No. 14-24-00543-CR

In The Court of Appeals
For the 14th District of Texas



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Melvin Morales-Gomez,
Appellant

v.

The State of Texas,
Appellee

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On Appeal from Cause Number 1833721
From the 179th District Court of Harris County, Texas

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# Brief for Appellant

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ORAL ARGUMENT REQUESTED

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## STATEMENT REGARDING ORAL ARGUMENT

Oral argument will significantly aid this Court because this case presents important issues concerning how courts should treat junk science in reviewing whether Appellant's conviction was supported by sufficient evidence.

## STATEMENT OF THE CASE

On July 23, 2024, a jury found Appellant guilty of murder (C.R. 273; 8 R.R. 4). On July 24, 2024, the Court assessed punishment at 55 years TDCJ (C.R. 299). Notice of Appeal was filed on July 24, 2024 (C.R. 279).

## ISSUES PRESENTED

1. Where the primary evidence supporting Appellant's conviction was expert testimony that relied on disproven and non-scientific theories of shaken baby syndrome and abusive head trauma, was the evidence insufficient to support his conviction?
2. When the State did not prove that their abusive head trauma expert's testimony was reliable in general, and when the expert's opinion did not have a sufficient basis in the facts and data as applied to this case, did the trial court err in overruling Appellant's objection to the expert's testimony?
3. When the trial court allowed the State to present a graphic animated video of the violent shaking of a small infant and internal bleeding caused in a manner that is not supported by science, did the trial court err in allowing the State to show the videos to the jury?

## STATEMENT OF FACTS

On January 30, 2020, while Melvin Morales-Gomez was caring for his nephew K.L., the boy became unresponsive. Concerned, Melvin told his wife Amanda what was happening—she told him to bring the child to her, she

wanted to see him (3 R.R. 147). Amanda observed that K.L. was unresponsive and "breathing ugly" and she thought it looked like he was dying (3 R.R. 147-48). Amanda gave Melvin gas money and told him to take K.L. to the hospital, but she could not leave work to go with them (Id.). Melvin brought the boy, breathing but unresponsive, to the hospital (3 R.R. 47-48). Because he mistakenly chose a medical rehab facility instead of an emergency room, an ambulance was called to provide emergency medical services and transport (Id.). Recognizing that his injuries were life-threatening, EMTs launched into action and swept Melvin's nephew away to be life-flighted to Memorial Hermann (3 R.R. 51-54). The EMTs could not communicate with Melvin in Spanish, and he was more involved than they would have allowed him to be if he had spoken English (3 R.R. 59); Melvin lifted the boy onto the stretcher and kept trying to cover him with a small blanket; he also tried to speak to the EMTs even though they could not understand him and he stayed by the ambulance looking in with concern (Id.). EMTs did not collect a medical history since the could not communicate with Melvin.

In the ambulance, EMT Little observed that the boy "was bruised and pale," and was concerned that abuse might be a factor, so she contacted the Sheriff's office (3 R.R. 50). By the time Melvin was finally able to communicate with anyone in Spanish, K.L. was with life flight, and Melvin was already in

handcuffs in the back of a sheriff's vehicle (3 R.R. 75). Melvin was transported to his apartment to give his consent to a search of his room, then to the Sheriff's investigative offices for questioning (3 R.R. 107). K.L. arrived at Memorial Hermann with a mechanism of injury described as "aggravated assault" from the EMT's referral history (4 R.R. 71; State's Exhibit 224).

Melvin never saw his nephew again. His wife Amanda was not allowed into the hospital where K.L. was being treated (3 R.R. 150). Despite medical intervention, K.L. died in the hospital three days later.

**K.L.'s injuries**

K.L.'s fatal injury was the injury to his head and brain (7 R.R. 170). K.L. died as the result of a subdural hematoma on the right side of his brain that caused the brain to shift to the left due to built-up pressure (4 R.R. 84-85). This deprived the brain of oxygen and blood flow and required emergency surgery to relieve the pressure on the brain (Id.). K.L. had no skull fractures or scalp swelling (6 R.R. 229), but there were scrapes to the right side of K.L.'s scalp and bruising on his left face and left forehead (7 R.R. 116). Neither the emergency room doctor at triage nor the medical examiner at autopsy could identify any open wounds that would have produced a significant amount of bleeding ( 4 R.R. 91; 7 R.R. 171).

Upon arrival to the hospital, doctors also observed that K.L. had bruising on various parts of his body in various stages of healing (4 R.R. 73-74). The State's witnesses opined that a bruise on K.L.'s abdomen and on his face were bitemarks (5 R.R. 107, 6 R.R. 171, 7 R.R. 135). K.L. also had healing fractures to his jaw and clavicle (4 R.R. 86; 7 R.R. 136-137).

**Testimony of other household members**

Melvin was the one to bring K.L. to the hospital, but there were three other adults living in the two-bedroom apartment at the time along with four children (3 R.R. 127). Amanda Vargas, Siara Sanchez, and Jefry Aguilar all testified that they and the oldest child, O.R., were out of the house in the middle of the day at the time that K.L. became unresponsive. Melvin's wife, Amanda, testified that on the morning of the incident, Melvin took O.R. to school, then came back and took her to work around 9:30. She testified that she and Melvin left K.L. at home alone, and did not check if Siara was home when Melvin took Amanda to work (3 R.R. 173, 144). Siara, Amanda's adult daughter, testified that she woke up around 10 or 10:30 and no one was home (3 R.R. 203-204). She did not check if K.L. or Melvin were there but the door was open, and she got herself and her children ready and went to see a notary for the rest of the day until around 6 pm (Id.). Siara's husband, Jefry Aguilar, testified that he was

at work from 7 am and did not learn what had happened until he arrived home that evening around the same time as Siara and their two children (4 R.R. 39).

Each adult witness testified that they never saw Melvin hit K.L. and certainly had not seen him strike K.L. on the day he was taken to the hospital[1] (3 R.R. 157, 211, 4 R.R. 31-34, 44). Siara, who was home for at least part of the morning, testified that from inside her room, she did not hear any sounds of struggle, crying, yelling, or thuds from the room sharing a wall with hers in the apartment (4 R.R. 32-34).

Each adult in the house testified that they had not observed injuries on K.L., but they testified about recent instances in which K.L. had injured his head in an accidental fall and by colliding with a car door (3 R.R. 210; 4 R.R. 168-169). Amanda also testified that K.L. had a past medical history of seizure-like episodes in Honduras and Mexico (3 R.R. 178-179). Amanda testified that the symptoms she observed on January 30 were worse than what she had seen before in Mexico because K.L.'s breathing on this occasion was much worse (3 R.R. 150). In Mexico it had been "as though he was dead" (Id.).

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[1] Child witness O.R. testified that he saw Melvin hit K.L. with a belt the morning of January 30 with Amanda present, and that he witnessed an ambulance arrive to the apartment in the evening to take K.L. to the hospital (7 R.R. 45, 55). Because this testimony did not fit with EMT testimony or the timelines provided by adult members of the household, it is unlikely that the jury put much weight in this potentially flawed recollection.

**Forensic evidence at trial**

Forensic evidence collected at the apartment included multiple stains that were presumptive blood consistent with K.L.'s DNA that had been found in spots on a wall, the floor, a bedspread, and some clothing, including conventionally female clothing with large blood stains (State's Exhibit 256). None of the other household members were swabbed for DNA to be compared to the evidence (7 R.R. 123), and the crime scene investigator testified that he could not determine how old any of the stains were (5 R.R. 62).

**Testimony about other incidents at trial**

The court allowed two witnesses from O.R.'s school to testify about an incident in which Melvin admitted that he hit eight-year-old O.R. in the face before school one day and caused his nose to bleed (7 R.R. 67, 82). O.R. did not testify about that incident but testified that Melvin disciplined him and K.L. by spanking them with a belt or cord (7 R.R. 44-48). The State presented photos of marks on O.R.'s body and questioned the Medical Examiner about whether they could have been caused that way (7 R.R. 51, 157). The same "looped" marks were not observed on K.L.'s body (7 R.R. 120).

Defense counsel also presented evidence that Jefry and Siara's daughter was found to have suffered a fracture to her skull. Amanda and Jefry both testified that Melvin never had access to or contact with their daughter, but that

they also did not believe what the medical records showed about their daughter's skull fracture (4 R.R. 16, 22, 35-36).

**Medical testimony at trial**

Because of the language barrier between Melvin and the EMTs, medical professionals proceeded without any information about how K.L.'s injuries were sustained and without any information about his medical history. Every medical professional testified that their conclusions were based on observation of K.L.'s injuries without any information about history (4 R.R. 72, 83; 5 R.R. 20, 47-48, 110, 6 R.R. 220, 223-224; 7 R.R. 167). Although law enforcement contacted other adult household members and became aware that K.L. had a history of seizures or seizure-like episodes (3 R.R. 107), and at trial those household members testified that he had such episodes (3 R.R. 179) as well as multiple recent accidents in which he hit his head (3 R.R. 166-69; 210), no medical professional was ever provided with the K.L.'s medical history or any information regarding previous illnesses or injuries.

*State's Experts testified conclusively that K.L.'s injuries were intentionally inflicted.*

Dr. Van Michele Ruda told the jury that intentionally[2] inflicted Abusive Head Trauma is diagnosable from looking at an injury with sufficient

[2] "Intentionally" is a term used by medical doctors in a manner that is interchangeable with the term "non-accidental." Because it is a term used in caselaw and in experts' testimony,

information (6 R.R. 186-187). Having reviewed K.L.'s records, and despite lacking any of his medical history, Dr. Ruda concluded that she did have enough information to make an Abusive Head Trauma diagnosis: "his brain injuries, retinal hemorrhages, multiple bite marks were a result of physical abuse or inflicted trauma" (6 R.R. 223). She testified that she was able to come to this conclusion because of the pattern and extent of retinal bleeding which she believed could not exist in a case of accidental trauma (6 R.R. 210). Using demonstrative videos (discussed below in Point of Error 2), Dr. Ruda explained that "violent acceleration-deceleration force…can be from shaking" and can cause subdural hemorrhages (6 R.R. 179).

She also testified that retinal hemorrhages are caused by a "similar mechanism" of "rotational acceleration-deceleration forces," and that retinal hemorrhages caused by abusive head trauma present a "specific pattern" 85% of the time (6 R.R. 209). She testified that the pattern of retinal bleeding in particular can distinguish Abusive Head Trauma injuries from short falls, birth trauma, or car accidents (6 R.R. 210-211).

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this brief uses it as well. This meaning of "intentionally" is consistent with the manner and means alleged in the Indictment and included in the Jury Charge and is not intended to assert a requisite mental state.

The Medical Examiner Dr. Darshan Phatak testified K.L.'s injuries were consistent with Abusive Head Trauma (7 R.R. 158). He concluded that K.L.'s death was a homicide and the cause of death was blunt force head trauma (7 R.R. 166). In coming to this conclusion, Dr. Phatak opined that that K.L.'s injuries could have been caused by striking against a blunt object, striking with a hand, throwing against a blunt object and, except for the bruises, shaking with a hand or violent acceleration-deceleration forces with a hand (7 R.R. 163-164). He testified that the force required to cause the injuries "is far more than one would expect with the normal handling and care of a child" (7 R.R. 102); that K.L.'s brain and neck trauma could not have been the result of a short fall or any medical condition (7 R.R. 158-160); and that the symptoms would be evident immediately in the moment of the injury (Id.). He testified that a child with a subdural hematoma "would collapse because it's an immediate reaction to injury" (7 R.R. 158).

*State's experts told the jury that K.L.'s injuries were unlikely to be caused by an accident or short fall.*

Two experts refrained from drawing a conclusion about whether K.L.'s injuries were accidentally or intentionally caused. Dr. Thomas McCarty testified that he did not have information about how K.L.'s injuries were caused (4 R.R. 84) and that he did not determine how the trauma he observed was inflicted (4 R.R. 88). He did, however, inform the jury that injuries such as K.L.'s are

"usually seen in severe car accidents, for example, falls from big heights or cases of nonaccidental trauma" (4 R.R. 88-89). The ophthalmologist Dr. Layla Ghergherehchi also testified that a finding of abusive head trauma "is not within [her] expertise to decide" (5 R.R. 38), but she testified similarly to Dr. McCarty— that although she was not qualified to make a distinction between nonaccidental and accidental trauma, the kind of retinal hemorrhages she observed in K.L. were "very rare in accidental head trauma" (5 R.R. 36). She explained instead that K.L.'s injuries were "highly suspicious for abusive head trauma. . .a sort of shaken baby syndrome where babies are violently shaken or moved…" (5 R.R. 36).

At the conclusion of the evidence and expert testimony, the jury retired to deliberate and returned a verdict against Mr. Morales-Gomez, finding him guilty of murdering K.L. (8 R.R. 4).

At punishment, Melvin testified and explained that, on the day of the incident, he came home and found K.L. unresponsive on the ground below the bed, he attempted to revive him with mouth-to-mouth and CPR and shook him to try to get him to respond (9 R.R. 6-7). Melvin also testified about K.L.'s episode in Mexico and said that K.L.'s mother said that he had multiple such episodes in Honduras (9 R.R. 8). Melvin denied ever hitting K.L. with or against a blunt object and said he never intended to hurt him (9 R.R. 10). When defense

counsel reminded him that the State's experts thought that the shaking is what caused K.L.'s head to bleed, Melvin said he only intended to revive him, and that if he had known that would happen, he would never have done it (Id.) Defense counsel asked for a sentence of 20 years (9 R.R. 45), the State asked for a life sentence (9 R.R. 49). The court sentenced Melvin to 55 years in prison (9 R.R. 50).

## SUMMARY OF THE ARGUMENT

In the 1970s a theory developed that proposed that children arriving at the hospital with subdural hematomas, retinal hemorrhages, and brain swelling could be "diagnosed" as victims of abuse. What was once called "shaken baby syndrome" (SBS) was rebranded as "abusive head trauma" (AHT) but the underlying assumptions remained the same. In the decades that have followed, the presumptions under the umbrella of SBS/AHT theory have been put to the test with scientific rigor and have not held up. Study after study has found the component assumptions underlying AHT to be unreliable and non-scientific. At least 40 people across the country have been exonerated based on changes in science that show that they were falsely convicted based on inaccurate and

unreliable SBS/AHT testimony.[3]

In the present case, expert testimony utilizing disproven SBS/AHT theories formed the primary evidence against Mr. Morales-Gomez. The testimony allowed jurors to conclude that the child K.L.'s fatal injuries were intentionally inflicted, and that they must have been inflicted by Appellant since he was K.L's primary caretaker when he became unresponsive. When, as in this case, a conviction relies on outdated and inaccurate "junk science" rather than current medical consensus, the evidence is not sufficient to support a conviction.

Although defense counsel objected to the State's child abuse pediatrician's Abusive Head Trauma testimony, the Court nevertheless admitted her testimony along with two graphic videos depicting a mechanism of injury, shaking, that is now known to be impossible, each over Appellant's objection. Even if this court were to find that the evidence was sufficient to support Appellant's conviction, the harm caused by admitting unreliable expert testimony and inflammatory and unreliable graphic videos merits reversal.

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[3] National Registry of Exonerations, filtered for tag "SBS": https://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx?View={faf6eddb-5a68-4f8f-8a52-2c61f5bf9ea7}&FilterField1=Group&FilterValue1=SBS&&SortField=ST&SortDir=Asc (Last accessed February 7, 2025)

## ARGUMENT AND AUTHORITIES

## POINT OF ERROR NUMBER ONE

THE EVIDENCE WAS INSUFFICIENT AS A MATTER OF LAW TO SUSTAIN MR. MORALES-GOMEZ'S CONVICTION FOR THE OFFENSE OF FELONY MURDER WHERE THE EVIDENCE AND UNRELIABLE SHAKEN BABY/ABUSIVE HEAD TRAUMA TESTIMONY FAILED TO ESTABLISH THAT K.L.'S INJURIES WERE NON-ACCIDENTAL OR THAT ANY CRIMINAL ACT CAUSED THE DEATH OF THE COMPLAINANT.

### *a) Standard of Review and Relevant Law*

The due process guarantee of the Fourteenth Amendment requires that a conviction be supported by legally sufficient evidence. U.S. Const. Amend. 14. Sufficiency of the evidence is measured by the standard enunciated by the United States Supreme Court in *Jackson v. Virginia*: "whether, after viewing the evidence in the light most favorable to the prosecution, any rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt." *Jackson v. Virginia*, 443 U.S. 307 (1979). In *Brooks v. State*, the Texas Court of Criminal Appeals announced that the *Jackson v. Virginia* legal-sufficiency standard is the only standard that a reviewing court should apply in determining whether the evidence is sufficient to support each element of a criminal offense that the State is required to prove beyond a reasonable doubt, *Brooks v. State*, 323 S.W.3d 893 (Tex. Crim. App. 2010) *overruling Clewis v. State*, 922 S.W.2d 126 (Tex. Crim. App. 1996).

### 1. The State had to prove that KL's fatal injuries were caused by a criminal act

Before a jury can find someone guilty of murder, the State must prove that a crime has even occurred: "The corpus delicti of murder is established if the evidence shows (a) the death of a human being (b) caused by the criminal act of another." *Fisher v. State*, 851 S.W.2d 298, 303 (Tex. Crim. App. 1993). In this case, the state was responsible for proving that K.L. died as the result of a criminal act. The jury was instructed that in order to do so, the State had to prove that Melvin committed the felony offense of injury to a child by striking K.L. with or against a blunt object, by striking him with his hand, by throwing him against a blunt object, by shaking him, or by inflicting violent acceleration-deceleration forces on him, and that any of those acts were clearly dangerous to human life and caused the death of K.L. (C.R. 263-264).

Further, when the State alleges a specific cause of death, it must prove beyond a reasonable doubt that the act alleged did, in fact, cause the death, *Jackson v. State*, 652 S.W.2d 415, 419-420 (Tex. Crim. App. 1983)(The evidence was insufficient to support the allegation that the mother had caused the death "by striking the child on the head with her elbows").

The Texas felony murder statute provides that a person commits the offense of felony murder if he "commits or attempts to commit a felony, other than manslaughter, and in the course of and in furtherance of the commission or attempt, or in immediate flight from the commission or

attempt, he commits or attempts to commit an act clearly dangerous to human life that causes the death of an individual." *See* Tex. Penal Code §19.02(b)(3). The State must therefore prove: (1) commission or the attempt to commit the underlying felony; (2) commission of an act clearly dangerous to human life; (3) the death of an individual; (4) causation (the dangerous act caused the death); and (5) proof that the commission of the dangerous act was "in the course of and in furtherance of…or in immediate flight from" the underlying felony. *Contreras v. State*, 312 S.W.3d 566, 584 (Tex. Crim. App. 2010) cert. denied, 131 S. Ct. 427 (2010).

A person commits the felony offense of injury to a child if he intentionally, knowingly, recklessly, or with criminal negligence by act or omission causes serious bodily injury or injury to a child. Tex. Penal Code § 22.04.

**2. Texas courts refuse to rely on bad science when reviewing evidence for legal sufficiency**

The Court of Criminal Appeals and this court have "refused to rely on 'bad science' within a legal-sufficiency analysis when the evidence was based upon unreliable methodology." *Shadle v. State*, 693 S.W.3d 434, 440 (Tex. App.—Houston [14th Dist.] 2023, pet. ref'd); *Winfrey v. State*, 323 S.W.3d 875, 882-84 (Tex. Crim. App. 2010). The Court of Criminal Appeals refused to consider unreliable "scent-discrimination lineups when used alone or as primary evidence" to support a conviction, *Winfrey*, 323 S.W.3d at 884. The Court again

applied this principle in its unpublished opinion in *Walker v. State*, finding that even a well-qualified expert's opinion in a child abuse case was "mere speculation" and unreliable when it did not make reference to necessary principles of bio-mechanics, *Walker v. State* 2016 WL 6092523 at *15, (Tex. Crim. App. 2010)(not designated for publication). Considering "the reliability of scientific evidence when answering whether that evidence could be legally sufficient to support a conviction" is part of the Court's role in assessing whether the evidence to support a conviction is sufficient in quality and quantity, *Shadle*, 693 S.W. 3d at 440.

### 3. This court should disregard "bad science" in the form of expert testimony about SBS/AHT

#### *a.* Roark*, founded on two decades of scientific testing and study, recognizes SBS/AHT as "junk science"*

The Court of Criminal Appeals has recently completed the painstaking process of receiving and reviewing testimony and decades of scientific opinions and studies to conclude that both "shaken baby syndrome" (SBS) and its new moniker "abusive head trauma" (AHT), both frequently relied upon by the State's child abuse experts, are in fact junk science. *Ex parte Roark*, No. WR-56,380-03, 2024 WL 4446858, at *23 (Tex. Crim. App. Oct. 9, 2024)("[I]t is only with great speculation devoid of adequate scientific basis that shaken baby can be diagnosed, that the timeline for injuries can be inferred, and that ultimately

a perpetrator of abuse, if it occurred, can be identified.").[4] The Court's opinion in *Roark* is the legal culmination of decades of science and experimentation that have contradicted the basic assumptions behind the original untested theory that medical professionals could diagnose *a crime* based only on a particular pattern of symptoms. *Id. Roark* is also a watershed case, noting that previously discounted "debate" and controversy within the scientific community have now developed into a scientific consensus against which the reliability of expert opinions can be judged, *cf Wolfe v. State*, 509 S.W. 3d 325, 331 (Tex. Crim. App. 2017)(Holding that Abusive Head Trauma testimony was reliable after a State's expert testified that "any unrest regarding the diagnostic criteria for abusive head trauma existed in the 'biomechanical world' and the 'medical examiner world,' but not in the field of pediatrics"). Judge Cochran's concurrence 2012 in *Henderson v. State* cited a law review article discussing the tension between judicial review frameworks and the need for relief in "shaken baby" cases:

> Until scientific consensus has been achieved, the criminal justice system must find its own solutions to the problem of a diagnosis already morphed and still in transition.

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[4] It is rare for science and Texas law to arrive at such a consensus. Before *Roark*, 11.071 had provided relief to only 15 people in the ten years since it came into effect, 73% of those cases concerned issues relating to DNA. "An Unfulfilled Promise: Assessing the Efficacy of Article 11.073: A Critical Examination of Texas's 'Junk Science' Law," Texas Defender Service, https://www.texasdefender.org/wp-content/uploads/2024/07/TDS-11.073-Report.pdf (July 2024). The Texas House Committee on Criminal Jurisprudence recently held a hearing on October 21, 2024 with the intent to explore why this law has not provided enough relief in cases like that of Robert Roberson, and whether this law should be expanded to give effect to the legislature's intent that it provide relief. https://house.texas.gov/videos/20863.

> To date, our system has failed. In place of adaptation, we have seen massive institutional inertia. Once the SBS prosecution paradigm became entrenched, the crime became reified. Deferential review standards and a quest for finality perpetuated the system's course. How expeditiously, and how deliberately, this course is righted will inform the meaning of justice.
> . . .
> For now, we find ourselves situated in an extraordinary moment; one which tests our commitment to innocence that is not proven, but presumed.

*Ex parte Henderson*, 384 S.W.3d 833, 845 n. 17 (Tex. Crim. App. 2012)(Cochran, J., Concurring), *quoting* Deborah Tuerkheimer, *The Next Innocence Project: Shaken Baby Syndrome and the Criminal Courts,* 87 Wash. U.L.Rev.. 1, 58 (2009). In the *Roark* decision, Court of Criminal Appeals finally recognized that a scientific consensus *has* been achieved, and the Court chose to uphold our commitment to the presumption of innocence.

*b. Disregarding bad science is consistent with the definition of sufficient evidence and with other Texas law*

Recognizing that SBS/AHT is bad science and should not be credited in a review for sufficiency is consistent with the definition of "sufficient evidence": Sufficient evidence is "such evidence, in character, weight, or amount, as will legally justify the judicial or official action demanded." *Brooks v. State*, 323 S.W.3d at 917, (Cochran, J., concurring), *citing* Black's Law Dictionary 1285 (5th ed.1979). In criminal cases, only that evidence which is sufficient in character, weight, and amount to justify a fact finder in concluding that every element of

the offense has been proven beyond a reasonable doubt is adequate to support a conviction.

Although sufficiency review gives deference to jurors' conclusions that are supported by the evidence, "juries are not permitted to come to conclusions based on 'mere speculation or factually unsupported inferences or presumptions.'" *Braughton v. State*, 569 S.W.3d 592, 608 (Tex. Crim. App. 2018), *citing Hooper v, State*, 214 S.W.3d 9 at 15-16 (Tex. Crim. App. 2007). The courts' decisions in *Winfrey, Walker, and Shadle* all recognize that the reliability of an expert's opinion is more than a credibility question—it is a consideration of whether the jury's decision was rational or factually supported.

*c. Disregarding SBS/AHT is in harmony with other parts of Texas law*

The decision to disregard junk science as evidence that is insufficient to support a conviction is also consistent with other parts of Texas Law.[5] Tex. Code Crim. Proc. art. 11.073 (b), (d) recognizes the need to correct past

[5] In fact, the Texas legislature has been specifically concerned about false allegations of abuse based on the opinion of child abuse pediatricians for years. In 2021, after hearings with testimony from parents falsely accused of abuse, the legislature passed a significant change in the family code. The new provision allows parents facing a case affecting their parent-child relationship to be allowed a court-funded second opinion from a specialist other than the State's child-abuse pediatrician regarding "medical conditions that mimic child maltreatment or increase the risk of misdiagnosis of child maltreatment." Tex. Fam. Code Ann. § 261.3017.

convictions that were once based on unreliable or "junk science." In post-conviction proceedings, courts are enabled to overturn convictions that were based on "scientific" presumptions when scientific developments have called old methodologies into question.

Considering whether a jury's conviction has relied on "junk science" on direct appeal as part of a sufficiency review allows the courts to correct these errors as soon as possible when the presumptions presented at trial are already recognized as unreliable at the time they were presented.

*b) Application and Analysis*

In the present case, the State's fact witnesses testified that Melvin was K.L.'s primary caretaker at the time K.L. became unresponsive, and that Melvin was the one to take K.L. to the hospital.

K.L.'s medical records identified that his fatal injury was a subdural hematoma and swelling in his brain leading to brain death.

Forensic evidence provided support to the conclusion that K.L.'s blood was found in spots on the wall and floor, and in larger stains on the bedspread and clothing found in Melvin and Amanda's bedroom. Nevertheless, both lay witness testimony and the forensic evidence in this case were consistent only with the incontrovertible facts of this case: that K.L. suffered serious injuries leading to his death, and that he was being cared for by Melvin who brought him to the hospital.

The State's extraneous offense evidence also could not establish that Melvin injured K.L., especially when another child in the household with whom Melvin never had contact also suffered from a skull fracture. As defense counsel emphasized, even if the jury found Melvin's methods of discipline distasteful, that could not prove that he killed K.L. in a different and extremely violent way.

> The constitutional necessity of proof beyond a reasonable doubt is not confined to those defendants who are morally blameless. *E. g., Mullaney v. Wilbur*, 421 U.S., at 697–698, 95 S.Ct., at 1888–1889 (requirement of proof beyond a reasonable doubt is not 'limit[ed] to those facts which, that if not proved, would wholly exonerate' the accused). Under our system of criminal justice even a thief is entitled to complain that he has been unconstitutionally convicted and imprisoned as a burglar.

*Jackson v. Virginia*, 443 U.S. 307, 323–24, 99 S. Ct. 2781, 2791, 61 L. Ed. 2d 560 (1979).

It was only through expert testimony that other evidence gained criminal significance as having necessarily been evidence of an intentionally and criminally inflicted injury.

When no witness could testify as to how K.L.'s fatal injuries occurred, the State resorted to experts to tell the jury that the nature and pattern of K.L.'s fatal injuries must have been caused intentionally by his caretaker, that they must have been caused in the manner the State alleged in their indictment, and that they could not have been caused by accident or by an ongoing medical issue. Without relying on expert testimony, the State in this case could not make

a logical link between K.L.'s injuries and wrongdoing on the part of any perpetrator.

With expert testimony as the primary evidence to prove that K.L.'s death was caused by a criminal act, only reliable expert testimony could sustain Appellant's conviction. However, the expert testimony presented by the state throughout trial was outdated and out of line with current medical consensus regarding the validity of SBS/AHT theories.

**1. Although nearly all of SBS/AHT theory has been reconsidered and abandoned by the medical community, the State's experts in this case relied on disproven non-scientific theories to support the State's allegation that K.L. was injured by an intentional criminal act.**

The SBS/AHT theory is an umbrella containing several unsupported and unscientific assumptions, which are discussed at length in *Roark*. The *Roark* principles are summarized below, followed by a comparison to the testimony that was presented by the State's experts in Mr. Morales-Gomez's trial.

**a. Shaking alone cannot create a subdural hematoma**

The original "shaken baby" theory was discredited first when biomechanical studies and experiments revealed that shaking alone could not cause the kinds of injuries that experts had been describing as SBS:

> We find it persuasive that as early as 2004, the Journal of Neurosurgery published an article stating the terminology of "shaking" should be avoided. In 2015, the journal for the British Academy for Forensic Sciences included writings that showed no study has demonstrated that shaking alone, without an associated

> impact, could create a subdural hematoma. Research ranging from mechanical dolls to animal abuse has yet to bridge the gap between theory and reproduceable results which the scientific method demands. Essentially, science has evolved to a degree that has removed "Shaken" from "Shaken Baby Syndrome." This is evident from the need to vague the terms to "Impact Syndrome" and then to "Abusive Head Trauma."

*Ex parte Roark*, No. WR-56,380-03, 2024 WL 4446858, at *23 (Tex. Crim. App. Oct. 9, 2024).

The *Roark* court cited to a federal case from 2014 coming to the same conclusion: "that the evidence supporting shaking alone could cause the subdural hematoma was 'non-scientific'" *Roark* at 25, *citing Del Prete v. Thompson*, 10 F.Supp. 3d 907, 955-57 (N.D. Ill. 2014).

This concept also is not new in Texas law: the Court of Criminal Appeals noted in its 2017 *Wolfe* opinion that although the State was still defending challenged testimony about Abusive Head Trauma, the Appellant and the State were at least in agreement that the injuries at issue "could not have occurred by shaking alone." *Wolfe v. State,* 509 S.W.3d 325.

*i. State's experts in this case testified that shaking alone could have caused K.L.'s fatal injuries*

Two of the mechanisms of injury described in the indictment alleged that Appellant caused K.L.'s death by "shaking" or by "inflicting violent acceleration-deceleration forces" on him (C.R. 10). The State's child abuse pediatrician testified and reviewed a video with the jury to assert that shaking

*can* cause a subdural hematoma and associated retinal hemorrhages (6 R.R. 179, 209). The Medical Examiner also testified that K.L.'s fatal brain injuries could have been caused by shaking and violent acceleration-deceleration forces with a hand (7 R.R. 164). The State's ophthalmology expert, speaking specifically about retinal hemorrhages described the mechanism that could have caused the injuries as "shearing forces where the body is moved so violently it causes pulling between the layers of the retina…," elaborating later that K.L.'s injuries were "highly suspicious for abusive head trauma. . .a sort of shaken baby syndrome where babies are violently shaken or moved…" (5 R.R. 36).

**2. A subdural hematoma can be caused by the impact from an accidental fall.**

Even after abandoning the idea that "shaking alone" could cause such injuries, child abuse specialists persisted in the assumption that SBS, rebranded as AHT, could be caused by an impact that could only have been intentionally inflicted (or "non-accidental"). That premise, that a subdural hematoma requires such force to form that it could not happen accidentally, is also unreliable. Since at least 2012, the Court recognized this development when overturning the conviction of Cathy Lynn Henderson. *See Ex Parte Henderson*, 384 S.W. 3d 833, 833 (Tex. Crim. App. 2012)("Relying on new developments in the science of biomechanics. . .the type of injuries that [the child] suffered

could have been caused by an accidental short fall…"). The expert in *Henderson*, when asked "do you think it's scientifically plausible to offer an opinion on the cause of an infant's death in a case like this without any review or application of biomechanics?" answered, "Not today, that's not acceptable." *Roark* at *24 *citing Ex Parte Henderson*, 384 S.W. 3d at 840-841. Accordingly, an opinion that makes no reference to these principles of biomechanics cannot reliably identify an intentional injury from an accidental one. *Id.*

Twelve years later, the court in *Roark* also reiterated the medical consensus that a subdural hematoma can be caused by short falls or other medical causes such as re-bleeds of a chronic hematoma. *Roark* at *26.

*i. State's experts in this case testified that K.L.'s fatal injuries could not have been caused accidentally.*

The Medical Examiner flatly denied that K.L.'s brain injury could have been caused by an accidental fall or by operation of a natural disease (7 R.R. 158). He stated, "If short falls could result in this sort of trauma, we'd see a lot more of it. It takes a substantial amount of force…" (Id.). He also denied that a child could have sustained this type of injury during a seizure (7 R.R. 160).

Child Abuse Pediatrician Ruda also denied the possibility of an accidental cause for K.L.'s brain injuries, arguing that the retinal hemorrhages distinguished his particular injuries from those observed after short falls, birth

trauma, or car accidents (6 R.R. 210-211). Dr. Ruda testified that the pattern of injuries could be caused by "throwing a child against a blunt object. . . striking with a hand. . . throwing an individual against a blunt object. . .shaking a child. . .[and] inflicting violent acceleration-deceleration forces as well" (6 R.R. 222-223). However, when the State asked if there are "any sort of scenarios or situations where a child may present symptoms similar to abusive head trauma," Dr. Ruda said that is not possible, that "[t]hey wouldn't have the pattern, the retinal hemorrhages in the subdural and the skin findings as in this case" (6 R.R. 221). Dr. Ruda denied having any expertise in biomechanical engineering, (6 R.R. 171) the specialty that developed proof that these injuries can be caused by short falls, and not by shaking. The State argued that such expertise is irrelevant: "a biomechanical engineer wouldn't know what causes injuries; they just are an engineer" (6 R.R. 176).

The relevant studies in this area that are cited in *Henderson* and *Roark* oppose this opinion and establish that this pattern of injuries can, in fact, be caused by a short fall or other less severe accidents. Neither expert testified about how or even whether this area of scientific consensus played a part in the formation of their expert opinion.

### 3. A timeline of injury cannot be reasonably inferred from the presence of a subdural hematoma

The presence of a subdural hematoma also cannot reliably prove that the adult caring for the child at the time they became unresponsive was responsible for the child's injury. As summarized in *Roark*, "[t]he common belief in 2000 was that there was no neuro lucid interval and therefore, whoever was with the child or the infant at the time, is the person who was guilty of doing something. . .[T]hat has also changed.), at *18-19 (internal citations omitted). Medical consensus now recognizes that there can be a "lucid interval" in which the child appears normal for up to several days after injury and long before the hematoma later progresses to the point that the child becomes unresponsive, *Roark* at *14. Subdural hematomas can even be chronic, subject to rebleeding, Id.

#### *i. State's experts in this case testified that K.L.'s fatal injuries would have caused him to collapse immediately as soon as they were sustained.*

The medical examiner testified,

> …Once you have subdural hemorrhage, your brain is being compressed, you might vomit, you might cough, but you would collapse because it's an immediate reaction to injury.
>
> Q You say "immediate"; is it possible to time out and specify the number of hours from when an injury occurred to when symptoms presented itself?
>
> A Well, I'd say it occurs in that moment.
>
> Q Okay. And how quickly would a child – how quickly would a caregiver see these injuries?

A It would be immediate to a caregiver if a child sustained an injury that would cause this and it occurred.

(7 R.R. 159).

Dr. Ruda also testified that the symptoms of abusive head trauma would be "immediately noticeable to a caregiver, who would notice "[h]eadache, vomiting, altered level of consciousness, seizures, coma." (6 R.R. 220).

The State relied on these opinions to argue: "[K.L.'s] body is limp, as you probably heard from Dr. Phatak, a child's body goes limp, they're unconscious..."(7 R.R. 212).

This assumption, if reliable science, would allow the jury to infer from the circumstances that K.L.'s injuries occurred while in the exclusive care and supervision of Melvin. The State used it to paint a picture in which K.L. "going limp" could infer knowledge of guilt as Melvin decided to seek medical treatment. But as discussed above, it is not reliable science. Current medical consensus regarding lucid intervals after a head injury removes the probative force from any assumption about Melvin being the exclusive caregiver at the time K.L. became non-responsive.

**4. Retinal bleeding is expected with a subdural hematoma, it does not have separate evidentiary significance.**

Finally, the theory that a particular degree or pattern of retinal bleeding indicates abuse instead of accident has also been thoroughly debunked. Now,

retinal bleeding is understood to be nothing more than an expected consequence of the pressure caused by a subdural hematoma. *Roark* at *24. The *Roark* court concluded that "retinal hemorrhaging, applied through today's scientific method, [is] non-specific and of no value in assigning causation for its existence." *Id.*

*i. Experts testified that K.L.'s retinal bleeding allowed them to identify his fatal injuries as inflicted abuse rather than accident.*

State's Expert Layla Ghergherehchi, a pediatric ophthalmologist, was called specifically to testify about the retinal hemorrhages she observed in K.L.'s eyes. She testified that a finding of abusive head trauma was "not in [her] expertise to decide" but nevertheless testified that the pattern and degree of retinal bleeding she observed in K.L. was "highly suspicious for abusive head trauma. . . a sort of shaken baby syndrome where babies are violently shaken or moved. . ." and that it is "very rare in accidental head trauma" (5 R.R. 36). Dr. Ghergherehchi briefly acknowledged that "certain traumatic injuries that are severe enough to cause bleeding inside the brain, that can also cause bleeding inside the eye," or something she called "backflow" (5 R.R. 20, 46). Nevertheless, she concluded that the pattern of hemorrhaging she observed was "very specific" to particular non-accidental sources of trauma (5 R.R. 38, 47).

This opinion was echoed by Dr. Ruda's opinion that the pattern and degree of retinal hemorrhaging was what distinguished K.L.'s injuries as intentional rather than accidental (6 R.R. 210-211).

**5. The only reliable SBS/AHT testimony would be merely that the symptoms observed are "consistent with" intentional trauma among other accidental or medical causes**

After decades of testing and winnowing the assumptions underlying SBS/AHT, Texas now recognizes that the only testimony that conforms with the last "twenty years of reputable scientific studies and publications" is that "[a]n expert could still attest to the 'consistent with' argument…[but] there would likely be no statements that it is 'almost certainly' or 'classically aligns with' a particular mechanism of injury. This leaves the jury with little help" *Roark* at *26.

*i. Expert testimony in this case permitted the jury to draw unjustified conclusions based on unreliable opinions.*

Expert opinion testimony in the present case frequently went beyond a mere "consistent with" argument to a conclusion that K.L.'s injuries were intentionally inflicted based on his constellation of injuries. As described above, while some testified that they could not come to an ultimate conclusion. Others testified using "consistent with" or "highly suspicious of" language. But each expert testified unequivocally about various theories falling under the SBS/AHT umbrella and each drew conclusions that are not supported by

current science. The *Roark* court described such testimony as an expert experiencing "the ostrich effect and [a] wish to bury his or her head in the sand" *Roark* at *26.

Disregarding the experts' unreliable opinions, the remaining theory that K.L.'s injuries were merely "consistent with" intentional trauma but also with other accidental or medical causes would not give the jury much help in determining whether his death was a homicide, and whether Appellant caused his fatal injuries or his death. This is far from the kind of opinion that would resolve reasonable doubts in a juror's mind.

Viewing the evidence in the light most favorable to the verdict, but refusing to credit "bad science," the evidence in this case is far from sufficient to support a rational finding beyond a reasonable doubt that the death of K.L. was caused in the manner alleged.

Even accepting each of the lay witnesses' testimony as true, facts about the household's schedule and K.L.'s last known caretaker only gained significance through the experts' testimony that K.L.'s injuries would have been immediately obvious as soon as they were sustained and could not have been caused by a medical condition or an accident. From these facts alone, the jury could not have concluded that the State had proven that K.L.'s injuries were inflicted rather than accidental, or that any act on Melvin's part must have caused his death.

Without resorting to unreliable and disproven "junk science," the State's other evidence could not have convinced a jury beyond a reasonable doubt that K.L.'s injuries were intentionally caused by anyone, let alone Appellant. Because of this, Melvin Morales-Gomez was convicted without sufficient evidence, his conviction should be overturned, and he respectfully requests that this court grant him a new trial.

## POINT OF ERROR NUMBER TWO

THE TRIAL COURT ERRED IN ALLOWING THE STATE'S ABUSIVE HEAD TRAUMA EXPERT TO TESTIFY ABOUT CAUSATION OF INJURIES WHEN THE BASIS OF HER TESTIMONY WAS DISPROVEN AND UNRELIABLE, AND WHEN THE EXPERT'S TESTIMONY DID NOT ACCOUNT FOR SUFFICIENT FACTS AND DATA AS APPLIED TO THIS CASE.

### *a) Relevant Facts*

Dr. Van Michele Ruda testified as a state's expert in "diagnosing children with Abusive Head Trauma" (6 R.R. 178). The State asked Dr. Ruda to define "abusive head trauma," and Dr. Ruda replied that it is a "constellation of injuries" including intracranial hemorrhage, retinal bleeding, and external injuries. Appellant objected to Dr. Ruda's testimony under Rules of Evidence 401, 402, 403 and 702 (6 R.R. 172-174). Outside of the presence of the jury, the State established that Dr. Ruda would testify that she had diagnosed K.L. with "abusive head trauma and physical abuse" (6 R.R. 170). Appellant examined Dr. Ruda on voir dire and established that she had no expertise in

biomechanics (6 R.R. 171). Appellant renewed his request to the court that Dr. Ruda be prevented from testifying about the mechanism of injury when she did not have any expertise in biomechanics and thus could not give a reliable opinion on the issue (6 R.R. 173). The State responded that that biomechanical engineers "wouldn't know what causes injuries" but that Dr. Ruda could testify about causation based on her experience with patients (6 R.R. 176). The state further argued that the triad of injuries, "specifically the subdural hemorrhaging, the bilateral retinal hemorrhaging, the mandibular fracture, and some bruises…are some tall [sic.] tell signs that are just indicative of [abusive head trauma.]" (6 R.R. 178-179).

The court overruled Appellant's objection and allowed Dr. Ruda to testify "to her expertise and opinion on abusive head trauma and child abuse" (6 R.R. 179). The only limitation the court made on Dr. Ruda's testimony was that she could not testify about the identity of the perpetrator of the abuse (6 R.R. 180). Dr. Ruda went on to provide detailed disproven non-scientific testimony described and discussed in detail above in Point of Error 1.

2) *Relevant Law*

Texas Rule of Evidence 702 states:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the expert's scientific, technical, or other

> specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.

In a case that deals with hard science, courts determine the reliability of the expert's opinions by deciding whether "(1) the underlying scientific theory is valid, (2) the methodology applying the underlying scientific theory is valid, and (3) the expert properly applied the correct methodology on the occasion in question" *Null v. State*, 690 S.W. 3d 305 (Tex. Crim. App. 2024) *citing Kelly v. State*, 824 S.W. 2d 568, 572 (Tex. Crim. App. 1992).

"The focus of a reliability analysis is to determine whether the evidence has its basis in sound scientific methodology such that testimony about 'junk science' is weeded out." *Null* at 205 citing *Tillman v. State*, 354 S.W. 3d 425, 435 (Tex. Crim. App. 2006). When a 402 objection is raised, the proponent of the evidence must prove "two prongs: (1) the testimony is based on a reliable scientific foundation, and (2) it is relevant to the issues in the case." *Id.* at 203.

The trial court's decision to admit an expert's testimony over a 702 objection to the reliability of an expert's testimony is based on a finding that the proponent has proven by clear and convincing evidence that the opinion and its scientific basis are reliable, *State v. Esparza*, 413 S.W. 3d 81, 86 (Tex. Crim. App. 2013). Such a decision constitutes reversible error when it is outside the

zone of reasonable disagreement, *Tillman v. State*, 354 S.W. 3d 128, 133 (Tex. Crim. App. 2006).

Expert opinion admissible under Rule 702, might still be inadmissible under Rule 403; *see* Tex. R. Evid. 403 (otherwise admissible evidence can be nonetheless inadmissible if its "probative value is substantially outweighed by a danger of ... unfair prejudice, confusing the issues, misleading the jury, undue delay, or ... presenting cumulative evidence").

Due to the concern with weeding out junk science, the Court of Criminal Appeals has recognized significant flaws in the scientific theory relied upon by experts who diagnose children's head injuries as being caused intentionally rather than accidentally. *Ex parte Roark*, No. WR-56,380-03, 2024 WL 4446858 (Tex. Crim. App. Oct. 9, 2024); *Ex parte Henderson*, 384 S.W.3d 833 (Tex. Crim. App. 2012). As discussed at length above, the Court's *Roark* opinion acknowledges that the scientific understanding of "shaken baby syndrome" or its more modern moniker "abusive head trauma" has evolved in significant ways over the last two decades, recognizing:

- "[T]here is no scientific validation to the claim that shaking alone can cause [subdural hematoma and retinal hemorrhaging]" (at *16-17);
- "A simple fall can cause a subdural hematoma and [ ] there is no data to quantify the amount of force necessary to cause one"(at *24);

- "Unless your experience is in the area of bioengineering, very few physicians have the necessary knowledge to evaluate, to rigorously evaluate, [child-in-question's] injury. It's got to go beyond medicine." (at *16);
- People can experience lucid intervals of up to several days after sustaining a head injury (at *14);
- "The current medical understanding is that intracranial pressure from a subdural hematoma causes retinal hemorrhaging. . . Hence, under current scientific and medical understanding, retinal hemorrhages should serve no purpose in any attempt to distinguish accidental injury from inflicted injury" (at *21).

By specifically discussing SBS and AHT, the Roark court's decision was a significant change from its previous opinion in *Wolfe v. State,* when the court determined that mere "debate" did not make an expert's opinion about AHT unreliable, 509 S.W. 3d 325. Now, the same Court has recognized that the "debate" in the scientific community has reached the level of scientific consensus and has abandoned SBS, AHT, and their component principles as unreliable and disproven by science. The *Roark* Court described an expert who now ignores these principles of scientific consensus as one experiencing "the ostrich effect and [a] wish to bury his or her head in the sand" *Roark* at *26.

3) *Application and Analysis*

**1. The State did not establish that Dr. Ruda's opinion testimony was reliable.**

In this case, Dr. Ruda concluded that K.L.'s injuries were diagnosable as intentionally inflicted abusive injuries. Her testimony revealed that she based this conclusion on the long-discredited triad of injuries and other assumptions that have been questioned by scientists for decades and finally repudiated by Texas courts in *Roark and Henderson, supra.*

"Without more than credentials and a subjective opinion, an expert's testimony that 'it is so' is not admissible," and establishing the reliability of an expert's opinion requires a technical showing that the evidence has its basis in sound scientific methodology, *Vela v. State*, 209 S.W. 3d 128 (2006). In addition to making a basic showing of reliability, "when an expert offers an opinion which is so outside the general mainstream of a particular scientific field as to be extraordinary, the proponent of that expertise must provide a greater-than-usual foundation for its reliability." *Vela v. State*, 209 S.W.3d 128, 136 (Tex. Crim. App. 2006) (Cochran, J. Concurring).

Nevertheless, when Appellant's objection called upon the State to prove that Dr. Ruda's testimony was reliable, the State did not present any technical foundation to support or defend Dr. Ruda's reliance on discredited theories regarding the diagnosis of accidental versus nonaccidental head trauma. Other

than one study correlating retinal hemorrhages with head trauma (6 R.R. 209), Dr. Ruda did not make any reference to scientific experimentation, study, or scholarship that formed the basis of her opinions, especially her opinions regarding non-accidental causation. Instead, the Prosecutor repeated the same long-discredited assumptions, arguing that the triad of injuries are simply tell-tale signs of abusive head trauma.

**2. Dr. Ruda's opinion did not take enough "facts and data" into account to be reliable as applied to the facts in this case.**

In addition to questions of methodology, Rule 702 reliability also contains a "facts and data" aspect elaborated in Texas Rule of Evidence 705(c)(making an expert's opinion inadmissible if the trial court finds that the expert does not have a sufficient factual basis for the opinion). Even assuming reliable methodology, an expert's opinion cannot be reliable if the expert does not take sufficient facts and data into account in the formation of that opinion as-applied to the particular case, *See Null v.* State, 690 S.W.3d 3005 (Tex. Crim. App. 2024).

Firstly, Dr. Ruda admitted that her opinion was not based on any expertise in biomechanics. Since at least 2012, courts have been aware that developments in biomechanics have called into question whether experts can diagnose subdural hematomas as being non-accidental, *see Ex parte Henderson*, 384 S.W.3d

833 (Tex. Crim. App. 2012). Rather than present whether or why Dr. Ruda's opinion differed from these and subsequent scientific developments, the State simply dismissed the importance of biomechanics arguing, "a biomechanical engineer wouldn't know what causes injuries; they just are an engineer. This is exactly what she sees. She sees thousands of patients" (6 R.R. 176).

Secondly, Dr. Ruda testified that she was able to render an opinion that this injury was non-accidental despite the fact that she did not have any information about K.L.'s medical history (6 R.R. 224). Although that information may have been unavailable at the time of her colleague's original diagnosis, there was more information available to be considered by the time the case came to trial. Lay witnesses testified about multiple incidents in the months preceding K.L.'s hospitalization that he had been witnessed to have injured his head in accidents (3 R.R. 210; 4 R.R. 168-169). Amanda also testified that K.L. had experienced seizures or seizure-like episodes in Honduras and Mexico prior to his arrival in Houston (3 R.R. 107, 178-179). Although Dr. Ruda referenced the importance of a patient's history at least nine times in her testimony, and even admitted that it would be difficult to determine accidental from intentional trauma without a history (6 R.R. 185, 187-88, 189, 200, 208, 212, 214, 220, 222), she did not testify that she had taken any of this information into account when forming her expert opinion to testify at trial, and she came to a conclusion without it.

Even if Dr. Ruda had only testified that K.L.'s injuries were "consistent with" SBS or AHT, such an opinion "leaves the jury with little help." *Roark* at *26. The court in this case should have weighed the prejudicial effect of using the concepts of "shaken baby" and "abusive head trauma" when these terms were once accepted theories and were popularized by public information campaigns ("Never shake a baby!"). This outweighs the questionable probative value of a scientific opinion that can only present SBS/AHT as one among many potential causes of K.L.'s fatal injuries.

Instead, the trial court accepted the State's argument and allowed Dr. Ruda to testify about abusive head trauma. Her testimony proceeded as if the decades of science documented in *Henderson* and *Roark* did not exist. In doing so, the trial court reproduced the same injustices that harmed Mr. Roark, Ms. Henderson, and others across the country who have been falsely convicted based on unreliable non-scientific SBS/AHT testimony. Because the State did not meet its burden to prove that Dr. Ruda's testimony was reliable, and because the court failed in its role as gatekeeper against junk science, Mr. Morales-Gomez was deprived of a fair trial.

### 3. Mr. Morales-Gomez was harmed by the admission of Dr. Ruda's Abusive Head Trauma Testimony

A court's erroneous admission of unreliable expert testimony is reviewed for harm under non-constitutional error under Tex. R. App. P. 44.2(b)("[A]ny

error, defect, irregularity or variance that does not affect substantial rights must be disregarded.")

"A substantial right is affected when the error had a substantial and injurious effect or influence in determining the verdict." *Nguyen v. State*, 222 S.W.3d 537, 542 (Tex. App.—Houston [14th Dist.] 2007, pet. ref'd), citing to *King v. State*, 953 S.W.2d 266, 271 (Tex. Crim. App. 1997). "Put another way, if the reviewing court has a grave doubt that the result was free from the substantial influence of the error, then it must treat the error as if it did. Grave doubt means that in the judge's mind, the matter is so evenly balanced that he feels himself in virtual equipoise as to the harmlessness of the error. Thus, in case of grave doubt as to harmlessness the [appellant] must win." *Burnett v. State*, 88 S.W.3d 633, 638-639 (Tex. Crim. App. 2002) (internal quotations omitted).

"In determining whether the error was harmless, the test is not whether a conviction could have been had without the improperly admitted evidence, but, rather, whether there is a reasonable possibility that the evidence might have contributed to the conviction or affected the punishment." *Battles v. State*, No. 11-05-00166-CR, 2006 Tex. App. LEXIS 3117 at *12 (Tex. App.—Eastland 2006, no pet.) (mem. op., not designated for publication), citing *Alexander v. State*, 740 S.W.2d 749, 765 (Tex. Crim. App. 1987). "Thus, if there is a reasonable possibility that the evidence might have contributed to either the

conviction or punishment assessed, then the error in admission is not harmless error." *Id.*

The National Registry of Exonerations reports that at least 40 people across the country have been exonerated after having been convicted based on unreliable non-scientific SBS or AHT testimony. National Registry of Exonerations, filtered for tag "SBS"(URL in footnote)[6](Last accessed February 7, 2025). In reversing Mr. Roark's conviction, the Court of Criminal Appeals commented that if experts relied on current scientific methodology,

> the jury could hear consensus on primary issues (such as short-distance falls, shaking causing injury, retinal hemorrhaging, lucid intervals, and chronic rebleed.) . . .[when] the mechanism of injury is the primary evidence in the case and the jury is left with criminal and non-criminal alternatives that are consistent with the evidence [,][w]e find it unlikely a jury would convict.

*Roark* at *26.

The Court in *Henderson* came to the same conclusion when considering the state of medical consensus regarding short falls in 2012. Judge Cochran concluded that Ms. Henderson "did not receive a fundamentally fair trial based upon reliable scientific evidence." She compared Ms. Henderson's case to other exonerees cases in Wisconsin and North Carolina, *Ex parte Henderson*, 384

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[6] https://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx?View={faf6eddb-5a68-4f8f-8a52-2c61f5bf9ea7}&FilterField1=Group&FilterValue1=SBS&&SortField=ST&SortDir=Asc

S.W.3d 833, 851 (Tex. Crim. App. 2012)(Cochran, J. Concurring). The Wisconsin court concluded that evidence about new scientific consensus established "a reasonable probability that a new jury, hearing both the new scientific evidence and the old medical testimony, would have a reasonable doubt as to her guilt.") Id., *citing State v. Edmunds*, 308 Wis.2d 374, 746 N.W.2d 590, 592 (Wis.Ct.App.2008). The North Carolina concluded "that the jury, or at least one juror. . . would have formed a reasonable doubt as to his guilt . . . had they heard the expert medical testimony that should have, and could have, been presented. . . *Id. citing Burr v. Branker,* No. 1:01CV393, 2009 WL 1298116, at *21 (M.D.N.C. May 6, 2009).

The same story is true yet again in this case: had the court performed its gatekeeping duty and prevented the jury from hearing unreliable expert testimony about repudiated SBS/AHT theories, it is likely the jury would not have convicted Mr. Morales-Gomez. As discussed at length in Point of Error One, the other evidence in the case established that K.L. was seriously injured, that he became unresponsive while Melvin was caring for him, and that Melvin was the one to bring him to the hospital. Given this context, Dr. Ruda's expert testimony about how K.L.'s injuries were caused and how she was able to rule out accidental causation was the primary piece of evidence that gave the other evidence criminal significance. If the jury had not heard this opinion, the

outcome of Mr. Morales-Gomez's trial would have been different, thus there is at the very least a reasonable possibility the Dr. Ruda's erroneously admitted testimony contributed to his conviction.

Because the court allowed Dr. Ruda to give the jury a scientifically unreliable expert opinion, and because that opinion was primary evidence supporting his conviction, Mr. Morales-Gomez respectfully asks this Court to reverse his conviction and grant him a new trial.

## POINT OF ERROR NUMBER THREE

THE TRIAL COURT ABUSED ITS DISCRETION IN OVERRULING APPELLANT'S OBJECTION TO DEMONSTRATIVE VIDEOS THAT DEPICTED VIOLENCE TOWARDS A CHILD. THE ERROR AFFECTED HIS SUBSTANTIAL RIGHTS.

*1) Relevant Facts*

During Dr. Ruda's testimony, the state moved to introduce and play State's Exhibits 257 and 258 to the jury. State's Exhibit 257 is an animated video illustrating an infant being violently shaken, the infant's head flopping uncontrolled back and forth, and a zoomed-in sequence of the infant's brain continuing to move within the skull as ruptures and bleeding form all over its surface. State's Exhibit 258 is a video that picks up where 257 left off—zooming from the infant's blood-covered brain to their eyes in order to show blood spots forming on the retinas. Appellant objected to the introduction of these videos for multiple reasons, including that it is "misleading, confusing, and therefore

should be excluded" primarily relying on Texas Rule of Evidence 403. Counsel emphasized the fact that the subject of the video was much younger than K.L. was when he died (6 R.R. 172-175). The State argued that the video was admissible, "it's been used…I think it's made by one of the doctors…I forget which physician organization. It is a training that is simply used," (6 R.R. 165-166).

After the court overruled Appellant's objection and the videos were played to the jury, Dr. Ruda commented, "So this is a video that illustrates a mechanism of how we can have injuries such as I mentioned, the intracranial hemorrhage, so the bleeding inside the brain, from this violent acceleration-deceleration force that you can see here that can be from shaking. . .it shows why you can have these internal injuries and sometimes noting on the external – the external body" (6 R.R. 182-183).

*2) Standard of Review and Relevant Law*

A trial court's ruling on the admissibility of evidence is reviewed under an abuse of discretion standard. *Devoe v. State*, 354 S.W.3d 457 at 469 (Tex. Crim. App. 2011). Demonstrative evidence is admissible if it "tends to solve some issue in the case" and "sheds light on the subject at hand." *Simmons v. State*, 622 S.W.2d 111, 113 (Tex. Crim. App. 1981). Such evidence is also subject to a Texas Rule of Evidence 403 "unfairly prejudicial" analysis. *See, e.g., Torres v. State*,

116 S.W.3d 208, 213 (Tex. App.—El Paso 2003, no pet.) ("[T]he proponent must first authenticate [the demonstrative evidence and then] establish that the evidence is fair and accurate and that it helps the witness to demonstrate or illustrate his testimony.").

Texas Rule of Evidence 403 provides: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, or needless presentation of cumulative evidence." A trial court, when undertaking a Rule 403 analysis, must balance

> (1) the inherent probative force of the proffered item of evidence along with (2) the proponent's need for that evidence against (3) any tendency of the evidence to suggest decision on an improper basis, (4) any tendency of the evidence to confuse or distract the jury from the main issues, (5) any tendency of the evidence to be given undue weight by a jury that has not been equipped to evaluate the probative force of the evidence, and (6) the likelihood that presentation of the evidence will consume an inordinate amount of time or merely repeat evidence already admitted.

*Gigliobianco v. State*, 210 S.W.3d 637, 641–42 (Tex. Crim. App. 2006). The trial court abused its discretion in admitting a video of a shaken baby over Appellant's Rule 403 objection.

*3) Application and Analysis*

1. **The prejudice caused by showing the jury an inaccurate and graphic demonstrative video outweighed its questionable prejudicial value.**

The degree of accuracy of the exhibit should be considered by the trial court during the weighing of the exhibit's probative value against its unfair prejudice. *Pugh v. State*, 639 S.W.3d 72, 85 (Tex. Crim. App. 2022).

As discussed at length in previous Points of Error above, the medical consensus for the last two decades has been that violent shaking alone cannot cause the kind of injuries illustrated in these videos. Because the videos were an illustration of the earliest element of SBS theory to have been rejected by the medical community, it certainly had little to no probative value. In addition, the fact that the video depicted a small infant being violently shaken in a case about an older and much larger toddler and illustrated bilateral hemorrhaging unlike the injury described in this case, further diminished any chance that the video could shed any light on the subject at hand.

In contrast, the videos had great prejudicial effect, they underlined and illustrated an unreliable and un-scientific concept and gave the jurors a means by which to visualize a mechanism of injury that could never have caused K.L.'s fatal injuries.

"As part of the unfair prejudice analysis, courts must also consider whether a demonstrative exhibit is 'overly inflammatory' – including gruesomeness, level of detail, perspective, and emotional effect on the jury." *Pugh v. State*, 639 S.W.3d at 87. Any juror, especially one who may have a young child, would be intensely,

emotionally, concerned about the many ways that a child might be injured. Child abuse is also an intensely emotional subject. Gruesome videos depicting violence toward a baby and a dramatic zoom-in on the bleeding of the baby's internal organs is precisely the kind of evidence that could have an undue emotional effect on a jury.

**2. Mr. Morales-Gomez was harmed by the admission of the State's demonstrative videos.**

As with the error discussed in Point of Error 2, improper admission of demonstrative evidence is reviewed under non-constitutional error according to Tex. R. App. P. 44.2(b)("[A]ny error, defect, irregularity or variance that does not affect substantial rights must be disregarded.") "A substantial right is affected when the error had a substantial and injurious effect or influence in determining the verdict." *Nguyen v. State*, 222 S.W.3d 537, 542 (Tex. App.— Houston [14th Dist.] 2007, pet. ref'd), citing to *King v. State*, 953 S.W.2d 266, 271 (Tex. Crim. App. 1997).

For the same reasons that the videos were prejudicial to the jury, they also could have contributed to the jury's verdict. Having viewed the State's inaccurate and gruesome video exhibits, there is a reasonable probability that jurors were emotionally disturbed and led to imagine Mr. Morales-Gomez shaking K.L. to death in a way that is actually scientifically impossible. This visual aid was absolutely harmful.

Because the prejudice caused by the admission of the State's inaccurate videos far outweighed their probative value, and because this harmed his substantial rights, Mr. Morales-Gomez respectfully asks this Court to sustain his third point of error, reverse his conviction and grant him a new trial.

## CONCLUSION AND PRAYER

For the reasons stated above, Melvin Morales-Gomez prays that this Honorable Court sustain his points of error, reverse the judgement of conviction entered below, and grant him a new trial.

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## CERTIFICATE OF SERVICE

I certify that the foregoing brief was electronically served via Texas e-file on the Harris County DistrictAttorney on the day the brief was filed.

/s/ Amanda Koons
_____
Amanda Koons

## CERTIFICATE OF COMPLIANCE

Pursuant to Rule 9.4(i) (3), undersigned counsel certifies that this brief complieswith all form requirements of TEX. R. APP. PROC. 9.4.

Exclusive of the portions exempted by TEX. R. APP. PROC. 9.4 (i)(1), this brief contains 11,189 words printed in a proportionally spaced typeface.

/s/ Amanda Koons
_____
Amanda Koons

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