  
14 the court in that field.

15 MR. ALLEN: We pass the witness, Your  
16 Honor.

17 THE COURT: Let's take a break. Please be  
18 back in about 15 minutes and we'll resume at 11:30.

19 (Short recess)

20 THE COURT: All right. Ms. Smith, your  
21 witness.

22 MS. SMITH: Thank you, Judge.

23 **CROSS EXAMINATION**

24 BY MS. SMITH:

25 Q. Dr. Bowers, just to be clear, your expertise

1 is as a forensic odontologist, correct?

2 A. Yes. Forensic dentistry and odontology are  
3 synonomous.

4 Q. Also to be clear, you said you looked at the  
5 evidence in this case, and you've presented through your  
6 PowerPoint a couple of photographs and copy of the mold  
7 of Mr. Chanthakoummane's teeth, correct?

8 A. Yes.

9 Q. How many photographs did you look at?

10 A. I believe the doctor took 13 photos of the  
11 bite mark that was part of his -- in the original  
12 testimony, and I received a series of images from  
13 defense counsel that dealt with autopsy photos.

14 Q. Did you have access to the mold itself?

15 A. No, I haven't physically seen that, no.

16 Q. You're here just to testify about the issues  
17 with matching a bite mark to a particular individual's  
18 teeth, correct?

19 A. Yes, ma'am.

20 Q. So it's your opinion that we can't match, we  
21 can't reliably, or with any degree of certainty match a  
22 bite mark to a person's teeth?

23 A. Correct.

24 Q. Are you saying that we can't identify  
25 something as a bite mark injury?

1 A. No. The bite mark recognition is acceptable.

2 Q. So you're not opining that there's not a bite  
3 mark injury in this case?

4 A. That is -- I am not opining.

5 Q. So it's a bite mark?

6 A. Yes, it's a bite mark.

7 Q. And you're not opining that a different third  
8 person made that bite mark, correct?

9 A. I have no opinion on that.

10 Q. Right, because that would be engaging in  
11 matching, right?

12 A. It would seem to be self-contradictory if I  
13 tried to do that, yes.

14 Q. So if we shouldn't use bite mark evidence to  
15 link somebody to a crime, that means we've got to use  
16 other types of evidence, right, in your opinion?

17 A. Absolutely.

18 Q. Like DNA?

19 A. Yes.

20 MS. SMITH: Pass the witness.

21 MR. ALLEN: No further questions, Your  
22 Honor.

23 THE COURT: Is this witness released or  
24 reserved?

25 MR. ALLEN: This witness is released.

1 THE COURT: Any objection?

2 MS. SMITH: No, Your Honor.

3 THE COURT: Sir, you are released. You're  
4 free to stay or go, whatever you'd like to do.

5 THE WITNESS: Thank you, Your Honor.

6 THE COURT: Thank you.

7 MR. D'ANGELO: Your Honor, before we call  
8 our next witness, we would require the thumb drive back  
9 so we could do the PowerPoint for our next witness.

10 MR. ALLEN: While we're doing that if the  
11 court please, we'll call Dr. Lynn and have him put under  
12 oath.

13 THE COURT: Sir, please come up to the  
14 table so I can swear you in.

15 THE WITNESS: Thank you. But I do have  
16 some materials in this next room, may I bring them to the  
17 stand?

18 THE COURT: Yes, sir.

19 MR. D'ANGELO: May I approach, Your Honor?

20 THE COURT: Yes.

21 MR. D'ANGELO: Thank you.

22 THE COURT: Sir, please raise your right  
23 hand for me.

24 (Witness sworn)

25 THE COURT: Thank you. Please have a

1 seat. Whenever you're ready.

2 **STEVEN LYNN, PH.D.,**  
3 having been first duly sworn, testified as follows:

4 **DIRECT EXAMINATION**

5 BY MR. ALLEN:

6 Q. Would you please state your name for the  
7 record?

8 A. Steven J., that's J-a-y, L-y-n-n.

9 Q. And what is your education?

10 A. I received a bachelors degree from the  
11 University of Michigan in 1967. I received a Ph.D. from  
12 Indiana University in 1976, and I completed a  
13 post-doctoral fellowship at Lafayette Clinic the  
14 following year.

15 Q. What are your current positions?

16 A. I'm a distinguished professor at Binghamton  
17 University, which is part of the State University of New  
18 York system.

19 Q. Do you have any other jobs besides that?

20 A. Any other jobs. I'm hesitating a little bit  
21 because I don't have any other paid jobs, but I do  
22 function in a number of different roles.

23 Q. Do you have a private practice in psychology?

24 A. I do currently.

25 Q. How long have you done that?

1 A. I've done that since 1977.

2 Q. And do you also work for the Laboratory of  
3 Consciousness and Cognition?

4 A. That is my laboratory. I don't technically  
5 work for it because it's part of my position at  
6 Binghamton University.

7 Q. Do you have any professional certifications or  
8 licensures?

9 A. I do. I'm licensed in New York state and I  
10 have a diplomate in both clinical psychology and  
11 forensic psychology and psychological hypnosis.

12 Q. Have you received any awards?

13 A. Yes, I have.

14 Q. If you could just hit the highlights.

15 A. I'm sorry?

16 Q. If you could hit the highlights.

17 A. Sure. I have a list here. I received a  
18 Chancellor's Award from the State University of New York  
19 and a University Award for Excellence in Scholarship and  
20 Creative Activities in 2002. I received an Award for  
21 Excellence in Research and Scholarship for The Research  
22 Foundation from the State University of New York 2003.  
23 Received an Award for Distinguished Contributions to  
24 Professional Hypnosis from the American Psychological  
25 Association, Hypnosis Division, and an Award for



1 Distinguished Contributions to Scientific Hypnosis --  
2 one was professional, excuse me, I misstated that. Also  
3 from the American Psychological Association, a  
4 President's Award for outstanding contributions to the  
5 science and practice of hypnosis from the Society for  
6 Clinical and Experimental Hypnosis, Milton H. Erickson  
7 Award for Scientific Excellence from the American  
8 Society of Clinical Hypnosis in 1995, and a Clark Hull  
9 Award for the American Journal of Clinical Hypnosis in  
10 2014 in recognition of scientific excellence in writing  
11 on experimental hypnosis.

12 Q. Have you written any books as it relates to  
13 hypnosis?

14 A. I have written, excuse me, I've written seven  
15 books that are published or impressed on that topic.

16 Q. What are those books?

17 A. One's entitled Hypnosis CBT and Mindfulness:  
18 Finding the Winning Edge. Another is Handbook of  
19 Clinical Hypnosis, which is now in Second Edition, which  
20 was published in 2010. I wrote A Brief History of  
21 Hypnosis with Judith Pintar in 2008. I wrote Essentials  
22 of Clinical Hypnosis and Evidence-Based Approach with  
23 Irvin Kirsch in 2006. A Casebook of Clinical Hypnosis  
24 with myself, Dr. Kirsch and Dr. Rhue. The First Edition  
25 of the Handbook of Clinical Hypnosis in 1993. 1991,

1 Theories of Hypnosis with Dr. Rhue. Those would be the  
2 seven.

3 Q. Have you written any peer-reviewed articles as  
4 it relates to hypnosis?

5 A. Of hypnosis, did you say?

6 Q. Yes.

7 A. I have.

8 Q. I won't ask you to list all of them. Roughly,  
9 how many have you --

10 A. I tallied up and it was 196 at the last count.

11 Q. And have you testified before as an expert?

12 A. I have testified prior.

13 Q. And what level -- what area of expertise have  
14 you done?

15 A. I have testified on not guilty by reason of  
16 insanity cases, competence to stand trial, and hypnosis  
17 cases, which involved eyewitness recall, and some civil  
18 cases involving the use of hypnosis in psychotherapy.

19 Q. When you were qualified as an expert, would  
20 that be an expert in forensic psychology?

21 A. That would be correct.

22 Q. And about how many times have you been  
23 qualified as an expert?

24 A. I believe it was 10 times.

25 Q. Is that in state court, federal court?

1           A.     Pardon me, let me just modify that. 10 times  
2 in terms of hypnosis, but probably another 20 times in  
3 my service as a forensic evaluator some years ago.

4                   MR. ALLEN: We'd ask that Mr. -- Dr. Lynn  
5 be qualified as an expert in forensic psychology, Your  
6 Honor.

7                   MS. SMITH: State has no objection.

8                   THE COURT: All right. He's so accepted.

9                   MR. ALLEN: Dr. Lynn has also done a  
10 PowerPoint presentation, if we could do the same thing we  
11 did before.

12           Q.     Do you have a copy of your PowerPoint in front  
13 of you, Dr. Lynn?

14           A.     I do have it. Putting it in front of me right  
15 now.

16           Q.     Let me know when you're ready.

17           A.     I'm ready.

18           Q.     This first slide relates to some definitions,  
19 if you could just hit the high points.

20           A.     Sure. I'm defining those here as a situation  
21 that's defined as hypnosis. In other words, when the  
22 individual comes into the situation, the context is  
23 established as hypnosis. And the individual who  
24 conducts the meeting with the person interchange is also  
25 defined as a hypnotist, and a person is invited to

1 respond to imaginative suggestions. And the suggestions  
2 themselves, we consider them imaginative suggestions  
3 that typically relate to the gamut of sensations,  
4 emotions, cognitions, memories, perceptions and actions.

5 Q. Can you give us an example of a hypnotic  
6 suggestion?

7 A. The hypnotic suggestion is limited only by the  
8 creativity on the hypnotist, but an example would be a  
9 standardized scale, something like your head is getting  
10 heavier and heavier, your arm is getting lighter, there  
11 are helium balloons attached to the arm and it's rising  
12 off the resting surface.

13 Q. You talk about hypnotic induction, could you  
14 give an example of that?

15 A. Hypnotic induction again is limited only by  
16 creativity. Historically, there have been -- there's  
17 been the proverbial swinging watch, there's been  
18 fixation on a pencil, there have been gongs that have  
19 been rung. More commonly it's suggestions for eye  
20 closure, some degree of relaxation, for example,  
21 focusing on the suggestion.

22 Q. Next slide, please. What is -- you're talking  
23 here about determinants of hypnotic suggestibility, what  
24 do you mean by all of this?

25 A. What I mean by all of this is to put my

1 presentation in context. I would like to talk, first  
2 off, some myths about hypnosis and I'll make this brief.

3 Q. Sure.

4 A. Myths abound in culture such as people lose  
5 their sense of control, lose their sense of reality  
6 outside the framework of hypnosis. Popular myths are  
7 people will not be able to resist suggestions or can't  
8 oppose suggestions. They may behave in very illogical,  
9 unusual ways. But, I want to emphasize that current  
10 scientific opinion, at least most of it, does not view  
11 hypnosis as some trance state where a person loses  
12 consciousness and will do the bidding of the  
13 hypnotist -- whatever the hypnotist suggests. So  
14 consciousness then, in altered and specific ways by  
15 specific suggestion, I would say there's very little  
16 evidence for just a general state of hypnosis because  
17 it's very much by what the suggestion is. And in terms  
18 of the purposes of this hearing is in comportance to  
19 understanding that hypnosis has a very long history  
20 where people have described very special abilities to  
21 it, even things like out of body experiences,  
22 extra-sensory perception. And the notion that hypnosis  
23 can improve memory has been around with us for many,  
24 many years. In other words, hypnosis can augment  
25 ordinary abilities and turn them into exceptional ones.

1 It's important to also emphasize that there are  
2 individual differences. Some people are highly  
3 responsive, some people fall in a middle range and some  
4 people are not all suggestible, about 15 percent high,  
5 15 percent low and 60-70 percent moderately  
6 hypnotizable. So this is why it is important in a  
7 forensic situation to gauge how hypnotizable or  
8 hypnotically responsive the person is, and I might just  
9 add that that was not done in this particular situation.  
10 What research does demonstrate is the importance of  
11 expectations, attitudes, beliefs about hypnosis,  
12 motivation to respond, how responsive people are in  
13 terms of imaginative suggestions outside of the context  
14 of hypnosis. And very importantly, I just want to  
15 emphasize people's expectations have been shown to be  
16 one of the clearest links with hypnotizability. So  
17 people will tend to do, if they are responsive, what  
18 they believe is expected of them in that context.

19 Q. Next slide, please. Could you explain what  
20 you mean about this?

21 A. I wanted to in this slide provide some context  
22 in terms of how my personal thinking about hypnosis has  
23 evolved, but also to provide context in terms of the  
24 importance of what people's beliefs are and expectations  
25 are coming into the hypnotic situation. So back there

1 in 1979, the majority of people, about 84 percent  
2 according to this survey of psychologists and  
3 non-psychologists believe hypnosis can recover memories.  
4 I was a believer.

5 Q. Okay. Next slide, please.

6 A. It's important to underline that beliefs about  
7 hypnosis, effectiveness of hypnosis, are still very  
8 popular, and I just cite a couple of surveys here.  
9 Taylor and Kowalski, 70 percent of introductory  
10 psychology students agreed that hypnosis is extremely  
11 useful in helping witnesses recall details of crimes. A  
12 similar rate was found in another study on this slide  
13 presented there. Much more recently, you'll see that  
14 two researchers conducted a large representative  
15 telephone survey of 1500 people and 55 percent agree, or  
16 mostly agree, that hypnosis is useful in helping  
17 witnesses accurately recall details of a crime. Only  
18 37 percent mostly disagree, or strongly disagree,  
19 whereas, eight percent don't know. That's important  
20 because this gives you the base rates. The set that  
21 people come in when they enter a forensic hypnosis  
22 situation, not only, in most cases, a fairly strong  
23 pressure to identify somebody or provide useful  
24 information, but they're, A, prior beliefs, and it's  
25 their beliefs prior are kind of contributing a sense

1 that hypnosis can be a valuable recall procedure.

2 Q. Next slide, please.

3 A. I bring this up because one of the premises of  
4 hypnosis is that there are accurate memories that can be  
5 recalled through the special technique of typically  
6 hypnotic age regression, someone goes back in time and  
7 invites the respondent to consider events that  
8 transpired anywhere varying from that particular day to  
9 childhood. People go in with this belief, again, that  
10 to some extent, at least, memory, everything,  
11 experiences are permanently in the brain even if we  
12 can't access all of it. And you'll see that in the  
13 study, it was more than two-thirds of people endorsed  
14 this belief. In another survey, 46 percent potential  
15 jurors believe the witness on the stand is effectively  
16 narrating a video recording of events that she can see  
17 in her mind's eye, and I like to put this in context  
18 that Mr. Shing, the hypnotist, in this case, actually  
19 used that term seeing images in the mind's eye in terms  
20 of both parties he hypnotized. So, again, they come in  
21 with this belief, it might not be emphasized or  
22 explicitly stated, but if they come in believing there  
23 is a record of memories and that the hypnosis session  
24 can tap into these memories and access information  
25 relevant to the purposes of that examination.



1 Q. You talk a lot about the mind's eye, does the  
2 mind have an eye?

3 A. No, the mind has no eye.

4 Q. Next slide, please. Talk just briefly about  
5 memories and their storage.

6 A. Well, if memories were permanently stored, if  
7 they were permanently stored in the subconscious mind,  
8 for example, which was a term that the hypnotist in this  
9 case used repeatedly with Ms. Sharpless, if they were,  
10 then it would be wonderful if we had a technique that  
11 could somehow access these memories. Unfortunately,  
12 many memories are not stored permanently, whether it's  
13 in the conscious or subconscious. We now know, and this  
14 has been in the recent years, this has really, really  
15 been laid down as factual now that memory is quirky,  
16 it's fallible, it's reconstructive in nature. You piece  
17 together things to form a memory or a belief that it is  
18 an accurate memory rather than accessing some source of  
19 knowledge that is somehow hidden. And this is a really  
20 important point that you can -- we've demonstrated it,  
21 particularly in the last 20 years, you can demonstrate a  
22 whole range of complex and rich false memories. You can  
23 implant, which is the term used or in-state memories of  
24 witnessing an exorcism, being bullied during childhood,  
25 riding in a hot air balloon, memories of events that one

1 has previously not endorsed. And most recently, a very  
2 impressive demonstration of this was conducted in 2015  
3 by Shaw and Porter, and they actually implanted memories  
4 in 70 percent of people of committing a crime, theft,  
5 assault with a weapon, for example, that lead to police  
6 contact in early adolescence, and they volunteered a  
7 detailed false account. This fits in with this notion  
8 that our minds, if you will, not the mind's eye, can  
9 construct scenarios that demonstrably, because we  
10 conduct these studies in laboratories, or get people's  
11 reports prior to the intervention that demonstrably, in  
12 that sense, did not occur in reality, if you put that in  
13 quotes. We now know that these false memories can  
14 persist over time and for lengthy periods of time.

15 Q. Next slide, please.

16 A. So to provide you with some background and  
17 historical perspective, I'd like to share with you the  
18 first study we did, and, again, I was a real believer  
19 that hypnosis would improve memories. To simplify this  
20 study, we had a number of sessions. In the first one,  
21 subjects learned paired words, high imagery and low  
22 words. Second session brought in and they were tested  
23 with hypnotic recall, task motivation, which simply  
24 means we ask people try to do your best to recall as  
25 completely and accurately as you can, and then there was

1 no treatment. The interesting finding was that the  
2 recall decreased from Session 1 to Session 2 in the  
3 hypnotic subjects, but it was basically stable for  
4 people in the other two conditions. And the finding  
5 that particularly interests me, but is also relevant for  
6 this particular matter, is that these differences were  
7 associated with less anxiety and less performance of  
8 concerns in hypnosis. And, of course, this is relevant  
9 to the current situation in the sense that the claim was  
10 made that the less anxiety would diminish, in fact,  
11 performance concern and be helpful. So this was my  
12 first inkling that there might be some problems with  
13 hypnotically elicited recall.

14 Q. Next slide, please.

15 A. The second study we did was a study on age  
16 regression. If you could bring up the rest of it.  
17 We've all seen in television and movies how hypnotists  
18 can perform an induction, and, if you will, take  
19 somebody back to an earlier point in time.  
20 Interestingly, in real life many people have  
21 subjectively compelling experiences of an earlier life  
22 experience when asked to age regress. By age regress, I  
23 simply mean the hypnotist says let's go back to an  
24 earlier point in time, gives a suggestion to that  
25 effect. So, again, I'm still a little more skeptical

1 but believing this may be possible to get some valid,  
2 veridical, or truthful memories. So what we did here is  
3 we age regressed. People here are in two groups, one  
4 group of people are hypnotized, we hypnotize them, and  
5 the second group, we take people who are very low  
6 suggestible, demonstrably low suggestible, and we ask  
7 them to role play or fake being hypnotized to the point  
8 where they can trick the examiner, fully experiment and  
9 to do this on a credible basis. And then we provide  
10 them with these age regression, suggestions to go back  
11 to age 3, to a point where they're in the soothing  
12 presence of their mother when they're feeling anxious,  
13 and we give them a scene to play with different objects.  
14 And then they reported the identity of the objects they  
15 were playing -- these were sort of transitional objects,  
16 many of us have had them, things like that, a teddy  
17 bear, a special blanket. Next slide, please. The  
18 findings were quite interesting because what we did is  
19 we actually contacted parents to see whether we could  
20 corroborate the reports. And when there were hypnotic  
21 recollections, when people were hypnotized, the parents  
22 corroborated only 21 percent of the time. But, when  
23 they were asked to role play, the parents corroborated  
24 their accounts 70 percent of the time. What we also  
25 found interesting was all of these recollections were

1 obtained during hypnosis. The subjects continued to  
2 believe that they incorporated these recollections into  
3 their testimony after hypnosis regardless of the  
4 accuracy. Next slide, please. My student Michael Nash  
5 did a comprehensive review of 60 years of studies, and  
6 it is quite clear that people are not literally going  
7 back on some time track and repeating or re-living  
8 earlier life experiences. Adults tend to fuse their  
9 memory with the childhood memories, or what they believe  
10 is appropriate to experience at an earlier age. In  
11 typical forensic studies, we use age regression to more  
12 recent time, but it can be years in the past. So now  
13 I'm really starting to wonder because we have a  
14 corroborated study. In 1994, there was a meta-analysis,  
15 24 studies. What a meta-analysis is, it's an analysis  
16 of analysis. We look at statistics across --

17 Q. Is that the Steblay and Bothwell study?

18 A. Yes, thank you.

19 Q. That's the next slide.

20 A. Yes. The primary findings were that there was  
21 more recall of the non-leading questions after one to  
22 two day delay, but less accurate recall, less than 24  
23 hours or after one week. However when you look more  
24 closely at the studies, there were six studies that  
25 hypnotized subjects, compared to non-hypnotized control,

1 there were more false memories in response to misleading  
2 questions or false information. But, they also analyze  
3 another five studies and they categorize these, where  
4 hypnosis produced more acute errors, in other words,  
5 they didn't ask a particular question but just produced  
6 more errors that were not prompted by misleading  
7 questions or stimuli.

8 Q. Next slide, please, Judge.

9 A. I'm sorry, next slide. Actually, I skipped  
10 one here. So we might wonder why is this the case, why  
11 might we have this effect, and I'm going to say this is  
12 an effect. When you look at studies, you're not going  
13 to find that all studies are in agreement.

14 Q. Dr. Lynn, did you do a study in 2012?

15 MR. ALLEN: Could you go back one, Judge?

16 A. Yes. I apologize for that. We skipped one.  
17 This was not a study, this was a review of studies, and  
18 I want to correct that, I believe the actual date was  
19 2013, where we wanted to look not only at the accuracy  
20 of memories, but the confidence that people hold in  
21 memories. Now, confidence is of critical importance in  
22 a forensic situation because if someone is highly  
23 confident of a memory, a false memory, for example, for  
24 our purposes, and they identify someone based on a  
25 confident false memory in a eyewitness situation, or in

1 court, it can be very deleterious, very damaging to the  
2 judicial process. So myself and my colleagues were  
3 interested in taking a look at previous studies. In 23  
4 studies shows hypnosis increases confidence relative to  
5 the non-hypnotic group where participants confidently  
6 report inaccurate memories of events they earlier denied  
7 occurred when they were not hypnotized. Now, there were  
8 nine studies in this group where there was no difference  
9 in confidence. When we went into these studies more  
10 carefully and looked at them, we found that in five  
11 those produced more errors or less accurate information.  
12 This raises rather serious questions about the use of  
13 hypnosis and in forensic situations, and in even more  
14 recent review Mazzoni, Laurence and Heap in 2014 wrote,  
15 in conclusion, there's little theoretical or empirical  
16 justification for using hypnosis to enhance memory, and  
17 I generally agree with that statement. So now coming  
18 back to the slide --

19 MR. ALLEN: Next slide, please.

20 A. You might wonder why is this the case. Well,  
21 I talked earlier about the importance of expectation.  
22 If you believe that hypnosis improves memory, it will  
23 probably increase confidence. And let me give you an  
24 analogy. If I were to give you a truth pill, somebody  
25 had told you was a truth pill, and you swallowed the

1 truth pill, and I said this truth pill will now allow  
2 you to get at the truth, to recover only accurate  
3 memories, or just generally to insure that there are  
4 more accurate than inaccurate memory that basically it's  
5 helping you to tell the truth. You take this pill,  
6 swallow it, and I ask you to recall things. Now some of  
7 those things may be accurate and some of those things  
8 you recall may not be accurate, but because you believe  
9 in the power of that pill, you're likely to come to the  
10 belief that the memories that surface after you  
11 experience that pill would be accurate memories. So  
12 that expectation then, that the memories are accurate  
13 memories can be quite problematic. And as I said a  
14 little bit earlier, if people enter that situation with  
15 that expectation, and as we know from survey data many  
16 people do, and unfortunately in these hypnotic sessions,  
17 people's expectations were not assessed, so we don't  
18 really know, but if they're more quote, unquote the  
19 average or modal person, we can at least ask questions  
20 about that. So that is a very important factor. And  
21 any suggestions that are provided during the hypnotic  
22 situation bolster contents that images are clearer or  
23 will be more clear, for example, are very, very, in my  
24 opinion, risky and potentially harmful. We know that  
25 hypnosis increases suggestibility, and it is a small one



1 but it is a significant effect. Eye closure and  
2 relaxation can discourage critical evaluation of  
3 memories as relaxation sensations, you're focused in on  
4 how relaxed your arm is rather than analyzing or  
5 thinking or evaluating whether that memory is a  
6 particularly accurate, or inaccurate memory. So if I  
7 ask you, for example, did you recall a person wearing a  
8 sombrero hat in court, I probably looked around or you  
9 probably looked around, but you may not have noticed  
10 someone wearing a large distinctive hat, but you would  
11 have probably said to yourself, well, I would have  
12 remembered that, that's called meta-memory. If I would  
13 have seen the judge, for example, wearing a hat like  
14 that, I would have remembered it, so I assume I did not  
15 see that particular hat. And I then am taking a  
16 critical attitude toward my memories, but if I'm really,  
17 really relaxed, I'm not thinking very carefully, well,  
18 was the person wearing it or wasn't it the way I had  
19 remembered it or not. I'll move along quickly.

20 Research shows that our problems distinguishing memories  
21 retreat prior to hypnosis and those that occurred during  
22 hypnosis, those are called source monitoring errors, and  
23 we have imagination inflation effect. The more people  
24 imagine something happen whether it was true or not  
25 true, they will tend to confuse what they imagined with

1 actual actions. There appears to be a lower threshold  
2 to evaluate these imagined events as memories and  
3 guesses tend to be -- presumed to be memories. So these  
4 are some ways to get your mind wrapped up around how  
5 hypnosis might be responsible for this effect. It's  
6 been said that hypnosis is maybe not great in terms of  
7 recovering older memories but what about emotional  
8 memories. And seven studies now that show hypnosis  
9 neither improves recall of emotionally arousing events,  
10 nor does arousal level affect hypnotic recall much. And  
11 these seven studies encompass things like shop  
12 accidents, fatal stabbings, mock assassination and  
13 actual murder that was videotaped serendipitously.

14 Q. Next slide. Let's talk about the flash bulb  
15 memory that was done.

16 A. Well, in Mr. Shing's pre-hypnotic inquiry, in  
17 statements he talks about flash bulb memories, in other  
18 words how we don't really forget these memories. Flash  
19 bulb memories are memories, events like 9-11, the  
20 Challenger, death of Princess Diana. We did a study of  
21 this, and I'll make this brief, we found people,  
22 identified people, who had an emotional reaction to  
23 Princess Diana's death. We queried them about what they  
24 were doing, what memories they had when they learned of  
25 her death, about one to three days after. We did a

1 follow-up 11 to 12 weeks. If you'll move to the next  
2 slide, please. We had three conditions, one was a  
3 hypnosis condition, one was a contextual reinstatement  
4 condition where we asked people to in their minds, in  
5 their memories reinstate a context, where they were,  
6 what they were seeing, what they were thinking, what  
7 they were doing in a task motivation condition where  
8 they just were instructed to try their best to recall  
9 the events, and we have consistency on the left axis  
10 going up, and you can see hypnosis, the memories were  
11 the least consistent over time.

12 Q. Next slide, please.

13 A. And then we wanted to see whether hypnosis  
14 could create impossible memories, memories or events  
15 that could not have transpired. The study was done with  
16 college students, and there were two toys that were very  
17 popular, the Mattel company's best selling toys in 1978.  
18 Girls tended to play with the Cabbage Patch doll; boys  
19 with the He Man toy. Age regress to 5 with hypnosis  
20 were non-hypnotic suggestions to play with the dolls;  
21 Cabbage Patch if a girl; He Man, a boy. Toys were not  
22 released until two to three years after the target time.  
23 Next slide, please. And as you can see, I guess it's on  
24 that slide, I apologize, that 20 percent of the  
25 hypnotized subjects rated memory as real and were

1 confident event occurred at the target age, but none of  
2 the non-hypnotized persons were influenced by the  
3 suggestion. (Coughing)

4 Q. Do you need some water, Doctor?

5 A. Yes. I apologize. My voice, I have a bit of  
6 laryngitis today. I appreciate that.

7 MR. ALLEN: May I approach, Judge?

8 A. Thank you.

9 Q. Next slide, please.

10 A. Now, you might ask what if we warn people in  
11 advance about the negative effects of hypnosis on  
12 memory, and there are now numbers of studies that show  
13 that even when people are warned, for example, let's say  
14 memory is imperfect, memory is not like a tape recorder,  
15 people can fill gaps in memory. Subjects are just as  
16 confident in the false memories and there's no  
17 difference in the false memory rate between warned and  
18 unwarned subjects. There is one study where some  
19 warnings seem to help, but even with the warnings, the  
20 hypnotic recollections were no more accurate than  
21 non-hypnotic recollections. Most recently, there was a  
22 study, 2015 study, that subjects who were given any  
23 suggestion about the effects of memory -- I'm sorry, the  
24 effects of hypnosis on memory were less accurate in  
25 falsely identifying items than subjects who received no

1 suggestion, so here, again, the warnings clearly didn't  
2 work.

3 Q. Next slide, please. Could you talk a little  
4 bit about the procedural guidelines?

5 A. Yes. Some states will admit hypnotically  
6 elicited testimony when certain procedural safeguards  
7 and guidelines are followed and they evaluate the  
8 hypnosis session based on the extent to which these  
9 guidelines were followed and admit the testimony or  
10 decide not to admit it, depending on the degree to which  
11 in toto the session followed these guidelines. These  
12 guidelines were first elaborated in a Supreme Court  
13 case, a New Jersey Supreme Court case in 1981, and then  
14 later in Zani, 1988, I believe they were adopted in  
15 Texas. I can go over all of these with you, if you'd  
16 like. I have them at the end of the slide. But,  
17 basically in this slide, I've summarized them and they  
18 refer to the level of training of the hypnotist, the  
19 independence from law enforcement, investigators, the  
20 prosecutor, or defense, talk about the need to record  
21 the entire session, have records of facts prior to  
22 hypnosis. And in Zani, they consider the level of  
23 corroborating information. It's important that only the  
24 hypnotist be present in the room, and they evaluate the  
25 appropriateness of the induction techniques used in Zani

1 and the presence of subtle or overt curing -- that  
2 should be cueing, not curing, in suggestions in Zani.

3 Q. Next slide, please.

4 A. Now in State versus Moore in 2006, they  
5 basically reversed the earlier 1981 Hurd ruling in  
6 concluding that the guidelines were no longer adequate  
7 to insure the reliability of hypnotically refreshed  
8 testimony, and that such testimony should no longer be  
9 permitted in criminal proceedings.

10 Q. That's in New Jersey?

11 A. That's in New Jersey.

12 Q. Next slide.

13 A. I've noted a number of concerns that I have  
14 about the --

15 Q. Did you review a number of documents and items  
16 as it relates to this case?

17 A. I did.

18 Q. Do you remember what those are?

19 A. Yes. I evaluated the testimony of the  
20 hypnosis session with, I don't want to mispronounce the  
21 gentleman's name, Villavicencio. I reviewed the video  
22 of the actual hypnosis session, and I reviewed the video  
23 of the Sharpless session and the transcript as well.

24 Q. Okay. And this slide talks about the  
25 Sharpless hypnosis, talk about that a little bit.

1           A.    I'd be happy to.  One of my concerns is that  
2   in this session, the hypnotist emphasized his belief  
3   that the mind is divided into conscious and subconscious  
4   parts, and strongly implied that hypnosis can access  
5   subconscious memories that, the way I read it, he  
6   implied they're always present.  So to give you an  
7   example, prior to hypnosis, you know your mind has a  
8   couple faces to it.  You have your conscious mind, then  
9   your unconscious, or your subconscious mind, not  
10   unconscious.  And Ms. Sharpless states, right,  
11   subconscious.  Shing, your subconscious kind of stores  
12   things for you that you go back and get and recall.  
13   Your conscious mind, like it's just less dysfunctional  
14   every day, and all this kind of stuff, and things you  
15   want to store, you store back there, some maybe.  And  
16   next slide.  And he goes on to say but what happens to  
17   us in a traumatic situation that all those senses are  
18   just at their peak performance.  Your eyesight is as  
19   sharp as it can be, and hearing is as keen as can be and  
20   smell and all that.  So when someone is -- and the best  
21   analogy I know is when like when someone has ever been  
22   in a wreck, they'll say, boy, you know, I can see this,  
23   I can remember this day, or some people talk about when  
24   Kennedy was assassinated, some people talk about now  
25   9-11.  I know exactly where I was and what I was doing

1 and when I had seen that on T.V. It's because it stuck  
2 in our memory because it was such a tragedy. Now,  
3 likewise, if you're in an accident, sometimes your  
4 subconscious mind might know everything that happens,  
5 but it's not going to let your conscious mind know it  
6 because we know what stress does to the body. And he  
7 goes on to say, our minds are very powerful and they  
8 know just how much they can let you have and if you can  
9 cope with it. They'll let a few more things creep in.  
10 Oh, I do remember that. I do remember now them getting  
11 me out of that car and helping, I remember my leg was  
12 hurting, I got trapped and they had to cut that, uh,  
13 metal away or whatever.

14 Q. Next slide, please, Judge.

15 A. Now my way of thinking, these statements  
16 strongly convey the misconception that there was a part  
17 of the mind, the so-called subconscious, which not only  
18 faithfully records everything that happens but also acts  
19 as a gatekeeper of what rises above the threshold of  
20 consciousness.

21 Q. How does that really work?

22 A. As I indicated earlier, the mind is not  
23 divided into sections. There's no part of your brain  
24 that is a subconscious or a conscious. This has never  
25 been identified in any neurological study I know, any



1 credible research on the split mind like this. But when  
2 you look at the flash bulb memory study, and not only  
3 the study that I shared with you, shows people forget  
4 many such memories. One study was a 10-year follow up.  
5 And they showed substantial forgetting of such memories  
6 within a year, and the memories that were inconsistent  
7 tended to be repeated rather than corrected over that  
8 time period. This was a massive study across many  
9 different laboratories, so I think we can have a high  
10 degree of confidence in it.

11 Q. That was in 2015?

12 A. That was in 2015. And as I said earlier,  
13 contrary to, I believe, the implication of what  
14 Mr. Shing was stating, hypnosis does not appear to  
15 improve emotional memories. Now, during hypnosis,  
16 Mr. Shing says I want you to be able to recall in your  
17 mind's eye what you just spoke about, that you'll be  
18 able to recall the vehicle description, the Mustang,  
19 even this Asian male, you'll be able to clearly remember  
20 that even after you come out of hypnosis.

21 Q. Why is that a problem?

22 A. Well, it's highly suggestive, what is not  
23 supposed to use suggestions according to Zani and  
24 according to great hypnotic technique in hypnosis. The  
25 mind as we've already discussed does not have an eye,

1 and Mr. Shing makes such references in stating that  
2 she'll clearly -- remember he invites her to imagine  
3 what she witnessed there by increasing the risk, I would  
4 say based on the research of false recollection and  
5 probably increasing the likelihood that she will be  
6 confident in her recollections regardless of their  
7 accuracy. If you say you'll be able to clearly remember  
8 and you'll even be able to remember after you, quote,  
9 unquote, come out of hypnosis, then it's a clear  
10 expectation that if she does remember, one would presume  
11 that would increase the confidence in those memories.

12 Q. Next slide, please.

13 A. All right. Then Mr. Shing spoke with  
14 Ms. Sharpless about bringing in a forensic artist, and  
15 she stated with reference to the eyewitness  
16 identification, I just know he's Asian, after which  
17 Mr. Shing offers the highly suggestive statement, you  
18 know there are certain features that Asians have. The  
19 way I read this, this could well have lead her to  
20 develop a highly stereotypic image or memory of the  
21 individual she witnessed, which influenced the sketch  
22 that was generated and increased her confidence in the  
23 accuracy of her identification. Again, I view this as  
24 clearly inappropriate technique. Now, you can so this  
25 is after hypnosis, however, experts in the field have

1 gone on to make it very, very clear that suggestions  
2 that are given after hypnosis, particularly those that  
3 relate to what occurred during hypnosis can be very,  
4 very powerful. So I view this as very significant.

5 Q. You also reviewed the Villavicencio hypnosis?

6 A. I did.

7 Q. Could you talk a little bit about that?

8 A. I'd be happy to. This is a quote from the  
9 hypnosis session during hypnosis. I want you now to  
10 remove yourself in your mind's eye the image of this  
11 person. This image will become slow motion to you now,  
12 and this image of this person will be freeze frame in  
13 your memory. And you will be able to recall this image  
14 in your mind's eye by merely closing your eyes. You'll  
15 be able to see this person very clearly. And just --  
16 and it's unintelligible -- as you do on the day of  
17 July 8th, 2006. You'll be able to do that. So this  
18 image that you see, make sure it is very sharp and  
19 distinct. Maneuver yourself. Do you see this image as  
20 clearly and as distinctly as you can. When you do that,  
21 let me know by raising and lowering your left index  
22 finger.

23 Q. So he's doing in the, Nelson's hypnosis, the  
24 same thing he was doing in the other hypnosis?

25 A. Even more flagrant in this case. The mind

1 cannot freeze frame images, much less memories of what  
2 transpires in slow motion, nor can a witness make sure  
3 such images are sharp and distinct. If they try to do  
4 that, try to make the image more sharp and distinct, and  
5 they see it as more sharp and distinct, it is not  
6 accurate. Again this poses great risk for false  
7 confidence and inaccurate memories. And these  
8 suggestions imply that he must use creative imagination,  
9 unless those images in the first place were very, very  
10 sharp and very, very distinct, but he's still saying,  
11 basically, make it even sharper and I'll recall that.  
12 And such suggestions also place inappropriate and very  
13 strong pressures for recall.

14 Q. You talk about the importance of not having a  
15 pre-hypnotic sketch?

16 A. Well, this is very interesting, really,  
17 because the hypnosis guidelines require the hypnotist to  
18 secure information before and after hypnosis to evaluate  
19 the effects of hypnosis on what is recalled. One very  
20 important goal of this session was to get a realistic  
21 sketch as lifelike and accurate a sketch as possible.  
22 Now, the reason why we want to get information before  
23 and after hypnosis is if we don't get that information,  
24 we don't know what was added or subtracted or multiplied  
25 or divided by the effects of hypnosis. We can't really

1 evaluate the effects of hypnosis. And if the primary  
2 goal of the session is to have an eyewitness sketch  
3 produced, why was an eyewitness sketch not provided  
4 prior to hypnosis, if that was the primary goal. If it  
5 were, then we could compare the pre-sketch from the  
6 post-sketch, and we could evaluate exactly what the  
7 effect of a hypnosis was. So in my mind, this evaluates  
8 the spirit if not the letter of the guidelines, both of  
9 the Zani guidelines and the Hurd guidelines.

10 Q. Can you talk a little bit about this slide?

11 A. Yes. Well, sometime ago, David Spiegel and  
12 Herbert Spiegel wrote about how important it is to have  
13 at least some measure, hopefully a formal or  
14 standardized measure of how hypnotizable individuals who  
15 are hypnotized are. It was not apparent to me that any  
16 measure of hypnotizability was given in this study, so  
17 we have no sense of how responsive to suggestions,  
18 generally speaking, these individuals were. Now we do  
19 know that there are studies that show that highly  
20 hypnotizable people produce false memories at a higher  
21 rate than low hypnotizable people, and that medium  
22 people are sometimes like highs and sometimes like lows,  
23 but we have no way to really gauge. Now, Mr. Shing in  
24 his hypnosis of Ms. Sharpless stated that he could tell  
25 how hypnotized she was. There's no way you can look at

1 a person and get an accurate reading of how hypnotizable  
2 that person is to the extent that they followed  
3 suggestions and, basically, appeared to be doing so.  
4 One can get a crude, perhaps a crude estimate, but what  
5 we're looking for here is even a brief measure of  
6 hypnotic suggestibility to have a better sense. So both  
7 the individuals at the end of the road here, at the --  
8 in the court setting identified the defendant, appeared,  
9 in my reading, to be confident. There was no pre-pulsed  
10 indication of how confident they were in their memories,  
11 so again we cannot determine what the effect of hypnosis  
12 had in terms of confidence. The end.

13 Q. The --

14 A. Oh...

15 Q. The opinions you've stated here today are  
16 based on your work and experience in forensic  
17 psychology?

18 A. Some of the -- well, broadly defined, yes,  
19 yes.

20 Q. And they're within a reasonable degree of  
21 scientific certainty?

22 A. In my estimation, yes.

23 MR. ALLEN: Pass the witness, Your Honor.

24 MS. SMITH: Your Honor, my cross is going  
25 to take a little time, did you want me to get started

1 before we break for lunch?

2 THE COURT: If it's going to take some  
3 time, why don't we go ahead and break. Let's say we'll  
4 resume at 1:30. Thank you.

5 (Lunch recess)

6 THE COURT: Ms. Smith, will you be needing  
7 the PowerPoint?

8 MS. SMITH: No, Your Honor.

9 MR. ALLEN: Your Honor, I forgot to ask  
10 one question. I asked the prosecutor if it was okay and  
11 she said it was all right. I'll be brief.

12 THE COURT: All right. Let's hold on.  
13 Let's wait until Mr. Chanthakoummane is back.

14 MR. ALLEN: Sorry, Judge.

15 THE COURT: That's all right.

16 (Defendant enters courtroom)

17 THE COURT: All right. Mr. Allen,  
18 whenever you're ready.

19 MR. ALLEN: Thank you.

20 Q (By Mr. Allen) Dr. Lynn, I forgot to ask you  
21 this question. In reviewing your notes, one of the  
22 interviews was three days after the incident, another  
23 was a month after the incident, what effect would that  
24 have on the person's memory or their ability to recall  
25 something?

1 A. Well, the --

2 Q. What studies do you know of --

3 A. There's a meta-analysis that I referred to by  
4 Steblay and Bothwell, if I remember it correctly, a  
5 delay of one to two days, hypnosis was not quite as  
6 accurate, I believe, but -- after that, and after one  
7 week, I believe, hypnosis was less accurate in terms of  
8 recollections.

9 Q. So the more time passes, the less effective  
10 hypnosis is?

11 A. Well, the more risk apparently there are of  
12 problems and/or the less effective it is.

13 MR. ALLEN: Pass the witness, Your Honor.

14 **CROSS EXAMINATION**

15 BY MS. SMITH:

16 Q. Dr. Lynn, would you characterize yourself as  
17 both a researcher and a clinician?

18 A. I would.

19 Q. And you testified before that this isn't your  
20 first time to testify in court, correct?

21 A. That's correct.

22 Q. You've testified 10 other times in criminal  
23 cases, or -- am I accurately stating that?

24 A. With respect to hypnosis, you're accurately  
25 stating. I've testified in other criminal matters



1 involving not guilty by reason of insanity or competency  
2 to stand trial.

3 Q. Let me be more specific then.

4 A. Sure.

5 Q. You have testified 10 times about hypnosis and  
6 its effect on memory?

7 A. Yes.

8 Q. And how many of those times were the cases  
9 criminal?

10 A. I believe they -- I'd have to check but it was  
11 about 50-50.

12 Q. So some criminal and some civil cases?

13 A. Yes, that's correct.

14 Q. In the criminal cases, did you testify for  
15 both the State and the Defense?

16 A. I think I mostly testified for the defense.  
17 There was one criminal trial, it was a civil -- I'm  
18 sorry, you're asking not about the civil cases?

19 Q. No, sir, I'm asking how many times did the  
20 state call you to testify?

21 A. I'd have to check my records, but I believe it  
22 was five and five criminal, and all of the criminal  
23 cases involved the state.

24 Q. Well, I know it involved the state, but was it  
25 the state that called you to testify on behalf of the

1 state -- it was the defense that called you, correct?

2 A. I'm not clear with those terms, what do you  
3 mean call -- did the state actually contact me is your  
4 question?

5 Q. No, sir. Did the prosecutor call you to the  
6 stand, or did the defense lawyer call you to the stand?

7 A. It was typically the defense lawyer who called  
8 me to the stand. Thank you.

9 Q. Have you ever testified in support of  
10 hypnotically refreshed eyewitness testimony?

11 A. No, I haven't.

12 Q. So is it accurate to say that you blanketly  
13 oppose the admissibility of such testimony?

14 A. That's not accurate.

15 Q. Well, what would be accurate?

16 A. I think it's close to being accurate but I  
17 would leave that up to the courts to decide based on  
18 their interpretation of my testimony. I would not here  
19 tell you that I am an adamant opponent of courts  
20 entering testimony regarding hypnosis.

21 Q. So you think in some cases it would be  
22 admissible?

23 A. I think that's up to the court to decide.

24 Q. I'm asking you your opinion.

25 A. My opinion is that that is the ultimate

1 question, and I think that that's a matter for courts to  
2 decide.

3 Q. So you've conducted several studies in your  
4 career about hypnosis and its effects on memory?

5 A. Correct.

6 Q. And you've been at this for a while, correct?

7 A. Correct.

8 Q. So you've done a lot of studies?

9 A. Depends on what you mean by a lot, but I've  
10 done many studies.

11 Q. Can you give me a number? Ballpark?

12 A. I could check, absolutely, I have them  
13 tallied.

14 Q. You don't need to add it up, would you say  
15 it's less than 50?

16 A. Correct.

17 Q. When did it become known in your field, first  
18 become known in your field that memory does not work  
19 like a video recorder, what year?

20 A. I couldn't give you an exact year.

21 Q. Would you say that your profession was aware  
22 of this in the 1980s?

23 A. It was.

24 Q. And how about the fact that hypnotized persons  
25 can confabulate memories, how long have we known that?

1 A. Since late '70s, '80s.

2 Q. So about the same time frame?

3 A. Correct.

4 Q. How about the fact that hypnosis has the  
5 effect of concreting memories, even false memories, have  
6 we known about that since about the '80s?

7 A. Yes, that's correct.

8 Q. How long have we known that people who have  
9 undergone hypnosis can't distinguish between true and  
10 false memories, about the same time frame?

11 A. Correct.

12 Q. How about the heightened suggestibility of  
13 hypnotized persons, has that been well-known since the  
14 '80s?

15 A. It has.

16 Q. How about the fact that false memories can  
17 essentially be permanent, have we known about that for a  
18 while?

19 A. For a while.

20 Q. Are you familiar with Dr. Bernard Diamond?

21 A. Somewhat familiar, not very familiar.

22 MS. SMITH: May I approach, Your Honor?

23 THE COURT: Yes.

24 Q. Dr. Lynn, I'm going to show you a copy of what  
25 is the State's copy of State's Exhibit 1 and ask if you

1 recognize this document?

2 A. No, I don't. I don't recognize that  
3 particular document, but I think I know the content.

4 Q. Are you familiar with the article?

5 A. I cannot say that I'm really familiar with it,  
6 I have come across it, but it's not one that I'm very  
7 familiar with. I'd have to review it, and I'd be happy  
8 to.

9 Q. Looking at it today, it's an article written  
10 by Dr. Bernard Diamond, correct?

11 A. Uh-hmm.

12 Q. On its face, that's what it is, right?

13 A. Yes, of course.

14 Q. And, pardon me, but it says it's dated March  
15 1980, correct? Sorry.

16 A. Correct.

17 Q. Are you familiar at all with the Shirley case  
18 out of California?

19 A. I'm somewhat familiar with it.

20 Q. Tell me what you know about it.

21 A. I don't know many details about it, but it was  
22 a case in the, I believe, the 1980s and it was an  
23 important case in terms of pointing to the pitfalls of  
24 hypnotically recovered memory, particularly focusing in  
25 on problems with instructing people to remember things

1 clearly during hypnosis.

2 Q. So that was back in the 1980s, correct?

3 A. It was.

4 Q. I'm going to show you a copy of an article  
5 that's identified for the record as State's Exhibit 2  
6 and ask if you're familiar with this article?

7 A. Yes.

8 Q. And what article is this?

9 A. It's entitled Scientific Status of Refreshing  
10 Recollection by the Use of Hypnosis, and it's a council  
11 report by the, I believe the American Medical  
12 Association.

13 Q. Do you recall when it was published?

14 A. I'd have to look at the exact date, 1985.

15 Q. Thank you.

16 A. You're welcome.

17 Q. Can you tell me what council commissioned this  
18 report, do you recall?

19 A. No, I don't recall actually. Oh, Council on  
20 Scientific Affairs.

21 Q. And do you know what the Council on Scientific  
22 Affairs is?

23 A. No.

24 Q. If I told you it was formed by the American  
25 Medical Association, would that sound accurate to you?

1 A. Yes, I said American Medical Association.

2 Q. I'm sorry, I didn't hear you, I apologize.

3 The American Medical Association formed a panel to  
4 actually evaluate the effect of hypnosis on memory back  
5 in the 1980s, didn't they?

6 A. They did.

7 Q. You're still conducting studies about how  
8 hypnosis affects memories even today, correct?

9 A. Correct.

10 Q. Is it your opinion that hypnosis affects  
11 memory's accuracy?

12 A. Yes.

13 Q. Makes it less accurate?

14 A. Well, it actually increases the overall volume  
15 of memories. It produces more accurate memories and  
16 more inaccurate memories, however, the proportion of  
17 accurate to inaccurate memories is such that it tends to  
18 produce more inaccurate memories.

19 Q. Okay. I'm going to show you what's marked for  
20 the record as State's Exhibit 3, and I'm fairly certain  
21 you'll recognize this. Can you identify for the court  
22 what we're looking at?

23 A. Yes, absolutely. It's an article that I  
24 published very recently. When was it? 2014 or '15.

25 Q. And the title of the article is Hypnosis,

1 Hypnotic Suggestibility, Memory and Involvement in  
2 Films, correct?

3 A. Yes.

4 Q. And as a part of this study -- well, I don't  
5 want to put words in your mouth. Tell me what this  
6 study was researching, what the research was.

7 A. The research was to look at hypnotizability  
8 across high, medium and low hypnotizable subjects in  
9 response to a sad film, it was an excerpt from the movie  
10 The Champ that's rated one of the saddest films ever,  
11 and a neutral scene of Toronto. And we asked subjects  
12 about their involvement in the two different movie  
13 clips, and we had in there one question or some  
14 questions at the very, very end asking them what they  
15 recalled from the movie clips.

16 Q. So in layman's terms, you were seeing what  
17 effect an emotional film had on memory versus a  
18 non-emotional film?

19 A. Correct.

20 Q. How did hypnosis play into that study?

21 A. Hypnosis played into it in terms -- well, I  
22 guess I'm not sure what you mean by played into it.  
23 People were in one condition administered a hypnotic  
24 induction, and in another condition they were not, as I  
25 recall.



1 Q. Didn't the results of your research show that  
2 hypnosis had no effect one way or the other on the  
3 accuracy of the individual's memories?

4 A. That's correct.

5 Q. I believe you've testified earlier about what  
6 it is you reviewed in preparation for your testimony and  
7 in giving your affidavit. I wanted to clarify a couple  
8 of things with you.

9 A. Of course.

10 Q. You said that you reviewed the video of the  
11 hypnosis sessions, correct?

12 A. Correct.

13 Q. That would be both from Mamie Sharpless and  
14 Nelson Villavicencio?

15 A. Correct.

16 Q. And you said you reviewed some testimony?

17 A. I reviewed transcripts.

18 Q. Transcripts of the hypnosis session?

19 A. That's what I meant by my testimony.

20 Q. So you didn't read any of the Reporter's  
21 Record from the trial?

22 A. I did. I read Shing's testimony from the  
23 trial, and the Daubert hearing. And I did review  
24 testimony by Villavicencio, and I believe I reviewed, it  
25 was quite a while ago, the Sharpless testimony too.

1 Q. Did you read their witness statements?

2 A. I did.

3 Q. Both the written statement of Mamie Sharpless  
4 and the written statement of Nelson Villavicencio?

5 A. I believe so. I have that material here if  
6 you'd like me to double check that?

7 Q. Sure.

8 A. I read the voluntary statement taken at the  
9 McKinney Police Department by Villavicencio dated, let's  
10 see the date here, 11th of August, 2006. I read a  
11 supplementary statement by the same individual. I read  
12 a supplementary statement by Ms. Sharpless.

13 Q. When you say supplementary, do you have two  
14 different statements for witnesses, or just one  
15 statement for each witness?

16 A. I have an e-mail basically that is dated  
17 September 9th.

18 MS. SMITH: May I approach?

19 A. Sure. And I have also a statement by  
20 Ms. Sharpless.

21 MR. ALLEN: Can I approach as well?

22 THE COURT: Yes.

23 Q. So the two e-mail statements appear to be from  
24 Mamie and Nelson, correct?

25 A. That's correct.

1 Q. And they relate to the Mustang?

2 A. It's been a while, I would have to review.

3 Q. They're short, take a moment.

4 A. Yes, they both do, that's correct.

5 Q. You have the subsequent statements, typed  
6 statement of Mamie Sharpless, and the handwritten  
7 statement of Nelson?

8 A. I don't have a handwritten statement, it's a  
9 typed statement.

10 Q. There's a typed version of his written  
11 statement?

12 A. Uh-huh.

13 Q. Did you see the sketch?

14 A. I do have a copy of the sketch.

15 Q. Were you under the impression that Mamie  
16 generated the sketch?

17 A. No, I'm not.

18 Q. So you are aware that no sketch was generated  
19 based on Mamie's description?

20 A. I am. So I misspoke earlier then when I said  
21 that the pre-sketch was not administered to either, and  
22 I stand corrected, so I am aware of that, yes.

23 Q. So you're correcting your earlier testimony?

24 A. I'm correcting my earlier testimony. That's  
25 why you appeared to be confused because it was

1 confusing. My apologies.

2 Q. No problem. Are you saying that Mamie and  
3 Nelson's memories are false?

4 A. I have no idea whether they were true or  
5 false.

6 Q. Is it possible their memories were true and  
7 accurate?

8 A. Yes.

9 Q. So you're not saying that all hypnotically  
10 refreshed memories are false?

11 A. That's correct.

12 Q. You're just questioning their reliability?

13 A. I am.

14 Q. Did you compare the descriptions that Mamie  
15 and Nelson gave before the sessions with the  
16 descriptions they gave during the sessions?

17 A. I did not do a careful comparison, but I did  
18 look at -- I did read the materials relevant to that,  
19 but I didn't see that as my task to look at what  
20 memories were changed, I was confining my evaluation to  
21 the conduct of the hypnosis sessions.

22 Q. Would you still have the same concerns about  
23 the validity of their identifications if their  
24 descriptions did not change over time?

25 A. Absolutely. And I can explain why, if you

1 like.

2 Q. Go ahead.

3 A. If their original impressions were incorrect,  
4 it is possible that hypnosis would have, through  
5 increased confidence in their original incorrect  
6 recollections, created rather serious problems.

7 Q. So assuming their initial recollections were  
8 incorrect, hypnosis would not render them more correct,  
9 it would make them still incorrect?

10 A. Well, it could also increase the confidence,  
11 which would clearly be irrelevant to the matter at hand.

12 Q. But your hypothesis is based on the assumption  
13 they were incorrect in the first place?

14 A. I'm saying that is one way that we could be  
15 certain that the -- well, let me retract that a bit.  
16 That would raise an index of suspicion regarding the  
17 negative effects of hypnosis.

18 Q. Did you know that Mr. Chanthakoummane was not  
19 a suspect at the time the witnesses first described him  
20 to the police?

21 A. I have no knowledge of that.

22 Q. Were you aware that he was not a suspect when  
23 they underwent hypnosis?

24 A. Yes.

25 Q. So if no one in law enforcement had any idea

1 that Mr. Chanthakoummane had any connection to the  
2 crime, they couldn't have suggested him to either Mamie  
3 or Nelson during the hypnosis session, could they?

4 A. That's not the issue with hypnosis, but rarely  
5 does someone say I will be hypnotizing you for you to  
6 recall someone with a certain set of features or  
7 characteristics, that's not the issue in terms of  
8 eyewitness testimony, or eyewitness enhanced testimony.

9 Q. Yes, sir, but my point is --

10 A. And hypnosis.

11 Q. I'm sorry, did you need to finish?

12 A. And hypnosis, yes.

13 Q. My question really is there's no way for the  
14 police to suggest Mr. Chanthakoummane to the  
15 eyewitnesses if they don't even know who  
16 Mr. Chanthakoummane is?

17 A. That's correct.

18 Q. Were you aware that Mr. Chanthakoummane  
19 admitted his encounter with the two eyewitnesses?

20 A. Am I aware of that? I think I am aware of  
21 that, yes, yes.

22 Q. How are you aware of it?

23 A. I believe through the materials that I read.  
24 I don't have a real clear recollection of exactly what  
25 transpired when, so I'm trying to be as honest as I can

1 in responding to your question.

2 Q. Did you review the interrogation?

3 A. I did.

4 Q. Could it be from that?

5 A. I can't tell you. I do believe that's correct  
6 though.

7 Q. Were you aware that he described both them and  
8 their vehicle in the interrogation?

9 A. Yes.

10 Q. And that information was not fed to him in the  
11 interrogation?

12 A. No.

13 Q. You previously testified that you're aware and  
14 familiar with the law that's governing the admissibility  
15 of testimony of witnesses in Texas who have undergone  
16 hypnosis?

17 A. Yes, I am.

18 Q. The Zani case?

19 A. Yes, I'm aware of that.

20 Q. That case, the opinion was issued in 1988?

21 A. Correct.

22 Q. And that case addressed some of the concerns  
23 that your field had about the reliability of  
24 hypnotically refreshed testimony, correct?

25 A. It did, uh-hmm.

1 Q. It came up with several factors to use to  
2 evaluate whether or not that testimony was reliable  
3 enough to warrant its admission, correct?

4 A. Correct.

5 Q. It was addressed -- those factors were  
6 designed to address the concerns with  
7 hyper-suggestibility, correct?

8 A. That was one prong, yes.

9 Q. The loss of critical judgment?

10 A. Correct.

11 Q. Confabulation and memory cementing, right?

12 A. Correct.

13 Q. And the Zani test is still the test today in  
14 Texas, correct?

15 A. It is, to my knowledge.

16 Q. One of the Zani factors is the existence of  
17 any evidence to corroborate the hypnotically enhanced  
18 testimony, you're familiar with that factor?

19 A. Yes, I am.

20 Q. Did your opinion take into account any  
21 corroborating evidence in this case?

22 A. No.

23 Q. Why not?

24 A. I don't feel that I'm an expert to evaluate  
25 any corroborating evidence, so my opinion was



1 independent of any possible corroboration.

2 Q. What kind of evidence would you consider  
3 corroborating?

4 A. Well, eyewitness -- no, no, I would not. DNA,  
5 yes. And I do understand that there is some DNA  
6 evidence, but I'm not an expert in the quality of DNA  
7 testing or evidence or any issues associated with that,  
8 and that's why I was hedging in terms of the previous  
9 question.

10 MS. SMITH: Pass the witness.

11 THE COURT: Any redirect?

12 MR. ALLEN: Yes, Your Honor. I was just  
13 waiting for Your Honor.

14 **REDIRECT EXAMINATION**

15 BY MR. ALLEN:

16 Q. You're not trained as a lawyer?

17 A. I am not.

18 Q. And the prosecutor talked about a number of  
19 studies that were done in the '80s, this case happened  
20 in 2008. Have there been a group of studies that have  
21 been done since 2008 that talk about hypnosis and  
22 psychology that you're aware of?

23 A. Yes.

24 Q. Could you talk about those, please?

25 A. Well, if I could broaden it?

1 Q. Sure.

2 A. There have been in reviews, for example, such  
3 as the one that I refer to in 2013 that synthesized much  
4 of the evidence that has to do with accuracy and  
5 confidence. There have been evaluative reviews, one  
6 published in 2016 that talked about there being no  
7 theoretical or empirical basis for having confidence in  
8 eyewitness testimony that was based on hypnotically  
9 elicited recall. There was a study that I referred to  
10 on warnings that showed that the warnings were not  
11 effective.

12 Q. Could you talk about that a little bit?

13 A. Yes. That was a study by Dasse and Elkins  
14 where they warned subjects regarding the mind not being  
15 like a tape recorder. And there was a second condition  
16 that included that, but I believe in one condition, they  
17 stated something about remembering things clearly, and  
18 in the second warning condition, they said that it was  
19 the opposite, and neither warning, in fact, was helpful,  
20 but it had the opposite effect. In fact, there was more  
21 false recollections with the warnings regardless of what  
22 the warnings were.

23 Q. And, I guess, to be fair, this part of the  
24 field of forensic psychology is not static, it's  
25 constantly developing new and different ways to look at

1 hypnosis?

2 A. It's not only -- yes, that is correct. It's  
3 not only static, not static, it's dynamic in the sense  
4 of hypnosis, but there have been probably 15 studies in  
5 the last decade or so on imagination inflation. There  
6 have been multiple studies --

7 Q. Could you explain what that is?

8 A. Imagination inflation is a phenomenon where  
9 when you invite someone to imagine a situation, an event  
10 from childhood or later, repeatedly, and the event was  
11 not an event that had previously occurred, they become  
12 more confident that the non-occurring event was an  
13 actually-occurring event. And, of course, this is  
14 relevant to hypnosis in terms of inviting the person who  
15 was hypnotized to remember, to hold the image in mind,  
16 to think about it later. Each episode of remembering  
17 the incident in a -- imagination, according to this  
18 perspective, would potentially be problematic. The more  
19 you think about something, the more it basically grooves  
20 in the memory, or is likely to elaborate or create a new  
21 memory of something that was imagined that did not  
22 happen.

23 Q. The prosecutor asked you about this 2015  
24 study, how did that relate to suggestibility?

25 A. It didn't relate to suggestibility.

1 Q. And suggestibility is the issue here, correct?

2 A. No. The effect of hypnosis is the issue here.  
3 Suggestibility is an independent issue saying that  
4 people who differ in terms of suggestibility have  
5 different probabilities of arriving at false memories.

6 Q. Okay.

7 A. That was not the main problem in terms of  
8 generalizability to a forensic situation.

9 Q. If you could, explain the study a little bit  
10 better and it's applicability to this case --

11 A. Sure. In fact, I do have some notes on that  
12 that I took. There's always problems in terms of  
13 looking at one study, focusing on only one study and  
14 making generalizations that are firm generalizations.  
15 That's why we do meta-analyses, that's why we do reviews  
16 like the one that I did that considers multiple studies  
17 that address the same issue. And this study was unlike  
18 a forensic situation in a number of respects. First  
19 off, there was no clear link that we made between  
20 hypnosis and the importance of recall. In forensic  
21 situations where recall is at issue, of course, that is  
22 key. Second, the recall tests came at the very end  
23 after multiple measures, so there might have been  
24 fatigue effects. Third, and importantly, the forensic  
25 situation, the study was conducted in a group. Four,

1 neutral or sad situations are very different from the  
2 target of most forensic situations. Five, the hypnotic  
3 induction that was used was very, very different from  
4 the one that was used in both cases. In the hypnosis,  
5 and the matter of issue here, there was a lengthy  
6 progressive relaxation induction when it's used, muscle  
7 group by muscle group. It was probably 15 or 20 minutes  
8 long, and as I recall, the induction in our study was  
9 very brief. But, most importantly, there was no  
10 suggestion for improved memory. And what is at issue in  
11 forensic situations is not only how hypnosis might  
12 affect memory versus no hypnosis, but what the effect of  
13 suggestions that are embedded within the hypnotic  
14 induction have on the person. And as I indicated in  
15 both cases, there were suggestions that I felt very  
16 uncomfortable with. But, while that study was  
17 interesting and fits into a number of studies that are  
18 in the minority that show that they're of little or no  
19 risks with hypnosis, there are very significant  
20 differences.

21 Q. Okay. Thank you. Talk a little bit about  
22 this widening, ever changing field. Now making your  
23 opinion today, the studies that you rely upon and your  
24 own research, these things, some of these things  
25 occurred after 2008, correct?

1 A. Correct.

2 Q. And it's really not, to be fair, it's not  
3 really about what the defendant says, it's what the  
4 witness says?

5 A. That's correct.

6 Q. It's more important in your looking at  
7 hypnosis as to what the witness is being told before  
8 they go under, while they're under, rather than --

9 A. And after, if I might add.

10 Q. And after. Not necessarily what the defendant  
11 has said or not said?

12 A. That's correct.

13 MR. ALLEN: If I could have a moment, Your  
14 Honor.

15 Q. Under -- would it be fair to say psychologists  
16 use a scientific method?

17 A. Many do.

18 Q. Fair enough. And the scientific method  
19 requires constant testing of hypotheses and testing of  
20 ideas?

21 A. Absolutely.

22 Q. And, certainly, you can pick one study from a  
23 group of studies and say that that stands for something,  
24 but really you have to look at the entire body of work?

25 A. I use the term the consilience of evidence,

1 the total body and the conclusions that can be drawn  
2 from a total body recognizing that the reason why we do  
3 studies is in part to dis-confirm our hypothesis, so the  
4 study that we are referring to, that study suggests many  
5 different avenues for follow-up studies. It would nail  
6 down how that particular study, why that particular  
7 study might have differed from other studies that found  
8 different results. That's how science advances.

9 Q. And that's a good point. Science doesn't,  
10 when you're testing it, it moves forward and breaks new  
11 ground, correct?

12 A. It's important to be wrong, just as important,  
13 maybe more important, or a little bit off base where  
14 they have a hypothesis dis-confirmed as it is to confirm  
15 your hypothesis. That is the goal of good science.

16 Q. It's not always wise to choose just one or two  
17 cases, you should really look at the whole field?

18 A. You have to look at the quality of the  
19 evidence and the entire body of evidence. Studies can  
20 be very well designed and comprehensive in the  
21 conclusions that can be drawn, or they can be poorly  
22 designed and also very narrow in the conclusions that  
23 can be drawn.

24 MR. ALLEN: Pass the witness, Your Honor.

25 MS. SMITH: State has nothing further.

1 THE COURT: Is this witness released or  
2 reserved?

3 MR. ALLEN: Your Honor, since this is a  
4 bifurcated hearing with the State's expert, we may need  
5 him -- we can work that out with him, but we may need him  
6 for the purposes of when their witness is here, so just  
7 for that limited purpose we would release him, but he's  
8 certainly free to go back to New York.

9 THE COURT: Thank you, sir.

10 THE WITNESS: Thank you very much.

11 THE COURT: Call your next witness.

12 MR. ALLEN: Yes, we'd call Curt Carlson.

13 THE COURT: Sir, please raise your right  
14 hand for me.

15 (Witness sworn)

16 THE COURT: Thank you. Please have a  
17 seat.

18 CURT ANTHONY CARLSON, PH.D.,  
19 having been first duly sworn, testified as follows:

20 DIRECT EXAMINATION

21 BY MR. ALLEN:

22 Q. Would you state your name and spell it for the  
23 record?

24 A. Curt Anthony Carlson, C-a-r-l-s-o-n.

25 Q. What do you do for a living?



1           A.    Well, I'm an associate professor at Texas A &  
2 M University - Commerce.

3           Q.    And what is your educational background?

4           A.    Well, I have a bachelors degree in psychology  
5 from the University of Nebraska from 2002, masters  
6 degree in cognitive psychology from the University of  
7 Oklahoma in 2004, and Ph.D. in experimental or cognitive  
8 psychology from the University of Oklahoma in 2008.

9           Q.    What type of research have you done?

10          A.    I do specialize in cognitive supervision  
11 research, specifically recognition memory, and more  
12 specifically than that, in terms of applications, I do  
13 focus on eyewitness identification.

14          Q.    Specifically, is there any subsection or  
15 subspecies of eyewitness identification that you're  
16 interested in?

17          A.    Certainly.  So I focus on the lineup, the  
18 necessity of having the lineup and characteristics that  
19 make for a good lineup, aspects of how to present a  
20 lineup to an eyewitness and various characteristics of  
21 the lineup.

22          Q.    What makes a good lineup?

23          A.    Several factors.  First off, you need to make  
24 sure -- ideally, there are several factors.  So they  
25 break down in terms of recall, estimator variables,

1 aspects of the crime itself as well assist in variables.  
2 So the lineup is technically a system variable, that  
3 which the criminal justice system has some control over,  
4 but there are other variables in play as well. So you  
5 want to be able to present the lineup shortly after the  
6 crime occurs so the memory is fresh but as to the lineup  
7 itself, you want to make sure that the individual  
8 presenting the lineup is what's called double blind,  
9 it's not aware of who the suspect is in the lineup  
10 thereby not being able to intentionally or  
11 unintentionally direct any eyewitnesses towards the  
12 suspect. You want to make sure that you're presenting a  
13 lineup as opposed to what's called a show up, that would  
14 be a single suspect identification procedure, which are  
15 also quite common. A lineup is better than show up  
16 because you have known innocent individuals in the  
17 lineup, so it makes for a better recognition test.  
18 That's fundamentally what a lineup is, it's a memory  
19 test. You're trying to present to a witness something  
20 that would be a diagnostic of their memory, whether they  
21 truly remember the person involved. So lineup is akin  
22 to a multiple choice test. You need to have  
23 alternatives there that could draw attention, but you  
24 know if the eyewitness chooses a filler, you know  
25 they're making an incorrect decision. Without fillers

1 to serve as kind of that ability to diagnose the memory  
2 as being accurate, it loses its ability to determine  
3 accuracy.

4 Q. Are you familiar with the issues with in-court  
5 identification?

6 A. Yes. So as in this case here, no lineup  
7 involved, you have just in court identification, so you  
8 have eyewitnesses that are never presented with a lineup  
9 or a show up. They get to trial and are asked is  
10 there -- do you recognize someone in this room as being  
11 the person who you saw involved with the crime, and they  
12 either identify the person in court or not, so that's an  
13 in-court identification.

14 Q. And the importance of -- in that situation,  
15 what is the importance of having a photo lineup, if  
16 that's possible?

17 A. Just so I understand, doing the photo lineup  
18 in court?

19 Q. Well, just beforehand, pretrial?

20 A. Well, so pretrial, yeah, a lineup, some sort  
21 of identification procedure like a lineup, something  
22 that presents fillers. That's essential, not only  
23 because it would occur closer to when the crime occurred  
24 so memory is more fresh, but it serves as a better  
25 diagnostic test of memory. You're able to determine --

1 especially with a fair lineup, you want to make sure  
2 that all the members of the lineup, all the fillers  
3 match the suspect's description, so truly if the  
4 eyewitness chooses the suspect out of the lineup, you  
5 can be pretty sure that they're doing that because of  
6 familiarity of the suspect, and then you have to  
7 determine whether that familiarity is driven by them  
8 knowing the person because they are, in fact, the  
9 perpetrator of the crime.

10 Q. So it's better to have that sort of ordered  
11 pretrial lineup --

12 A. Yes, it's a very structured, and really very  
13 essential to have a lineup and to present it in a very  
14 structured manner to control for these kinds of biases  
15 that exist and make sure it's a good memory test.

16 Q. Have you written any books on eyewitness  
17 identification or photograph...

18 A. So I've co-authored two chapters, I've written  
19 several peer-reviewed articles on the experimental  
20 psychology underlying eyewitness identification.

21 Q. What are those called, if you remember?

22 A. The titles of the articles?

23 Q. Yes.

24 A. Oh, gosh, I didn't bring my CV with me, I  
25 don't know about the specific titles, but I started out

1 by investigating two very popular types of lineups.  
2 Simultaneous lineups, which are still most common in  
3 this country, you present all the photos, usually six  
4 photos in a photo array at the same time,  
5 simultaneously. There's another way you can do it,  
6 present the photos one at a time, it's called sequential  
7 lineup. So I had papers investigating, really comparing  
8 and contrasting the two in some experiments I did a few  
9 years ago. Then I got involved in some work involving  
10 distinctiveness. Specifically, if you have a  
11 perpetrator who has a black eye, or something like that,  
12 what impact does that have on eyewitness memory? And I  
13 did some work on what's called the weapon focus effect  
14 such that if there's a weapon present during the crime,  
15 how does it draw attention, how does it impact  
16 eyewitness identification in that way.

17 Q. Are you a member of any organizations?

18 A. Sure. I'm a member of the American  
19 Psychology-Law Society, and it's Division 41 of the  
20 American Psychological Association. Also, I'm a Fellow  
21 of the Psychonomic Society, so that's the largest  
22 international group of cognitive psychologists.

23 Q. Do you do any private practice?

24 A. No, I'm purely an associate professor at A & M  
25 Commerce such that I teach and I conduct research with

1 my doctoral students.

2 Q. And a majority of that research is related to  
3 eyewitness identification and the issues related to  
4 that?

5 A. Yes. The vast majority of it is directed  
6 towards issues of eyewitness identification.

7 Q. Have you received any honors or awards in  
8 relation to?

9 A. Well, I'm fairly early on in my career here so  
10 I can't say that I've earned any awards specific to my  
11 research to this point, although I do publish in very  
12 good journals in my field.

13 Q. Have you ever testified before as an expert?

14 A. No.

15 Q. Today, were you able to review a number of  
16 items as it relates to this case?

17 A. Yes, I did review transcripts from the trial,  
18 and I focused specifically on the two eyewitnesses, the  
19 two in-court identifications that took place.

20 Q. Would you be able to provide an opinion as it  
21 relates to eyewitness identification and this matter  
22 before the court?

23 A. Yes. So in-court identifications, as I  
24 mentioned before, don't provide the same kinds of  
25 structure as a lineup does to make sure it's a

1 diagnostic memory test. I have an analogy that I think  
2 can be useful when this comes to in-court  
3 identifications.

4 Q. Okay.

5 A. Let's say you're studying for an exam although  
6 it's only going to have one item. It's not going to be  
7 multiple choice, it's going to be true/false. If it's a  
8 true/false question, you know that 50 percent of the  
9 time you can guess and get it correct, but then you find  
10 out the exam is not going to be in a few days, few  
11 weeks, it's going to be several months, it's going to be  
12 over a year from now, and not only that but you  
13 encounter information during that span of time that  
14 directs you towards you think the answer is going to be  
15 true based on the information that's out there. And  
16 then you get to the exam finally over a year later and  
17 you're told, well, before you answer this single  
18 question, single true/false question, be mindful of the  
19 fact that several people took the exam and they all  
20 answered true, so what do you think, is it true or  
21 false? Similar to an in-court ID, by that point it's  
22 highly suggestible. At that point it doesn't really  
23 qualify as a memory test. It's entirely too suggestive,  
24 indicating that an individual is the perpetrator at that  
25 point could be driven by so many things other than

1 memory. It's really not a useful memory test.

2 Q. Are you familiar with the literature as it  
3 relates to cross-racial identification?

4 A. Yes. So the cross race effect, or own race  
5 bias, as it's called, has been around for quite  
6 sometime. You have papers such as Chance, Goldstein,  
7 McBride, 1975, and there have been several reviews and  
8 meta-analyses of this area as well to indicate a very  
9 robust phenomenon, and, that is, that members of one  
10 race are very good at identifying familiar individuals  
11 of their own race, but not very good at identifying or  
12 recognizing correctly faces of another race. So that  
13 earlier paper I mentioned by Chance and colleagues,  
14 1975, so that one focused on presenting pictures to  
15 Caucasian participants and African-American  
16 participants, and those faces -- those photographs of  
17 faces they were presented with, there were Caucasian  
18 faces, African-American faces and Asian faces. And then  
19 they would be tested later and it was found they were  
20 best at the faces of their own race, and then for  
21 Caucasians, the African-American faces were next, Asian  
22 faces were worst. For African-American participants,  
23 the African-American faces were best, then Caucasian  
24 faces and then Asian faces were last. And there were  
25 lots of different theories to explain this effect, but



1 it's a very robust phenomenon.

2 Q. Both the eyewitness identification, I don't  
3 want to say field, but this sort of study of -- and the  
4 cross-racial identification, that's something that's  
5 ongoing, that there are studies being done on that?

6 A. Yes.

7 Q. And have been studies since 2008 that you're  
8 aware of?

9 A. Yes, there have.

10 Q. And you're comfortable talking about those  
11 things here?

12 A. Yes.

13 MR. ALLEN: Your Honor, we would ask that  
14 he be qualified as an expert.

15 MS. SMITH: State has no objection.

16 THE COURT: All right. He's accepted by  
17 the Court as an expert in his field.

18 Q. You talked about this a little bit, but I want  
19 to dig down a little deeper if I can, and I'll only talk  
20 really, if I can, about the two spots. The first is the  
21 in-court identification. You talked about time being a  
22 variable, what does time do to that person's memory?

23 A. Yeah, so the passage of time, so what's known  
24 in experimental psychology is the retention interval,  
25 how long is the information -- how long does the

1 information have to be retained has a large impact on  
2 the accuracy of memory over time. So you have a natural  
3 decay of memory over time, you have interference that  
4 takes place such that people, if they're trying to keep  
5 in mind one face they've seen, well, other faces they've  
6 seen in that span of time are going to interfere with  
7 that original memory. As we heard in prior testimony  
8 here, memory is highly reconstructed. That means that  
9 it's always changing every time you recall a face,  
10 recollect a face, you open it to what's called  
11 re-consolidation, so you're essentially re-storing that  
12 memory. And in this re-consolidation process, the  
13 memory is open to manipulation and change, so any  
14 exposure to other faces in the media, or other faces  
15 you're encountering in your every day life are going to  
16 interfere with that original face, and the longer period  
17 of time that goes by, the larger the impact of the  
18 interference.

19 Q. What effect does post-event information have  
20 on them?

21 A. What I'm describing is all post-event  
22 information. This is all the information encountered  
23 between the encoded event, the initial time the event  
24 occurs and the test, the retrieval period when you're  
25 asked to do something with that information. So

1 post-event information, as I said, it creates  
2 interference, and that's only if it's neutral. If it  
3 has some kind of a direction to it, seeing the same face  
4 over and over again, that will also have an impact on  
5 confidence. So oftentimes eyewitnesses will become  
6 over-confident in their original memories, even though  
7 the original memories haven't -- they haven't had a  
8 chance to go back and review, memory is not like a tape  
9 recorder, it's rather the new information coming and the  
10 post-event information that can make people feel more  
11 confident in their original memories when, in fact, that  
12 confidence is misplaced, it's really driven by the  
13 post-event information, not the original information, so  
14 you can get over-confidence.

15 Q. Is there any correlation to confidence of  
16 accuracy?

17 A. So that is a complicated -- there's a  
18 complicated answer to that. For the longest time for  
19 several decades in my field of eyewitness  
20 identification, it was argued that it was found  
21 empirically that there was not a very good correlation,  
22 good relationship between confidence and accuracy. That  
23 is still correct when it comes to in-court  
24 identifications to be sure. The change that's been made  
25 in the last few years is it's been realized that if you

1 have good circumstances -- not good circumstances -- if  
2 you present a good lineup in the manner in which it  
3 should be presented that I described, double blind, a  
4 fair lineup, and it's fairly soon after the crime occurs  
5 and you collect confidence immediately after the eye  
6 witness' decision, that confidence is correlated well  
7 with accuracy, but you have to have those fairly  
8 pristine conditions as they're called. This is driven  
9 largely by a large review paper by Wixted and Wells that  
10 came out this last year.

11 Q. In terms of the in-court identification, the  
12 fact that there has -- are there any variables within  
13 the courtroom itself that make an in-court  
14 identification less reliable?

15 A. Well, yes. I mean, it's highly suggestible.  
16 It's suggestible because there's one, in a case like  
17 this when there's one perpetrator, there's one suspect  
18 in the room. Quite obvious who -- not to even mention  
19 the social pressures that would be involved with an  
20 eyewitness sitting in front of everyone and being asked  
21 who do you think was the person you saw, it's clear who  
22 everyone -- not everyone, it's clear -- it's heavily  
23 implied as to who it is, and this is driven by something  
24 other than memory. It's suggestibility. It's the  
25 suggestible nature of the context of the courtroom.

1 Q. And if that defendant is of another race, does  
2 that get into the cross-racial identification?

3 A. That would be a factor as well, yes. So it  
4 would make the -- it has a high probability of making  
5 the suspect stand out more in the courtroom, and also  
6 the fact that, yes, it's cross-race ID. So one aspect  
7 of the cross-race effect is when trying to recognize  
8 faces of that other race, they are more easily  
9 confusable, it's easier to false alarm to a face because  
10 it's of that race, even though it's not the same  
11 individual.

12 Q. And I should be clear, that's not just between  
13 white and black people, that could be between white  
14 people and Asians, black people and Latinos, Latinos and  
15 Asians?

16 A. That's correct. So there's literature on all  
17 of those races. A lot of this research has been done in  
18 this country, mostly with Caucasian participants viewing  
19 Caucasian photos versus African-American versus Latino.  
20 Great deal of research happens at University of Texas El  
21 Paso with Hispanic participants and Hispanic photos that  
22 they're being tested on and, certainly, Asian faces as  
23 well, both here and Asian countries.

24 Q. Can the photo lineup cut down on it?

25 A. Can you repeat the question?

1 Q. If they had done a photo lineup, can that cut  
2 down on the cross-racial effect?

3 A. So does the photo lineup cut down on the cross  
4 race effect? In a way it does, if it's a fair lineup  
5 and let's say you have an Asian suspect and lineup of  
6 other Asian individuals, it does make it less likely  
7 that that suspect will be chosen from the lineup because  
8 you have Asian fillers who should match the description  
9 in other ways as well beyond being of the same race. So  
10 in that way, yes, a lineup would help, but still there  
11 would be issues with the identification due to the  
12 cross-race effect even if it were a lineup, but lineup  
13 does help.

14 Q. Certainly, in this case, the passage of time,  
15 what variables do you rely upon in saying that the  
16 in-court identification isn't reliable?

17 A. Well, the passage of time is one, but even if  
18 the trial had occurred a few days after the crime as  
19 opposed to 15 months, it would still be highly  
20 problematic, because it does not serve as a good test of  
21 memory. It's still entirely too suggestive as to who  
22 the eyewitness should choose.

23 Q. And does that also take into effect the  
24 cross-racial effect that's at play here?

25 A. I'm not sure I understand.

1 MR. ALLEN: If I could have a moment, Your  
2 Honor?

3 THE COURT: Uh-hmm.

4 Q. Basically, that they're going to pick whoever  
5 is sitting at defense counsel that doesn't match -- that  
6 matches the description?

7 A. Yes. That is the primary problem with  
8 in-court identifications is that they're highly likely  
9 to choose the defendant. That would be exacerbated by  
10 the cross-race effect, but it would still be problematic  
11 due to its suggestiveness.

12 Q. Do you know how much time between the events  
13 and the in-court identification?

14 A. Between, I'm sorry?

15 Q. Between when this event allegedly took place  
16 and the in-court identification, do you know how long  
17 that was?

18 A. Yes. It's my understanding the crime took  
19 place on July 8, 2006 and the trial was October 2007, so  
20 15 months.

21 MR. ALLEN: Pass the witness, Your Honor.

22 **CROSS EXAMINATION**

23 BY MS. SMITH:

24 Q. Dr. Carlson, would you characterize yourself  
25 as a forensic expert?

1           A.    No, I would not. I am a cognitive  
2 psychologist. I primarily understand the literature on  
3 memory and decision making and eyewitness  
4 identification.

5           Q.    Would it be accurate to say you're a  
6 researcher?

7           A.    Yes.

8           Q.    You said that it's essential to have a lineup  
9 before an in-court ID, did I state that accurately?

10          A.    I probably used that term. I would argue that  
11 it's essential to have a fair lineup in order to -- for  
12 an identification to be based on, yes.

13          Q.    How soon after the offense or the event that's  
14 witnessed should the lineup be presented to the witness?

15          A.    That is an excellent question. There's no set  
16 period of time that's been identified as an ideal window  
17 by empirical research, there's just been research on the  
18 retention interval itself, and the longer it is, the  
19 more problematic it is, but a fair lineup can still be  
20 useful even if a significant period of time has passed.

21          Q.    In order to do the lineup, you have to have a  
22 description of the suspect, correct?

23          A.    Yes.

24          Q.    And even better would be an actual suspect  
25 whose photograph you could include in the lineup?



1 A. Well, yes.

2 Q. You're not saying an in-court ID can't be  
3 accurate without a lineup beforehand, are you?

4 A. In-court identifications can be accurate, even  
5 without a lineup before it. I just would argue it would  
6 not be very reliable to do it that way.

7 Q. Let's talk about what you reviewed before you  
8 testified today. You said today before you took the  
9 stand, you reviewed the testimony of Mamie Sharpless and  
10 Nelson villavicencio; is that correct?

11 A. I didn't review it today, but I did review it  
12 recently.

13 Q. I'm sorry, I misunderstood earlier. Did you  
14 review their statements, their written statements?

15 A. I reviewed only court transcripts from the  
16 trial during which they made the in-court  
17 identifications.

18 Q. You did not review transcript or video  
19 recording of Mr. Chanthakoummane's interrogation by the  
20 police?

21 A. No.

22 Q. So you're not saying that the witnesses in  
23 this case misidentified Mr. Chanthakoummane, are you?

24 A. I can't speak to the specific eyewitnesses or  
25 their memories in particular, I'm only here to describe

1 what the literature in my field has found in terms of  
2 the overall reliability of in court identifications  
3 versus lineup identifications and show ups and those  
4 sort of things.

5 Q. So Mamie and Nelson could have made an  
6 accurate identification of Mr. Chanthakoummane?

7 A. Yes, that is possible.

8 MS. SMITH: Pass the witness.

9 **REDIRECT EXAMINATION**

10 BY MR. ALLEN:

11 Q. Your concern is with the reliability of the  
12 identification?

13 A. Yes. I'm here to speak to the overall  
14 unreliability of in-court identifications in contrast to  
15 lineups, which are, if done properly, more reliable.

16 Q. This is based on your experience and research  
17 in this area?

18 A. Yes.

19 Q. You can't say if the identification was  
20 correct or incorrect, you're just worried about the  
21 reliability?

22 A. That's correct. As an eyewitness expert, I  
23 can't speak to an individual person's memory, what they  
24 perceived, what they might have remembered, I can just  
25 speak to the overall data, the information from the

1 literature in my field indicating the, as I said before,  
2 unreliability of in-court identifications and higher  
3 reliability of fair lineup-based identifications.

4 Q. If a thing like a lineup is done, you know,  
5 it's more reliable, like if there isn't a long period of  
6 time, you look at all these variables to determine the  
7 reliability of the identification?

8 A. There are a constellation of factors involved.  
9 As I said, estimated variables such as how much time has  
10 passed, the cross-race element and also system variables  
11 like a lineup, or show up, and, yeah, you have to kind  
12 of take a step back from the literature because you  
13 don't have very many studies that try to manipulate all  
14 of these factors all at the same time, usually you're  
15 just manipulating one or two. When I say manipulate, I  
16 just mean in an experimental setting, but that's the way  
17 to approach this issue is to look at the broader  
18 literature and the overall conclusions.

19 MR. ALLEN: Pass the witness, Your Honor.

20 MS. SMITH: State has nothing further.

21 THE COURT: Is this witness released or  
22 reserved?

23 MR. ALLEN: He is released, Your Honor.  
24 Thank you.

25 MS. SMITH: Released.

1 THE COURT: Sir, you are released. You  
2 are free to stay or go, whatever you'd like to do.

3 MR. ALLEN: Your Honor, that is all the --

4 MR. D'ANGELO: Just a moment, Judge.

5 THE COURT: All right.

6 MR. D'ANGELO: Judge, may we have a very  
7 brief recess before we rest?

8 THE COURT: Yes.

9 (Short recess)

10 THE COURT: All right. How are we  
11 proceeding?

12 MR. ALLEN: Your Honor, at this time, we  
13 have no more testimony, and subject to the -- you've  
14 already admitted our exhibits, we have nothing further in  
15 the way of evidence here today.

16 THE COURT: Should we resume tomorrow  
17 then?

18 MS. SMITH: Yes, Your Honor. I'll have my  
19 two witnesses here in the morning instead of the  
20 afternoon.

21 THE COURT: All right. We'll be in recess  
22 until 9 o'clock tomorrow morning.

23 (Adjourned)

24

25

1 STATE OF TEXAS

2 COUNTY OF COLLIN

3 I, Karla Kimbrell, Official Court Reporter in and  
4 for the 380th District Court of Collin, State of Texas,  
5 do hereby certify that the above and foregoing contains  
6 a true and correct transcription of all portions of  
7 evidence and other proceedings requested in writing by  
8 counsel for the parties to be included in this volume of  
9 the Reporter's Record, in the above-styled and numbered  
10 cause, all of which occurred in open court or in  
11 chambers and were reported by me.

12 I further certify that this Reporter's Record of the  
13 proceedings truly and correctly reflects the exhibits,  
14 if any, offered by the respective parties.

15 I further certify that the total cost for the  
16 preparation of this Reporter's Record is reflected in  
17 the first volume and will be paid by Collin County.

18 WITNESS MY OFFICIAL HAND this the 12th day of  
19 December, 2018.

21 /s/Karla Kimbrell

22 Karla Kimbrell, Texas CSR 3790  
23 Official Court Reporter  
24 380th District Court  
25 Collin County, Texas  
2100 Bloomdale Road  
McKinney, Texas 75071  
Telephone: (972) 548-4661  
Expiration: 12/31/2019

KARLA KIMBRELL, COURT REPORTER, 380TH DISTRICT COURT

APPENDIX D

Dissenting opinion of Newell, J. in which Richards and Walker, JJ, joined,  
Cause No. WR-78,107-02, October 7, 2020



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

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**NO. WR-78,107-02**

**EX PARTE KOSOUL CHANTHAKOUMMANE, Applicant**

---

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**ON APPLICATION FOR WRIT OF HABEAS CORPUS  
CAUSE NO. W380-81972-07-HC2  
IN THE 380<sup>TH</sup> DISTRICT COURT  
COLLIN COUNTY**

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**NEWELL, J., filed a dissenting opinion in which RICHARDSON  
and WALKER, JJ., joined.**

In this case, Applicant raises questions about three different types of forensic science evidence used in his capital murder trial and claims he is actually innocent. Of those claims, Applicant's argument that hypnotically refreshed identification information led to unreliable identification testimony deserves further consideration. The Court ought

to file and set this case to thoroughly examine this issue. Because the Court does not, I respectfully dissent.

Hypnosis has been discredited, at least according to one court, as a forensic discipline to uncover forgotten memories of crimes.<sup>1</sup> Although the State's expert testified that the risks associated with using hypnosis to assist with memory recall have been well known in the scientific field since at least the mid-1980s, the risks associated with eyewitness identification have become more apparent over time. As we noted in *Tillman v. State*, eyewitness misidentification is the leading cause of wrongful convictions across the country.<sup>2</sup> And as I've stated before, I cannot imagine that the concerns regarding suggestive eyewitness identification evaporate when eyewitness testimony is enhanced through hypnotism.<sup>3</sup>

---

<sup>1</sup> See, e.g., *State v. Moore*, 902 A.2d 1212, 1213 (N.J. 2006) ("Based on the record developed below, and the substantial body of case law that has considered the question since *Hurd* was decided, we have determined that a change in course is now warranted. We are no longer of the view that the *Hurd* guidelines can serve as an effective control for the harmful effects of hypnosis on the truth-seeking function that lies at the heart of our system of justice. Most important, we are not convinced that it is possible to know whether post-hypnotic testimony can ever be as reliable as testimony that is based on ordinary recall, even recognizing the myriad of problems associated with ordinary recall. We therefore conclude that the hypnotically refreshed testimony of a witness in a criminal trial is generally inadmissible and that *Hurd* should no longer be followed in New Jersey.").

<sup>2</sup> 354 S.W.3d 425, 441 (Tex. Crim. App. 2011).

<sup>3</sup> *Ex parte Don Flores*, WR-64,654-02, 2016 WL 3141662, at \*1 (Tex. Crim. App. May 27, 2016) (Newell, J., concurring).



In light of *Tillman*, I believe we should revisit our precedent evaluating the admissibility of hypnotically enhanced testimony.<sup>4</sup> I would file and set this case with briefing by the parties to address that issue. Because this Court does not, I respectfully dissent.

Filed: October 7, 2020

Publish

---

<sup>4</sup> See *State v. Medrano*, 127 S.W.3d 781, 782–83 (Tex. Crim. App. 2004) (upholding *Zani* as consistent with *Kelly*; “With *Zani*, the Court provided a mechanism to allow for the admission of hypnotically enhanced testimony and at the same time to ensure that this admitted testimony was reliable.”).

APPENDIX E

Transcript of Testimony of Stacy McDonald t trial court evidentiary hearing,  
Cause No. W380-81972-07-HC2

**REPORTER'S RECORD**

VOLUME 3 OF 6 VOLUMES

TRIAL COURT CAUSE NO. 380-81972-07

COURT OF CRIMINAL APPEALS NO. WR-78,107-02

STATE OF TEXAS	)	IN THE DISTRICT COURT
	)	
vs.	)	COLLIN COUNTY, TEXAS
	)	
KOSOUL CHANTHAKOUMMANE	)	380TH JUDICIAL DISTRICT

---

**WRIT OF HABEAS CORPUS HEARING**

---

On the 17th day of July, 2018, the following came on to be heard in the above-titled and numbered cause, and the following was had before the Honorable Benjamin N. Smith, Judge Presiding, held in McKinney, Collin County, Texas.

Proceedings reported by computerized stenotype machine; Reporter's Record produced by Computer-Assisted Transcription.

KARLA KIMBRELL, Texas CSR #3790  
 Official Court Reporter - 380th Judicial District Court  
 2100 Bloomdale Road, McKinney, Texas 75071  
 (972) 548-4661



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## EXHIBIT INDEX

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**STATE'S  
EXHIBIT  
NO.**

**DESCRIPTION**

**OFFERED/ADMITTED VOL.**

12	Updated report	45/46	3
13	Timeline (DEMONSTRATIVE PURPOSES)	49/49	3
14	Interrogation video	11/11	3
15	Report	45/46	3

**APPLICANT  
EXHIBIT  
NO.**

**DESCRIPTION**

**OFFERED/ADMITTED VOL.**

8	Forensics Files video (RECORD PURPOSES ONLY)	5/8	3
12	Updated report	45/46	3
13	Timeline (DEMONSTRATIVE PURPOSES)	49/49	3
14	Interrogation video	11/11	3
15	Report	45/46	3

1 (Open court; Applicant present)

2 **PROCEEDINGS**

3 THE COURT: Are we ready to proceed?

4 MR. D'ANGELO: One thing on the record,  
5 Judge, from yesterday. I know that we rested, however,  
6 the Court will recall we asked for a finding that we  
7 could enter Exhibit 8 for record purposes, and I just  
8 wanted to, No. 1, confirm we do have that exhibit on a  
9 thumb drive for the Court. We would like the Court to  
10 make that available for record purposes, and we just  
11 wanted to briefly proffer why we believe it's relevant,  
12 if the Court would indulge me briefly?

13 THE COURT: Yes.

14 MR. D'ANGELO: Judge, we believe it's  
15 relevant because it is nothing more than a summary of the  
16 case. The State intends to make their own summary of the  
17 case and to provide actual witness testimony that is  
18 going to rely on source material to make that summary.  
19 This documentary, the Forensic Files that was cited, and  
20 I would reference for the Court that we cited this in our  
21 successor writ on Page 29, we made reference to this  
22 Forensic Files documentary about the case because it is  
23 source material. It is the substance of what we want to  
24 rely on are direct quotes from the investigators from the  
25 McKinney Police Department. One in particular that we

1 had quoted in our writ is a quote from the lead  
2 detective, who said, quote, what the science did in this  
3 case is it made that defense attorney get up in his  
4 opening statement and say that, "My client is guilty and  
5 it was a robbery gone bad. He would not have said that  
6 if he hadn't had the physical evidence we had in this  
7 case." well, clearly, Your Honor, we're attacking the  
8 scientific aspects of that physical evidence, both the  
9 DNA, the hypnosis and, of course, the bite mark, which I  
10 think has more or less been conceded at this point, but  
11 the simple reason we were offering that is because it is  
12 indeed the case. It is true that the State's case relied  
13 heavily at trial on scientific evidence, part of which  
14 has been determined to be junk science, the bite mark  
15 evidence, part of which, the hypnosis, which we've called  
16 into question by way of our affidavits and by way of our  
17 expert testimony, and, finally, what the Court will hear  
18 today, which is the DNA, where we have a mixture sample  
19 and we have a third unidentified male suspect who is in  
20 the mixture sample, so that was simply our reasoning for  
21 admitting that exhibit.

22 we'd ask the Court to reconsider, and if  
23 the Court is inclined to reconsider, we would welcome  
24 the opportunity to partially publish that exhibit for  
25 purposes of establishing what we've just addressed. If



1 the Court is not inclined to admit the exhibit into  
2 evidence, then again, we would simply urge that the  
3 Court rule on our proffer with respect to its relevance  
4 and then allow it to be admitted for record purposes for  
5 the Texas Court of Criminal Appeals, Your Honor.

6 THE COURT: Thank you.

7 Any response?

8 MS. SMITH: Yes, Your Honor, the State  
9 re-urges it's hearsay objection. The quotes from the  
10 investigators are clearly hearsay. They're not here,  
11 they're not on the stand to be confronted and asked about  
12 them. If they would like to call the investigators in  
13 and question them about their remarks, they have subpoena  
14 power and they can do that and bring them in here.  
15 Outside of live testimony, however, we would object to  
16 this tape being offered in as substantive evidence in  
17 this proceeding. We have no objection to it being  
18 offered for record purposes only.

19 MR. D'ANGELO: I would just say briefly in  
20 response to that, Judge, there has traditionally been a  
21 somewhat relaxed standard when it comes to evidentiary  
22 hearings. The damaging effect of hearsay when we're  
23 talking about a jury trial is certainly obvious, however,  
24 where the Court has access to the entire record, the  
25 transcripts, all of the evidence in this case, I think

1 that really diminishes the hearsay impact of this video.  
2 And, again, I would reiterate that in habeas proceedings,  
3 there's traditionally been quite a relaxed standard on  
4 what is admissible.

5 MS. SMITH: Your Honor, may I respond  
6 briefly to that?

7 THE COURT: All right.

8 MS. SMITH: The Rules of Evidence are the  
9 same in a habeas proceeding as they are in a trial  
10 proceeding. They're not more relaxed, it's not more  
11 relaxed just because we're in a death penalty writ  
12 hearing. Same rules apply to both sides.

13 THE COURT: Was there testimony in the  
14 record that any of the experts relied on the contents of  
15 that exhibit to form their opinions in the case?

16 MR. ALLEN: No.

17 THE COURT: I have some questions in my  
18 mind regarding the contents of the exhibit, which I have  
19 not reviewed or previously seen. There may very well be  
20 statements, or -- I shouldn't say statements, but there  
21 may very well be content in the exhibit that is not  
22 hearsay because it's not being offered for the truth. It  
23 may be an opinion, it may be a question, it may be  
24 otherwise an exception to hearsay, that is, for example,  
25 if it's a statement by a person being interviewed in the

1 program about their mental impressions or state of mind  
2 and so on and so forth, but without reviewing the exhibit  
3 and going through each statement, I think, and analyzing  
4 it on its own, I don't think that it's possible for me to  
5 make a ruling. And then if I did, there would be some  
6 that would be admissible and there may be other portions  
7 that are inadmissible hearsay. I suppose that since  
8 there is no jury, I might, if there are non-hearsay  
9 statements or exceptions to hearsay, I could then admit  
10 that and consider it when making my findings and  
11 disregard -- again, since there's no jury, I could simply  
12 choose to disregard any statements or contents that I do  
13 find are inadmissible hearsay. So what I'll do is I'll  
14 go ahead and review the contents, and I will admit any  
15 portions of the exhibit that I find are not hearsay or  
16 that come within hearsay exception and disregard anything  
17 I observe on the video, see, or hear that I find to be  
18 inadmissible. I don't know if the Court of Criminal  
19 Appeals would require me to make any sort of specific  
20 findings about what I did find admissible and what I did  
21 not, but, anyway, that's kind of my thought process at  
22 this point is I'll go ahead and review it. If, on the  
23 other hand, I review it and I decide that I just think  
24 that almost all of it, or virtually all of it is  
25 inadmissible hearsay and there's really nothing of any

1 evidentiary significance that is admissible, I may decide  
2 to exclude it altogether, but since we will be recessing  
3 to accommodate a State's witness that can't be here  
4 today, that gives me a little bit of time to do that, so  
5 I think that when we resume at our next setting, I can go  
6 ahead and let you all know what I've -- after I've had a  
7 chance to review the video, I'll take some notes, and  
8 I'll let y'all know where I'm at with that and we can go  
9 from there.

10 For now, I will admit it for record  
11 purposes, and I will reserve a ruling on admitting it  
12 substantively for all purposes, and my ruling on the  
13 State's objections, as well, at that later time.

14 MR. GARDNER: Your Honor, may I approach  
15 and look at the State's Exhibits and just make notes of  
16 the order of -- make sure I have the right numbers?

17 THE COURT: Sure.

18 And I just want to be sure, the exhibit  
19 is a television program, it's Forensic Files?

20 MR. D'ANGELO: Yes, Your Honor.

21 THE COURT: Is it 30 minutes, is it an  
22 hour?

23 MR. D'ANGELO: It's about 30 minutes.

24 MR. ALLEN: I don't believe there are any  
25 commercials, Your Honor, so probably about 20 minutes.

1 MS. SMITH: Your Honor, we have a copy of  
2 the interrogation video that's a complete copy of the  
3 recording. We talked about this yesterday, the one  
4 that's in the exhibits from the trial, cuts off at the  
5 very end, so this is a copy for the record, State's  
6 Exhibit 14. I've tendered one to defense counsel today  
7 and here's a copy for the record.

8 Do you guys have any objections to  
9 State's Exhibit 14?

10 MR. GARDNER: I believe we said no  
11 objection yesterday, Your Honor.

12 THE COURT: All right. State's Exhibit 14  
13 is admitted.

14 MS. SMITH: Your Honor, should I go get my  
15 first witness?

16 THE COURT: Yes, please.

17 Good morning. Could you please come up  
18 to this table to be sworn. Please raise your right hand  
19 for me.

20 (Witness sworn)

21 THE COURT: Thank you. Please have a  
22 seat.



1 volume, from the Reporter's Record from the trial, do  
2 you have that?

3 A. Yes.

4 Q. Could you turn to Exhibits 108, 109 and 110.

5 A. Yes, I'm at 108.

6 Q. Do you recognize 108?

7 A. Yes. It appears to be a copy of the report  
8 that was issued April 6, 2007.

9 Q. Was that report prepared by you?

10 A. Yes, it was.

11 Q. And what about 109?

12 A. 109 also is a copy of a supplemental report  
13 issued April 9, 2007.

14 Q. And then 110?

15 A. 110 is a copy of a report I issued September  
16 6, 2007.

17 MS. SMITH: The State will ask the court  
18 to take judicial notice of the exhibits from the trial,  
19 Your Honor.

20 THE COURT: So noticed.

21 Q. You testified in 2007 to the results, you also  
22 testified to your experience and your duties. Have --  
23 and you've reviewed your testimony from 2007, correct?

24 A. I have.

25 Q. Are there any changes or additions to your

1 experience or qualifications?

2 A. Since the time of the testimony, I became the  
3 DNA technical leader for their autosomal DNA testing. I  
4 also was appointed to the National Institute of Science  
5 and Technology, NIST, their Organization for Scientific  
6 Area Committees, so the OSAC. I'm on the Biological  
7 Methods Subcommittee. The purpose of that committee is  
8 to draft standards to be used nationally in forensics,  
9 specifically, in my case, for DNA testing.

10 Q. And you were just re-appointed to that --

11 A. I was just re-appointed to that, yes.

12 Q. Are you still qualified in serology?

13 A. I am no longer qualified as a serologist. I  
14 still maintain my qualifications and occasionally  
15 perform DNA testing.

16 Q. And to your knowledge, SWIFS performed all of  
17 the DNA testing in this case?

18 A. Yes, to my knowledge.

19 Q. Did the testing you performed back in 2006  
20 yield a profile that matched Mr. Chanthakoummane's DNA  
21 profile?

22 A. Yes. There were evidence items tested back  
23 then for which his profile either matched, or he was  
24 included as a possible contributor to a DNA profile.

25 Q. That profile was found both at the scene and



1 on the victim, correct?

2 A. He was included or matched samples on either,  
3 yes.

4 Q. And I believe you've already mentioned this,  
5 sometimes the samples were part of a mixture, profiles  
6 were part of a mixture?

7 A. Yes. In certain instances, you might get a  
8 DNA profile that's obviously or apparent that it's from  
9 a single contributor. In other instances, it can be a  
10 mixture of two or more people. So in this particular  
11 case there were some samples in which single-source  
12 profiles were obtained, and others were mixtures of  
13 varying numbers of individuals.

14 Q. So we had his profile both alone and in  
15 mixtures with another profile?

16 A. His profile matched single-source profiles  
17 found on certain items, and he was included as a  
18 possible contributor to other profiles where it was a  
19 mixed profile.

20 Q. On what items was the profile that matched his  
21 profile found?

22 A. So --

23 Q. And this is back in 2006?

24 A. Yes. So single-source profiles were found on  
25 three items. Our item No. 24, which is labeled item

1 L-3, item No. 25, which was a stained swab that was  
2 labeled L-4, those two samples yielded single-source  
3 profiles that matched the Defendant. Additionally,  
4 there was an item, No. 96, it was a stained swab said to  
5 be from a deadbolt, a single-source DNA profile was  
6 obtained from that sample that matched the Defendant.

7 Q. And what about K-13 and K-15, were those also  
8 single-source profile matches?

9 A. Take me a minute to find them in here. So  
10 K -- you said K-13?

11 Q. Yes.

12 A. K-13 was a single-source profile that matched  
13 that --

14 Q. And K-15?

15 A. K-15 was a single-source profile. It was a  
16 low level DNA profile, so it was not a complete DNA  
17 profile. All the other profiles that I've mentioned, up  
18 to this point, a full profile was obtained. This one  
19 was a low level one, but he did match that profile.

20 Q. Okay. So we've talked about the single-source  
21 profiles, what about the profiles that were found in a  
22 mixture? Let's start with the pull cords.

23 A. That's our item 12AT1 and 12BT1. Those both  
24 were mixtures. Pulling out my table. Yes, those both  
25 were mixture profiles. There are two types of mixtures,

1 so as we go through these mixture profiles, we have what  
2 we call a simple mixture where it just looks like it's a  
3 mixture of two people and you can't potentially  
4 differentiate one from another. The other that we'll  
5 probably be going through are what we consider  
6 major-minor mixtures. So in the case of a major-minor,  
7 you have someone that appears -- it's a mixture,  
8 however, it appears one individual is contributing more  
9 DNA than the others, they're considered the major  
10 profile, and the other one is the minor. So on both of  
11 the pull cords, those were simple mixtures, so it was  
12 just a mixture of two individuals.

13 Q. How about the victim's fingernails?

14 A. In the case of the victim's fingernails, the  
15 13NT1, so stain from fingernail clippings, was a mixture  
16 of two individuals. It could be differentiated into a  
17 major and a minor. The major profile matched the DNA  
18 profile of Sarah Walker, and then the markers in the  
19 minor matched the DNA profile of the Defendant.

20 Q. How about K-12, is that also a mixture?

21 A. 28 was a stained swab labeled K-12, was a  
22 mixture. It was a major-minor, so the major profile  
23 matched the profile of the Defendant. The minor  
24 profile, set of genetic markers in the minor, matched --  
25 matched Sarah Walker.

1 Q. And how about the face plate?

2 A. The face plate, that was our item No. 97. It  
3 was a stained swab said to have been from a face plate.  
4 It was also a mixture, two individuals. Could be  
5 differentiated into a major and a minor. The major DNA  
6 profile matched that of Sarah Walker, the set of genetic  
7 markers in the minor matched the Defendant.

8 Q. Lastly, E-5 from the entryway?

9 A. That's our item No. 33, a stained swab labeled  
10 as being E-5, mixture of two individuals, could be  
11 differentiated into a major and a minor. The major DNA  
12 profile matched that of Sarah Walker, the minor set of  
13 genetic markers in the minor matched that of the  
14 Defendant.

15 Q. So we have the Defendant's DNA profile, a  
16 profile matching his profile, in a mixture in the pull  
17 cords, the victim's fingernails, in the kitchen, on the  
18 face plate and in the entryway; is that correct?

19 A. Sounds correct, yes.

20 Q. Then we have his profile, or profile matching  
21 his profile, alone in the living room, L-3 and L-4, in  
22 the kitchen, K-13 and K-15, and on the deadbolt, No. 96?

23 A. Correct. A single-source profile was obtained  
24 from those samples that matched him.

25 Q. Now, you used three different statistical

1 interpretation methods of analyzing these results back  
2 in 2006, correct?

3 A. We do three different methods for calculating  
4 the statistical weight, that is correct.

5 Q. What are those three methods?

6 A. We -- and we currently still use these three  
7 methods. We use what's called a CPI, or a combined  
8 probability of inclusion, we use a modified random match  
9 probability, and we also use a likelihood ratio.

10 Q. Now you didn't use all three methods for each  
11 item, correct?

12 A. No. Once you include an individual, or a  
13 profile where someone is considered to match a DNA  
14 profile, you must calculate the statistical weight to  
15 show how well that match that is, or how significant it  
16 is. And so, at that point in time, you will determine  
17 the appropriate statistic to be used to calculate that  
18 statistical weight.

19 Q. Now, in 2015 there were some discoveries made  
20 in relation to DNA analysis, correct?

21 A. That's correct.

22 Q. And what were those two discoveries?

23 A. The first was -- so, in order to calculate a  
24 statistical weight, you have to have how frequently  
25 specific genetic markers occur in the population, so you

1 have to have those frequencies, and there are a variety  
2 of different databases that contain those frequencies  
3 that labs use. So at the time in which the original  
4 testing was done in this case, we used two different  
5 databases. We either use the Texas Department of Public  
6 Safety database, which is one that is housed and was  
7 developed by the Texas Department of Public Safety, or  
8 we used the FBI's database. Back in 2015, the FBI  
9 re-looked at its statistical database and found there  
10 was some errors in frequencies in that database for  
11 specific genetic markers, so errors. Those errors might  
12 have included a transcriptional error, so where a  
13 frequency might have been .243, it had been entered in  
14 as .234, so transposition of numbers. In other  
15 instances, when someone determined the DNA profile for a  
16 particular individual to enter that into the database to  
17 calculate the frequencies, that profile had been entered  
18 in incorrectly. So there were certain genetic markers  
19 at certain loci in which the frequencies changed, and so  
20 they made those corrections and issued an amended FBI  
21 database, I believe, the summer of 2015.

22 Q. Now, were those amendments expected to have a  
23 significant impact on test results?

24 A. The labs were not anticipating that they would  
25 have any significant ramifications on our statistical

1 calculations. It's important to understand that when we  
2 give statistical weights, it's an estimate. It is not  
3 an exact number. So if you were to calculate that  
4 statistic using a different database, you're going to  
5 get a slightly different number, but it shouldn't be  
6 significantly different. What did happen, however, is  
7 upon doing some re-calculations, a lab, I believe a lab  
8 in south Texas, issued a report to a D.A.'s office in  
9 which those frequencies changed significantly for -- it  
10 was a stat of being like one in several million to one  
11 in a couple thousand. That's a significant change. In  
12 another sample, it went from being an inclusion to not  
13 being able to interpret a profile. So when that lab was  
14 asked why the amended database, when you recalculated  
15 this, why it had this big of a change, it was not  
16 because of the database values, it was because between  
17 the time at which the original testing was done in that  
18 case, so it would have been done -- I don't know the  
19 exact date, but let's say it was done 10 years earlier,  
20 that between the time of that testing and the time in  
21 which they were recalculating the database, they had  
22 changed the way they interpreted DNA mixtures. So in  
23 re-evaluating the case to stay true to their procedures,  
24 they then used the updated procedures for  
25 interpretation. As a result of that, the Texas Forensic

1 Science Commission, once that D.A.'s office got that  
2 result, they requested that the Texas Forensic Science  
3 Commission look into mixture interpretation across the  
4 state of Texas. Why was there this big change? And  
5 they asked each of the labs to re-evaluate their mixture  
6 interpretation guidelines at that time, so the one  
7 spurred the other.

8 Q. Okay. So as a result of both discoveries, the  
9 database discovery and the mixture interpretation  
10 discovery, did SWIFS make changes to its DNA analysis  
11 guidelines?

12 A. We did. Of all the laboratories, I think we  
13 made some of the fewest changes to the way we  
14 interpreted our profiles. We met with a DNA expert that  
15 the Forensic Science Commission had recommended to go  
16 through our mixture interpretation, so we showed him the  
17 variety of different ways we interpret mixtures. Out of  
18 that, we produced a procedure for analysts that allowed  
19 for a lot of mathematical calculations to take the  
20 subjectivity of mixture interpretation out of it and  
21 make it a much more objective process for them.

22 Q. So in relation to mixtures, did the changes  
23 your lab had to employ really affect many -- affect the  
24 prior test results that you had rendered?

25 A. At the time at which we revised our mixture



1 interpretation procedures, any case that was going to  
2 trial, we have taken it upon ourselves to re-interpret  
3 and re-issue reports. So from 2015 to now, our  
4 guidelines came out the beginning of 2016, from then  
5 until now, we've reported out on many, many cases and we  
6 have not seen a significant change.

7 Q. One of the reasons you didn't see significant  
8 changes is because you as a lab actually employed what  
9 we call a stochastic threshold in your mixture  
10 interpretations, correct?

11 A. So the big change was the labs in the state of  
12 Texas for the most part did not have a stochastic  
13 threshold. The easiest way I can think, hopefully, to  
14 explain it is when you're looking at different  
15 locations, so when we do DNA analysis, we're not looking  
16 at all the DNA, we're only looking at certain locations,  
17 certain addresses of the DNA, and we're looking to see  
18 how often a specific sequence of DNA repeats, so we're  
19 looking at how many repeats at this particular location  
20 for this particular person. You get half of your DNA  
21 from your mom and you get half of it from your dad, so  
22 you might get, at a specific location, you might get  
23 five repeats from your mom and you might get six repeats  
24 from your dad. What we see when we see a DNA profile is  
25 we will see a peak for the five and peak for the six, so

1 we will see two peaks at a particular location. Now,  
2 there are certain instances in which you will see one  
3 peak, so you might just see a five. And is that because  
4 both your mom and dad gave you five repeats, so you got  
5 5 repeats from mom and five repeats from dad, or is it  
6 because we're not seeing the six, so you're missing some  
7 information. And so a stochastic threshold is, is how  
8 high does that peak have to be for you to be convinced  
9 you're seeing all the data, you have all the information  
10 that you need. Our particular laboratory when we  
11 started doing DNA analysis in 2000, have always had a  
12 stochastic threshold. The problem was there were labs  
13 in the state of Texas that didn't have a stochastic  
14 threshold until 2008, 2009, some brought it online in  
15 2015. So while they were making the assumption that  
16 they had all the genetic information, they actually did  
17 not, or they couldn't cert -- in a sense, they couldn't  
18 guarantee that they did. So we have always had a  
19 stochastic threshold, so that didn't impact us. As part  
20 of our re-evaluation of our mixture interpretation  
21 guidelines, we also went back and re-evaluated that  
22 stochastic threshold to see if from 2000 to 2015 or  
23 2016, is that line in the sand that we've drawn, is it  
24 still valid, and we did validate that that number still  
25 holds, so we did not change our stochastic threshold.

1 Q. We're talking a lot about stochastic  
2 threshold, but it's significant when it comes to  
3 mixtures relates to a particular calculation method, the  
4 CPI method, correct?

5 A. That is correct. It's a calculation method in  
6 which you are assuming -- in which you are not assuming  
7 the number of contributors, you're saying I don't know  
8 how many people are in this mixture, but I'm seeing all  
9 the genetic information from the individuals that are  
10 there. And so that's why it's important to be able to  
11 guarantee with a stochastic threshold that you actually  
12 are seeing all that information.

13 Q. So does the stochastic threshold have any  
14 bearing on the other calculation methods, such as random  
15 match probability and likelihood ratio?

16 A. The only reason it would, and it did for us  
17 with modified random match and the likelihood ratio, was  
18 a change in the assumption that in comparing a profile,  
19 if I'm -- trying to think of the best way to phrase  
20 it -- if I did not have to make the assumption that I  
21 was missing information, then I could -- I would  
22 calculate it a specific way. Now, we use a mathematical  
23 threshold to where we say even though when I'm comparing  
24 a person, I'm seeing the alleles there, I still have to  
25 make the assumption that I might be missing something.

1 So it slightly modifies the likelihood ratio in the  
2 modified random match, but not to the extent of the CPI.

3 Q. Okay. So based on these discoveries that were  
4 made in 2015, the State asked you to re-evaluate the  
5 results in Mr. Chanthakoummane's case, correct?

6 A. That's correct.

7 Q. So you didn't perform any new DNA analysis in  
8 this case, right?

9 A. No, I did not.

10 MS. SMITH: May I approach, Your Honor?

11 THE COURT: Yes.

12 Q. I'm showing you what is marked as -- and  
13 admitted as State's Exhibit 12, do you recognize this?

14 A. Yes, I do.

15 Q. What is that?

16 A. It is a copy of the corrected and amended test  
17 report that was issued May 19, 2016.

18 Q. And that report was prepared by you, correct?

19 A. That is correct.

20 Q. And can you give us a summary of what that --  
21 information that report contains?

22 A. Yes. So, this report took into account four  
23 different things. One, any statistics that had been  
24 calculated using the FBI database back during the  
25 original testing was recalculated using the amended FBI

1 database. So that's one issue. Two, any mixture  
2 profile that was previously reported was re-evaluated  
3 using our mixture interpretation guidelines that were  
4 issued in February of 2016, and if that interpretation  
5 had to change, then it was corrected as part of this  
6 report. The third thing that was done is, as I  
7 mentioned previously, there were two different databases  
8 that we used in the laboratory, the Texas Department of  
9 Public Safety, and then the FBI's databases. The cutoff  
10 for us was if you were using a DNA profile where you had  
11 attempted to look at nine locations, then you would  
12 calculate that statistic using the Texas Department of  
13 Public Safety database. If you had attempted 13 loci,  
14 then the Texas Department of Public Safety database was  
15 not the appropriate database to use, for us it was not,  
16 we used the FBI. To simplify things for everyone, any  
17 calculation that was previously done using the Texas  
18 Department of Public Safety database was done with the  
19 FBI, so this entire report is only using FBI statistics,  
20 statistics generated using the FBI database. And then  
21 the final thing, fourth thing that was done with this  
22 report was any sample in which a statistic had not been  
23 provided for previously was calculated and provided for  
24 in this report.

25 Q. Okay. Now, this report's format looks a

1 little different from the format of the reports that  
2 were offered into evidence back at the time of trial?

3 A. Yes, we are constantly trying to evolve our  
4 reports to make them easier for the reader.

5 Q. So now they contain tables, correct?

6 A. Yes, that's correct.

7 Q. And at the State's request, you actually  
8 generated a table in this report that reflects the  
9 changes, or whether there was no change in the results  
10 in the DNA testing done in this case, correct?

11 A. Yes. It either listed there was no change, or  
12 if there was some change, it would provide what the  
13 statistic originally was and what it was today, or what  
14 it was at the time of this report, and then if no  
15 statistical weight was originally reported, it would say  
16 that and then what the statistic was as determined in  
17 this report.

18 Q. Has SWIFS made any changes to its guidelines  
19 since you re-analyzed the evidence in this case?

20 A. No. The only change that the laboratory has  
21 done is we've moved to a different typing system, so  
22 newer technology.

23 Q. Now, the table we just talked about, it  
24 reflects DNA profiles of a variety of people, correct,  
25 not just Mr. Chanthakoummane and the victim, but a

1 variety of other individuals as well?

2 A. That's correct.

3 Q. I asked you to go through that table, however,  
4 and highlight the results that related specifically to  
5 Mr. Chanthakoummane's profile, right?

6 A. Those that did change, yes.

7 Q. Is his profile, or profile matching his  
8 profile, still found on all the items we previously  
9 discussed?

10 A. He was still included as either the source of  
11 or contributor to the same samples he was originally  
12 included in.

13 Q. Let's talk about what results changed. Let's  
14 start with the fingernails. Was that a mixture or  
15 single source?

16 A. 13NT1, the fingernail clippings, was a mixture  
17 of two individuals with a major contributor and minor  
18 contributor, the Defendant matched the minor. So that  
19 statistic was originally calculated as a likelihood  
20 ratio. When you calculate a likelihood ratio, you are  
21 comparing two different hypotheses, or two different  
22 possible explanations for the data. In this particular  
23 case, when it was originally reported, it was hypothesis  
24 one was it was Sarah Walker and the Defendant, a mixture  
25 of their DNA, versus Sarah Walker and an unknown person.

1 In order to calculate a likelihood ratio, you have to be  
2 able to guarantee you have all the genetic information  
3 there, you're seeing everything there. With the new  
4 interpretation guidelines, however, there were two  
5 locations in which I had to take into account that I  
6 wasn't seeing all the genetic information. That's why  
7 you see in this chart that originally I calculated a  
8 likelihood ratio, but now I've calculated a modified  
9 random match probability. A modified random match  
10 probability allows you to take into account the  
11 possibility that you're missing information. So we went  
12 from it being 16.5 billion times more likely that it was  
13 a mixture of her DNA and the Defendant's versus her and  
14 an unknown person to a modified random match, which says  
15 if I was to randomly select a person from the  
16 population, how frequently would I expect to see this  
17 profile. And I would expect to see this profile in 1 in  
18 5.09 billion people. So to put that in perspective,  
19 there's roughly seven and a half -- I checked last night  
20 -- seven and a half billion people on the planet, it's a  
21 little less than the population of the Earth, I would  
22 expect to find one person that matched the minor profile  
23 obtained from the sample in the same way that the  
24 defendant would.

25 Q. So that is still a significant or a strong



1 result linking Mr. Chanthakoummane to the fingernails?

2 A. It is.

3 Q. Let's move to the kitchen, let's start with  
4 K-12. What was the initial result?

5 A. So the initial result, a modified random match  
6 was calculated, so I would expect to find, in this case,  
7 K-12 was a mixture of two individuals, can be determined  
8 to be a major and minor. As I said previously, the  
9 major matched the Defendant. That did not change, so  
10 the interpretation of that did not change, so the reason  
11 for the change in the statistic is solely based on the  
12 database, the amended database. So it went from 1 in  
13 635 trillion people to 1 in 89.8 trillion people, so  
14 that's approximately the population of 11,900 Earths.

15 Q. So very significant, strong statistic?

16 A. Yes, still a strong statistical weight.

17 Q. So let's move on to K-15, what was the initial  
18 result?

19 A. K-15, was a single-source profile, it was a  
20 low level profile. This is a sample where the  
21 interpretation did not change, so the change in the  
22 number was due to the fact using the Texas Department of  
23 Public Safety database to the FBI database. So the  
24 statistic originally was 1 in 105 people and it changed  
25 to 1 in 177 people.

1 Q. So that wasn't a very strong statistical  
2 weight the first time and it's still not a strong  
3 statistical weight now?

4 A. That's correct.

5 Q. Let's move on to K-16.

6 A. K-16 was a mixture of three people, both the  
7 suspect, or the Defendant, and Sarah Walker were  
8 included in that sample. The stat though, however,  
9 you'll see in the chart was calculated as a CPI, so  
10 combined probability of inclusion, so it went from 1 in  
11 4 to, as a modified random match, 72 in 100 people.

12 Q. So you changed statistical calculation  
13 methods?

14 A. That is correct.

15 Q. But it was a weak result first time around and  
16 it's still a weak result?

17 A. Right. I went from including 1 in 4 people to  
18 basically less than one person, so 72 in 100 people.

19 Q. Let's move on to K-18, what was the initial  
20 result?

21 A. The initial result both were calculated as a  
22 modified random match. It's a mixture of two people. I  
23 had to take into account that I didn't have information  
24 at 1 locus that I had originally made the assumption  
25 that I had, so it went from 1 in 5 people to 97 in a 100

1 people.

2 Q. So, again, it was weak to begin with and it's  
3 still weak now?

4 A. That is correct.

5 Q. How about the face plate, what was the initial  
6 result?

7 A. The face plate was a mixture of two people, a  
8 major, could be determined to be a major and a minor.  
9 Sarah Walker matched the major, so it was the minor  
10 profile that matched the Defendant. It was a modified  
11 random match. Two things came into account in this  
12 sample, one was that I had to take into account that I  
13 didn't have all the genetic information at three loci,  
14 so I had to drop out some loci, and then this one had  
15 originally been calculated with the DPS database. It  
16 went from 1 in 278,000 people to 1 in 9,000 people,  
17 9,180.

18 Q. So that was a fairly weak result initially,  
19 correct?

20 A. Yes.

21 Q. And still is today?

22 A. Yes.

23 Q. Lastly, let's move to the entryway, E-5.

24 A. E-5 was a mixture, again, major-minor. Major  
25 matches matched Sarah Walker, minor matched the

1 Defendant. In this particular case, the statistic  
2 changed due to a change in our policy in calculating the  
3 minor statistic. At the time of the original report  
4 when we calculated a minor statistic, we would use a  
5 modified random match. We instituted the requirement  
6 that if you could demonstrate that you had all the  
7 genetic information there, that you could do a  
8 likelihood ratio, so this was calculated as a likelihood  
9 ratio instead of a modified random match. So it went  
10 from being he was included, and the statistical weight  
11 was 1 in 1.6 billion people, it then changed to the  
12 likelihood ratio, which was -- it was 216 million times  
13 more likely that it was a mixture of the DNA of Sarah  
14 walker and the Defendant versus Sarah walker and an  
15 unknown individual.

16 Q. So we've changed calculation methods but the  
17 stat remains statistically significant or strong?

18 A. Right, but it was just calculated in two  
19 different ways.

20 Q. Let's talk about the results that did not  
21 change. Let's start with the pull cords. What was the  
22 result initially and remains the same today?

23 A. For both stains from the pull cords, so 12AT1  
24 and 12BT1, that was a mixture, I believe, of two  
25 individuals, and so in that case a likelihood ratio was

1 calculated, it was calculated then and it was calculated  
2 again, and it is 216 million times more likely that it's  
3 a mixture of Sarah Walker and the Defendant versus Sarah  
4 Walker and an unknown individual.

5 Q. Let's move to the living room, L-3 and L-4.

6 A. L-3 and L-4 were calculated using a modified  
7 random match probability. And the statistical weight  
8 was 1 in 38.1 billion people, so five times the  
9 population of the Earth roughly, four or five.

10 Q. And then the deadbolt?

11 A. And then the deadbolt again was a modified  
12 random match and was the same, 1 in 38.1 billion.

13 Q. The living room, L-3 and L-4, and the deadbolt  
14 were both single-source profiles, correct?

15 A. Yes, they were all single-source profile,  
16 that's why they have all the same statistical weight.

17 Q. And all three of those results were strong  
18 back at the time of the trial and they are strong today?

19 A. It's greater than the population of the Earth,  
20 all of them.

21 Q. When you did the testing on the evidence from  
22 the scene and the victim, did you have  
23 Mr. Chanthakoummane's DNA profile, or did that come to  
24 the lab at a later date?

25 A. So when you do DNA, you get DNA profile from

1 an evidence item and you have to compare it to a known  
2 standard from various people. At the time of the  
3 original testing, when I did the evidence samples, I did  
4 not have a DNA standard for comparison purposes from the  
5 Defendant. So his buccal swab or blood had not entered  
6 the laboratory as a DNA standard.

7 Q. But you entered the DNA profile that you found  
8 on the evidence into CODIS, correct?

9 A. Yes. CODIS is a different database, I think  
10 it gets confused a lot of times. It is not the  
11 statistical database that we do calculations on, it is a  
12 database of evidentiary convicted offender arrestee  
13 profiles that are entered in. In this particular case,  
14 one of the single-source profiles that was obtained from  
15 an evidence item was entered into CODIS as an unknown,  
16 because at that time it didn't match anybody, to see if  
17 we would get a hit to either another evidence sample in  
18 the database, or to another individual's profile that  
19 had been entered in.

20 Q. And we got what we call a CODIS hit off of  
21 that, didn't we?

22 A. We did.

23 Q. And then did you compare, after you obtained  
24 Mr. Chanthakoummane's profile, did you compare it to the  
25 DNA profiles that you had generated from your testing?

1           A.    Yes, we received -- so in September of 2006,  
2 we received a buccal swab standard, so that's a swabbing  
3 of the inside of the mouth, from Mr. Chanthakoummane.

4           Q.    So having now gone back and re-evaluated the  
5 results with the new guidelines and the amended  
6 database, there are no results excluding  
7 Mr. Chanthakoummane where he was previously included,  
8 correct?

9           A.    That's correct.

10          Q.    And his profile is still found at the scene  
11 and on the victim, correct?

12          A.    A profile in which he either matched or was  
13 included in, yes.

14          Q.    In both single sources and as a mixture,  
15 correct, it's found in both types of --

16          A.    Yes, that's where we would use the term match  
17 for a single source, or included in terms of mixture.

18          Q.    And the results that were strong, or  
19 statistically significant back at the time of trial,  
20 still are?

21          A.    Yes.

22                       MS. SMITH:  Pass the witness.

23                       THE COURT:  Whenever you're ready.

24                       MR. ALLEN:  Thank you, Judge.

25

**CROSS EXAMINATION**

1  
2 BY MR. ALLEN:

3 Q. Good morning, Ms. McDonald. How are you?

4 A. I'm good, how are you?

5 Q. I'm doing well. You talked a little bit on  
6 Direct about matching. Be fair to say that you would  
7 include the profile or exclude the profile, there's not  
8 really any matching that's done?

9 A. Well, we would say that the set of genetic  
10 markers that we detected in a case of a single source  
11 profile, we would say they matched a set of genetic  
12 markers from a known individual, so we would use the  
13 term in that way.

14 Q. But in terms of that profile on the sample,  
15 you would say that that profile is included or excluded,  
16 correct?

17 A. Right. If you're asking me whether or not we  
18 testify to identity, the answer is no.

19 Q. So you're not matching profiles, you're saying  
20 whether they're included or excluded, correct?

21 A. We do use the term match, but just in the  
22 sense of the two sets match each other, and then that  
23 would mean that they were included.

24 Q. Right. Okay. And you talked a little bit  
25 about these statistical analysis with the prosecutor,



1 and these are new guidelines that were developed?

2 A. They were new guidelines that were -- in some  
3 instances for us, for our laboratory, it was just  
4 putting down on paper what those guidelines were, so the  
5 analysts were doing that, but it wasn't written, but  
6 then there was some revision to our approach, yes.

7 Q. This is a new way to look at the statistical  
8 analysis of what your results --

9 A. Yes, or to interpret DNA profiles for  
10 inclusion and exclusion and then the resulting  
11 statistics.

12 Q. Did this happen after 2008?

13 A. This happened -- yes, the revision happened  
14 after that, that's correct.

15 Q. Do you have a date when that happened, a year?

16 A. Our revised statistical interpretation  
17 guidelines, the profile interpretation guidelines, came  
18 out in February of 2016.

19 Q. Recently?

20 A. Yes, this all came out of the 2015 FBI amended  
21 database, as I discussed earlier.

22 Q. And I don't know if the judge knows this or  
23 not, the FBI database, that sort of sets the statistical  
24 analysis?

25 A. That is one of the databases that can be used

1 for calculating statistical weights. There are other  
2 databases available.

3 Q. Sure. Now, in these databases in terms of  
4 Asian people, they have Chinese and Vietnamese Asian  
5 people?

6 A. They do. So there are -- when a statistical  
7 database is generated, what they do is they take samples  
8 from known people who have donated their samples for  
9 this purpose, and they would determine their profile,  
10 and then in order to calculate a frequency within an  
11 ethnicity, or population group, then they would go off  
12 of what the person self-declared themselves to be. So,  
13 for example, in my case, I would say I was Caucasian, so  
14 I would mark myself on the form as Caucasian. Other  
15 individuals of mixed race would pick one or the other,  
16 but it puts it in that category of ethnicities. The FBI  
17 database has a variety of different groups far more than  
18 what we report on. They have American Indian, southwest  
19 Hispanic, Caucasian, African-American, Chinese,  
20 Vietnamese, I believe they have Japanese, they have a  
21 variety of different ethnicities.

22 Q. Now, you had talked a little bit about where  
23 Mr. Chanthakoummane's DNA was. Did you receive a  
24 request to test the plant stand for DNA in regards to  
25 this case, or swabs from it?

1 A. No, I don't -- I don't see that I did.

2 Q. Did you receive a request from either the  
3 police or the prosecutor to test a swab from the porch  
4 outside the crime scene?

5 A. (No response)

6 Q. Let me ask it differently.

7 A. Oh, no, no. I can't go off of -- I can answer  
8 off of recollection, I was just trying to be a little  
9 more specific. I do not see any samples that were  
10 requested that were labeled in that way.

11 Q. And you were not asked to test any samples  
12 from a sidewalk that's outside of the crime scene in  
13 this case?

14 A. Not that I recall, no.

15 Q. You were asked to test a sample from what  
16 purports to be the Defendant's car?

17 A. I don't know -- there were samples from a car,  
18 I believe, I don't think I know whose car it is.

19 Q. It wasn't identified when it was given to you  
20 by the Ranger or whoever?

21 A. No, I had a sample from a car console frame,  
22 and I believe something that was referred to as an  
23 accessory insert that were tested.

24 Q. And the car console, there was no DNA there?

25 A. The car console, that was our sample 73. In

1 the case of -- okay, in the case of 73BT1, the car --  
2 you are just specifically asking me about the car  
3 console, so that would be -- you are correct, I don't  
4 think any DNA profile was obtained from that sample.

5 Q. Okay. So there are a number of mixture  
6 samples, correct?

7 A. Yes, there were.

8 Q. And that would include the pull cord?

9 A. That's correct.

10 Q. That would include the face plate?

11 A. Yes.

12 Q. And that would include a number of the stained  
13 swabs?

14 A. Yes.

15 Q. And I would say -- when I say a mixture, I  
16 mean Sarah Walker and Mr. Chanthakoummane?

17 A. Well, profiles in which both of those  
18 individuals were included.

19 Q. Okay. And you had gotten a swab from a P  
20 trap, what is that, is that from a sink, from under a  
21 sink?

22 A. I don't really know what a P-trap is, but I  
23 think a P-trap is a portion of a sink.

24 Q. Might be what's underneath?

25 A. Might be underneath. Something to do with a

1 sink.

2 Q. And there's no DNA profiles -- I'm sorry, I'll  
3 use your reports 23T1, the stain from the P-trap, there  
4 were no DNA profiles from that sample?

5 A. Right, no DNA was detected from that sample.

6 Q. And our guess is that's what's underneath the  
7 sink in the kitchen?

8 A. My best guess.

9 Q. You did -- you got a razor, 15AT1?

10 A. Yes.

11 Q. And you weren't able to develop a profile from  
12 that?

13 A. From 15AT1, I got a single-source profile that  
14 matched Sarah Walker.

15 Q. Okay. So she may have shaved her legs with  
16 that or something?

17 A. I think my recollection was that at the time  
18 of autopsy, they shaved to get to a bite mark, and I  
19 think that was the razor that was used. That's my  
20 recollection.

21 Q. You weren't able to get any DNA from the swab  
22 on the bite mark?

23 A. I got a DNA profile from the swab on the bite  
24 mark, that's our 15B, it was a single-source profile and  
25 it matched the complainant.

1 Q. Okay. So Sarah walker?

2 A. Yeah, it matched Sarah walker.

3 Q. Not Mr. Chanthakoummane?

4 A. Yes. No DNA was detected that could not be  
5 attributed to her.

6 MR. ALLEN: Pass the witness.

7 **REDIRECT EXAMINATION**

8 BY MS. SMITH:

9 Q. Dr. McDonald -- it is Doctor, correct?

10 A. It is, but I answer to whatever.

11 Q. Is there a Laotian population database  
12 available to you?

13 A. I have not identified one for that population  
14 group, no.

15 Q. So you selected the Chinese and Vietnamese  
16 because you thought that would be closest in comparison  
17 to a Laotian population?

18 A. Yes. We standardly will only report out, and  
19 at the time this was reported, we will only report out  
20 the population frequencies for the three largest  
21 population groups in the state of Texas, which at that  
22 time, Caucasian, African-American and Hispanic. In this  
23 particular case, there was a request to find a  
24 population database close to Laotian, so the FBI had a  
25 Chinese and Vietnamese database, so I used those as

1 well. The stats that I've been quoting this whole  
2 entire time for anybody's knowledge is the lowest, or  
3 the most conservative of all of those population groups,  
4 whatever they might be. So it might have been -- but  
5 it's the one that most benefits the person it's matching  
6 to, in a sense, the defendant in this case, we picked  
7 the most conservative number to report.

8 Q. You had actually made a copy from the May  
9 report of the table we've been talking about this  
10 morning, correct?

11 A. That's correct.

12 Q. And you made highlights in that, correct?

13 A. Correct.

14 Q. Do you have that with you?

15 A. I do.

16 MS. SMITH: State will offer the  
17 highlighted table as State's Exhibit 15, previously  
18 tendered a copy to Defense.

19 MR. ALLEN: No objection.

20 THE COURT: It's admitted.

21 MS. SMITH: Did I also offer State's  
22 Exhibit 12 already?

23 MR. ALLEN: The updated report?

24 MS. SMITH: It's the updated May report.  
25 Then I'll also offer as State's Exhibit 12, the May 19,

1 2016 report.

2 MR. ALLEN: No objection.

3 THE COURT: It's admitted.

4 MS. SMITH: Pass the witness.

5 THE COURT: Anything else?

6 MR. ALLEN: No, Your Honor.

7 THE COURT: Dr. McDonald, you are  
8 released. You're free to stay or go, whatever you'd like  
9 to do.

10 MR. ALLEN: Your Honor, if we could, we do  
11 have an objection as it relates to their next witness. I  
12 believe they'll be calling, I believe, a former or  
13 current prosecutor to talk about the time line in the  
14 case. I don't -- I guess I'm fishing in the wrong hole  
15 here, but I don't know what the rules are in Texas about  
16 lawyers becoming witnesses in their own case, so we would  
17 have an objection as it relates to that. If he's still  
18 in the office, or even if he was in the office, he's  
19 becoming a lawyer in a case and that would create a  
20 conflict of interest.

21 The second is he's going to present an  
22 opinion as to Mr. Chanthakoummane's guilt or innocence  
23 or the strength of his case, we believe that would be  
24 improper as well, and it's irrelevant. As it relates to  
25 these proceedings, the remand, as I understand it,



1 relates to specifically the junk science issues, for you  
2 to make a decision whether or not they affected the  
3 outcome.

4 THE COURT: Ms. Smith, are you making an  
5 oral offer of proof regarding Mr. Howard's testimony -- I  
6 presume it's Mr. Howard?

7 MS. SMITH: Yes, Your Honor. The State  
8 will be offering Curtis Howard, who is a former Collin  
9 County prosecutor who sat second chair on this case. He  
10 is no longer with our office. He works for the Plano  
11 Police Department as their legal counsel. He's  
12 testifying today strictly as a fact witness based on his  
13 personal knowledge about the case, and the investigation.  
14 I'm offering him primarily to demonstrate how  
15 Mr. Chanthakoummane became a suspect in this case, which  
16 is not currently reflected by the trial record. It could  
17 be interpreted that his testimony is somehow expressing  
18 an opinion as to Mr. Chanthakoummane's guilt, but only to  
19 the extent that he would be testifying to his belief  
20 about the evidence that inculpatates him that they offered,  
21 and I suppose if they were to ask him if his opinions  
22 would change in any way, he might rendering that kind of  
23 testimony, but that's not the primary purpose for which  
24 I'm offering it.

25 Also, part of the disposition of these

1 claims requires the Court to determine whether or not  
2 any of this new science would have impacted the result  
3 in this case. Mr. Howard's testimony will relate  
4 directly to that because it will show that it would have  
5 had no bearing.

6 MR. ALLEN: If I could respond, Your  
7 Honor?

8 THE COURT: All right.

9 MR. ALLEN: I think it will come out as  
10 opinion evidence, and certainly then we could call  
11 Mr. Gardner to testify that he thinks he didn't do it,  
12 and I think two of the exhibits that they will rely on  
13 have to do deal with evidence that wasn't heard by the  
14 jury, and that relates to Barbara Johnson. She wasn't  
15 called as a fact witness in the guilt/innocence phase,  
16 she was called as a witness in the mitigation phase. So  
17 there are going to be relying on things that in making  
18 your decision, it will be sort of clouded by things that  
19 came up that the jury did not hear in the original trial.  
20 So, we are certainly willing to stipulate, they have  
21 provided us with a time line, as to that time line, that  
22 is an accurate time line of how the case progressed, but  
23 certainly his testimony, I don't think it's relevant.

24 And if you're looking at the reasonable  
25 juror standard, if you're being asked to look at things

1 that the jury did not look at initially, I don't think  
2 that would be proper, and I don't think his testimony  
3 would be relevant.

4 MS. SMITH: Can I provide the Court with a  
5 copy of the time line that Mr. Allen is referencing?

6 THE COURT: Yes.

7 MS. SMITH: We've labeled it as State's  
8 13. We have not offered it yet, we were planning to use  
9 it for demonstrative purposes only.

10 THE COURT: Any objection to the Court  
11 admitting this as an aid, or for record purposes, or for  
12 all purposes?

13 MR. ALLEN: No, Your Honor -- yeah, as  
14 demonstrative, that's fine.

15 MS. SMITH: Your Honor, you had  
16 previously, in relation to Defense Exhibit 8 said that  
17 you were going to take the matter about viewing the  
18 Forensic Files video under advisement, could I propose  
19 that I be allowed to put Mr. Howard on and at least make  
20 a bill, basically, of what he would testify to, and then  
21 after hearing that, you could decide whether or not you  
22 feel it's relevant and admissible on any matter before  
23 you?

24 THE COURT: Well, given the Court's role  
25 in this proceeding being, among other things, to make a

1 finding whether current scientific -- accepted scientific  
2 opinions would have impacted the jury's result. I would  
3 tend to think that if there was additional inculpatory  
4 evidence that the appropriate way to admit that would be  
5 through specific fact witnesses. I don't see, otherwise,  
6 the relevance of testimony from Mr. Howard with respect  
7 to how Mr. Chanthakoummane may have become a suspect in  
8 the case that I think would be derived from investigators  
9 or from other sources. I, otherwise, don't believe that  
10 any opinions that Mr. Howard would express regarding  
11 Mr. Chanthakoummane's guilt is relevant to this  
12 proceeding. And I don't particularly see based on the  
13 offer that's been made that Mr. Howard would have any  
14 relevant testimony concerning the issues that I need to  
15 resolve, other than, perhaps, providing a summary of, in  
16 his opinion, what the evidence at trial was, or what  
17 the -- his opinion regarding the -- a summary of the  
18 investigation.

19           So, I believe I'm going to sustain the  
20 Applicant's objections to Mr. Howard testifying and  
21 exclude him as a witness at this time.

22           When at all possible, I would like to  
23 minimize the, pardon the term, mental gymnastics  
24 required of the Court in hearing evidence and then  
25 un-hearing it. I understand that it's part of my job

1 and it's one that I'm certainly capable of doing, but  
2 with that said, I wish to minimize it, if I can, and if  
3 the State's summary offer of what Mr. Howard would  
4 testify to is accurate, I would prefer that the State  
5 not go beyond that and present the offer through the  
6 form of testimony or as a bill. However, if legally  
7 speaking, or procedurally speaking, the State has a  
8 right to do that, I'm not going to prevent it.

9           Those are just my thoughts on the  
10 subject, but based on the oral -- the offer of proof  
11 that's been presented, I don't believe that Mr. Howard  
12 has testimony that's relevant to this proceeding.

13           MS. SMITH: Then, Your Honor, may I offer  
14 the time line for substantive purposes then?

15           Do you have any objection to me offering  
16 it for substantive purposes, Eric?

17           MR. ALLEN: What --

18           MS. SMITH: It's largely reflective of  
19 exhibits that have already been admitted in the hearing,  
20 it's a way to kind of put it all in one place.

21           MR. ALLEN: We would prefer that it be  
22 kept as a demonstrative exhibit, Your Honor.

23           THE COURT: Insofar as the evidence  
24 reflected in the time line is in the record, I think that  
25 the trial record speaks for itself, and it is from that

1 record that the Court should determine whether the new  
2 scientific opinion evidence would have impacted the  
3 original result in the trial. So I would tend to confine  
4 my determination to that record and to the testimony  
5 presented at this hearing.

6 So I'll sustain the objection to admit it  
7 for substantive purposes, and I will consider it only  
8 for demonstrative purposes.

9 MS. SMITH: Your Honor, to the extent that  
10 what's reflected in the time line is not currently  
11 evident through the exhibits and the testimony before  
12 you, may I have an opportunity to present one of the  
13 investigators to put on evidence in relation to those  
14 particular facts? It shouldn't take very long. I could  
15 have Ranger Davidson come in and testify, probably take  
16 15 minutes, but I need to make a record to support the  
17 time line of how this came about, not just to show that  
18 it wouldn't have made a difference, but also to show how  
19 it shows that the eyewitness identifications were not  
20 affected by the hypnosis session, it relates in part to  
21 that.

22 THE COURT: Are you confident that the  
23 testimony you would be offering through Ranger Davidson  
24 was not already presented at trial?

25 MS. SMITH: Yes, Your Honor, because it's

1 only reflected in our files in a search warrant affidavit  
2 and a case summary.

3 THE COURT: Do you know Ranger Davidson's  
4 availability?

5 MS. SMITH: Not today. He's lieutenant  
6 now over Company B, but I had contacted him in relation  
7 to the case, and I could coordinate with Dr. Spiegel and  
8 see if I could make him available the same day.

9 MR. ALLEN: We have no objection to that,  
10 Your Honor.

11 THE COURT: All right. That's fine.

12 MR. GARDNER: Your Honor, one thing though  
13 if -- we may work with the State since they're bringing  
14 in a new witness, we may have to have a rebuttal witness,  
15 I kind of doubt it, but it's something we will have to  
16 think about, and we will let the Court and State know  
17 well beforehand in that case if that happens.

18 THE COURT: All right. Based on the age  
19 that this matter is accumulating, I am going to ask the  
20 attorneys to please try to expedite any remaining  
21 matters. I haven't received any communications from the  
22 Court of Criminal Appeals, but I would have to think that  
23 at this point they are going to be extremely short of  
24 patience with respect to delay, as I think is quite  
25 understandable, given the typical mandated timelines with

1 regard to these subsequent writs.

2 Is Dr. Spiegel from out of town?

3 MS. SMITH: Yes, Your Honor, he's from  
4 Stanford, California.

5 THE COURT: If Dr. Spiegel's testimony and  
6 Ranger Davidson's anticipated testimony is not going  
7 to -- you don't anticipate that it's going to take more  
8 than a couple of hours total, I will do my best to  
9 facilitate the first available time and day that we can  
10 resume, and I will push aside anything else that I have  
11 going to make that happen.

12 So if neither side has any additional  
13 evidence to offer at this time, I'd ask y'all to confer  
14 and to confer with Dr. Spiegel and Ranger Davidson and  
15 try and get back to us with the very first available  
16 time and date that y'all can -- that we can conclude  
17 this matter.

18 MS. SMITH: Yes, Your Honor.

19 MR. GARDNER: Yes, Your Honor. And one  
20 thing we did tell you yesterday, just wanted to remind  
21 you, it's highly likely we will call Dr. Lynn again in  
22 rebuttal just to add a third witness to your plate,  
23 sorry.

24 THE COURT: Okay. Based on the delay  
25 between now and the time we resume, there is a strong, I



1 would think, a strong likelihood that the sheriff will  
2 cause Mr. Chanthakoummane to be transported back to the  
3 custody of TDC. I don't know in particular what his  
4 policy might be on that, but I just want to let y'all  
5 know that for planning purposes, depending on how long  
6 we're talking about, that may happen, and we may have to  
7 bench warrant him back if the delay is, I would think,  
8 more than a week or so.

9 MS. SMITH: Yes, Your Honor. We've  
10 already been in communication with the Sheriff's Office,  
11 he's going to be transferred back to Polunsky Thursday  
12 morning because we can't get back here within a couple of  
13 weeks, so we've already made those arrangements.

14 THE COURT: Okay. All right. As I said,  
15 please confer with your witnesses and try to get a date  
16 secured as soon as possible. I will let you know that I  
17 am going to be out of town starting July 30 and I will  
18 not be back until the 8th. So I am available on the 9th  
19 and 10th, but otherwise that week, the week of August, I  
20 think it's the 6th, and the week of July 30 I am not here  
21 except for those two days, the 9th and 10th. And the 9th  
22 and 10th, my calendars are almost completely clear. The  
23 9th is completely clear and the 10th might be completely  
24 clear, and then anytime after that, beginning the 13th  
25 should -- we should be able to accommodate you. So the

1 only times I can't accommodate anything are the week of  
2 the 30th and the week of the 6th, that is, August 6, 7  
3 and 8. All right. Thank you.

4 MS. SMITH: Thank you, Judge.

5 MR. ALLEN: Thank you.

6 THE COURT: Thank you. We're adjourned.

7 (Adjourned)

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1 STATE OF TEXAS

2 COUNTY OF COLLIN

3 I, Karla Kimbrell, Official Court Reporter in and  
4 for the 380th District Court of Collin, State of Texas,  
5 do hereby certify that the above and foregoing contains  
6 a true and correct transcription of all portions of  
7 evidence and other proceedings requested in writing by  
8 counsel for the parties to be included in this volume of  
9 the Reporter's Record, in the above-styled and numbered  
10 cause, all of which occurred in open court or in  
11 chambers and were reported by me.

12 I further certify that this Reporter's Record of the  
13 proceedings truly and correctly reflects the exhibits,  
14 if any, offered by the respective parties.

15 I further certify that the total cost for the  
16 preparation of this Reporter's Record is reflected in  
17 the first volume and will be paid by Collin County.

18 WITNESS MY OFFICIAL HAND this the 13th day of  
19 December, 2018.

21 /s/Karla Kimbrell

22 Karla Kimbrell, Texas CSR 3790  
23 Official Court Reporter  
24 380th District Court  
25 Collin County, Texas  
2100 Bloomdale Road  
McKinney, Texas 75071  
Telephone: (972) 548-4661  
Expiration: 12/31/2019

KARLA KIMBRELL, COURT REPORTER, 380TH DISTRICT COURT

APPENDIX F  
Trial Court Findings and Conclusions of Law,  
Cause No. W380-81972-07-HC2

**W380-81972-07-HC2**

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**IN THE DISTRICT COURT  
380TH JUDICIAL DISTRICT  
COLLIN COUNTY, TEXAS**

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**EX PARTE  
KOSOUL CHANTHAKOUMMANE**

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**FINDINGS OF FACT AND CONCLUSIONS OF LAW**

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Having considered (1) the subsequent application for writ of habeas corpus, (2) the State's answer, (3) official court documents and records from the trial, direct appeal, and these writ proceedings, (4) evidence presented at the hearing conducted on July 16-17, 2018, and November 1, 2018, (5) the arguments presented by the parties, and (6) the Court's personal experience and knowledge, the Court makes the following findings of fact and conclusions of law:

## **Background Facts**

### ***Guilt Phase Evidence***

The Court of Criminal Appeals summarized the evidence presented in the guilt phase of trial in its opinion on direct appeal as follows:

On Saturday, July 8, 2006, real estate agent Sarah Walker was murdered in the D.R. Horton model home where she worked in the "Craig Ranch" subdivision in McKinney, Texas. [Applicant] was charged with intentionally and knowingly causing Walker's death while in the course of committing or attempting to commit robbery.

On the morning of July 8, Walker's ex-husband, Randy Tate, went to Walker's residence in Frisco, Texas. Walker planned to work at the model home that day, so Tate picked up their son early that morning. While Tate was at Walker's residence, Walker showed him a new Rolex watch that she said she had purchased the previous day. Later that morning, Walker went to a Bank of America in Frisco. Still photographs taken from the bank surveillance video showed Walker wearing a watch and a ring at around 11:45 a.m. Walker's cousin, Jessica Allen, testified that Walker often wore ornate rings and a Tag Heuer watch that she had owned for several years.

Another real estate agent, Mamie Sharpless, received a phone call at 9:40 a.m. that morning from a man who identified himself as "Chan Lee." The man told Sharpless that he found her phone number in a Keller Williams advertisement and that he wanted to look at a town house she had listed in the Craig Ranch subdivision. He said that he had just moved from North Carolina to the Dallas area, that he had graduated from the University of North Carolina at Charlotte, and

that he worked for Texas Instruments. He said that he was calling from a phone booth at the 7-Eleven at Midway and Park and that he was staying in Room 245 at the "InTown Suites." When Sharpless asked him for a contact number, he said that he did not have a cell phone. The phone "cut off" before their conversation ended, so Sharpless tried to reach him by calling his hotel. Sharpless testified that she "called two InTown Suites, and one didn't have a [Room] 245, the other one did, but it just had a recording on it."

Sharpless arrived to show the town house between 11:30 a.m. and noon, and she brought her husband, Nelson Villavicencio, with her. As they sat in their car and waited, they saw a man drive by in a white Ford Mustang and park across from a D.R. Horton model home down the street. They observed the man getting out of the Mustang and starting to cross the street. They drove over to the man and asked him if he was "Chan Lee," and he replied, "No." Sharpless described him as a muscular man of Asian descent, about 5' 4' or 5' 5' tall, with a "buzz cut." She made an in-court identification of [applicant] as the man she saw that day, but explained that he was thinner with longer hair at the time of trial.

As Sharpless and Villavicencio drove away, they noticed that the Mustang had Texas license plates. When Villavicencio drove to the end of the block, turned around, and drove back, the Mustang was no longer there. He then drove back to the town house so Sharpless could show it to another potential buyer. As Villavicencio looked out the bedroom window while Sharpless showed the town house, he observed Walker arrive in her Porsche Boxster. Walker parked her car across the street from the D.R. Horton model home and went inside. At that point, Villavicencio also saw a white Mustang parked on the street in front of the model home. Sharpless then finished showing the town house and they left between 12:30 and 1:00 p.m. As they left the subdivision, Sharpless also noticed a white Mustang parked in front of the model home.

At about 12:30 p.m., Walker called her cousin, Jessica Allen. Allen testified that Walker was "in a really good mood" during their brief



telephone conversation. They talked for about 15 minutes, then Walker “said someone had walked in and she’d call [Allen] back.”

At approximately 1:10 p.m., Andy Lilliston and his wife came to look at the D.R. Horton model home. When they entered the model home, Lilliston thought that it appeared to have been “ransacked.” He observed a large pool of blood in the dining room, where the sales desk was located. He followed a trail of blood into the kitchen, where he saw Walker lying face-up on the floor, with the upper half of her body covered in blood. Lilliston directed his wife to call 9–1–1, and they exited the model home. Lilliston ran into the street and flagged down a vehicle for help. He briefly went back inside the model home to check on Walker, but she did not display any signs of life. Lilliston then went back outside and waited for emergency personnel to arrive.

When Texas Ranger A.P. Davidson arrived at the model home, he noticed signs of a struggle in the dining room. The desk was crooked, the desk chair was out of place, a plant stand was knocked over, and a potted plant was on the floor. A pair of women’s shoes, a broken hair clip, and a broken earring were also on the floor. There was a trail of blood leading from the dining room into the kitchen. Walker’s body was on the kitchen floor, and it appeared that she had multiple stab wounds. Davidson opined that Walker had been dragged by her feet from the dining room to the kitchen because the long skirt she was wearing was rolled up to her waistline.

McKinney police officer Pete Copin discovered a bloody fingerprint on the deadbolt lock on the front door of the model home; however, he testified that there were “not enough individual characteristics for a positive identification.” Copin further observed what appeared to be blood on the plant stand, on the ceramic tile in the entryway, on the wall next to the edge of the window beside the front door, and on the pull cord for the window blinds. It also appeared that there had been blood in the kitchen sink that had been washed or diluted with water. Copin collected blood swabs and other evidence from the scene for further testing.

When Walker's body was discovered, she was no longer wearing the watch and ring that she had been shown wearing earlier on the bank surveillance video. When the police searched Walker's residence after her death, they found her Tag Heuer watch. The police never located her Rolex watch, but they did find the box and the receipt for the Rolex watch in her residence.

William Rohr, the Collin County Medical Examiner who performed Walker's autopsy, testified that Walker sustained several blunt force injuries to her head. He opined that the blunt force injuries were the result of "several blows," and that they were consistent with Walker being struck in the face and head with the plant stand in the model home. Walker had multiple bruises on her face and head, a broken nose, and fractured teeth. She had some defensive wounds, including an excised wound on her left arm and a broken fingernail on her right hand. She suffered a total of 33 stab wounds, 10 of which penetrated vital organs and blood vessels. Rohr testified that any one of those 10 wounds could have been "pretty much immediately fatal." Walker also had a bite mark on the back of her neck that Rohr opined was inflicted "at or near her death." Rohr testified that he preserved this evidence by using a scalpel to excise the bite mark and surrounding area.

DNA analysis linked [applicant] to evidence from the crime scene. [Applicant's] DNA profile was consistent with the DNA obtained from Walker's fingernails, the window blind pull cords, the deadbolt lock and faceplate, and some of the swabs taken from the living room, kitchen, and entryway of the model home. The DNA analyst testified that only a "partial profile" was obtained from a swab taken from the kitchen sink because the DNA extracted from that swab "was of low quality and degraded quality." However, the set of genetic markers that she was able to detect in the partial profile "corresponded with the genetic markers observed in the DNA profile of [applicant]."

After receiving the results of the DNA analysis, police arrested [applicant] at his apartment on September 5, 2006. Texas Ranger Davidson testified that [applicant] owned a white Ford Mustang and

that his apartment was located three miles away from the pay phones at Midway and Park. Davidson spoke to [applicant's] sister, who informed him that [applicant] had attended school in North Carolina and that he had moved from Charlotte to Dallas in February 2006. Davidson determined that applicant had filled out a lease application at an apartment complex near the InTown Suites on Trinity Mills. Davidson also discovered that [applicant's] bank account was overdrawn by \$82.27 on the day before Walker's murder. Davidson testified that [applicant] was muscular and had a shaved head at the time of his arrest. Officer Copin, who later photographed applicant to document his appearance, testified that he observed what appeared to be some healed cuts or scratches on [applicant's] hands and fingers.

[Applicant] was transported to the McKinney Police Department, where he was interviewed by Officer Randall Norton. [Applicant] at first denied ever being in McKinney in his white Mustang. Upon further questioning, he stated that his car had broken down at "a model house," that he knocked on the door but no one answered, that he took "like three or four steps" inside and asked if anyone was home but no one was there, and that he spoke to a man and a woman in a green or blue "Corolla or Camry" as he left. Next, he admitted that he went to the kitchen sink for a drink of water, but said that he "didn't know how to use the faucet because the hot water came out," so he left. He acknowledged that he had "old cuts" on his hands "from work," so it was possible that he could have been bleeding when he was inside the model home. He also acknowledged that he had sold some of his own property for cash at a pawn shop on Greenville Avenue, including a tape deck, a drill, and an inexpensive Kenneth Cole watch.

Forensic dentistry consultant Brent Hutson examined [applicant] and made impressions of his teeth. Hutson compared [applicant's] teeth to the bite mark on Walker's neck and found enough similarities that he was "unable to exclude [applicant] from that population of individuals that could have inflicted this injury." Hutson concluded

“within reasonable dental certainty beyond a doubt” that [applicant] was responsible for the bite mark on Walker’s neck.

*Chanthakoummane v. State*, No. AP-75,794, 2010 WL 1696789, at \*1-4 (Tex. Crim. App. Apr. 28, 2010) (not designated for publication).

### ***Punishment Phase Evidence***

At punishment, the State presented evidence of applicant’s escalating criminal behavior as a juvenile and young adult. On March 15, 1995, applicant and some friends assaulted Larry Smith and stole his bicycle. (24 RR 79-83). After applicant began the assault by punching Smith without warning, he and his friends kicked Smith in the back, ribs, and face. (24 RR 82). Applicant was laughing during the assault. (24 RR 83). Smith suffered six fractured ribs and a concussion. (24 RR 83). The case was filed against applicant as a “strong-arm robbery,” but applicant pleaded guilty to a lesser misdemeanor assault. (24 RR 119-20, 144). Other charges against applicant at the time included communicating threats and credit card fraud against his mother. (24 RR 120-21; SX 114 (juvenile records)). Applicant was placed on probation. (24 RR 118).

Applicant’s next major charge was an assault with serious injury committed on October 10, 1995. (24 RR 22). During that incident, applicant was skipping school with other students when he assaulted Shawn Bank. (24 RR 24-26). Bank suffered a fractured arm and bruises to his head. (24 RR 26-28). In a non-custodial interview with police, applicant admitted committing the assault. (24 RR 30, 33). Applicant was unconcerned for Bank and showed no remorse during the interview. (24 RR 30-31).

New juvenile petitions were filed against applicant for this crime, as well as for several car thefts. (24 RR 154-56). Applicant’s probation was revoked, and he was sent to training school at Swannoa, a campus-like facility where juveniles lived in cottages and attended school. (24 RR 157, 134, 160). After a certain amount of time with good behavior, juveniles at Swannoa were allowed furloughs. (24 RR 168-69). At one point, applicant was considered “AWOL” because he refused to return from a furlough. (24 RR 169).

At Swannoa, applicant wrote to his former probation officer and expressed some remorse for his assault crime. (24 RR 135-38; SX 115). The letter also

contained symbols and words indicating that applicant was a member of the Crips gang. (24 RR 135-38). One symbol, C4L, meant "Crips for Life." (24 RR 138). Other gang symbols included spelling out the word "six" instead of using the numeral, the way he defaced the letter "B" to show disrespect for Bloods, a pitchfork, and his signature, "Gangsta Crip John." (24 RR 138-40; SX 115). Applicant's conditions of probation had required him to avoid the Kaos Klan Kings, a gang associated with the Crips. (24 RR 125-26).

Applicant was on furlough from Swannoa when he committed his next crimes. (24 RR 174). On June 17, 1997, sheriff's deputies in Union County, North Carolina learned of a stolen vehicle after three suspects fled a traffic stop. (24 RR 47-48, 62). One of the suspects turned herself in immediately, but applicant and the other suspect later broke into a trailer occupied by two elderly women, tied them up with an electrical cord, ransacked the trailer, and stole a car. (24 RR 50-55; SX 116-21). Applicant was charged with two counts of kidnapping, two counts of robbery with a dangerous weapon, breaking and entering and larceny to the residence, and larceny to the car. (24 RR 57-58). Because he was 16 years old, applicant was charged as an adult and detained in the adult jail. (24 RR 62, 64). Applicant was sentenced to fifty-one to seventy-one months' imprisonment after pleading guilty to robbery and kidnapping. (24 RR 73-74; SX 122). Applicant's sentences ran consecutively, and he was paroled from North Carolina prison on February 19, 2006. (SX 122 at 6).

On July 7, 2006, the day before Sarah Walker's murder, applicant stalked another female real estate agent. (24 RR 181-90). Barbara Johnson, who specialized in rentals and relocations, had helped applicant locate an apartment in May 2006. (24 RR 179). They met one time during that process, and she did not tell him where she lived. (24 RR 181). On the evening of July 7, 2006, she was home alone with her dog when someone rang her doorbell. (24 RR 182-83). She did not recognize applicant at the time, but he was at her door mumbling something about his car being "broken down" or "in her driveway." (24 RR 183). She asked if he needed her phone, and he said yes. (24 RR 183).

Johnson closed her door, retrieved her phone, and went back to the front door. (24 RR 183). Applicant was not at the door or in her yard. (24 RR 183). Johnson thought applicant may have misunderstood her, and she closed the door and went through her house to the backyard, which was fenced off from her rear

entry driveway. (24 RR 183-84). She “hollered out at him” to see if he needed the phone. (24 RR 183-84). Her dog was very upset and barking. (24 RR 184). Applicant needed the phone, and she handed it to him over the fence. (24 RR 185). Applicant asked for water, and because she felt bad for him, she went inside and got him some. (24 RR 185). But she also became afraid. (24 RR 185). She gave him a glass of water over the fence and asked him where he lived. (24 RR 185). He said Plano, but he did not answer when she asked him why he was in her neighborhood. (24 RR 185). Johnson was becoming very scared, and she started back toward her house as applicant began trying to open her back gate. (24 RR 186). She thought he might be trying to return the water glass, but she told him the gate was broken. (24 RR 186). He asked her to let her dog out to keep him company while he waited, but she told him the dog would bite and went back inside. (24 RR 186).

Applicant went back to her front door, but she did not answer it. (24 RR 187). He then went to the back door and started beating on it. (24 RR 187). Johnson called the police. (24 RR 187). The police came and talked to applicant, and Johnson saw a white car while they were talking to him. (24 RR 187-88). The police lectured her about opening her door to a stranger. (24 RR 187-88). They also told Johnson that it appeared that applicant did have car trouble but had gone. (24 RR 188). Johnson lived in a cul de sac, and applicant would have had to make several turns from a main road and go down an alley to reach the spot where his car was parked. (24 RR 188-90).

Applicant’s parole officer met with him the morning of the murder. (24 RR 192-94). He dropped by applicant’s apartment unannounced at 7:30 a.m. (24 RR 196-97). Applicant’s nephew answered the door and went to get applicant, who had been sleeping. (24 RR 198). Applicant and the parole officer talked for about ten minutes about applicant’s job and the difficulties he had had reporting. (24 RR 198). The parole officer noted nothing unusual about applicant; he did not appear agitated or express any concerns. (24 RR 198). The parole officer had no idea applicant was about to commit a violent crime. (24 RR 199). Applicant also reported to another parole officer on July 10, 2006, two days after Sarah Walker’s murder. (24 RR 199). Nothing unusual was recorded about that visit. (24 RR 199).

## **Procedural History**

Applicant, Kosoul Chanthakoumanne, was convicted of capital murder and, on October 17, 2007, this Court sentenced him to death. The Court of Criminal Appeals subsequently affirmed applicant's conviction and sentence on direct appeal. *Chanthakoumanne*, 2010 WL 1696789, at \*27. Applicant filed his original article 11.071 writ application on April 5, 2010. The Court of Criminal Appeals subsequently denied that application. *Ex parte Chanthakoumanne*, No. WR-78,107-01, 2013 WL 363124 (Tex. Crim. App. Jan. 30, 2013) (not designated for publication).

The federal district court and the Fifth Circuit Court of Appeals also denied applicant's request for habeas relief. *Chanthakoumanne v. Stephens*, No. 4:13cv67, 2015 WL 1288443 (E.D. Tex. Mar. 20, 2015); *Chanthakoumanne v. Stephens*, 816 F.3d 62 (5th Cir. Feb. 25, 2016). And the United States Supreme Court denied his requests for certiorari review of the state and federal courts' denials of habeas relief. *Chanthakoumanne v. Texas* 562 U.S. 1006 (2010); *Chanthakoumanne v. Davis*, 137 S.Ct. 280 (2016).

Consequently, this Court scheduled applicant's execution for January 25, 2017. However, the Court modified the date when applicant filed a subsequent habeas application under article 11.071. On June 7, 2017, the Court of Criminal Appeals stayed applicant's execution and issued the subsequent writ, returning the application to this Court to litigate the four issues raised therein. *Ex parte Chanthakoumanne*, No. WR-78,107-02, 2017 WL 2464720 (Tex. Crim. App. June 7, 2017) (not designated for publication).

This Court subsequently conducted a hearing on July 16, 2018, July 17, 2018, and November 1, 2018. During the hearing, the parties presented testimonial, documentary, and video-recorded evidence. The parties subsequently filed proposed findings of fact and conclusions of law.

## **Claims Raised**

Applicant raises four claims for relief centered on some of the evidence the State presented linking him to the murder, namely, the bitemark evidence, the testimony from two previously hypnotized eyewitnesses, and the DNA evidence.

**Claim 1:** Applicant alleges he is entitled to relief under article 11.073 of the Code of Criminal Procedure because developments in science since his 2007 trial have discredited the State's bitemark evidence, eyewitness testimony, and DNA evidence.

**Claim 2:** Applicant alleges the State's bitemark evidence, eyewitness testimony, and DNA evidence constituted false evidence that violated his Fourteenth Amendment right to due process.

**Claim 3:** Applicant alleges the admission of the State's bitemark evidence, eyewitness testimony, and DNA evidence violated his Fourteenth Amendment right to a fair trial.

**Claim 4:** Applicant alleges he is actually innocent because the new scientific evidence debunks all of the State's evidence connecting him to the offense and, thus, his execution will violate the Eighth and Fourteenth Amendments.

### **Applicant Fails to Prove Any Right to Relief**

- (1) Applicant bears the burden to allege and prove by a preponderance of the evidence facts which, if true, entitle him to relief. *Ex parte Chappell*, 959 S.W.2d 627, 628 (Tex. Crim. App. 1998).
- (2) Applicant failed to sustain his burden of proving a right to relief under any of the four claims raised in his subsequent writ application.

### **Article 11.073 Claim (Claim 1)**

- (3) Article 11.073 authorizes relief if:
  - relevant scientific evidence is currently available and was not available at the time of his trial because the evidence was not ascertainable through the exercise of reasonable diligence by him before or during his trial; and
  - the scientific evidence would be admissible under the Texas Rules of Evidence at a trial held on the date of the application; and



- had the scientific evidence been presented at trial, on the preponderance of the evidence the person would not have been convicted.

Tex. Code Crim. Proc. Ann. art. 11.073(b)(1) & (2) (West Supp. 2018).

(4) Article 11.073 applies to relevant scientific evidence that (a) was not available to be offered by a convicted person at his trial, or (b) contradicts scientific evidence relied on by the state at trial. *Id.* at (a).

(5) “When assessing reasonable diligence, courts consider whether ‘the field of science, a testifying expert’s scientific knowledge, or a scientific method on which the relevant scientific evidence is based’ has changed since the applicant’s trial.” *Ex parte Chaney*, No. WR-84,091-01, 2018 WL 6710279, at \*10 (Tex. Crim. App. Dec. 19, 2018); *see also* Tex. Code Crim. Proc. art. 11.073(d).

(6) “Scientific method is defined as ‘[t]he process of generating hypotheses and testing them through experimentation, publication, and republication.’” *Chaney*, 2018 WL 6710279, at \*10 (quoting *Ex parte Robbins*, 478 S.W.3d 678 (Tex. Crim. App. 2014)).

(7) “‘Scientific knowledge’ includes a change in the body of science (e.g., the field has been discredited or evolved) and when an expert’s opinion changes due to a change in their scientific knowledge (e.g., an expert who, upon further study and acquisition of additional scientific knowledge, would have given a different opinion at trial).” *Id.*; *see also* art. 11.073(d).

(8) With respect to the science of bitemark and DNA analysis, applicant presented relevant scientific evidence that was unavailable at the time of his trial. That new evidence was not ascertainable through the exercise of reasonable diligence by him before or during his trial.

(9) Also, that evidence would be admissible under the Texas Rules of Evidence at a trial held on the date applicant filed his subsequent writ application.

(10) With respect to the science of hypnosis, however, applicant has failed to present relevant scientific evidence that was unavailable at the time of his trial. The evidence applicant presented in these writ proceedings was ascertainable through the exercise of reasonable diligence before and during his trial.

(11) Furthermore, applicant has failed to prove by a preponderance of the evidence that he would not have been convicted if the evidence he presented during these writ proceedings on the science of bitemark, hypnosis, and DNA had been presented at his trial.

(12) Therefore, applicant has failed to prove by a preponderance of the evidence that he is entitled to relief under article 11.073.

***Bitemark***

(13) At applicant's 2007 trial, the State presented the expert testimony of Dr. Brent Hutson, a forensic odontologist. Hutson compared applicant's teeth to the bitemark on Sarah Walker's neck. He found enough similarities that he was unable to exclude applicant from that population of individuals that could have inflicted the injury. Hutson concluded "within reasonable dental certainty beyond a doubt" that applicant was responsible for the bitemark on Walker's neck. (22 RR 258-59).

(14) Since applicant's 2007 trial, knowledge in the scientific field of bitemark comparison has evolved. Under today's scientific standards, no expert could identify applicant as the source of the bitemark on Sarah Walker's neck. Matching a particular person's teeth to a particular bitemark left on skin is no longer sound science.

(15) These changes in the scientific field are evidenced by the affidavit and testimony of applicant's own expert, Dr. Michael Bowers, a forensic odontologist. (2 WRR 13-48; Applicant's Exhibits 1-3). Bowers is a credible witness whose testimony is based on valid and reliable information.

(16) The changes are further evidenced by (1) the 2009 National Academy of Science's report, "Strengthening Forensic Science in the United States: A Path Forward," (2) the Texas Forensic Science Commission's February 2016 recommendation of a moratorium on bitemark comparison evidence and subsequent April 2016 report on such evidence, and (3) the President's Council of Science and Technology (PCAST) 2016 report on bitemark evidence and 2017 addendum. (2 WRR 25-28; Applicant's Writ Exhibits, Vols. 1 & 2, pp. 36-1376).

(17) Moreover, as of March 2016, the American Board of Forensic Odontology (ABFO) has determined that the science supports only three conclusions: (1) excluded as having made the bitemark; (2) not excluded as having made the bitemark; and (3) inconclusive. AMERICAN BD. OF FORENSIC ODONTOLOGY, INC., DIPLOMATES REFERENCE MANUAL: SECTION III: STANDARDS & GUIDELINES at 102 (March 2016); (2 WRR 24).

(18) The Court of Criminal Appeals recently recognized these changes in the science of bitemark comparison in *Ex parte Chaney*, No. WR-84,091-01, 2018 WL 6710279 (Tex. Crim. App. Dec. 19, 2018). In particular, the Court held that the science no longer supports “matching” a person’s teeth to a mark left on skin. *Id.* at \*15. The science now completely disavows individualization. *Id.*

(19) This disavowal is premised on the discovery that it is not scientifically established that human dentition is unique, that teeth leave a unique pattern on skin, or that skin is able to maintain a unique pattern. *Id.* at 13-15; (2 WRR 36-41). In addition, “[a] standard for the type, quality, and number of individual characteristics required to indicate that a bitemark has reached a threshold evidentiary value has not been established.” *Id.* at 13; (2 WRR 35-36).

(20) Therefore, as appellant alleges, there is new, relevant scientific evidence in the field of bitemark comparison.

(21) Moreover, this new evidence would have been admissible at a trial conducted on the date applicant filed his subsequent writ application. Dr. Bowers’s expertise is unquestioned and bitemark comparison is still founded in science. *Id.* at 15 (holding bitemark evidence admissible because expertise of witnesses was unchallenged and, notwithstanding changes in field, bitemark comparison is based in science).

### ***Hypnosis***

(22) At applicant’s trial, the State presented the eyewitness testimony of Mamie Sharpless and Nelson Villavicencio, both of whom identified applicant in court as the man they saw near the scene shortly before the murder. (21 RR 87-121). Both Sharpless and Villavicencio participated in a hypnosis induction session with Texas Ranger Richard Shing before trial. (21 RR 68-69, 121-22; State’s Writ Exhibits 4 & 20). At trial, applicant sought to exclude Sharpless’s and Villavicencio’s testimony

under the Sixth, Eighth, and Fourteenth Amendments, several evidentiary rules, and *Zani v. State*, 758 S.W.2d 233 (Tex. Crim. App. 1988). (21 RR 84-86). The Court overruled all of applicant's objections. (21 RR 86).

(23) In support of his attack on Sharpless's and Villavicencio's eyewitness testimony, applicant presented the testimony of Curt Carlson, Ph.D., a cognitive psychologist.

(24) Dr. Carlson's testimony does not advance applicant's claim that new science discredits the eyewitness testimony of Sharpless and Villavicencio.

(25) Dr. Carlson testified to the overall unreliability of in-court identifications in comparison to line ups. He opined that Sharpless's and Villavicencio's in-court identifications of applicant were unreliable because of the passage of time and the suggestive nature of the in-court identifications. He also opined that cross-racial bias could have affected their in-court identifications. (3 WRR 109-24, 127-29).

(26) Applicant has failed to show that Dr. Carlson's testimony constitutes new scientific evidence.

(27) Furthermore, Dr. Carlson's testimony is not probative of applicant's allegation that new scientific evidence in the field of hypnosis has come to light since applicant's trial.

(28) Applicant also presented the affidavit and testimony of Dr. Steven Lynn, Ph.D., a hypnosis expert, as new scientific evidence regarding the use of hypnosis to facilitate memory recall.

(29) In his affidavit, Dr. Lynn opined, "[T]oday a virtual consensus exists among cognitive scientists and the larger psychological community that hypnosis imposes risks of false memory creation and that hypnosis further carries a risk of unwarranted confidence in memories, with attendant risks of grievous errors in eyewitness identification." (Applicant's Exhibit 5).

(30) Dr. Lynn further opined, "[G]iven the new information about the risks of hypnosis, serious consideration should be given to the possibility that a miscarriage of justice was perpetrated in the case of [applicant]."

(31) Dr. Lynn identifies the following as “new information” in his scientific field:

- a. Memory is not a vast, permanent, and potentially accessible storehouse of information;
- b. The mind does not record everything that a person witnesses and experiences;
- c. Memory is reconstructive in nature;
- d. Non-hypnotic suggestive procedures can implant false memories of complex events;
- e. Hypnosis results in false memories;
- f. People will confabulate memories, i.e., fill in gaps in memory with information that is not necessarily accurate;
- g. Asking people to imagine events can create false memories or have increased confidence that a particular event occurred, i.e., “imagination inflation”;
- h. Highly hypnotizable subjects tend to report more false memories than “low” hypnotizable persons;
- i. Hypnosis increases suggestibility;
- j. Hypnosis inflates confidence in the accuracy of memories, i.e., “concreting”;
- k. Warning subjects about the imperfections of hypnotically elicited recall does not increase the accuracy of recall; and
- l. The emotional significance of an event does not necessarily increase the accuracy of recall.

(Applicant’s Exhibits 5). Dr. Lynn reiterated the above during his testimony in these writ proceedings. (2 WRR 56-75).

(32) The information Dr. Lynn identified in his affidavit and his testimony as “new” is not, in fact, new.

(33) Dr. David Spiegel, M.D., the State's hypnosis expert in these writ proceedings, attested that myths regarding memory and hypnosis and the risks associated with using hypnosis to assist with memory recall have been well known in the scientific field since at least the mid-1980's. (4 WRR 21, 23, 29-31).

(34) Dr. Spiegel is a credible witness whose expert opinion is founded on valid and reliable information in the scientific field.

(35) Furthermore, his expertise in the field exceeds Dr. Lynn's.

(36) Dr. Spiegel is a research and clinical psychiatrist. He is a full-time tenured professor of psychiatry and behavioral sciences at Stanford University School of Medicine. (4 WRR 5; State's Writ Exhibit 16).

(37) Dr. Spiegel has received prestigious awards related to his work in hypnosis, he belongs to two professional hypnosis organizations, he participated in the DSM-IV and DSM-5 working groups and was charged with the dissociative disorders sections in both editions, he has run 8 major studies in lab clinical trials related to the use of hypnosis, he has authored 75 research journal articles related to hypnosis, and he has written 45 chapters on hypnosis and one textbook. (4 WRR 6-9).

(38) Dr. Spiegel has also hypnotized between 7000-8000 subjects during his career. (4 WRR 9).

(39) Dr. Spiegel has extensive forensic experience, two-thirds of which has been for the defense. (4 WRR 9-10, 59).

(40) Moreover, Dr. Spiegel served as a member of the panel organized in 1985 by the American Medical Association's Council on Scientific Affairs to examine the use of hypnosis in the forensic setting. (4 WRR 13-14). That panel published a report identifying the risks and concerns of using hypnosis to recall memories. (4 WRR 14, 31; State's Writ Exhibit 2). The report prompted many states to establish guidelines for assessing the admissibility of testimony from witnesses who had undergone hypnotic induction before trial. (4 WRR 23).

(41) Texas was one of the states to adopt such guidelines. The Court of Criminal Appeals enunciated the guidelines in 1988 in the *Zani* case. *Zani*, 758 S.W.3d at 243-44. The *Zani* guidelines still govern the admissibility of testimony from

previously hypnotized witnesses. *State v. Medrano*, 127 S.W.3d 781, 786-87 (Tex. Crim. App. 2004).

(42) Dr. Spiegel's assertion that the information attested to by Dr. Lynn has been available since the 1980's is corroborated by numerous articles and studies, some of which Dr. Lynn cites himself. (4 WRR 29-30; State's Writ Exhibits 1-2; Applicant's Exhibit 5). Indeed, the concerns were first published in the United States in a law review article published in 1980 by Dr. Bernard Diamond. (State's Writ Exhibit 1). And those concerns were acknowledged by the Supreme Court of California in 1982 in *People v. Shirley*, 31 Cal.3d 18 (1982).

(43) Even Dr. Lynn confirmed that the concerns and risks that accompany the use of hypnosis for memory recall have been known since the 1970's or 1980's. (2 WRR 88-92).

(44) The knowledge of the risks and concerns associated with the use of hypnosis for memory recall has not changed since the mid-1980's. (4 WRR 30-31). Although new research and studies have been conducted in the field since applicant's trial, their results simply confirm the risks and concerns first identified by experts in the field in the 1980's. At most, there is more information about the fallibility of memory generally. (4 WRR 29-31).

(45) If anything, new research shows the risks and concerns identified in the 1980's may have been exaggerated. Indeed, the results of Dr. Lynn's most recent research, published in a 2015 journal article, show that hypnosis had no adverse impact on the accuracy of recollections. (2 WRR 93-94; 4 WRR 30; State's Writ Exhibit 3).

(46) Thus, contrary to applicant's assertions, the field of scientific knowledge related to the use of hypnosis in facilitating memory recall has not changed since applicant's trial. The risks and concerns associated with using hypnosis to help recall memories have been well-known and documented since at least the mid 1980's.

(47) Applicant has failed to prove any new, relevant scientific evidence in the field of hypnosis was unavailable at the time of his trial.

## **DNA**

(48) At trial, the State presented DNA evidence linking applicant to the murder. Dr. Stacy McDonald, a DNA analyst employed by the Southwestern Institute of Forensic Sciences (SWIFS),<sup>1</sup> testified that she found a DNA profile matching applicant's DNA profile alone or included in a mixture on various items found at the scene and on Sarah Walker's fingernail clippings.

(49) Specifically, McDonald found a lone DNA profile matching applicant's profile on swabs from the living room (L-3 and L-4), swabs from the kitchen (K-13 and K-15), and the deadbolt. McDonald found a DNA profile matching applicant's profile included in DNA mixtures found on the pull cords, Walker's fingernail clippings, a swab from the kitchen (K-12), the faceplate, and a swab from the entryway (E-5). Walker's DNA profile matched the other profile found in the mixtures. (22 RR 272-84; 3 WRR 15-18; State's Trial Exhibits 108-110)).

(50) The statistical significance of the profiles was determined using one of three different methods – the combined probability of inclusion (CPI), the modified random match probability, or the likelihood ratio. (3 WRR 18-19; State's Trial Exhibits 108-110).

(51) In 2015, two discoveries were made in the scientific field of DNA analysis. The first related to errors in the FBI database. The second related to the interpretation of DNA mixtures.

(52) Specifically, the FBI discovered errors in the frequencies in its database for specific genetic markers. Corrections were subsequently made to the database. The corrections were not expected to have significant ramifications on statistical calculations; statistics already varied slightly between databases. But the discovery prompted recalculations of the statistical significance of prior DNA test results, and some produced significantly different results. The difference was not due to the database errors; it was due to errors in the interpretation of DNA mixtures. In short, some labs were interpreting DNA results based on the false

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<sup>1</sup> In his writ application, applicant asserts that the DNA testing in his case was performed by the Texas Department of Public Safety's DNA lab. (Application at 20-21). This is incorrect. SWIFS performed all of the DNA testing in applicant's case. (3 WRR 14).



assumption that they were seeing all of the data at a particular loci. Since this discovery, labs across the state have instituted new guidelines and procedures to ensure the accurate interpretation of DNA mixtures.

(53) In applicant's case, SWIFS utilized the FBI database in its interpretation of the statistical significance of some of the DNA results in applicant's case. Furthermore, there were DNA mixtures in applicant's case, and SWIFS subsequently modified its procedures and guidelines for interpreting mixtures. The changes to SWIFS procedures and guidelines were not significant because SWIFS had employed stochastic thresholds since 2000, which helped ensure the analysts were seeing all of the data at each loci. Nevertheless, on its own initiative, the State asked Dr. McDonald to re-evaluate the results in applicant's case using the corrected FBI database and SWIFS' new procedures and guidelines. When she did, the statistical significance of some of the results changed, and the State furnished the new results to applicant.<sup>2</sup> (3 WRR 19-35; State's Writ Exhibit 12).

(54) The 2015 discoveries and the resulting modifications to interpretation of DNA results were made in 2015, well after applicant's 2007 trial. Neither could have been ascertained by applicant through the exercise of reasonable diligence before 2015. Therefore, as appellant alleges, there is new, relevant scientific evidence in the field of DNA analysis.

(55) Furthermore, Dr. McDonald's testimony and recalculations would have been admissible at a trial conducted on the date applicant filed his subsequent writ application. McDonald's expertise is unquestioned. (4 WRR 12-14). And it is well-settled that DNA analysis is a valid and reliable scientific field. *See e.g., Roberson v. State*, 16 S.W.3d 156, 166 (Tex. App. – Austin 2000, pet. ref'd) (recognizing reliability of science of DNA identification evidence).

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<sup>2</sup> The State provided applicant's counsel a copy of Dr. McDonald's amended DNA report documenting the recalculations in May 2016, more than seven months before applicant filed his subsequent writ application. Thus, applicant was aware of the impact the recalculations had on the DNA evidence when he filed his subsequent application.

### ***Impact on Applicant's Trial***

(56) Applicant contends he would not have been convicted if the new relevant scientific evidence he presented in these writ proceedings had been presented at a trial conducted on the date he filed his subsequent writ application.

(57) Whether the evidence pertaining to each scientific field is considered separately or collectively, applicant has failed to prove by a preponderance of the evidence that the jury would have acquitted him.

### ***Bitemark***

(58) If applicant's new bitemark comparison evidence had been presented at trial, Dr. Hutson's opinion "matching" applicant's teeth to the bitemark on Sarah Walker's body would have been excluded as scientifically unsupportable and, thus, unreliable. *See Chaney*, 2018 WL 6710279, at \*15 (holding expert testimony "matching" Chaney to bitemark on victim's body "is now known to be scientifically unsupportable"), *see also Kelly v. State*, 824 S.W.2d 568 (Tex. Crim. App. 1992) (expert testimony must meet criteria establishing reliability to be admissible under rule 702); Tex. R. Evid. 702.

(59) But the exclusion of Dr. Hutson's "matching" testimony would have only minimally impacted the State's case against applicant. Dr. Hutson's testimony was not the linchpin of the State's case. In fact, in closing arguments in the guilt phase, the State did not argue that the bitemark proved applicant was the perpetrator. The State argued only that the bitemark showed the savagery of the offense. (23 RR 25, 36).

(60) Today, the State could still utilize the bitemark evidence to show the heinousness of the offense. To the extent the State's evidence showed that the injury to Walker was a bitemark, it would still be admissible through either Dr. Hutson or Dr. Rohr, the medical examiner. (22 RR 225, 239-40). Applicant's expert, Dr. Bowers, confirmed that the science supports the identification of a mark as a bitemark and that the mark on Walker's body was a bitemark. (2 WRR 49-50). Moreover, Dr. Rohr's testimony that the bitemark was inflicted at or near the time of death is unimpeached. (22 RR 230-31).

## *DNA*

(61) If there was a linchpin to the State's case, it was the DNA evidence. That evidence was very strong at the time of trial, and it still is.

(62) Back in 2007 and today, the DNA evidence puts applicant at the scene of the murder. Specifically, a DNA profile matching applicant's profile was found on the townhome's kitchen sink, the living room floor, entryway floor, front door deadbolt, and the pull cords to the blinds in the window beside the front door. Second, and more importantly, the DNA evidence puts applicant on the victim's body, namely, on Sarah Walker's fingernails.

(63) On some items, the matching profile was found alone, i.e., as a single source profile. In others, it was found mixed with a DNA profile matching Walker's profile.

(64) A profile matching applicant's DNA profile was found alone on the living room floor (L-3 & L-4), the deadbolt (96), and the kitchen sink (K-13 & K-15). (21 RR 225-26; 3 WRR 15-16).

(65) A profile matching applicant's profile was found in a mixture on the pull cords (12AT1 & 12BT1), the kitchen sink (K-12), the entryway floor (E-5), the faceplate to the deadbolt (97), and Walker's fingernail clippings (13NT1). (21 RR 222-23, 224-226; 3 WRR 16-18).

(66) Dr. McDonald did not retest any evidence in 2016. She merely recalculated the statistical significance of the 2007 DNA test results. She prepared a report on May 19, 2016 that documented her re-evaluation of the prior results. The report contains a chart that details what she re-evaluated and what, if any, statistical weight changes she made. (State's Writ Exhibit 12).

(67) In some instances, the statistical significance of the DNA test results remained the same. In others, it changed. The changes were due either to the corrections to the FBI database or to changes in the method used to interpret DNA mixtures.

(68) Whether or not they changed, however, the results that were statistically strong in 2007 are still strong today and those that were weak are still weak. Where they were and are weak, it is due only to the poor quality of the sample.

The previous results including or matching applicant's profile to the profiles found on the victim and at the scene still include or match his profile. They do not now exclude applicant; nor have any become inconclusive.

(69) Unchanged Results: The statistical weight of the results from the pull cords, the living room floor, and the deadbolt remained the same. The DNA profile found in the mixture on the pull cords is still 216 million times more likely to be that of Walker and applicant than Walker and someone else. You would expect to find the profile found on the living room floor and on the deadbolt 1 in 38.1 billion people. The statistical weight of these results was high in 2007 and is still high. (3 WRR 34-35; State's Writ Exhibit 12).

(70) Changed Results: The statistical weight of the results from Walker's fingernails, the kitchen sink, the faceplate, and the entryway floor changed as set out below:

(71) *Fingernails*: In 2007, McDonald determined that the profile in the mixture on the fingernails was 16.5 billion times more likely to be Walker and applicant than Walker and someone else. In 2016, McDonald determined that you would expect to find the profile 1 in 5.09 billion people. The statistical weight of this result was high in 2007 and is still high. (3 WRR 29-30; State's Writ Exhibit 12).

(72) *K-12 (kitchen sink)*: In 2007, McDonald determined that you would expect to see the profile 1 in 635 trillion people. In 2016, McDonald determined that you would expect to find the profile 1 in 89.8 trillion people. This statistic changed solely because of changes to the FBI database. The statistical weight of this result was high in 2007 and is still high. (3 WRR 31; State's Writ Exhibit 12).

(73) *K-15 (kitchen sink)*: In 2007, McDonald determined that you would expect to find the profile 1 in 105 people. In 2016, McDonald determined that you would expect to find it 1 in 177 people. This statistic changed solely because McDonald switched from the TDPS database to the FBI database. The testing on K-15 yielded a low-level or degraded profile. Consequently, the result was statistically weak in 2007 and is still weak today. (3 WRR 31-32; State's Writ Exhibit 12).

(74) *K-16 (kitchen sink)*: In 2007, McDonald determined that you would find this profile 1 in 4 people. In 2016, McDonald determined that you would find it 72 in

100 people. The result was statistically weak in 2007 and is still weak today. (3 WRR 32; State's Writ Exhibit 12).

(75) *K-18 (kitchen sink)*: In 2007, McDonald determined that you would expect to see this profile 1 in 5 people. In 2016, McDonald determined that you would expect to see this profile 97 in 100 people. The result was statistically weak in 2007 and is still weak today. (3 WRR 32-33; State's Writ Exhibit 12).

(76) *Faceplate*: In 2007, McDonald determined you would expect to see this profile 1 in 278,000 people. In 2016, McDonald determined you would expect to see this profile 1 in 9,180 people. The result was statistically weak in 2007 and is still weak today. (3 WRR 33; State's Writ Exhibit 12).

(77) *Entryway*: In 2007, McDonald determined that you would expect to find the profile 1 in 1.6 billion people. In 2016, McDonald determined that it was 216 million times more likely that the DNA mixture was a mixture of Walker and applicant than Walker and someone else. The statistical weight of this result was high in 2007 and is still high. (3 WRR 33-34; State's Writ Exhibit 12).

(78) In sum, there is considerable, statistically strong DNA evidence placing applicant on Sarah Walker's body and throughout the crime scene. This was true in 2007, and it is still true today.

(79) The only reasonable inference to be drawn from the DNA evidence is that applicant violently attacked Walker, suffering injuries to himself in the process and, consequently, leaving his DNA on her body and around the crime scene.

#### *Hypnosis*

(80) Applicant asserts that his "new" hypnosis evidence shows "how the State's hypnotism likely created false eyewitness identification of [him]." (Application at 47).

(81) Even assuming the evidence applicant presented was new, it merely confirms the existence of certain risks and concerns associated with the use of hypnosis to refresh recollection. Applicant has failed to demonstrate that those risks and concerns negatively impacted the recollections and identifications of him by Mamie Sharpless and Nelson Villavicencio.

(82) Neither Dr. Lynn nor Dr. Carlson opined that Sharpless and Villavicencio misidentified applicant. In fact, both explicitly stated that they were not rendering such an opinion and acknowledged that Sharpless and Villavicencio could have accurately identified applicant. (2 WRR 97, 126-27).

(83) Dr. Lynn overestimated the dangers of suggestibility and confabulation and entirely disregarded the actual consequences of using hypnosis in this case. (4 WRR 27-28).

(84) Just because a witness undergoes hypnotic induction does not render their memories unreliable. (4 WRR 25).

(85) One-third of the population is not hypnotizable; even if they think they were hypnotized, they were not. And among those who can be hypnotized, hypnotizability ranges from low to moderate to high. (4 WRR 25, 34-35).

(86) Also, the risks and concerns with using hypnosis in the forensic setting can be minimized or eliminated to ensure the reliability of testimonial recollections.

(87) As previously noted, the Texas Court of Criminal Appeals established a standard for assessing the trustworthiness of testimony from witnesses who have undergone a hypnotic induction before trial. The Court first set out this standard in *Zani v. State*, 758 S.W.2d 233 (Tex. Crim. App. 1988). And notwithstanding the adoption of evidentiary rules governing the admissibility of expert testimony, the *Zani* standard still governs. *State v. Medrano*, 127 S.W.3d 781, 786-87 (Tex. Crim. App. 2004).

(88) The *Zani* standard is a highly specific framework of procedural safeguards designed to minimize the four dangers of hypnosis: hyper-suggestibility, loss of critical judgment, confabulation, and memory cementing. *Medrano*, 127 S.W.3d at 783 and 787; (4 WRR 23).

(89) “The *Zani* standard permits admission of hypnotically enhanced testimony ‘[i]f after consideration of the totality of the circumstances, the trial court should find by clear and convincing evidence that hypnosis neither rendered the witness’s posthypnotic memory untrustworthy nor substantially impaired the ability of the opponent fairly to test the witness’s recall by cross[-]examination.’” *Medrano*, 127 S.W.3d at 783 (quoting *Zani*).

(90) *Zani* instituted the following non-exclusive list of factors to consider in determining trustworthiness:

- a. the level of training in the clinical uses and forensic applications of hypnosis by the person performing the hypnosis;
- b. the hypnotist's independence from law enforcement investigators, prosecution, and defense;
- c. the existence of a record of any information given or known by the hypnotist concerning the case prior to the hypnosis session;
- d. the existence of a written or recorded account of the facts as the hypnosis subject remembers them prior to undergoing hypnosis;
- e. the creation of recordings of all contacts between the hypnotist and the subject;
- f. the presence of persons other than the hypnotist and the subject during any hypnosis session;
- g. the location of the hypnosis session;
- h. the appropriateness of the induction and memory retrieval techniques used;
- i. the appropriateness of using hypnosis for the kind of memory loss involved;
- j. the existence of any evidence to corroborate the hypnotically-enhanced testimony; and
- k. the presence or absence of overt or subtle cuing or suggestion of answers during the hypnotic session.

*Zani*, 758 S.W.2d at 243-44.

(91) These factors are responsive to the risks and concerns associated with using hypnosis in the forensic setting and appropriately focus on what actually happened rather than what might have happened. (4 WRR 23-25).

(92) The trial record and extrinsic evidence presented by the State in these writ proceedings affirmatively show the reliability of Sharpless's and Villavicencio's recollections and identification testimony. More specifically, it shows their participation in the hypnosis sessions with Ranger Richard Shing did not affect the accuracy of their recollections.

(93) As recommended by *Zani*, Ranger Shing was trained in the use of hypnosis. He was licensed as a hypnotist. He received formal training that was supervised and approved by the Texas Commission on Law Enforcement Officer Standards and Education (TCLOSE). (21 RR 67). To obtain his license, he completed a series of lectures and practical applications of hypnosis, and he passed a written exam. *Id.*

(94) Shing employed TDPS's guidelines for using hypnosis in his sessions with Sharpless and Villavicencio. (State's Writ Exhibit 5). These guidelines, which closely resemble the *Zani* factors, are designed to minimize or eliminate the risks and concerns associated with the forensic use of hypnosis. *Id.*

(95) In keeping with the *Zani* factors and TDPS guidelines, Shing meticulously recorded all of his contact with Sharpless and Villavicencio and had no contact with them beforehand. (4 WRR 32-33; State's Writ Exhibit 11).

(96) Before their hypnosis induction, Shing obtained a description of the suspect from both Sharpless and Villavicencio so that it could be compared to their descriptions after the session. (4 WRR 33; State's Writ Exhibits 5, 11, 20; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(97) Shing's questioning of Sharpless and Villavicencio during the sessions was not leading or suggestive. Indeed, it would have been difficult for Shing to be suggestive. He was not involved in the investigation and took pains to shield himself from all but the most basic information about the offense. And most importantly, applicant had not been identified as a suspect at the time of either hypnosis session. Thus, Shing could not have suggested him particularly to Sharpless or Villavicencio during their sessions. (4 WRR 32-34, 71-74; State's Writ Exhibits 5, 11, 20; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(98) During their sessions, Shing exerted no pressure on Sharpless or Villavicencio to provide information. In fact, he told them that it was okay if they



could not recall information, and he took no for an answer. (4 WRR 32-33; State's Writ Exhibit 11; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(99) Shing's reference to "the mind's eye" was not improper. It did not equate memory to a video-recorder that permanently recorded everything for later recall. The "mind's eye" reference is a good approximation of what the brain does when one tries to remember something. The reference appropriately implies you are looking inward to see what you remember, not what you saw. Moreover, it does not suggest that the person possesses more information than they can remember. (4 WRR 28-29; State's Writ Exhibit 11; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(100) Although Shing did not assess the hypnotizability of Sharpless or Villavicencio beforehand, it can be reliably inferred from the recordings and transcripts of the sessions that neither was highly hypnotizable. Both were hypnotized in their sessions, but, at most, they were only low to moderately hypnotizable. This is evidenced by the mild time distortion Mamie experienced, and the tingly feeling both reported. (4 WRR 34-36; State's Writ Exhibits 5, 11, 20; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(101) Also, it can be reliably inferred from the recordings and transcripts of the sessions that Sharpless and Villavicencio were not highly suggestible. In conjunction with their low to moderate hypnotizability, which tends to correspond with lower suggestibility, both readily and freely declined to provide some information during their sessions when they could not remember it. (4 WRR 34; State's Writ Exhibit 11; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(102) Significantly, the descriptions Sharpless and Villavicencio gave of the suspect remained the same over time.

(103) Their description was the only source of information about that suspect for quite some time. They first shared it with police the day after the offense. (4 WRR 65). They later memorialized it in their written statements, repeated it to Ranger Shing during their hypnosis sessions, and testified to it at trial. (State's Writ Exhibits 4, 7-8, 20).

(104) Sharpless and Villavicencio always described the suspect as an Asian male, with a very short buzz cut, a muscular or athletic build, wearing a blue tank top, muscle shirt, or golf shirt. Sharpless's and Villavicencio's descriptions varied from each other's only with respect to whether the suspect wore shorts, pants, or jeans. (21 RR 98-101, 105-06, 112-14, 118-20; 4 WRR 36-37, 65-68; State's Writ Exhibits 7-8, 11; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(105) After his hypnosis session, Villavicencio worked with a sketch artist to create a drawing of the suspect's face, and that sketch was consistent with Villavicencio's prior descriptions. (21 RR 120-22; 4 WRR 69-70; State's Writ Exhibit 6; State's Trial Exhibit 7).

(106) The only descriptive fact that ever changed was Sharpless's description of the suspect's height. She initially described him to police as 3-4 inches taller than she did at trial. (21 RR 100-01; 4 WRR 65-66; State's Writ Exhibits 7, 11).

(107) Furthermore, both Sharpless and Villavicencio always described the suspect's vehicle as a white Mustang with a Texas license plate. (21 RR 98-99, 102, 112-14; 4 WRR 65-67; State's Writ Exhibits 7-8, 11; Applicant's Writ Exhibits, Vols. 16 & 17, pp. 1627-1738).

(108) Clearly, their hypnosis sessions with Shing had no impact whatsoever on Sharpless's and Villavicencio's memory of the suspect's appearance.

(109) And last but not least, Sharpless's and Villavicencio's recollections and in-court identifications of applicant were strongly corroborated by other evidence.

(110) First, although neither Sharpless nor Villavicencio mentioned seeing an arm tattoo or eyeglasses, applicant resembles the descriptions they gave, and he owned a car fitting the description of the car they described.

(111) Second, and perhaps most obviously, the DNA evidence puts applicant at the scene at the time of the offense and in contact with the victim's body.

(112) Also, as set out in greater detail below, other evidence links applicant to the crime, including his own admissions, his similarities to "Chan Lee," injuries to his hands and arms, and his need for money.

(113) Thus, contrary to applicant's allegation, Sharpless and Villavicencio did not misidentify him. Rather, they accurately described and rightly identified him as the individual they saw near the scene around the time of the murder.

*Additional Incriminating Evidence*

(114) In addition to the bitemark, DNA, and eyewitness testimony, the State presented other significant evidence implicating applicant as Walker's murderer.

(115) Most notably, applicant implicated himself in the offense during his police interrogation. (22 RR 86-90; State's Trial Exhibits 77 & 78; State's Writ Exhibit 14). In particular, he admitted to being inside the townhome around the time of the offense. *Id.* And as previously noted, he described seeing a man and woman resembling Sharpless and Villavicencio outside of the townhome. *Id.* He even accurately described their car's color and model. *Id.*

(116) Furthermore, applicant was linked to the offense by the parallels between himself and "Chan Lee," the individual who had arranged to meet Sharpless near the scene. The mysterious "Chan Lee" told Sharpless that he was from North Carolina, and applicant had gone to school in North Carolina and had just moved to Texas from there. (21 RR 90, 196-97). "Chan Lee" told Sharpless he was calling from an InTown Suites, and applicant had filled out an application for an apartment near an InTown Suites. Moreover, his sister, Sopha, had stayed at an InTown Suites in September 2006. (21 RR 90, 199-200; State's Trial Exhibit 44. According to Sharpless, "Chan Lee" spoke with an African-American accent, and so does applicant. (21 RR 93; 4 WRR 66; State's Trial Exhibit 77). Sharpless and Villavicencio saw the suspect in a white Mustang, and applicant owned a white Mustang. (21 RR 98-99, 182-83, 185; 4 WRR 65-67; State's Trial Exhibit 49). Also, "Chan" is a patent derivative of applicant's last name – "Chanthakoummane."

(117) Although another person with a name similar to "Chan Lee" existed, police pursued that lead and rightly determined that the individual was unconnected to Walker's murder. His name was not an exact match, his Mustang was silver - not white, and he spoke with a thick Asian accent. (21 RR 173-76; 4 WRR 67-68)

(118) Additionally, physical evidence at the crime scene and on Walker's body indicated that Walker had engaged in a violent struggle with her attacker. Consistent with his participation in such a struggle, applicant bore healing cuts

and scratches on his hands and arms at the time of his arrest. (21 RR 232-35; State's Trial Exhibits 72-74).

(119) And lastly, applicant had a motive for robbing Walker of her Rolex watch and expensive ring. He was broke. The day before the murder his bank account was overdrawn. (21 RR 201).

### *Conclusion*

(120) In conclusion, although the bitemark identification evidence would have been excluded, evidence of the bitemark's existence would still be admissible to show the violent nature of the attack on Walker. Moreover, if there was a linchpin to the State's case implicating applicant, it was, and still is, the DNA evidence, connecting him to the crime scene and the victim's body. The eyewitnesses' testimony identifying applicant still bears significant indicia of reliability and would still be admissible today. And on top of this evidence, the State had, and still has, other evidence implicating applicant in Walker's murder, not the least of which is applicant's own admissions.

(121) In sum, the relevant scientific evidence applicant has presented in these writ proceedings would not have altered the outcome of his trial. The evidence inculpatory him in the offense would still be substantial and compelling. In all likelihood, the jury would still convict him of the capital murder of Sarah Walker.

(122) Therefore, applicant is not entitled to relief under article 11.073.

(123) The Court recommends the denial of relief on applicant's article 11.073 claim.

### **False Evidence Claim (Claim 2)**

(124) Applicant claims the State used "false scientific evidence to secure his conviction and death sentence." (Application at 58).

(125) "Due process is violated when a conviction is obtained using false evidence, irrespective of whether the false evidence was knowingly or unknowingly used against the defendant." *Chaney*, 2018 WL 6710279, at 17; *see also* U.S. Const., amends. IV & XIV.

(126) To obtain relief on a false-evidence claim, applicant must prove (1) the complained-of evidence was false, and (2) the false evidence was material. *Id.*

(127) “Whether the evidence is false turns on whether the jury was left with a misleading or false impression after considering the evidence in its entirety.” *Id.* “Neither the witness’s nor the State’s good or bad faith is relevant.” *Ex parte Weinstein*, 421 S.W.3d 656, 666 (Tex. Crim. App. 2014). Falsity is a factual inquiry, and the court’s findings are reviewed under a deferential standard. *Chaney*, 2018 WL 6710279, at \*17.

(128) False evidence is material when there is a reasonable likelihood that it affected the jury’s judgment. *Id.* Materiality is a legal question reviewed *de novo*. *Id.*

(129) Applicant has failed to prove that the post-hypnosis testimony of Sharpless and Villavicencio and the DNA evidence was false.

(130) Also, applicant has failed to prove that the bitemark-comparison testimony and the post-hypnosis testimony of Sharpless and Villavicencio was material.

(131) Thus, applicant has failed to prove a violation of his constitutional right to due process.

### ***Bitemark***

(132) Dr. Hutson’s bitemark comparison testimony identifying applicant as the source of the bitemark on Walker’s body was false.

(133) The science does not support “matching” a person’s teeth to a bitemark on skin.

(134) Dr. Hutson’s testimony left the jury with the false impression that a forensic odontologist could scientifically identify the bitemark as applicant’s.

(135) Dr. Hutson’s testimony was not material, however. It played a minimal role in linking applicant to Walker’s murder.

(136) Although the State relied on Dr. Hutson’s bitemark-comparison testimony to link applicant to the crime, it was not the linchpin of the State’s case. As

previously noted, the State relied primarily on the DNA evidence, which still strongly inculcates him.

(137) Moreover, the State had the eyewitness identification testimony of Sharpless and Villavicencio, applicant's admissions to being at the scene around the time of the offense and encountering Sharpless and Villavicencio, the parallels between applicant and "Chan Lee," the injuries to applicant's hands and arms that were consistent with his participation in a violent struggle, and applicant's motive for committing a robbery.

(138) The State's other evidence linking applicant to the crime was so substantial that the State did not even argue in closing that Dr. Hutson's testimony proved applicant was the murderer. The State only referred to the bitemark as evidence of the savagery of the crime, an argument it could still make today. (23 RR 25, 36).

(139) Thus, there is no reasonable likelihood that Dr. Hutson's testimony affected the judgment of the jury. *See Weinstein*, 421 S.W.3d at 667-669 (holding witness's false denial of hallucinations was not material to jury's verdict where defense impeached witness on other, more significant grounds at trial, facts to witness attested to were corroborated by other evidence, and an abundance of evidence unrelated to witness's testimony supported conviction).

### ***Hypnosis***

(140) The post-hypnosis testimony of Sharpless and Villavicencio was not false.

(141) Their testimony did not leave the jury with a false or misleading impression about the accuracy of their recollections or the reliability of their in-court identification of applicant.

(142) As previously noted, applicant presented evidence of the risks and concerns associated with using hypnosis to recall memories, but he failed to prove that those risks and concerns affected the recollections of Sharpless and Villavicencio.

(143) Moreover, as previously noted, the trial record and extrinsic evidence presented by the State in these proceedings affirmatively shows that hypnosis did not negatively impact the accuracy of their recollections or the reliability of their in-court identification of applicant.

(144) Sharpless's and Villavicencio's recollections were accurate and their identifications of applicant were reliable.

(145) Even assuming otherwise, however, Sharpless's and Villavicencio's testimony was not material.

(146) There is no reasonable likelihood that their testimony affected the judgment of the jury. As previously noted, the State relied primarily on the DNA evidence to link applicant to the offense, and that evidence still strongly inculcates him. The State also had applicant's admissions to being at the scene around the time of the offense and encountering Sharpless and Villavicencio, the parallels between applicant and "Chan Lee," the injuries to applicant's hands and arms that were consistent with his participation in a violent struggle, and applicant's motive for committing a robbery. See *Weinstein*, 421 S.W.3d at 667-669.

#### ***DNA***

(147) The State's DNA evidence was not false.

(148) The evidence that appellant's DNA was found at the scene and on the victim was accurate.

(149) As previously noted, the statistical weight of some of the evidence was recalculated after trial in light of changes to the FBI database and to SWIFS guidelines and procedures for interpreting DNA mixtures. But where the statistical weight of the evidence back in 2007 was strong, it is still strong; and where it was weak, it is still weak. Also, applicant has not been excluded from any results where he was previously included. Nor have any results that previously included him become inconclusive. Thus, even though recalculations were necessary after trial, the 2007 testing results did not mislead the jury or leave it with a false impression about the strength of the DNA evidence linking applicant to the crime.

#### ***In Conclusion***

(150) The post-hypnosis testimony of Sharpless and Villavicencio and the DNA evidence were not false or misleading.

(151) Dr. Hutson's bitemark comparison testimony and the post-hypnosis testimony of Sharpless and Villavicencio were not material.

(152) Thus, whether considered separately or in combination, the admission of the bitemark comparison testimony, Sharpless's and Villavicencio's eyewitness testimony, and the DNA evidence did not violate applicant's right to due process.

(153) The Court recommends the denial of relief on applicant's false evidence claim.

### **Fair Trial Claim (Claim 3)**

(154) Applicant claims his due process right to "fundamental fairness" has been violated because his conviction "was secured through multiple discredited forensic sciences." (Application at 61).

(155) The United States Supreme Court has "defined the category of infractions that violate 'fundamental fairness' very narrowly." *Dowling v. United States*, 493 U.S. 342, 352 (1990).

(156) As the Supreme Court observed in *United States v. Lovasco*, 431 U.S. 783 (1977):

Judges are not free, in defining "due process," to impose on law enforcement officials our "personal and private notions" of fairness and to disregard the limits that bind judges in their judicial function. Our task is more circumscribed. We are to determine only whether the action complained of . . . violates those fundamental conceptions of justice which lie at the base of our civil and political institutions," and which define "the community's sense of fair play and decency."

*Lovasco*, 431 U.S. at 790 (citations omitted).

(157) Applicant argues "[j]unk science evidence that is proven demonstrably false by scientific advances" can undermine the fundamental fairness of a trial. (Application at 61).



(158) To the extent applicant is once again seeking relief under the due process clause based on the admission of false testimony, his claim is addressed by the above findings on his second writ claim.

(159) To the extent applicant is seeking relief under the due process clause based on the admission of evidence that is merely “faulty,” not false, he fails to present controlling authority for his position. (Application at 61-62).

(160) Applicant cites to two federal circuit court of appeals cases: *Gimenez v. Ochoa*, 821 F.3d 1136 (9th Cir. 2016) and *Tan Lee v. Glunt*, 667 F.3d 397 (3rd Cir. 2012). (Application at 61).

(161) Applicant does not cite to authority from any Texas court, the Fifth Circuit Court of Appeals, or the United States Supreme Court holding that the admission of flawed or faulty evidence violates due process.

(162) Furthermore, applicant presents no authority for his contention that the admission of flawed or faulty evidence is governed by the same standard as a false evidence claim, i.e., that he need only show a reasonable likelihood that the “faulty” evidence affected the jury’s judgment.

(163) Indeed, under *Gimenez*, the authority applicant cites, the admission of flawed or faulty evidence warranted relief only if the habeas applicant showed by clear and convincing evidence that no reasonable factfinder would have found him guilty but for the introduction of the purportedly flawed evidence. *Gimenez*, 821 F.3d at 1145.

(164) Nevertheless, assuming applicant’s representation of the law is valid, he has failed to prove that the trial testimony of Dr. Hutson, Ms. Sharpless, Mr. Villavicencio, and Dr. McDonald was so flawed or faulty that it undermined the fundamental fairness of his entire trial.

(165) As previously noted, Dr. Hutson’s bitemark comparison evidence was unreliable and should have been excluded. But the State still could have offered the bitemark itself as evidence of the heinous and violent nature of Walker’s murder.

(166) Also, as previously noted, the eyewitness testimony of Sharpless and Villavicencio was not flawed or faulty. Although there are potential risks and

concerns with the use of hypnosis to recall memories, applicant failed to prove they negatively impacted the recollections and identification testimony of Sharpless and Villavicencio. Indeed, the record and extrinsic evidence shows that notwithstanding those concerns, the witnesses' recollections were accurate and their identification testimony was reliable.

(167) Moreover, as previously noted, the corrections to the FBI's DNA database and the changes to DNA mixture interpretation procedures and guidelines only minimally impacted the State's DNA evidence. The statistical weight of some of the evidence was recalculated after trial in light of changes to the FBI database and to SWIFS guidelines and procedures for interpreting DNA mixtures. But where the statistical weight of the evidence back in 2007 was strong, it is still strong; and where it was weak, it is still weak. Also, applicant has not been excluded from any results where he was previously included. Nor have any results that previously included him become inconclusive.

(168) And lastly, as previously noted, the State presented other evidence implicating applicant in the murder. In particular, applicant was implicated in the offense by his recorded admissions to being at the scene around the time of the offense and encountering Sharpless and Villavicencio, the parallels between applicant and "Chan Lee," the injuries to applicant's hands and arms that were consistent with his participation in a violent struggle, and applicant's motive for committing a robbery.

(169) In sum, not all of the complained-of evidence was flawed or faulty.

(170) Moreover, there is no reasonable likelihood that any flawed or faulty evidence affected the judgment of the jury. See *Weinstein*, 421 S.W.3d at 667-669.

(171) Thus, whether considered separately or in combination, admission of the bitemark-comparison testimony, the eyewitness testimony, and the DNA evidence did not deprive applicant of a fundamentally fair trial.

(172) The Court recommends the denial of relief on applicant's "fundamentally" fair trial claim.

### **Actual Innocence Claim (Claim 4)**

(173) A habeas applicant may obtain relief based on actual innocence in light of newly discovered evidence. *Chaney*, 2018 WL 6710279, at \*25 (citing *Ex parte Elizondo*, 947 S.W.2d 202 (Tex. Crim. App. 1996)).

(174) To obtain relief based on actual innocence, applicant must prove by clear and convincing evidence that no reasonable juror would have convicted him based on the newly discovered evidence. *Id.* “This is a Herculean burden.” *Id.* (citing *Ex parte Brown*, 205 S.W.3d 538 (Tex. Crim. App. 2006)).

(175) Newly discovered evidence is evidence not known to applicant at the time of trial, plea, or post-trial motions and that could not have been known to him even with the exercise of due diligence. *Id.* (citing *Ex parte Miles*, 359 S.W.3d 647 (Tex. Crim. App. 2012)). Applicant may rely on a single piece or multiple pieces of new evidence so long as the burden of proof is met, and the newly discovered evidence must affirmatively support the applicant’s innocence. *Id.* To determine whether an applicant has met that burden, the newly discovered evidence must be weighed against the State’s case at trial to determine the probable impact the evidence would have had at trial if the new evidence had been available. *Id.* (citing *Elizondo*).

(176) Not all of the evidence applicant has presented is newly discovered. As previously noted, the risks and concerns associated with using hypnosis to recall memories have been well-known since the 1980’s.

(177) Moreover, whether the evidence applicant presented is newly discovered or not, he has failed to prove by clear and convincing evidence that no reasonable juror would have convicted him.

(178) As previously noted, the evidence presented in these proceedings shows that applicant’s teeth cannot be scientifically matched to the bitemark on Sarah Walker’s body.

(179) But the evidence does not scientifically exclude applicant as the person who made the mark. (22 RR 258-59).

(180) And, obviously, the evidence does not identify someone other than applicant as the maker of the mark. (2 WRR 50).

(181) Also, as previously noted, the DNA evidence still strongly implicates applicant as the murderer. The evidence puts applicant at the scene and on the victim. The only logical inference to be drawn from this evidence is that applicant left his DNA during his violent attack on Walker.

(182) In addition, as previously noted, the risks and concerns associated with using hypnosis to recall memories did not negatively impact the recollections and identification testimony of Sharpless and Villavicencio. The recollections and identifications of both witnesses are accurate and reliable.

(183) And importantly, there is other, unimpeached evidence implicating applicant in the murder. As previously noted, applicant is further implicated by his recorded admissions to being at the scene around the time of the offense and encountering Sharpless and Villavicencio, the parallels between applicant and "Chan Lee," the injuries to applicant's hands and arms that were consistent with his participation in a violent struggle, and applicant's motive for committing a robbery.

(184) Simply put, the evidence relied on to prove applicant's guilt in his 2007 trial still overwhelmingly implicates him in Walker's murder.

(185) The evidence presented in the guilt phase of applicant's trial is not the only evidence implicating him in the murder, however. There is also evidence from the punishment phase of his trial that implicates applicant in Walker's murder, namely, his extraneous attempt to victimize Barbara Johnson.

(186) The day before Sarah Walker's murder, applicant showed up at Johnson's home, claiming his white Mustang had broken down and asking to use her phone. Johnson lived alone with her dog. Applicant had previously met Johnson. She had assisted him with finding an apartment when he first moved to the area. Initially, applicant knocked on Johnson's front door, then he came into Johnson's backyard against her wishes and banged on her back patio door. Feeling threatened, Johnson called 911 and the Carrollton police responded and confronted applicant. Applicant identified himself to police and, when his car started, he left. (24 RR 178-90; State's Writ Exhibit 9).

(187) When Johnson heard of the murder of Sarah Walker, another female real estate agent, she considered contacting police to report the incident with

applicant. She delayed contacting the police until she saw the sketch of the suspect that had been generated with Villavicencio's help. (4 WRR 70-73; State's Writ Exhibits 6, 9-10).

(188) It may be reasonably inferred from the incident involving Johnson, that applicant was engaged in a scheme to isolate and rob vulnerable female real estate agents. When his plan to rob Johnson the day before failed, applicant attempted to rob Sharpless. And the same day his plan to rob Sharpless failed, he attacked, robbed, and killed Walker.

(189) With or without the evidence of his attempt to victimize Johnson, applicant has failed to sustain his burden of proving that no reasonable juror would have convicted him in light of the evidence he presented in these writ proceedings.

(190) Applicant does not claim innocence under the *Schlup* standard for relief. Under *Schlup*, an innocence claim is merely a gateway through which to obtain review of an otherwise barred claim of constitutional error. *Schlup v. Delo*, 513 U.S. 298, 315 (1995).

(191) But still, even assuming *Schlup's* lower standard of proof applied, applicant has failed to sustain his burden of proving he is entitled to relief.

(192) Specifically, applicant fails to prove it is more likely than not that no reasonable juror would have convicted him in light of the "new" evidence he presented. *See Schlup*, 513 U.S. at 326-27.

(193) It can only be reasonably concluded that the evidence applicant presented in these writ proceedings would not have affected the jury's judgment.

(194) Plainly put, the jury's verdict is correct. Applicant is guilty of the capital murder of Sarah Walker.

(195) Therefore, his execution will not violate the Eighth and Fourteenth amendments.

(196) The Court recommends the denial of relief on applicant's actual innocence claim.

## **ORDER**

The Court adopts the foregoing findings of fact and conclusions of law.

**THE CLERK IS ORDERED** to prepare a transcript of all papers in Cause Number W380-81972-07-HC2 and to transmit the same to the Texas Court of Criminal Appeals as provided by article 11.071 of the Texas Code of Criminal Procedure.

The transcript shall include certified copies of the following documents:

1. Applicant's subsequent application for writ of habeas corpus and any other pleadings filed by applicant in cause number W380-81972-07-HC2, including any exhibits, unless they have been previously forwarded to the Court;
2. The State's answer to applicant's subsequent writ application filed in cause number W380-81972-07-HC2;
3. Any other pleadings filed by the State in cause number W380-81972-07-HC2;
4. Any proposed findings of fact and conclusions of law filed by the State and applicant in cause number W380-81972-07-HC2;
5. This Court's findings of fact and conclusions of law, and order in cause number W380-81972-07-HC2;
6. Any and all orders issued by the Court in cause number W380-81972-07-HC2;
7. The indictment, judgment, sentence, docket sheet, and appellate record in cause number W380-81972-07-HC2, unless they have been previously forwarded to the Court of Criminal Appeals.

THE CLERK IS ALSO **ORDERED** to send a copy of these Findings of Fact and Conclusions of Law, including its Orders, to counsel for applicant: Carlo D'Angelo at carlo@dangelolegal.com; Gregory Gardner at ggardner@ggardnerlaw.com; and Eric Allen at eric@eallenlaw.com; and to counsel for the State, Lisa Smith, at lsmith@co.collin.tx.us.

SIGNED the 29th day of March, 2019.



Digitally signed by Judge Benjamin Smith  
DN: cn=Judge Benjamin Smith, o=State of Texas, ou=380th District Court, email=bsmith@co.collin.tx.us, c=US  
Date: 2019.03.29 13:01:43 -05'00'  
Adobe Acrobat version: 2019.010.20098

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**BENJAMIN SMITH  
PRESIDING JUDGE  
380TH JUDICIAL DISTRICT COURT**