E-Filed Document Apr 24 2014 15:16:53 2013-DR-01995-SCT Pages: 45

IN THE SUPREME COURT OF MISSISSIPPI

JEFFREY HAVARD, ***Petitioner***

vs. **No. 2013-DR-01995-SCT**

STATE OF MISSISSIPPI, ***Respondent***

PETITIONER'S REBUTTAL TO THE STATE'S RESPONSE TO MOTION FOR RELIEF FROM JUDGMENT OR FOR LEAVE TO FILE SUCCESSIVE PETITION FOR POST-CONVICTION RELIEF

Petitioner, Jeffrey Havard, by and through undersigned counsel, hereby submits his Rebuttal to the State's Response to Motion for Relief from Judgment or for Leave to File Successive Petition for Post-Conviction Relief ("State's Response"). For the reasons set forth in the original Petition and herein, Petitioner is entitled to the relief requested in the Petition.

I. THE CLAIMS ARE NOT PROCEDURALLY BARRED OR TIME-BARRED

In the Petition, Havard anticipated that the State would argue that the claims raised therein are procedurally barred or time-barred. In its Response, the State has indeed placed a great deal of reliance on the time bar [Section 99-39-5(2)], the successive writ bar [Sections 99-39-23(6) & 99-39-27(9)], and other procedural bars found in Section 99-39-21(1)-(3).

To begin, Petitioner would point out that this Court has held that successor petitions such as this one are not subject to time bars. *Bell v.* State, 66 So. 3d 90 (Miss. 2011). In *Bell*, the petitioner sought leave to file a successive petition in the trial court on several issues, including mental retardation. *Id.* at 91. Bell had previously been denied post-conviction relief. *Id.* In examining whether Bell's matter should be remanded for further proceedings, this Court examined *Miss. Code Ann.* § 99-39-27(9) and the exceptions that it makes for filing successive petitions. *Id.* at 93. After reviewing the various exceptions, including the new evidence standard

under which Havard's instant Motion was filed, the Court observed: "Noticeably absent from this statute is a time limitation in which to file a second or successive application if such application meets one of the statutory exceptions." *Id.* The Supreme Court, finding no time bar applied, remanded the case to the trial court for an evidentiary hearing. *Id.* at 94.

Also, in *Grayson v. State*, 118 So. 3d 118, 129 (Miss. 2013), the petitioner obtained merits review of a successor petition despite the State urging the claims were time-barred, though petitioner did not ultimately prevail. Likewise, the Mississippi Supreme Court recently remanded a successive petition for an evidentiary hearing without applying the time-bar as urged by the State, *see Walker v. State*, 131 So. 3d 562 (Miss. 2013), and also granted outright relief on a successive petition despite the State's arguments that the claims were procedurally barred. *See* En Banc Order, *Byrom v. State*, No. 2014-DR-00230-SCT (Miss. Mar. 31, 2014).

Simply put, if a petitioner states a sufficient claim under the new evidence standard, then such a claim is not subject to any time or successive writ bar. The same result is required by *Miss. Code Ann.* § 99-39-5(2), which excepts from time bars claims that are based on new evidence. In this case, Petitioner has based his claims on the new evidence standard. The new evidence in support of the Petition is set forth with exacting detail and supported by the opinions of numerous world-renowned expert witnesses. **The new evidence that triggered the Petition was the newly-formulated opinions of Dr. Steven Hayne, first made known in a Clarion Ledger newspaper article published on June 16, 2013 (with the Petition being filed approximately 5 months later).** *See* Motion Exh. "H". Had it not been for the article, Havard would still be in the dark about Hayne's true opinions.

Dr. Hayne's opinions, which differ substantially from his trial testimony in that they acknowledge the changes in science and medicine during the years since the trial and invoke a theory of cause and manner of death (blunt force trauma) that Dr. Hayne did not account for

during Petitioner's 2002 trial, are compelling new evidence that cause grave doubts about Havard's conviction and sentence. Viewing these facts set forth in the Petition as true—which, at this stage, the Court must do—Havard has demonstrated that this Petition falls within the new evidence exception under the UPCCR. As such, no time bar applies.

Furthermore, Petitioner has been diligent in seeking evidence in support of these claims. Frankly, Petitioner did not become aware of the significant changes in the scientific and medical consensus concerning Shaken Baby Syndrome (SBS) until the possibility that Dr. Hayne's opinions on SBS in **this case** had changed became apparent when he was interviewed in connection with a news story written by a journalist. The article was published in June 2013. After reading the article, Petitioner's counsel did the only thing they could do: they asked to meet with Dr. Hayne to discuss the issue. This set in motion the events leading to the filing of this Petition. Dr. Hayne signed an Affidavit setting forth enough information to show the change in his opinions to demonstrate why an evidentiary hearing is needed. In less than 6 months from the publication of the article in which Hayne brought up SBS, this Petition was filed. It cannot be argued with a straight face that Havard has been anything but diligent in pursuing this claim as soon as the new evidence demonstrating its pertinence to **this case** existed.

The new Affidavit from Dr. Hayne is essential to the evaluation of this claim and whether it involves newly-discovered evidence. The State places great reliance on the fact that in other cases information discrediting Shaken Baby Syndrome has been presented for some time. This cannot be disputed, but it is a red herring in an attempt to get this Court to ignore the real question: whether the claims presented in Jeffrey Havard's case—**this case**—with respect to SBS are based on new evidence in **this case**. Comparing Dr. Hayne's trial testimony (Petition at pp.

10-12) with his new Affidavit (Petition at pp. 15-16), it is clear this is newly-discovered evidence.

This is information that was not capable of being discovered or raised at trial, on direct appeal, or in Havard's post-conviction proceedings, because Dr. Hayne, the only expert who gave an opinion as to the cause of death at trial, has only recently acknowledged the change in scientific consensus as it applies to this case and put forth an alternative theory—a theory consistent with Havard's innocence and with Havard's description of the accidental fall that Chloe suffered—that differs from his trial testimony. The difference is crucial: Dr. Hayne now acknowledges that simple blunt force trauma (separate and apart from any shaking or any other intentional, criminal act) such as that which could be produced from an accidental fall onto a hard surface could have caused Chloe's death and injuries. When Dr. Hayne expressed his new opinions, SBS became a new issue in Havard's case. Havard immediately investigated the claim, obtained analyses from leading experts on the issue, and presented it to this Court with adequate and compelling supporting evidence.

Havard had no way of knowing of Dr. Hayne's change in opinion. In prior interactions between Hayne and Havard's attorneys, Hayne made no indication of any shift in his opinions on the topic of SBS. Further, as demonstrated in the Court of Appeals' opinion in *Brandon v. State*, 109 So. 3d 128, 131 (Miss. Ct. App. 2013), Dr. Hayne was testifying as late as 2009 to opinions that mirror his opinions from Havard's 2002 trial, and the State was relying on those opinions from Hayne as late as 2013. The Court of Appeals summarized Hayne's testimony in Brandon's trial as follows:

> Pathologist Dr. Steven Hayne performed Xavier's autopsy. He too found Xavier had fatal bleeding behind the retina and on the surface of the brain. Dr. Hayne determined that the cause of death was SBS. Dr. Hayne testified that SBS occurs when a child is shaken without impacting the child's head on a hard surface. The

> shaking generates a force "equivalent to . . . a motor vehicle crash," causing the brain and skull to move in different rotations, tearing the blood vessels between them. He described SBS as a violent death, listing in his autopsy the manner of Xavier's death as "homicide." But on cross-examination, Dr. Hayne acknowledged disagreement among pathologists on whether SBS is a valid cause of death. He noted that some pathologists believed that other circumstances could cause the same types of injuries as SBS.

Id. Clearly, in the Brandon trial, Dr. Hayne acknowledged that "some pathologists" believed that something other than shaking could cause injuries that other pathologists, such as Hayne, call SBS. Dr. Hayne's new opinions concerning SBS, described in his Affidavit attached to Havard's Motion for Relief, contrast with his testimony from the Brandon trial in 2009 as well as Havard's trial in 2002. Clearly, Dr. Hayne's shift in opinions concerning SBS is a recent development and not discoverable by Havard at trial, on direct appeal, or during his PCR proceedings. As soon as Hayne made his change of opinion known, Havard's counsel investigated the issue and presented this claim.

Finally, all of the claims involved fundamental rights, and thus the procedural bars cited by the State do not apply. *See Rowland v. State*, 42 So. 3d 503 (Miss. 2010). Havard has discussed in detail how the fundamental rights exception to procedural bars applies (Petition at pp. 36-38), and will not repeat those same arguments here.

Under any formulation, this Court should not disregard as a matter of form over substance the significant new evidence that casts grave doubts on Havard's conviction and sentence. A man's life hangs in the balance. He stands convicted of capital murder and sentenced to death in a case where the objective science and medicine cast grave doubts on the validity and trustworthiness of the conclusions that led to the charge and, ultimately, his conviction and death sentence. The one and only expert witness (Dr. Hayne) on whom the State relied to obtain a guilty verdict has now given a sworn affidavit disavowing his trial opinion that

shaking alone caused Chloe's injuries. Dr. Hayne now accounts for another, non-criminal possibility: blunt force trauma such as that caused by an accidental fall onto a hard surface, as described by Havard in his interview with law enforcement. Hayne did not account for this possibility at trial. This is precisely the sort of scenario that the newly-discovered evidence and fundamental right exceptions were designed to address: to correct serious errors and resolve grave doubts in the most serious of cases.

II. PETITIONER'S CLAIMS ARE SUFFICIENT FOR THIS COURT TO REMAND THE MATTER TO THE TRIAL COURT FOR FURTHER FACTUAL DEVELOPMENT

It is worth noting the procedural posture of this post-conviction proceeding and how this affects how this Court is to view the claims raised by the Petitioner and the State's Response to those claims. Under the Mississippi Uniform Post-Conviction Collateral Relief Act, *Miss. Code Ann.* § 99-39-1 *et seq.*, the procedural posture here "is analogous to that when a defendant in a civil action moves to dismiss for failure to state a claim." *Neal v. State*, 525 So. 2d 1279, 1280 (Miss. 1987). Havard is entitled to an evidentiary hearing on claims raised in his Petition unless it appears **beyond a doubt** that he cannot prove any set of facts entitling him to relief. *See Marshall v. State*, 680 So. 2d 794, 794 (Miss. 1996) ("a post-conviction collateral relief petition which meets basic requirements is sufficient to mandate an evidentiary hearing unless it appears beyond doubt that the petitioner can prove no set of facts in support of his claim which would entitle him to relief"); *accord Archer v. State*, 986 So. 2d 951, 957 (Miss. 2008) ("If [petitioner's] application states a *prima facie* claim, he then will be **entitled** to an evidentiary hearing on the merits of that issue in the Circuit Court . . . .") (emphasis added).

Havard's claims are substantial and warrant this Court's granting him full relief pursuant to Section 99-39-27(7)(a). At the very least, however, Havard's allegations entitle him to an evidentiary hearing pursuant to Section 99-39-27(7)(b).

The factual allegations in Havard's proposed motion for post-conviction relief are more than enough under this Court's precedents to warrant an evidentiary hearing. *See*, *e.g.*, *Spicer v. State*, 973 So. 2d 184, 190-91 (Miss. 2007) (remanding for an evidentiary hearing where post-conviction counsel identified 15 additional witnesses who had not been contacted by defense counsel and were willing to testify regarding defendant's character and childhood history); *Doss v. State*, 882 So. 2d 176, 189 (Miss. 2004) (finding that trial counsel's efforts fell short of the prevailing standard, and thus warranted an evidentiary hearing, where trial counsel did not seek any school, medical, mental health, or other records, seek advice from a mental health expert, obtain records resulting from prior criminal charges, or follow-up on witnesses identified by investigator); *Davis v. State*, 743 So. 2d 326, 338-40 (Miss. 1999) (ordering evidentiary hearing on ineffective assistance of counsel when on post-conviction review, affidavits of an additional six witnesses were presented); *Leatherwood v. State*, 473 So. 2d 964 (Miss. 1985) (remanding case for an evidentiary hearing where post-conviction counsel submitted affidavits of several more mitigation witnesses who had not been contacted by defense counsel).

Under well-established post-conviction procedure, this Court must accept as true Mr. Havard's allegations. *Simon v. State*, 857 So. 2d 668 (Miss. 2003); *Myers v. State*, 583 So. 2d 174 (Miss. 1991). An evidentiary hearing is mandated unless it appears beyond doubt that Havard can prove no set of facts in support of his claim which would entitle him to relief. *Robertson v. State*, 669 So. 2d 11 (Miss. 1996); *Sanders v. State*, 846 So. 2d 230, 234 (Miss. Ct. App. 2002) ("'[A] post-conviction collateral relief petition which meets basic requirements is

sufficient to mandate an evidentiary hearing unless it appears beyond a doubt that the petitioner can prove no set of facts in support of his claim . . . .'" (quoting *Marshall v. State*, 680 So. 2d 794, 794 (Miss. 1996)).

A great deal of the State's Response does nothing more than underscore the need for further factual development of these claims in the trial court. Specifically, the State goes to great lengths to criticize, citing other cases, some of the experts who have provided affidavits in support of Havard's Petition. *See* State's Response at pp. 25-44. In the course of its Response, the State criticizes the qualifications, methodologies, and opinions of all of the experts (except Dr. Steven Hayne) that have provided affidavits demonstrating the unquestionable shift in the scientific and medical communities with respect to Shaken Baby Syndrome and how that shift applies to the facts of Havard's case.

However, parsing expert qualifications, methodologies, underlying data, and opinions is a task best left to the trial court in this matter. In *Chase v. State*, 873 So. 2d 1013, 1030 (¶ 82) (Miss. 2004), this Court remanded for a hearing on whether the petitioner was mentally retarded, even though it recognized potential weaknesses with his proffered evidence. Likewise, in *Bell v. State,* 66 So. 3d 90, 94 (¶ 10) (Miss. 2011), the majority granted an evidentiary hearing though it acknowledged that the dissenting justice highlighted significant points that the State would be able to raise at the hearing.

Because the matters listed above are best handled in the trial court, the case should be remanded to the Circuit Court of Adams County for an evidentiary hearing on these issues. An evidentiary hearing in the trial court would afford the opportunity to fully explore each expert witness's credentials, training, and experience as related to the medical issues in this case and determine who is a qualified expert in these respective fields and who will be permitted to offer

opinion testimony. From there, the parties and the trial court can fully explore the facts relied upon by each expert, any assumptions upon which they rely, their methodologies, and other information undergirding their opinions. Finally, the trial court can receive the opinions of these various experts and determine what effect, if any, the new evidence presented should have on Havard's conviction and sentence.

In short, the only inquiry at this point is whether Havard has set forth facts which, if true, could entitle him to relief. If so, and these facts are based upon newly-discovered evidence—evidence that was not available to Havard at trial in 2002[1]—then this Court must remand this matter to the Adams County Circuit Court for a full evidentiary hearing on the claims raised in the Petition.

III. THE STATE HAS MISCONSTRUED THE *EDMUNDS* CASE FROM WISCONSIN, WHICH IS STRIKINGLY SIMILAR TO HAVARD'S CASE

The State misconstrues Petitioner's reliance on *State v. Edmunds*, 746 N.W.2d 590 (Wis. Ct. App. 2008) and ignores the pertinent findings and conclusions of that decision. Petitioner relies on *Edmunds* primarily to support his claim that recent advances in the scientific and medical community regarding Shaken Baby Syndrome constitute new evidence sufficient to overcome the procedural bars. In *Edmunds*, the Wisconsin Court of Appeals[2] found that the change in mainstream medical opinion regarding Shaken Baby Syndrome amounted to newly discovered evidence for purposes of overcoming procedural bars and obtaining a new trial. The Court found that even though there were medical opinions questioning Shaken Baby Syndrome

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[1] It bears noting that, during Havard's 2002 trial, the State never asked Dr. Hayne if Havard's description of Chloe's accidental fall and striking her head on the toilet was a plausible explanation of her injuries. This fact, combined with Dr. Hayne's new opinions regarding SBS, demonstrate the significance of the new evidence. A jury hearing that shaking alone could not produce enough force to cause Chloe's death but that blunt force trauma to the head—such as from falling from a short distance onto a hard surface like a toilet—could cause such injuries could certainly find that Chloe's death was a tragic accident, and not an intentional homicide as argued by the State at Havard's trial.

[2] In the original Motion, it was inadvertently stated that *Edmunds* was an opinion by the Wisconsin Supreme Court.

at the time of the trial, "there was not a significant debate about th[e] issue . . . and [] the medical opinions . . . would have been considered minority or fringe medical opinions." *Id.* at 593. The court concluded that "it is the emergence of a **legitimate and significant dispute** within the medical community [regarding Shaken Baby Syndrome] that constitutes newly discovered evidence." *Id.* at 599 (emphasis added).

In an attempt to discredit *Edmunds*, the State cites a later decision of the Wisconsin Court of Appeals, *State v. Cramer*, 351 Wis. 2d 682, 2013 Wisc. App. LEXIS 847 (Wis. Ct. App. 2013), to erroneously suggest that the court now recognizes that Shaken Baby Syndrome is accepted in the medical community without controversy. The quotation lifted from *Cramer* and relied upon—with emphasis—by Respondent, however, came not from the court, but from the state's medical expert witness. 2013 Wisc. App. LEXIS 847 at *5. And the only reason the expert testimony was included in the court's opinion was because it was the subject of a claim by the criminal defendant that it was demonstrably false and misleading, given the medical literature showing that shaking alone, without some type of impact, cannot cause the type of brain injury commonly associated in the past with Shaken Baby Syndrome. *Id.* at *10.

In addressing the claim, the court expressly acknowledged the medical literature relied upon by the defendant by citing and quoting *Edmunds*. *Id.* ("A significant and legitimate debate in the medical community has developed in the past ten years over whether infants can be fatally injured through shaking alone."). The court chose not to grant the defendant relief on that basis, however, but only because the State's expert testified that the victim died from abusive head trauma, not Shaken Baby Syndrome. *Id.* In contrast, **the testimony in Havard's trial was that Chloe had died from shaking alone**. Also, in *Cramer*, the court noted that there was no evidence in the record that the child victim had ever fallen, *id.* at *21-22; such evidence is

present in the record in Havard's case. *See* Motion Exh. "F," Havard Interview Transcript. Thus, rather than discrediting it, *Cramer* actually bolsters *Edmunds*, and further demonstrates why Havard is entitled to relief in this case.

Another similar case from a sister jurisdiction is that of Cathy Lynn Henderson. In 2007, the Texas Court of Criminal Appeals, in a post-conviction proceeding similar to what Havard has filed in this matter, remanded the case to the trial court for further proceedings. *Ex Parte Henderson*, 246 S.W.3d 690 (Tex. Crim. App. 2007). Henderson was convicted of capital murder for the death of a three-and-a-half month old child. *Id.* at 691. The key dispute in Henderson's case was whether the child was intentionally killed or died as a result of an accidental short distance fall onto a hard surface (concrete). *Id.* The medical examiner who testified in Henderson's trial called Henderson's description of an accidental fall as "impossible," "false," and "incredible". *Id.* However, Henderson presented affidavits from several experts (including Dr. Janice Ophoven, who has provided an affidavit in this case), who demonstrated that subsequent advances in the scientific and medical communities supported Henderson's theory. *Id.* In light of those developments, the medical examiner questioned his original testimony and stated that he would not be able to testify in a similar manner if the trial were held anew. *Id.* at 691-92.

The Texas Court of Criminal Appeals held that the advances in the scientific and medical communities concerning SBS subsequent to Henderson's trial and the testifying medical examiner's change in opinion because of those advances were "material exculpatory facts". *Id.* at 692. Accordingly, the Court stayed Henderson's execution and remanded the case for further proceedings on her claims. *Id.*

Following the remand, additional proceedings were held and the case returned to the Texas Court of Criminal Appeals. *Ex Parte Henderson*, 384 S.W.3d 833 (Tex. Crim. App. 2012). The Court described the proceedings held in the trial court as follows:

> In accordance with our remand order, the trial court held an evidentiary hearing. Applicant presented the testimony of six expert witnesses. Relying on new developments in the science of biomechanics, these witnesses testified that the type of injuries that Brandon Baugh suffered could have been caused by an accidental short fall onto concrete. Dr. Roberto Bayardo, the medical examiner who testified at trial that applicant's position that Brandon's injuries resulted from an accidental fall was false and impossible, testified at the evidentiary hearing that he now believes that there is no way to determine with a reasonable degree of medical certainty whether Brandon's injuries resulted from an intentional act of abuse or an accidental fall. The State presented five expert witnesses who testified that, notwithstanding the studies cited by applicant's experts, it was very unlikely that Brandon's injuries were caused by an accidental short fall onto concrete.
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> Following the evidentiary hearing, the trial court recommended granting a new trial. The court found that all of the expert witnesses were truthful and credible. The court further found that Dr. Bayardo's re-evaluation of his 1995 opinion is based on credible, new scientific evidence and constitutes a material exculpatory fact. The trial court concluded that applicant has proven by clear and convincing evidence that no reasonable juror would have convicted her of capital murder in light of her new evidence.

Id. at 833-34.

Following the evidentiary hearing, the trial court found that Henderson was actually innocent and vacated Henderson's conviction and death sentence and ordered that she be given a new trial. *Id.* at 834. While unwilling to go so far as to declare Henderson "actually innocent," the Court of Criminal Appeals accepted the trial court's recommendation to vacate the conviction and sentence and to grant Henderson a new trial. *Id.* The close parallels between Havard's case and Henderson's show that Havard should similarly be permitted to advance his claim in the trial court to flesh out the paradigm shift in the medical and scientific communities concerning SBS and how they undermine his conviction and death sentence. *See also Prete v. Thompson*, 2014 U.S. Dist. LEXIS 9472 (N.D. Ill. Jan. 27, 2014) (finding, in a federal habeas

case, that petitioner had established that no reasonable juror could find her guilty beyond a reasonable doubt based upon scientific advances in SBS).

The State also places improper reliance on *Middleton v. State*, 980 So. 2d 351 (Miss. Ct. App. 2008) to vaguely and misleadingly assert that "petitioner's claim is not a novel one." *Middleton* had nothing to do with whether the recent advances in the scientific and medical community regarding Shaken Baby Syndrome constitute new evidence sufficient to overcome procedural bars. Nor did it involve whether a recantation by the sole expert in the case amounted to newly discovered evidence. Rather, *Middleton*, in pertinent part, addressed whether the State's expert in pediatric trauma was qualified to testify about Shaken Baby Syndrome, which the court found that he was. *Id.* at 355-57. The quote lifted by the State from the *Middleton* decision was merely from the court's reporting of the substance of the expert's testimony. *Id.* at 357. It has no legal or binding significance.

Aside from these specific errors, however, the overall and fundamental flaw in the State's argument is that it mistakes the existence of any professional opinions questioning Shaken Baby Syndrome as the newly-discovered evidence at the heart of this Petition. The State goes to great lengths to demonstrate that there existed at the time of Petitioner's trial and/or direct appeal voices in the scientific and medical community questioning whether Shaken Baby Syndrome could cause a head injury. From this, the State concludes that Petitioner has not shown newly discovered evidence for purposes of overcoming the procedural bars. But, the newly discovered evidence asserted in the Petition is not the mere existence of those opinions, but rather the significant and legitimate debate within the scientific and medical communities that has recently

emerged in which many, if not most, experts now express grave doubts about shaken baby syndrome.[3]

The significant and legitimate debate taking place in academic and professional circles has now emerged in **this case** by virtue of the shift in Dr. Hayne's opinions on the matter of Shaken Baby Syndrome and its relation to his investigation of Chloe Britt's death and his trial testimony concerning his investigation. Dr. Hayne is willing to testify at an evidentiary hearing about his change of opinion. (*See* Petition Exhibit "A," Hayne Affidavit at ¶ VIII). Based upon conversations with Dr. Hayne, if he was called to testify at an evidentiary hearing, it is believed that Dr. Hayne will testify that he was never provided with Havard's explanation of the accidental fall, and was thus precluded from accounting for this in his evaluation of Chloe's death and his resulting trial testimony. Havard's statement, coupled with (a) the significant and legitimate debate on the science of Shaken Baby Syndrome and (b) the alternative, non-criminal explanation for Chloe's injuries and death, both as described by Dr. Hayne, demonstrate that the cause and manner of death in this case are in serious question. Indeed, Dr. Hayne now acknowledges that Chloe's death could not have been caused by shaking alone, which directly contradicts his trial testimony and the State's theory at trial. As a result, Havard's conviction and sentence are subject to grave doubts and deserve serious review by this Court or by the Circuit Court of Adams County upon remand to that court for an evidentiary hearing.

With the proper focus on what actually constitutes the asserted newly-discovered evidence in this Petition, it becomes clear that Petitioner has established such under the UPCCR. *Miss. Code Ann.* § 99-39-3 states that "the purpose of [the UPCCR] is to provide prisoners with a

[3] Even assuming, for the sake of argument, that the State's assertion that the shift in medical consensus is not newly-discovered evidence, without this expert assistance at trial, Havard could not affirmatively establish his defense. Certainly, without medical expertise, Havard could not challenge the State's case against him in any meaningful way.

procedure, limited in nature, to review those objections, defenses, claims, questions, issues or errors which in practical reality could not be or should not have been raised at trial or on direct appeal." Here, Petitioner could not have previously presented the claims in this Petition because they are based upon (a) significant changes in Dr. Hayne's opinions since Havard's trial in 2002 and (b) a paradigm shift in opinion within the medical and scientific communities with respect to Shaken Baby Syndrome, a shift that had not taken place and therefore was not reasonably discoverable at the time of trial, direct appeal, or during PCR proceedings.

IV. THE PARADIGM SHIFT IN MEDICAL AND SCIENTIFIC OPINIONS CONCERNING SHAKEN BABY SYNDROME

In light of the State's refusal to recognize the paradigm shift in the scientific and medical communities with respect to Shaken Baby Syndrome, Havard details those developments below, with citations to supporting source material.

In 2002 (when Havard was arrested, tried, and convicted), virtually no one in mainstream medicine openly questioned the existence of SBS. Today, such questioning is mainstream. *See, e.g.,* Szalavitz, *The Shaky Science of Shaken Baby Syndrome*, TIME (Healthland) (online, Jan. 17, 2012) (App. Tab 30); Bazelon, *Shaken-Baby Syndrome Faces New Questions in Court*, N.Y. TIMES (Dec. 2, 2011) (App. Tab 4); Hansen, *Unsettling Science*, ABA. J. (Dec. 2011) (App. Tab 15); Gabaeff, *Challenging the Pathophysiologic Connection Between Subdural Hematoma, Retinal Hemorrhage and Shaken Baby Syndrome*, 12 W. J. EMER.MED. 144, (2011) (App. Tab 10) ("It appears that SBS does not stand up to an evidence-based analysis."); Miller, et al. *Overrepresentation of Males in Traumatic Brain Injury of Infancy and in Infants with Macrocephaly: Further Evidence that Questions the Existence of the Shaken Baby Syndrome*, 31 AM. J.

FORENSIC MED. PATH. 165, 169 (2010) (App. Tab 25) ("Several recent observations have converged to raise serious questions about SBS and whether shaking alone can cause the triad. . . . How could such a diagnosis based on such flimsy evidence and with such far-reaching implications become so entrenched in pediatric and legal medicine?"); Talbert, *Shaken Baby Syndrome: Does It Exist?*, 72 MED. HYPOTHESES 131 (2009) (App. Tab 31); Anderson, *Does Shaken Baby Syndrome Really Exist?*, DISCOVER (Dec. 2, 2008) (App. Tab 1). *See also* Affidavits/Declarations attached to original Motion of Dr. Steven Hayne (Exhibit "A"); Dr. Michael Baden (Exhibit "B"); Dr. Janice Ophoven (Exhibit "C"); Dr. George Nichols (Exhibit "D"); and Dr. Chris Van Ee (Exhibit "E").

In Havard's trial, medical providers and Dr. Hayne testified that the SBS triad of findings was unique to SBS. Today, the list of other conditions currently known to mimic the SBS symptoms -- which were not considered by the doctors or the medical examiner in 2002 -- is long and growing. In other words, it is now known that many other conditions and events can cause the SBS findings, while there is tremendous debate about whether those findings can even be caused by shaking. Moreover, as the understanding about SBS has progressed, several particular aspects of the SBS testimony given at Havard's trial have been exposed as wrong. For instance, it has now been fairly established that retinal hemorrhages are not traumatic injuries caused by shaking, but occur in a wide variety of non-traumatic and accidental circumstances as a result of intracranial bleeding and pressure.

These changes in understanding -- and others discussed herein and in the original Motion – have accelerated rapidly in the last decade. At a minimum, these developments

constitute significant new evidence that was not available to Jeffrey Havard to defend himself more than a decade ago. The changes in science have been significant enough to cause the medical examiner, Dr. Hayne, to significantly revise his medical conclusion and account for a non-criminal possibility (simple blunt force trauma) that (a) he did not find before and (b) that Havard's jury never heard.

A. The Evolution in SBS Understanding

1. The Original Hypothesis

In 1962, a Dr. Henry Kempe wrote a very influential article identifying characteristics of "battered" children. *The Battered-Child Syndrome*, 181 J. AM.MED. ASS'N 17. (App. Tab 17) He listed several physical injuries that, particularly when more than one was present, were suspicious for child abuse. Most were fairly common sense – broken bones in babies, soft tissue swelling, bruises. Also on his list was subdural hematoma -- a pooling of blood between the brain itself and the protective dura layer, which Dr. Kempe identified as often a trauma-induced injury.

In 1971, Dr. A. Norman Guthkelch, who was the first pediatric neurosurgeon in England, wrote an article that questioned why infants who presented with subdural hematoma and who he suspected had been abused, nevertheless did not have any sign of trauma to their heads. Guthkelch, *Infantile Subdural Haematoma and its Relationship to Whiplash Injuries*, 2 BRIT.MED. J. 430 (1971) (App. Tab 14). He cited a biomechanical study by a Dr. Ommaya that Dr. Guthkelch described as recording "two well-documented cases of subdural haematoma, in both of which the subject sustained a whiplash injury to the neck as a result of an automobile accident, the head itself not being [impacted] at all."

(*Id.* at 430). He also discussed two patients of his that had subdural hematomas yet no sign of head trauma -- in one the mother said she had shaken her infant when he was having a coughing fit and she feared he was choking; in the other, the infant had grip marks and the mother said that she "might have" shaken him when he cried at night. (*Id.* at 431). From the Ommaya study and his two case reports, he hypothesized that infants could sustain whiplash-type injuries, including subdural hematoma, from being violently shaken.

In 1972 and 1974, a prominent American pediatric radiologist and textbook author named John Caffey published two articles, respectively entitled: *On the Theory and Practice of Shaking Infants: Its Potential Residual Effects of Permanent Brain Damage and Mental Retardation*, 124 AMER. J. DIS. CHILD. 161 (1972), (App. Tab 6) and *The Whiplash Shaken Infant Syndrome: Manual Shaking by the Extremities With Whiplash-Induced Intracranial and Intraocular Bleedings, Linked With Permanent Brain Damage and Mental Retardation*, 54 PEDIATRICS 396 (1974) (App. Tab 7). In the first article, Dr. Caffey collected 27 instances of what he deemed "convincing" examples of children who had suffered brain injury as a result of shaking. In the second article, Dr. Caffey cited his previous data and the same Ommaya study that Guthkelch cited for the proposition that shaking infants could cause subdural hemorrhage. In addition to causing subdural hemorrhage, he speculated that shaking damaged capillaries within the retina, which explained why retinal hemorrhages often were seen in children he thought to have been shaken. Although he admitted that his data set was "meager" and "manifestly incomplete," he broadly concluded that the evidence "indicates that manual whiplash

shaking of infants is a common primary type of trauma in the so-called battered infant syndromes. It appears to be the major cause in these infants who suffer from subdural hematomas and intraocular bleedings." 54 PEDIATRICS at 402.

Dr. Caffey ended his article by calling for a "nationwide educational campaign" that he said could be summarized by the following stanza:

> Guard well your baby's precious head,
> Shake, jerk and slap it never,
> Lest you bruise his brain and twist his mind,
> Or whiplash him dead forever.

Id. at 403.

2. SBS Rapidly Becomes A Well-Accepted Medical Diagnosis

Notwithstanding that Dr. Caffey reached his conclusions on an evidence base that even he acknowledged was meager, but propelled by a nationwide campaign highlighting the dangers of shaking infants, the SBS diagnosis rapidly gained acceptance in medical circles. *See* Uscinski, *Shaken Baby Syndrome: An Odyssey*, 46 NEUROL.MED. CHIR. 57 (2006) (App. Tab 33) ("Nonetheless, the mechanism of shaking and the so named syndrome gained immediate acceptance and enormously widespread popularity, with no real investigation or even question as to its scientific validity."); Immwinkelried, *Shaken Baby Syndrome: A Genuine Battle of the Scientific (and Non-Scientific) Experts*, 46 CRIM. BULL. 1, (Jan.-Feb. 2010) (App. Tab 16) ("In a relatively short time after Caffey's enunciation of the theory, the theory became widely accepted in both medical and legal circles."). SBS was not always defined consistently in the literature -- for example, it often was applied in cases where there was evidence of impact to the head as

well as in cases where there was not. But the general theory was as expressed at Havard's trial -- i.e., shaking caused the brain to move within the skull, which, in turn, caused bridging veins overlying the brain to rupture and tear, which, in turn, caused blood to form within the subdural area between the brain and the overlying protective dura. Consistent with Dr. Caffey's hypothesis, the same acceleration-deceleration mechanism was assumed to cause capillaries within the retina to shear and hemorrhage.

By the early 1990s, SBS -- a diagnosis that an infant who presented with subdural hemorrhage, retinal hemorrhages and no "adequate" explanation for such allegedly traumatic injuries presumptively had been violently shaken or slammed – was an entrenched diagnosis within the medical community. *See* Turkheimer, *The Next Innocence Project: Shaken Baby Syndrome and the Criminal Courts,* 87 WASH. U.L. REV. 1, 3-4 (2009) (App. Tab 32). Because SBS, by its very definition, is a diagnosis of violent shaking, it basically also is a diagnosis of child abuse. Consequently, if the baby died, an SBS diagnosis is, in essence, "a medical diagnosis of murder." Turkheimer, 87 WASH. U.L. REV. 1, 5.

As the SBS diagnosis became more and more entrenched, SBS-based prosecutions and child protective services proceedings became common. By 2000, a National Center for Shaking Baby Syndrome led by a board of prominent physicians had been established to host conferences, distribute educational literature, train law enforcement officers, and support prosecutors in SBS cases. *See* Turkheimer, 87 WASH. U.L. REV. 1, 29. Manuals were published to guide prosecutors in SBS cases, citing Holmgren, *Prosecuting the Shaken Infant Case* in THE SHAKEN BABY SYNDROME: A

MULTIDISCIPLINARY APPROACH 307 (2001) (providing prosecutors with ideas for physician testimony such as: the "expert can testify that the forces the child experiences [from shaking] are the equivalent of a 50-60 m.p.h. unrestrained motor vehicle accident, or a fall from 3-4 stories on a hard surface").[4] Thousands have been convicted. Turkheimer, 87 WASH. U.L. REV. 1, 9-10.

3. SBS Reaches Peak Acceptance, Then Slowly Starts to Unravel

Over the last decade, opposition to SBS has grown from a trickle to a virtual avalanche. The summary below provides a snapshot of this development:

2001

"The shaking hypothesis . . . was seemingly accepted as settled science in 2001 in two documents: a position paper from the National Association of Medical Examiners and an updated position statement from the American Academy of Pediatrics (AAP)." Lloyd, et al., *Biomechanical Evaluation of Head Kinematics During Infant Shaking Versus Pediatric Activities of Daily Living*, 2 J. FORENSIC BIOMECHANICS 1 (2011) (App. Tab 22). The AAP position statement endorsed SBS and suggested that child abuse be presumed whenever a child presented younger than 1 year with intracranial injury and retinal hemorrhages. The paper from the National Association of Medical Examiners (NAME) also endorsed SBS as a reliable diagnosis.

Without dissent, numerous court decisions around the country at this point in time recognized SBS as a valid scientific theory upon which convictions could be sustained. *See, e.g., State v. Sayles*, 662 N.W.2d 1 (Iowa 2003) (App. Tab 29) (both prosecution and

[4] Testimony that is strikingly similar to that provided by Dr. Hayne at Havard's trial. Tr. at 557.

defense medical experts agreed baby died from SBS; defense merely challenged timing); IND. CODE § 16-41-40-2 (providing for the admissibility of SBS testimony). In the 1980s and 1990s, dozens of articles presuming the existence, validity and reliability of the SBS diagnosis filled the medical literature.

While SBS acceptance was at its zenith in 2001, hindsight reveals that the foundations for subsequent challenges to the SBS dogma were published that same year, though they were unquestionably outside of the mainstream. These were fringe opinions that were not widely accepted.

In 2001, Dr. Jennian Geddes, a British neuropathologist, published two papers after studying the brains and eyes of infants who allegedly were the victims of non-accidental head injury, including shaking. In one of the papers, she observed that the subdural hemorrhage and brain findings in infants who died of natural causes appeared to be virtually indistinguishable from the findings in cases of allegedly abused children. *Neuropathology of Inflicted Head Injury in Children I*, 124 BRAIN 1290 (App. Tab 11). In the other, she noted that, although it was assumed in SBS cases that a particular kind of shearing brain injury occurred that was, by definition, traumatic, she found no such evidence of such shearing injury in studying the brains of babies thought to have been SBS victims. She concluded that the beliefs that shaking directly caused the triad (subdural hemorrhage, retinal hemorrhage and edema) "require fresh examination." *Neuropathology of Inflicted Head Injury in Children II*, 124 BRAIN 1299 (App. Tab 12).

At the time, Geddes' work was vilified as unreliable by the child abuse protection community. *See* Block, *Letter to the Editor*, 113 Pediatrics 432 (Feb. 1, 2004) (App. Tab

5) (criticizing Geddes' work and her "totally unfounded opinions not supported by published data other than her own"); Lucey, *Editor Reply* (Feb. 1, 2004) (App. Tab 23) (referring to Geddes' related articles as "junk science").

Also in 2001, John Plunkett, a forensic pathologist in Minnesota, published *Fatal Pediatric Head Injuries Caused By Short-Distance Falls*, 22 AM. J. FORENSIC MED. PATH. 1 (App. Tab 27). In that article, Dr. Plunkett addressed common courtroom testimony that the triad could not be caused by falls unless the falls were from greater than 10 feet. Based on case data from the Consumer Product Safety Commission, he described multiple witnessed short falls that resulted in some or all of the triad injuries, including a **videotaped** fatal fall of a 23 month-old toddler from a plastic gym set (28 inches high) in the carpet-covered garage of her home. The child cried and talked after the fall, but soon vomited, became stuporous, and eventually died. The hospital findings included the SBS symptoms of subdural hemorrhage, retinal hemorrhage and cerebral edema -- all from a 28-inch fall.

2002

In 2002, Dr. Ayub Ommaya and heavyweight co-authors in the field of biomechanics published a lengthy article titled *Biomechanics and Neuropathology of Adult and Paediatric Head Injury*, 16 BRIT. J. NEUROSURG. 220 (App. Tab 26).

Biomechanical engineers, unlike most medical doctors, study the exertion of forces on the human body and the body's tolerances to such forces. In their article, Dr. Ommaya and his co-authors explained that Dr. Ommaya's earlier whiplash study, the one that Guthkelch and Caffey cited in their seminal papers on SBS, had involved not infants,

but adult rhesus monkeys. The monkeys had not been shaken, but instead had been strapped in collision carts and impacted at various speeds from the rear in an effort to gauge human thresholds to whiplash injury in car accidents. (*Id.* at 221-22). They further explained that the Ommaya study actually shown that subdural hemorrhage was caused far more easily by impact to the head than by whiplash and they suggested that the study had been misinterpreted by Guthkelch and Caffey in citing to it as scientific support for SBS. (*Id.*)

With respect to their views on SBS itself, they reasoned that they would expect to see soft tissue injury to the neck as well as spinal injury in any case of shaking sufficient to cause subdural and retinal hemorrhage. (*Id.* at 222). On the subject of retinal hemorrhages, they were directly critical of SBS theory, stating that the "hypothesis" of "retinal hemorrhage caused by orbital shaking has not been tested experimentally" and the "levels of force required for retinal bleeding by shaking to damage the eye directly is biomechanically improbable." (*Id.* at 233).

2003

In about 1999, the medical community embraced a movement to ensure that medical practice was based on the best available medical and scientific evidence, as opposed to overreliance on anecdote and historical practice. This movement was known as the Evidence-Based Medicine (EBM) movement, and it developed repeatable criteria to gauge the evidentiary basis for medical practices and opinions, with Level I being the highest/most reliable evidence and Level IV the lowest/least reliable.

In a 2003 article, Dr. Mark Donohoe classified the medical and scientific SBS literature through 1998 against EBM standards. His conclusions were startling. Although there were 55 published articles on SBS, none exceeded Level III-2 by the end of 1998, "which means that there was inadequate scientific evidence to come to a firm conclusion on most aspects of causation, diagnosis, treatment, or any other matter pertaining to SBS." *Evidence-Based Medicine and Shaken Baby Syndrome Part I: Literature Review, 1966-1998*, 24 AM. J. FORENSIC MED. PATH. 239, 241 (2003) (App. Tab 9). Dr. Donohoe concluded that "there was an urgent need for properly controlled, prospective trials into SBS, using a variety of controls. Without published and replicated studies of that type, the commonly held opinion that the finding of SDH and RH in an infant was strong evidence of SBS was unsustainable, at least from the medical literature." (*Id.*).

<u>2004</u>

Over time, as more literature confirmed cases of retinal hemorrhages in a wide variety of circumstances where no abuse had occurred, SBS advocates increasingly began to claim that, although retinal hemorrhages may be found in circumstances unrelated to abuse, certain types of ocular or retinal hemorrhage were virtually always diagnostic for abuse. In 2004, however, Dr. Patrick Lantz published a case report finding perimacular retinal folds, retinal and optic sheath hemorrhage -- findings that previously had been considered diagnostic of SBS/abuse -- in a child hurt when a television tipped over and hit him on the head. Lantz, et al., *Evidence Based Case Report: Perimacular Retinal Folds from Childhood Head Trauma*, 328 BR.MED. J. 754 (App. Tab 18). Although the article involved a single case, Dr. Lantz reviewed the existing literature that claimed such

ocular findings were diagnostic of SBS and concluded that the literature suffered from the same systemic deficiencies noted by Dr. Donohoe with respect to SBS in general.

In a Letter to the Editor of the journal Pediatrics written the same year, Dr. Lantz stated that the "vested dogma" that the trauma of shaking causes retinal hemorrhages "is a faith-based assumption, not a scientific fact." Lantz, *Junk Science and Glass Houses*, 114 PEDIATRICS 330 (2004) (App. Tab 19).

2005

As noted, in 2002 Dr. Ommaya and his co-authors had suggested that it was improbable that one could shake an infant hard enough to cause intracranial injuries without also causing significant neck and spinal injuries. In 2005, Dr. Faris Bandak, a biomechanical engineer, published a study after investigating that exact hypothesis. Dr. Bandak's study confirmed that the levels of force required to shake a healthy infant hard enough to produce subdural injury would in fact exceed the tolerance of the infant neck, causing near or total neck failure. *Shaken Baby Syndrome: A Biomechanics Analysis of Injury Mechanisms*, 151 FORENSIC SCI. INT. 71, (2005) (App. Tab 2) ("Head acceleration and velocity levels commonly reported for SBS generate forces that are far too great for the infant neck to withstand without injury."). His article thus seriously called into question the assumption that shaking alone could cause the triad of injuries associated with SBS, at least without significant neck or spinal injury. This was a critical study, because such neck and spinal findings are conspicuously absent in SBS cases, including the case of Chloe Britt.

As these evidence-based contributions to the medical and scientific literature began to build, SBS advocates dismissed them as failing to acknowledge the literature establishing that a multitude of caretakers over the years had confessed to causing the child's injuries through violent shaking. Perpetrator confessions, the SBS advocates contended, proved the validity of the diagnosis. But when Dr. Jan Leetsma, a neuropathologist at the Children's Memorial Hospital at Northwestern University closely examined the so-called SBS confession literature, he found that in the vast majority of the "confession" cases there was clear evidence of impact injury to the head -- i.e., the child's injuries likely had not been caused by shaking at all or, at least, were likely partially attributable to an impact. He found that the confession literature only recorded 11 "pure" shaking cases and several of those were questionable because no details were given about the degree of shaking, for how long, or about the circumstances surrounding the confession. For example in some of the cases where the caretaker admitted shaking the infant, it turns out the "admission" was of bouncing the baby during play or attempts to revive the baby when it was found unconscious.[5] Leestma, *Case Analysis of Brain Injured, Admittedly Shaken Infants*: *54 Cases*, 26 AM. J. FORENSIC MED. PATH. 199 (2005) (App. Tab 20). Dr. Leestma concluded that "confessions" did not provide an adequate basis to establish the reliability of the SBS diagnosis.

[5] In Havard's case, the State repeatedly draws emphasis to a similar "confession," when Jeffrey stated under police questioning that he "shook her, but not hard" after she fell and struck the toilet. Motion Exh. "F," Interview Transcript at pp. 5-6, 12.

2006

In 2006, the National Association of Medical Examiners officially withdrew its 2001 position paper on SBS. At its annual meeting, presentations were made with titles such as *"Where's the Shaking?: Dragons, Elves, the Shaken Baby Syndrome and Other Mythical Entities"* and *"The Use of the Triad of Scant Subdural Hemorrhage, Brain Swelling, and Retinal Hemorrhages to Diagnose Non-Accidental Injury Is Not Scientifically Valid."*

In a follow-up to his article the year before on confessions, Dr. Leestma lamented that the medical community's acceptance of SBS theory had resulted in a lack of studies into other potential causes of the SBS triad of findings:

> It should be apparent that from virtually every perspective many flaws exist in the theory that shaking is causative. No case studies have ever been undertaken to probe even a partial list of possible confounding variables/phenomena, such as the presence of intracranial cysts or fluid collections, hydrocephalus, congenital and inherited diseases, infection, coagulation disorders and venous thrombosis . . . or recent or remote head trauma. Until and unless these and probably many more factors are evaluated, it is inappropriate to select one mechanism only and ignore the rest of the potential causes.

Leestma, *"Shaken Baby Syndrome": Do Confessions by Alleged Perpetrators Validate the Concept*, 11 J. AM. PHYS. AND SURGEONS 14, 15-16 (2006) (App. Tab 21).

2007

Echoing Dr. Leestma's call for greater consideration and investigation into other conditions that would mimic the SBS findings, Dr. Patrick Barnes compiled and published a lengthy paper that included a five-page summary of known non-traumatic

causes that mimicked SBS. Barnes, et al., *Imaging of the Central Nervous System in Suspected or Alleged Nonaccidental Injury, Including the Mimics*, 18 TOP MAG RESON IMAGING 53 (App. Tab 3).

<u>2008</u>

Despite these advances in the medical and scientific literature that served to undermine SBS theory, SBS prosecutions continued seemingly unabated, with at most passing recognition that the SBS theory had become at all controversial. An abrupt change came in 2008.

In Ontario, Canada, there had been several documented, publicized instances of mistakes, wrongful accusations and even wrongful convictions in childhood death cases in Ontario, with a particular focus on cases involving the Hospital for Sick Children, in Toronto. This led the Ontario government to establish The Inquiry Into Pediatric Forensic Pathology in Ontario. Ontario Court of Appeals Justice Stephen Goudge was appointed as its Commissioner. Commissioner Goudge held hearings and gathered evidence for more than a year before issuing his several hundred page Report on October 1, 2008. Goudge, INQUIRY INTO PEDIATRIC FORENSIC PATHOLOGY IN ONTARIO – REPORT Volume 3 – Policy and Recommendations [6](2008) (App. Tab 13).

The Goudge Report observed that "one of the deepest controversies surrounding pediatric forensic pathology concerns shaken baby syndrome." (*Id*. at 527). The Report noted the "evolution in forensic pathology in this area" had progressed such that **"the**

[6] This is a four volume document. In order to avoid unnecessarily bulking up the record, Havard is only including the volume pertinent to the issue stated. If the Court desires the entire document, it can be made a part of the record.

predominant view is no longer that the triad on its own is diagnostic of SBS. Instead, the issue is fraught with controversy.” (*Id.* at 528 (emphasis added)). The Report went on to conclude that “our systemic examination has identified this particular area of forensic pathology as one where change has raised the real possibility of past error.” (*Id.* at 531). Commissioner Goudge called for a review of SBS convictions from 1986-2006 because **“[t]he significant evolution in pediatric forensic pathology relating to shaken baby syndrome” and “the concern that, in light of the change in knowledge, there may have been convictions that should now be seen as miscarriages of justice.”** (*Id.* at 533) (emphasis added)). Ontario undertook that review.

Also in 2008, the Wisconsin Court of Appeals granted post-conviction relief to a woman who had been convicted in 1996 of murdering an infant in her care. *Wisconsin v. Edmunds*, 746 N.W.2d 590 (Wis. Ct. App. 2008) (App. Tab 34). The court did so because “a significant and legitimate debate in the medical community has developed in the past ten years over whether infants can be fatally injured through shaking alone . . . and whether other causes may mimic the symptoms traditionally viewed as indicating shaken baby or shaken impact syndrome.” *Id.* at 596. The *Edmunds* case is discussed further in Havard’s original Motion and herein.

2009

The Committee on Child Abuse and Neglect of the American Academy of Pediatrics has long been dominated by staunch SBS advocates. In 2009, the Committee nevertheless felt compelled to update its 2001 policy statement, reasoning that “advances in the understanding of the mechanisms and clinical spectrum of injury associated with

abusive head trauma compel us to modify our terminology to keep pace with our understanding of pathologic mechanisms." Christian, et al. *Abusive Head Trauma in Infants and Children, Committee on Child Abuse and Neglect, News From the Field* (June 2009) (App. Tab 8). The Committee continued to insist that the confession literature supported shaking as a mechanism of injury, but nevertheless recommended that physicians use the term "abusive head trauma" (AHT) rather than Shaken Baby Syndrome, a tacit admission that the SBS diagnosis and mechanism of shaking had become highly controversial.

2010

By 2010, a debate was raging about SBS, yet there was growing consensus that: (1) brain swelling previously thought attributable to neurons sheared from shaking actually was the result of hypoxia (lack of oxygen to the brain)[7] from whatever cause and (2) there are many non-traumatic causes of subdural hemorrhage. But SBS (now "AHT") advocates insisted that retinal hemorrhages are a reliable marker of child abuse, particularly if they were multi-layered, extended out to the ora serrata and/or were accompanied by optic nerve sheath hemorrhage. The retinal hemorrhage hypothesis was severely undermined in February 2010.

Unlike most medical examiner's offices, the Dallas Medical Examiner's Office routinely removed eyes from corpses for evaluation by consulting ophthalmologic pathologists. In order to assess the hypothesis that certain eye findings were associated

[7] In Havard's case, Chloe Britt was oxygen-deprived for a significant amount of time (approximately 45 minutes to 1 hour) between when her mother discovered her blue and not breathing and when she was successfully intubated at the hospital.

with child abuse and SBS, the office studied the eyes and records in cases involving deceased children. On February 24, 2010, Dr. Evan Matshes reported on the study. He explained that "[f]or many years, the dogma of pediatric forensic pathology was 'retinal and optic nerve sheath hemorrhages are pathognomonic of abusive head injury,' including shaken baby syndrome. Growing controversy surrounding the existence of SBS led to questioning of that dogma." *Retinal and Optic Nerve Sheath Hemorrhages Are Not Pathognomonic of Abusive Head Injury*, AMERICAN ACADEMY OF FORENSIC SCIENCES (Feb. 24, 2010) (App. Tab 24). The study revealed that retinal hemorrhages are commonly found in natural and accidental deaths, as well as homicides, and identified a statistically significant relationship between retinal and optic nerve sheath hemorrhage and the restoring of a perfusing cardiac rhythm following advanced life support and cerebral edema, regardless of etiology. In other words, where there is hypoxia, increased intracranial pressure and prolonged resuscitation efforts, retinal hemorrhages of all kinds follow; such hemorrhages are not diagnostic of nor caused directly by shaking. The study concluded that eye evaluations are of "limited value" in child death investigations. (*Id.*).

In 2010, Rubin Miller, a biomechanical engineer, and Marvin Miller, a pediatrician and geneticist, published an article that noted that male babies were diagnosed as victims of SBS and traumatically inflicted brain injury much more frequently than females. *Overrepresentation of Males in Traumatic Brain Injury of Infancy and in Infants with Macrocephaly: Further Evidence that Questions the Existence of the Shaken Baby Syndrome*, 31 AM. J. FORENSIC MED. PATH. 165 (App. Tab 53) (App. Tab 25). The authors also noted that by a very similar margin male babies

more frequently suffered subdural hemorrhage from non-SBS causes. The authors strongly criticized the evidentiary basis for SBS and explained why male babies can be expected to suffer intracranial bleeding from non-traumatic causes. They recommended that less focus be given to trying to support the failed SBS construct.

2011

Dr. Waney Squier is a neuropathologist and lecturer at Oxford. In a 2011 article she reviewed the status of the SBS science. Squier, *The "Shaken Baby" Syndrome: Pathology and Mechanisms*, ACTA NEUR. 1 (Sept. 24, 2011) (App. Tab 28). Many of her findings bear directly on this case:

· ***SBS Is Not Proven By Either Confessions or Witnessed Shakings***

The SBS literature contains only three published reports of witnessed shakings. All three infants were already collapsed before the shaking event. (*Id*. at 2). Despite clear evidence in the literature that confessions are not reliable basis for validating SBS, SBS advocates, as the State in this case, nonetheless continue to rely heavily on such "confessions" as "proof" of the shaking hypothesis. (*Id*. at 3).

· ***Shaking Does Not Generate Enough Force to Cause Intracranial Injury***

Biomechanical tests done over the course of nearly two decades have confirmed that the forces generated by shaking are: (1) insufficient to cause whiplash intracranial injury and (2) less than those the head endures from an impact after a short fall Accordingly, "shaking is no longer a credible mechanism" for the SBS findings. (*Id*. at 2-3).

· ***There Are Many Non-SBS Causes of SBS Symptoms***

The differential diagnosis of a baby presenting with the SBS triad is now "wide." It includes alternative explanations that "are often overlooked," particularly cortical vein and/or sinus thrombosis (CVT). (*Id*. at 3, 15-17, 19). CVT often presents with symptoms such as "lethargy, poor feeding, vomiting or seizures." (*Id*. at 17).

Similarly, physicians often fail to diagnose early non-traumatic subdural bleeding (from whatever cause) because the symptoms are "non-specific," such as vomiting, irritability, progressive enlargement of the head and, "ultimately, a seizure." (*Id*. at 10).

· ***Retinal Hemorrhages Are Not A Reliable Marker of SBS***

"An important and almost invariably overlooked part of the clinical history in babies presenting with the triad is a prolonged period of hypoxia, often 30 min or more between the baby being found collapsed and arriving in hospital and receiving advanced resuscitation. . . . Prolonged hypoxia and resuscitation have been shown to be significantly associated with retinal hemorrhages and may also explain the [brain injury] in babies with the triad." (*Id*. at 9). In Havard's case, Chloe Britt had a period between 45 minutes to one hour of hypoxia and received prolonged advanced resuscitation, including multiple CPR efforts from her mother and multiple attempts at intubation by emergency room medical providers.

All aspects of intraocular hemorrhage have been shown to occur without shaking. Natural diseases greatly outnumber inflicted injury in association with retinal hemorrhages in infants under 1 year of age. (*Id*. at 12). Studies confirm that physicians

check for retinal hemorrhages far more often when they suspect child abuse than when they do not. (*Id*. at 11-12).

Importantly, the literature and studies that Dr. Squier cited in support of these propositions all were published after Jeffrey Havard was accused of homicide and after his trial.

4. Even for Most SBS Advocates, the Approach Has Changed

The preceding sections document the dramatic change in understanding about SBS. That debate has had a particular, very practical consequence that merits highlighting against the backdrop of Chloe Britt's death and Havard's related conviction and death sentence.

Even among most steadfast SBS believers, there has been a move away from SBS as a "rule-in" diagnosis – if you find the triad, it is SBS unless proven otherwise -- to a "rule out" diagnosis -- it is SBS only if all other potential causes are thoroughly explored and can be ruled out. In 2002, however, the "rule-in" approach clearly ruled. Thus, consistent with the practice then, medical providers and Dr. Hayne did not extensively pour over Chloe's medical records, did not involve a neuropathologist or an ophthalmologist, and did not make any meaningful effort to determine whether Chloe's past medical history might give a clue as to symptoms that were assumed to be related to SBS. The record demonstrates that they saw retinal and subdural hemorrhage and reached a firm conclusion of SBS without considering any other alternatives. In his post-mortem evaluation, Dr. Hayne did the same.

V. THE NEW EVIDENCE CASTS GRAVE DOUBTS ON HAVARD'S GUILT AND THERE IS A REASONABLE PROBABILITY THAT IT WOULD CAUSE A JURY TO REACH A DIFFERENT VERDICT

Contrary to the State's assertion, the new evidence in this case—(1) the paradigm shift in the medical and scientific communities concerning SBS and how the new mainstream analysis of SBS fits into this case and (2) Dr. Hayne's new opinions concerning SBS with respect to the death of Chloe Britt—is material. One need only compare what the jury from Havard's 2002 trial heard with respect to SBS and what a jury in a new trial would hear to see how the new evidence cast grave doubts on the reliability of Havard's conviction.

What the 2002 Jury Heard About SBS

As demonstrated in detail in Havard's original Motion, the following is a summary of the evidence and argument that the jury heard regarding SBS during Havard's 2002 trial:

- Testimony from witnesses was used to establish that Chloe Britt was a normal, healthy baby prior to her death.
- Dr. Ayesha Dar observed "hemorrhages in [Chloe's] retina . . . which is so very specific of this kind of injury . . . [b]eing a shaken baby. **Nothing else causes that** . . ." Tr. at 415 (emphasis added).
- Dr. Laurie Patterson also noticed the retinal hemorrhaging, describing it as "indicative . . . of a shaken baby type thing . . ." Tr. at 407-408.
- ER Nurse Patricia Murphy saw that Chloe had injuries "consistent with . . . Shaken Baby Syndrome." Tr. at 396.
- Dr. Hayne's autopsy report concluded that Chloe's cause and manner of death was "consistent with Shaken Baby Syndrome." Motion Exh. "G," Final Report of Autopsy.

- Dr. Steven Hayne reiterated Dr. Patterson's testimony that, at the time of her death, the child had both retinal and brain hemorrhaging. Tr. at 407-408, 415, 420, 551-56.
- Dr. Hayne also explained that the subdural hemorrhaging indicated that the child suffered from ripped "small bridging [blood] vessels," likely caused by the child being shaken violently. Tr. at 552.
- Dr. Hayne said that blood-pooling in the brain indicated trauma and injury. Tr. at 552.
- Dr. Hayne also asserted that Chloe's symptoms – subdural hemorrhage and retinal hemorrhage –were "consistent with the shaken baby syndrome." Tr. at 556-57. Dr. Hayne further clarified: "It would be consistent with a person violently shaking a small child. Not an incidental movement of a child, but violently shaking the child back and forth to produce the types of injuries that are described as shaken baby syndrome, which is a syndrome known for at least forty-five years now. . . .We're talking about very violent shaking." Tr. at 556-57. He further explained to the court and the jury that the "classic triad for shaken baby syndrome" – the three primary indicators of SBS – is the presence of subdural hemorrhage, the presence of retinal hemorrhage, and the absence of other potentially lethal causes of death. Tr. at 556.
- Dr. Hayne concluded that Chloe's death was homicide caused solely by "violent shaking". Tr. at 557.
- Dr. Hayne described SBS as a well-established diagnosis, acknowledged for many decades.

- According to Dr. Hayne, the child's symptoms were exclusively diagnostic of SBS: "[b]oth inclusionary findings were present. The subdural hemorrhage, the retinal hemorrhage, and also there was an exclusionary component. I did not find any other causes of death." Tr. at 557. Dr. Hayne described the injuries resulting from the shaking in this case as similar to those from "motor vehicle crashes, falls from significant heights and the like." Tr. at 557. He concluded that Chloe's death was a homicide caused by "violent shaking" committed by "another person". Tr. at 557.
- Dr. Hayne noted that "there were no contusions or bruises and no tears on the brain itself . . . [and] there were no [skull] fractures . . . [or] breaking of the bones composing . . . [any part of the skull]." Tr. at 554-55.
- Dr. Hayne's testimony is devoid of any analysis of the accidental dropping of Chloe as described by Havard. No other witness tendered or qualified as an expert witness analyzed Havard's explanation of an accidental fall onto a hard surface.
- Havard's defense team presented no evidence—and certainly no expert medical evidence—to contest the State's theory of Shaken Baby Syndrome.
- In closing argument, the State urged: "Remember the testimony of Dr. Hayne who told you that this baby died of head trauma of being shaken violently. A violent shaking would be the equivalent of being in a car wreck, of being dropped from a high height is the injury that this baby suffered to her head. Again shaken violently. And after having been sexually penetrated." Tr. at 611-12. The prosecutor continued: "This baby was shaken to death having been sexually

assaulted, and ladies and gentlemen, don't try to understand it. Don't try to figure out how it could have happened. Just know what did happen and render your verdict of guilty of capital murder because that's what this man is over there for doing that to this child." Tr. at 612.

- The State's closing argument concluded by reiterating "what Dr. Hayne said would have to happen for this shaking to cause the injuries that baby had," another reference to the alleged force of the shaking described by Dr. Hayne. Tr. at 624.
- The State concluded its closing argument with this overall theory: "[H]e hurt that child more than he intended to in this sexual battery. He hurt her. Your heard him talking about how she was injured in her rectal area, and what does a child do—what's the only defense an infant baby has got when something like that happens to them? They scream. They don't just cry, folks. They scream in pain. When they're in pain, they scream. And what's he going to do then? She's screaming. He's injured her. Stop her. I got to stop her from screaming. Well, he stopped her all right. She ain't screaming now. And then what does he do? Now, he's not only injured her rectally, but he shook her so hard that results in her death." Tr. at 626.

In short, the jury was told that the SBS symptoms allegedly observed by medical providers and Dr. Hayne could lead to only one conclusion: homicide by shaking alone. No other evidence was adduced at trial. Simply put, Havard's 2002 trial jury was told unequivocally that the cause and manner of death was Shaken Baby Syndrome, a well-established and non-controversial diagnosis. Period.

What a New Jury Would Hear About SBS

In Havard's Motion, he details with supporting affidavits, the new evidence regarding SBS. If Havard's case was tried today, the following is a summary of what the jury would hear:

- SBS has moved from a recognized, mainstream diagnosis to a diagnosis that is highly controversial and routinely questioned.
- Many of the previously described "unique" SBS markers have been proven to not be confined to being caused by SBS (for instance, retinal hemorrhages).
- Dr. Hayne, who previously affirmed the long-standing acknowledgement of the SBS diagnosis, now acknowledges recent advances in the scientific and medical communities in the field of SBS. In particular, Dr. Hayne acknowledges advances in the field of biomechanics, finding that shaking alone could not have produced enough force to kill Chloe Britt.
- Dr. Hayne's trial testimony regarding the severity of shaking Chloe endured (equivalent to a fall from a great distance or forces present in high speed motor vehicle collisions) has been disproved by objective science (i.e., falls from short distances, especially onto hard surfaces can produce significant, fatal injuries).
- Havard now has multiple expert witnesses who would testify on his behalf that Chloe's death was definitively not caused by shaking alone and that the objective, forensic evidence supports Havard's account of a short accidental fall onto a hard surface.
- Dr. Michael Baden concludes "to a reasonable degree of medical certainty, that Chloe Britt's autopsy findings are entirely consistent with having occurred as a

result of a short accidental fall, as Mr. Havard has consistently described, and are not consistent with the baby having been shaken to death."

- The external and internal injuries found on Chloe Britt "could be caused by the impact of a short fall as described by Mr. Havard," according to Baden.
- Dr. Baden notes that Chloe Britt did not have other injuries that are typically associated with violent shaking injuries in infants.
- Dr. Baden states that retinal folds are not solely indicative of SBS but can "occur as the result of many types of innocent head trauma."
- Dr. Janice Ophoven has conducted an in-depth anlaysis of Chloe's birth and pediatric records and found multiple instances of chronic issues that are often mistaken for SBS symptoms.
- Dr. Ophoven states that "[t]here is no medical or scientific support" for Dr. Hayne's comparisons of the forces involved in the shaking death of Chloe Britt as the equivalent of those seen in high speed car collisions and falls from great heights.
- Dr. Ophoven rejects any finding of shaking as causing the death of Chloe Britt. Rather, the available evidence supports a finding of death by impact, such as that resulting from a short distance fall onto a hard surface.
- Dr. George Nichols opines that, at the time of Havard's trial in 2002, many medical experts would have agreed with the SBS conclusion found and expressed in 2002 by Dr. Hayne.

- Dr. Nichols describes academic research that casts "serious doubt on the conclusions that retinal hemorrhages and subdural hematomas in infants are specific signs of vigorous shaking."
- Dr. Nichols describes how advances in medicine have led to recognition of other causes for what have traditionally been considered SBS symptoms—such causes include "various infections" (from which Chloe suffered during her young life) and "simple impact trauma" (as caused by a short fall onto a hard surface).
- Dr. Nichols also takes to task Dr. Hayne's descriptions of the forces involved in causing Chloe's injuries, stating that it "is now generally agreed by most forensic pathologists and biomechanical scientists and engineers that such comparisons are without scientific merit and should not be made."
- Dr. Chris Van Ee, a biomechanical engineer, has conducted research of many of the scientific underpinnings of SBS theory and have found many of them lacking or completely unfounded.
- Dr. Van Ee opines that "short distance falls of three feet or less can result in serious, and sometimes fatal, head injury" and that "low level falls can result in serious and fatal head trauma including subdural and retinal hemorrhage." Dr. Van Ee also specifically notes that a short distance fall head-first onto a hard surface such as a porcelain toilet tank could cause "a severe, or fatal, head injury."
- Dr. Van Ee opines that shaking—advanced at the 2002 trial as the sole cause and manner of death—is a "less likely" explanation for Chloe's injuries than the short distance accidental fall onto a "particularly hard surface" as described by Havard.

- Dr. Van Ee also criticizes Dr. Hayne's trial testimony describing the forces involved in producing Chloe's injuries as equivalent to a multi-story fall or high speed motor vehicle accident as "without scientific foundation."
- Analysis of the short distance accidental fall as described by Havard by renowned experts demonstrates that Chloe's injuries could have been caused by the short distance, accidental fall onto a hard surface as consistently described by Havard.
- Dr. Hayne would acknowledge that Chloe's injuries and death could have been caused by simple "blunt force trauma" such as could be caused by a fall, even at a short distance, onto a hard surface (porcelain toilet tank).
- Testimony regarding Chloe's medical history as derived from her birth and pediatric records reveals chronic issues that can cause symptoms that were historically attributed to SBS.

A comparison of what Havard's trial jury was told about SBS and what a jury would hear about SBS in a modern trial is striking. The differences are significant and have direct bearing on Havard's conviction and death sentence, since SBS alone was the sole theory of cause and manner of death advanced by the State. With the new evidence detailed in the original Motion and herein, grave doubts exist as to Havard's guilt. Thus, this Court should vacate Havard's conviction and sentence or, at the very least, grant Havard permission to file his PCR petition in the trial court, so that further proceedings can be held.

VI. REBUTTAL TO THE STATE'S ARGUMENTS REGARDING THE APPLICATION OF RULE 60

Petitioner has detailed in the Petition the rationale for his request for relief under Rule 60. (*See* Petition at pp. 38-40), and will not repeat those arguments here. However, in rebuttal to the State's Response on this issue, Petitioner would simply like to clarify what he is seeking with

respect to the request for Rule 60 relief. Petitioner is asking for relief from this Court's prior judgments, and specifically requests this Court to recall the mandate issued in Petitioner's initial PCR proceedings and re-open those proceedings, in light of the newly-discovered evidence. The Court is certainly empowered to do so in the interest of justice, particularly in a case involving the serious and irreversible penalty at issue here: death. *See, e.g.,* En Banc Order, *Byrom v. State*, No. 2014-DR-00230-SCT (Miss. Mar. 31, 2014). Given all of the questions surrounding the conviction and sentence of Jeffrey Havard, justice would only be served by this Court granting extraordinary relief and granting Havard a new trial. However, in the alternative, Petitioner requests leave to proceed with further post-conviction proceedings in the trial court.

VII. CONCLUSION

As demonstrated in the Petition and herein, Petitioner has set forth claims based upon new evidence which, if proven, would entitle Petitioner to relief. In these claims, Petitioner has raised facts, which this Court must assume at this stage are true, sufficient to warrant an evidentiary hearing. None of these claims are procedurally or otherwise barred from consideration. Therefore, Petitioner is entitled to the relief requested in the Petition, and is certainly entitled to file his proposed Motion for Post-Conviction Relief in the Circuit Court of Adams County. The Motion should, accordingly, be granted.

Respectfully submitted, this the 24th day of April, 2014.

Respectfully submitted,

JEFFREY HAVARD, PETITIONER

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CERTIFICATE OF SERVICE

I hereby certify that I filed the foregoing with the MEC filing system, which sent notice to the following:

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This the 24th day of April, 2014.

/s/ Graham P. Carner
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