

# Shaken Baby Syndrome: actual innocence petition

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### Abstract

In this hypothetical case the state's entire prosecution rested on the Rule 702, R. Evid. Medical Testimony that the head injury was caused by SBS (Shaken Baby Syndrome), a biomechanical hypothesis for explaining head injuries. Although this alleged event was not witnessed by anyone, the state posited this hypothesis as the only explanation for the injuries. The rule 702 experts also testified that the head injury could not be caused by a minor fall, also known as the biomechanical LMF (lethal minor fall) theory.

The history of medicine is replete with examples of practices that, during their times, were generally accepted by a consensus of medical opinion, only to be later rejected as useless, potentially harmful, or sometimes even lethal, such as the practice of bloodletting, blistering, or purging of the bowels with mercury-containing calomel of earlier times, or more recently with practices of lobotomies or electric shock treatments. The same processes are continuing today, with more recent practices provided in the medical literature.

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*Keywords:* Shaken Baby Syndrome, biomechanics, medical opinion, Habeas Corpus, innocence petition

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Petitioner's Name:

Petitioner's Address:

In Propria Persona:

UNITED STATES DISTRICT COURT,  
 DISTRICT OF \_\_\_\_\_

Petitioner \_\_\_\_\_ v. PETITIONER \_\_\_\_\_  
 (Respondent)

No. C.V.

MEMORANDUM TO HABEAS CORPUS  
 ACTUAL INNOCENCE PETITION

COMES NOW \_\_\_\_\_ Petitioner in Propria Persona to the above entitled action, pursuant to Rule 2, Rules Governing 2254, and hereby respectfully submits his memorandum of facts and authorities in support of his habeas corpus petition filed this same day.

Petitioner supports this memorandum with Exhibits #1-24, that include the pro bono findings from his expert panel (Exhibit # 14), which show by "clear and convincing" evidence that petitioner is innocent of all criminal charges.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2008

By \_\_\_\_\_

### DOCUMENT INDEX FOR HABEAS FILING

Shaken Baby Syndrome Cover Letter  
 Habeas Memorandum on Shaken Baby Actual Innocence  
 Habeas Memorandum Exhibits

### I. MEMORANDUM OF POINTS AND AUTHORITIES

In this hypothetical case the state's entire prosecution rested on the Rule 702, R. Evid. Medical Testimony that the head injury was caused by SBS (Shaken Baby Syndrome), a biomechanical hypothesis for explaining head injuries. Although this alleged event was not witnessed by anyone, the state posited this hypothesis as the only explanation for the injuries. The rule 702 experts also testified that the head injury could not be caused by a minor fall, also known as the biomechanical LMF (lethal minor fall) theory.

Since the conviction, Petitioner found that the biomechanical branch of science is the one and only discipline with the expertise, experimental data, and responsibility to determine if a biomechanical event such as human shaking (SBS) or lethal minor falls (LMF) can or cannot cause potentially fatal injuries such as subdural hematoma (SDH). No other medical subspecialty has the necessary experience or mathematical expertise involved in the field of biomechanics (mass, force, velocity, acceleration, etc.) as applied to head injuries.

The history of medicine is replete with examples of practices that, during their times, were generally accepted by a consensus of medical opinion, only to be later rejected as useless, potentially harmful, or sometimes even lethal, such as the practice of bloodletting, blistering, or purging of the bowels with mercury-containing calomel of earlier times, or more recently with practices of lobotomies or electric shock treatments. The same processes are continuing today, with more recent practices provided in the medical literature (Exh. #2 at p. 1292, Exh. #19 at p. 20.)

Recently the biomechanical community came forward to inform courts in this and other western nations that the medical community was misguided in the biomechanical SBS and LMF opinions, exposing to the medical and legal communities their mountain of experimental data that prove the following:

Thirty years ago they (the biomechanical community) had initially rejected the Shaken Baby Syndrome hypothesis due to lack of evidence and at the same time accepted the LMF theory as a valid hypothesis. Since these initial findings the biomechanical discipline has repeatedly tested both the SBS and LMF hypotheses. In case of the former, it has been proven with scientific certainty that humans lack the strength to cause fatal brain injuries from manual shaking; that if the violent shaking supposedly taking place did actually occur, it would result in a high incidence of spinal paralysis from neck injuries in infants, which has never been reported in association with SBS, and that LMF can be lethal, all pursuant to a series of 1987-2007 studies.

Confronted with the scientific data from the biomechanical branch that governs SBS/LMF, many pediatricians, forensic pathologists, and ophthalmologists who formerly endorsed SBS and rejected LMF in court have now reversed their positions in these areas. Finally, within the biomechanical discipline itself, there are no disputes today, nor have there been any disputes in the last 30 years over the invalidated SBS hypothesis or verified LMF theory.

Once notified of the foregoing by the medical or biomechanical experts, and notified of the fact that an actual SBS has never been witnessed or validated, a tsunami of case reversals began. England started by sua sponte reviewing and reversing SBS convictions. This was followed by the states of Arizona, Texas, California, Wisconsin, and Missouri, all reversing SBS convictions due to Frye, Jackson, or new evidence.

This petition follows and is supported by the newly exposed scientific tests/studies (Exh. #1-13), expert opinions (Exh. #14), and the new medical papers that now reject SBS and endorse LMF. (Exh. #18-24). This new scientific evidence supports Petitioner's *Sculp v. Delo*, 115 S. Ct. 851(1995) "gateway" claim that his 14th Amend. Right to fundamental fairness under *Medina*, infra, and *Brecht*, infra, was violated, with or without the *Daubert*.

This newly exposed science further proves his "substantive" or "freestanding" claim of "actual innocence" under *Herrera*, infra, *House v. Bell*, 126 S. Ct. 2064 (2006), *Smith v. Baldwin*, 466 F. 3d 805, Fn 4, Fn. 37 (9th c.v. 2006) (mandating that innocence claims be decided), and when ripe his fungible *Jackson*, infra, claim, with or without the *Daubert* error.

## II. FACTUAL SCIENTIFIC STUDIES PROVE INNOCENCE

For the reasons that follow, the Petitioner asserts that the current SBS hypothesis that the states used to convict the Petitioner is "opinion" evidence put forth by doctors with no training in the biomechanical science, that said hypothesis has repeatedly been tested in controlled experiments by qualified scientists who conclusively proved it to be a scientific impossibility.

### A. The State's Wild Medical Hypothesis

[Insert facts showing the State's SBS opinions and/or minor falls and/or the alternate explanation of vaccine reactions.]

### B. Biomechanical Science Governs in Shaken Baby Syndrome and Lethal Minor Falls Issues as the Only Specialty with Expertise in These Areas

Although doctors often offer their opinions on SBS and lethal minor falls (LMF) to the Courts, most of this testimony is contrary to the governing scientific findings of biomechanical studies in this field, since both SBS and LMF are governed by laws of biomechanics. Once this area of expertise is contrasted with other medical specialties with no training in the laws of biomechanics (involving the mathematics of mass, velocity, acceleration, and resultant force), it will become clear to the Court that no qualified expert witness dispute exists.

Regarding biomechanics itself: "Biomechanics is the subset of the scientific discipline of mechanics that deals with the forces, motions, deformation, ruptures, fractures, breaks, etc. of living tissue. The science of biomechanics applies at the microscopic ... and the macroscopic (tissue, organ, full body, etc) scales. "Injury biomechanics is the application of biomechanics to the understanding of the causation and mechanism of injury." (Quotation of F. Bandak, Director, Accident Reconstruction Division, U.S. National Highway Traffic Safety Administration, Professor of Engineering and Applied Sciences, George Washington University.) (Refer to 2005 study falsifying SBS, Exhibit #10).

Because they have very different training, biomechanicians and physicians perform very different roles. For example:

"Biomechanicians and physicians evaluate trauma in fundamentally different ways. Biomechanician constructs or accepts a particular system, obtains its physical and geometric characteristics, applies a specified and quantifiable input (load), and then determines the output using experimental, analytical, and numerical techniques. A physician, in contrast, sees the end product of signs and symptoms, and relies primarily if not exclusively on experience and observational case material to diagnose and treat. A biomechanician traces a continuous path from cause to effect using the laws of nature, tries to determine the specific mechanism of any injury, and attempts to either establish or eliminate an ultimate mechanical cause." (Quotation from Professor Werner Goldsmith, University of California at Berkeley, and forensic pathologist and injury causation specialist, Dr. John Plunkett, joint 2004 Shaken Baby Syndrome falsification study.) (Refer to Exh. #7)

In short, biomechanical engineers test, validate, and/or falsify injury mechanisms while doctors care for patients who have been injured. Since these disciplines deal with injuries in very different ways, with biomechanical engineers determining what events cause an injury and doctors determining what treatment is appropriate. An M.D. is no more qualified to affirm the validity of SBS/LMF injury mechanisms than a biomechanical engineer is qualified to write prescriptions or perform surgery. (See Exh. #14) Thus, if biomechanical testing falsifies SBS while validating LMFs as a cause of subdural hemorrhage, an M.D. can no more dispute or override these scientific findings than a biomechanical engineer can override a physician's prescriptions or recommendations for surgery. In both instances, the disputing party is not qualified to engage in the dispute.

## 1. M.D. Evidentiary Standards

As the habeas expert panel will explain, the M.D.s who testified, like most M.D.s everywhere, had no formal training in biomechanics, as this science is not part of their medical school or residency training. While a few physicians, such as Dr. John Plunkett, have educated themselves in biomechanics, they are the exception to the rule.

Since doctors who testified at the Petitioner's trial were not trained in injury biomechanics, they by necessity relied upon other people's work and opinions. In so doing, they failed to follow the applicable EBM (evidence based medicine), AMA (American Medical Association) and international scientific QER (Quality of Evidence Ratings) standards. Had they followed these standards, no criminal charges would have been brought, since the best quality literature falsifies SBS.

The medical community is bathed in an ocean of literature. Much of this literature consists of case studies that are limited in scope and on hypotheses that are based on the ideas of others. To sort through this information, which ranges from rhetoric to research, the medical community uses EBM standards, which are endorsed by the AMA. Under EBM standards, in considering the literature and making a diagnosis, doctors are required to employ the "highest quality evidence" available. (See Exh. #2) These requirements promote reliability, much like the scientific QER standards. (See Exh. #6, the Donohoe review paper, pages 239-240, discussing QER tiers and *Daubert*, infra.)

In applying these standards, it is necessary for doctors to differentiate between "opinion" and "science." In the scientific community, opinion literature consists of proposed hypotheses. For example, a medical doctor may publish a retrospective study of alleged SBS cases and suggest that some of the medical findings support an SBS hypothesis. This "opinion" paper may be validly considered by another M.D. unless higher quality literature is available. A scientifically controlled study that tests this "hypothesis" would be an example of higher quality evidence, as the Supreme Court noted in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* 509 U.S. 570, 11 2786, 2796-97 (1993):

"Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified: indeed, this methodology is what distinguishes science from other fields of human inquiry."

A published paper that tests the hypothesis is higher quality evidence and would be given controlling status. If the initial tests support the hypothesis, it would become a scientific theory, subject to further scrutiny and broader validation. If the initial tests falsify the hypothesis, the hypothesis has been disproven and is – or should be – immediately rejected by the scientific community.

In summary, since the medical community must use the best quality literature that is available to assist in decision making, M.D.s who provide biomechanical diagnosis must base their opinions on the biomechanical literature and research. They must also bear in mind that a "well-done" scientific study will always trump an "opinion" paper.

## 2. Rejection of SBS by the Governing Scientific Community

As the habeas expert panel will point out, as astonishing as it may seem, after 30 years of accusations, there has never been a reported case of SBS in which the fatal shaking was witnessed or videotaped. This is unlike all other forms of abuse. Since the hypothesis was advanced in 1972-1974, the SBS has never been scientifically validated. Many doctors and scientists rejected it from the beginning, and it has been rejected and falsified not once but many times. (See Exh. #14) Despite these scientific findings, some members of the medical community continued to advocate the SBS hypothesis. This entire body of "opinion" papers has been rejected by many physicians, as well as the biomechanical engineers, due to improper bias and unscientific methodology. (See Exh. #6 Donohoe and Exh. #9 Leestma)

As set forth in the habeas exhibits, the SBS hypothesis started with a biomechanical misunderstanding. In 1966 Dr. Ommaya, a neurosurgeon and biomechanical engineer, conducted mechanical sled tests using adult monkeys. The monkeys were secured to chairs, rapidly accelerated to 30 m.p.h., and then instantly stopped, mimicking a 30 m.p.h. car crash. The majority of adult monkeys (11 out of 19) suffered fatal neck spinal cord injuries and subdural hemorrhages. After reading Dr. Ommaya's published results, Dr. Caffey, a radiologist, contacted Dr. Ommaya and asked if the data would support a SBS hypothesis. Since Dr. Caffey was not trained in biomechanics, this consultation was critical. Dr. Ommaya told the radiologist that this data would not support such a hypothesis as humans cannot generate or mimic 30 m.p.h. forces and that a child would die from neck spinal cord failure long before creating a subdural hemorrhage. (See Exh. #4 and #7, the latter at page 92) Unfortunately, Dr. Caffey misunderstood or ignored Dr. Ommaya's objections and published his 1972/1974 opinion papers setting forth the SBS hypothesis, citing Dr. Ommaya's tests, incorrectly, as supporting the hypothesis. Since the hypothesis coincided with a focus on undiagnosed child abuse and provided a simple (albeit unsophisticated) explanation for subdural hemorrhages in children, it was warmly greeted by the medical community, inspiring hundreds of concurring "opinion" papers. While none of the authors were qualified biomechanicians, and few if any other than Dr. Caffey sought advice from biomechanicians, this untested hypothesis quickly became entrenched in the medical literature and was treated by many M.D.s as scientific fact until 1987.

In 1987 Dr. Duhaime put together a team that included biomechanician Dr. Thibault, Dr. Margulies, and Dr. Wisner. The purpose of this multidisciplinary team was to scientifically test and validate or falsify the SBS hypothesis through controlled experiments. Using specially designed dummies with accelerometers in their necks, and with adult "shakers," the team found that, by a large order of magnitude, humans could not shake hard enough to cause a subdural hemorrhage in a child. Humans simply cannot replicate the shearing force present in 30 m.p.h. mechanical sleds. (See Exh. #1) This scientific study invalidated all previous opinion papers. Under the evidentiary standards that govern the medical profession, this falsification of the SBS hypothesis should have ended all M.D. testimony that human shaking can cause shearing and SDH. Sadly, this did not happen.

In 2002-2007 the biomechanicians again addressed the SBS hypothesis. In 2002 members of the 1987 team joined Dr. Ommaya to conduct a scientific assessment of his original 1968 data, the 1987 data, and all other available biomechanical data to determine if it validated or invalidated the 1987 conclusions. The team concluded that the 1987 results were correct. Like the earlier study, this study concluded that it was humanly impossible for an adult to cause a fatal subdural hemorrhage in a child by shaking alone but that impact, including the impact from 3-4 foot falls, generates forces approximately ten times greater than shaking alone and is sufficient to cause subdural hemorrhage. Since the SBS hypothesis held precisely the opposite, these findings contradicted and further invalidated the SBS theory. (Ommaya, Goldsmith, & Thibault, *Biomechanics and neuropathology of adult and pediatric head injury*, *British Journal of Neurosurgery*, 2002; 16:220-242)

In 2003 different members of the 1987 team joined Dr. Michael Prange to repeat the 1987 experiments using different test models. With crash dummies they again validated that it was physiologically impossible for a human to cause a subdural hemorrhage in a child by shaking. The team also validated previous scientific tests that found that accidental short falls could create sufficient force to cause subdural hemorrhages and that it made no significant difference whether the impacted surface had moderate padding such as carpet. (See Exh. #6A)

In 2004 Dr. J. Plunkett, a forensic pathologist, joined biomechanician Professor Werner Goldsmith, University of California at Berkeley (2002, *supra*) to review the existing biomechanical data and evaluate the SBS hypothesis, including the likelihood of structural damage to the neck/cervical spine/brainstem areas. This evaluation included a biomechanical reconstruction of Dr. Plunkett's videotaped fatal fall from his 2002 paper. (Exh. #3 and #7) Professor Goldsmith concluded that SBS was biomechanically impossible; that humans cannot generate sufficient force by shaking alone to cause subdural hemorrhage; that fatal structural damage to the neck, cervical spine, and brain stem will occur well below the force needed to produce subdural hemorrhage; and that accidental short falls are biomechanically consistent with subdural hemorrhage and death. Professor Goldsmith also validated the 2002 videotaped short-fall death through a biomechanical reconstruction. (Exh. #7)

In 2005 the nation's arguably most qualified injury biomechanician, Dr. Faris Bandak, conducted a methodical scientific analysis of all biomechanical data on SBS/LMF with special emphasis on neck, cervical spine, and brainstem injury. In this study, Dr. Bandak again confirmed that it was impossible for humans to generate the force needed to support the SBS hypothesis and that lethal minor falls are a valid cause of accidental death. Furthermore, since the force levels needed to cause fatal structural damage to the neck, cervical spine, and brain stem are well below the levels needed to create subdural hemorrhage, due in part to the inherent weakness of the human infant neck, Dr. Bandak concluded that fatal injury to the neck would inevitably precede a subdural hemorrhage in any hypothetical shaking event. (Exhibit #10)

In 2005 Dr. Sushinsky, Director for Laboratory Sciences, U.S. Consumer Product Safety Commission, completed his "Surfacing Materials in Indoor Play Area: Impact Attenuation Report." Based on a series of scientific tests he determined that

placing carpet over a cement floor did nothing to reduce the potential for fatal injuries, thus validating the conclusion reached by Dr. Prange in 2003.

In 2007 Dr. Prange conducted a crash dummy test funded by the U.S. government. His data confirmed Dr. Bandak's 2005 study by showing that fatal neck and/or cervical spine injuries would necessarily precede a subdural hemorrhage and that the force needed to create a subdural hemorrhage was far above the range of human capability. (Exh. #12)

In 2007 biomechanicians Professor Sparte (University of California at Berkeley), Dr. Monson and Dr. Cheng (Alameda Applied Biomechanics) and Dr. Van Ee (Design Research Engineering) joined Dr. Mantley to study what appeared to be contradictions in the "opinion" papers on lethal short falls. While the scientific and observational evidence confirmed lethal short falls, many SBS opinion pieces continued to claim that short falls can never cause subdural hemorrhage or serious injury. Repetitive testing of short falls using a crash dummy generated the data needed to explain these contradictions. In these tests the angle of the head-torso upon impact was the critical variable that caused some minor falls to be fatal and others not fatal. While most angles of impact were non-fatal, other angles of impact generate sufficient force to cause fatal subdural hemorrhages. (Exh. #13)

### 3. Scientific Testing Summary

As shown by the foregoing, SBS has never been supported by scientific evidence and has never been accepted as valid by the discipline of biomechanics, which objected to its birth in 1974 and invalidated it in 1987. Since 1987, moreover, the SBS hypothesis has been repeatedly falsified by repetitive scientific testing. Allowing a conviction to stand based on falsified "opinion"-based accusations would make a mockery of our justice system and the U.S. Bill of Rights. Looking to the underlying *Frye* claim, the scientific evidence does not merely establish a "significant dispute" over the SBS hypothesis, it proves that SBS is biomechanically impossible. (Exh. #14)

## III. LEGAL DOCTRINES MANDATE RELIEF

For the legal reasons that follow, Petitioner asserts that his new scientific evidence complies with *Schulp*, that the rule 702 trial testimony violated *Daubert*, *infra Frye*, *infra*, and that with or without the Rule 702 due process error, his fundamental fairness rights under *Medina*, *infra*, and *Brecht*, *infra*, were violated.

It is further asserted that the new evidence proves his freestanding Innocence claim under *Herrera* and *House*, with or without the Rule 702 due process error, and that the 702 error would further prove a then ripe *Jackson* claim of insufficient evidence.

### A. Moot Procedural Doctrines

If the State has no procedure for adjudication of *Schulp*, *supra*, and *House*, *supra*, actual innocence "Gateway" or "Substantive" claims, then questions of procedural default and exhaustion are moot under those holdings.

Moreover. If either the *Schulp* or *House* claim is proven, then the AEDPA statute of limitations question would also be moot, as failing to toll under these circumstances would violate Art. I, Cl.9, 14th Amend. U.S. Const. protections. SEE: *Majoy v. Roe*, 296 F. 3d 770, 776-778 (9TH Cir. 2002), *Stern v. Schriro*, 2007 WL 201235 (D. Ariz. 2007), *Beyett v. Yates*, 2007 WL 2600745, #3 (N.D. Cal 2007)[All three cases finding valid innocence claims could/should toll AEDPA.]

### B. *Schulp* Due Process Error Violated *Brecht*

To succeed on his allegation of *Daubert* due process error, Petitioner “must support his allegations of Constitutional error with new reliable evidence, whether it be exculpatory, scientific evidence, trustworthy eyewitness accounts, or critical physical evidence – that was not presented at trial.” (*Schulp*, 115 S. Ct. at 865) Moreover, this evidence must prove “it is more likely than not that no reasonable juror would have convicted him in light of the new evidence.” (115 S. Ct. at 867)

Showing Rule 702 trial error under *Frye v. U.S.*, 293 F. 1013, 1014 (1923), would require proof that the SBS/SIS and minor fall non-fatal trial testimony hypotheses were not “generally accepted as reliable in the relevant scientific community” (id) due to significant disputes, while *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), would require Petitioner to show “whether the reasoning or methodology underlying the testimony is scientifically valid and...whether a theory or technique...can be (and has been) tested. Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified.” (*Daubert*, 509 U.S. at 592-593.

Once the Rue 702 trial error is proven, the Court must determine if this error violated Petitioner’s due process rights under the *Hewitt v. Helms*, (State mandatory language), *infra*, *Rochin v. Calif.* (Substantive rights), *infra*, *Medina v. Calif.* (fairness) lines of authority, and whether this error was sufficiently egregious to meet the burden of *Brecht v. Abrahamson*, *infra*, or *Schulp*.

Petitioner asserts that these tests are easily met by his new scientific evidence, (Exh. #1-14) and while the true meaning of this evidence is surprising, it greatly simplifies the issues before the Court when it is brought to light.

In this case exhibits #1-14 are scientific studies and reviews, all of which falsified or rejected the old SBS hypothesis and would readily comply with *Schulp* while proving 702 error under *Daubert* analysis:

Once the point of who the proper experts are is fully understood, the Rule 702 error becomes obvious. For this case does not concern a battle of qualified experts. All the qualified experts fully concur that the repeatedly tested LMF theory is valid and the Shaken Baby Syndrome hypothesis false. These conclusions are universally accepted within the biomechanical branch of science that has the training and expertise to evaluate and test both alleged injury-causation mechanisms. (Exh. #14)

As described in the fact section, *supra*, not only does the trial MD in this case have zero training in this field, but the data base that medical doctors utilize does not access the biomechanical tests and data that are routinely published in the bioengineering and biomechanical journals.

If a state medical doctor or pathologist reviewed all the bioengineering and biomechanical literature that governs SBS /LMF as required by the American Medical Association (Exh. #2) and then based their case “opinion” on the “highest quality” (id) studies that were available, it could perhaps be argued that the opinion was qualified.

However, a medical doctor with no formal training in mechanical injury mechanisms, either during his medical school or residence, who has not taught himself the basic scientific principles and laws of biomechanics or researched that field’s data, is simply not qualified to dispute the proper biomechanical experts in the field.

While the state could likely produce a prosecutor, DNA expert, mathematician, or other professional who had *no* training in the correct science, and who disagreed with the entire biomechanical scientific community, that faith-based opinion does not rise to the level of a qualified dispute under *Frye* or *Daubert*.

Accordingly, the most difficult aspect of this case is why the legal community tolerated the unqualified medical testimony regarding biomechanical principles for so long.. Medical doctors with no biomechanical training were eager to offer their biomechanical testimony yet courts rarely heard from the governing experts who had the training to test SBS/LMF. (Exh. #14)

While recent legal commentators have been advocating that the courts ban SBS testimony under *Daubert*, *supra*, and while numerous court and western countries have begun reversing the old, improper convictions under *Frye* and other grounds (SEE Subsection C, *infra*), this court is advised that those cases and commentators were unaware of all the biomechanical data discussed in this brief; were unaware that biomechanics was and is the governing branch of science, and did not know of the recent research by scientists (Exh. #1-14) and medical doctors. (Exh. #18-24) Yet they still advocated the ban of all SBS convictions. (SEE: “Shaken baby syndrome: a questionable scientific syndrome and a dangerous legal concept,” by Lyons, 2003, *Utah L. Rev.* 1109; “A nuts and bolts approach to litigating the shaken baby or shaken impact syndrome,” by L.T. Ramsey, Summer, 2006, *Military Law Review*, Vol. 188, Dept of Army Pamphlet 27-100-188; “Shaken Baby Syndrome: Medical Uncertainty Casts Doubt on Convictions,” by Genn, 2007, *Wisconsin Law Review*, 701.) [All three reviews advocate that SBS be banned from courtrooms due to conflicting science, while none aware of all the tests disclosed in this petition.]

When assessed under the Rule 702, *Frye*, *supra*, *Daubert*, *supra*, line of authority and under the newly developed record, it is asserted by Petitioner that the SBS and “not fatal” minor fall testimony is inadmissible. Moreover, even if admitted into the trial and not banned under 702, the new record proves that the trial violated the *Medina*, *infra*, fundamental fairness doctrine.

However, once the Court finds that the new record proves error under 702 in admitting the falsified testimony, Petitioner asserts that this error further proves his due process claim.

Our Supreme Court has found that a liberty interest protected by the 14th Amendment can arise from two sources: The due process clause itself or the laws and procedures of the State, *Hewitt v. Helms*, 459 U.S. 460, 466, 471-472, 103 S. Ct. 864, 868-869, 871(1983), when they invoke mandatory process or procedures (id).

Due process claims can be “substantive,” “procedural,” or both, and “substantive” *due process is violated by government conduct that “shocks the conscience,” Rochin v. Calif.*, 342 U.S. 165, 172, 72 S. Ct. 205, 209(1952), or “interferes with rights implicit in the concept of orderly liberty,” *Pulko v. Connecticut*, 302 U.S. 319, 325-326, 58 S. Ct. 142, 152 (1937).

State rules that comply with “substantive” due process must still be applied in a “fair manner,” *Mathews v. Eldridge*, 424 U.S. 319, 335, 96 S. Ct. 893, 903(1976) so as not to violate “any recognized principle of fundamental fairness,” *Medina v. Calif.*, 505 U.S. 437, 112 S. Ct. 2572, 2578 (1992), otherwise known as “procedural” due process.

“Recognized” (id) principles include but are by no means limited to: state evidentiary rulings that infect the trial, *Crane v. Kentucky*, 476 U.S. 685, 106 S. Ct. 2142 (1996), perjury that infects the trial with false evidence, *Mooney v. Holohan*, 294 U.S. 103(1935), improper comments on the evidence by the prosecutor, *U.S. v. Young*, 470 U.S. 11-12(1985), suppressed exculpatory evidence, *Kyles v. Whitley*, 115 S. Ct. 1555 (1995), and improper burden shifting, *Cooper v. Oklahoma*, 517 U.S. 348 (1996), although numerous other examples exist.

Like the holding in *Brecht v. Abrahamson*, 507 U.S. 619, 637 (1993), which requires reversal of constitutional trial error on habeas when the error had “substantial and injurious effect or influence in determining the jury’s verdict” (id). All fundamental fairness holdings focus on the integrity of the trial process and the reliability of the verdict. When the error imposes a “grave doubt” in the Court’s mind, it must grant the great writ.

Founding a verdict of guilt upon evidence which is now proven to be a scientifically human impossibility, while not allowing the jury to know the evidence was falsified would “shock the conscience” of most jurors and so infect the trial process as to make it fundamentally unfair, *Medina, Brecht*, supra.

Therefore, Petitioner would move the court to grant the requested relief under *Schulp* and to find that the SBS and LMF testimony in this case violated Petitioner’s due process right, when it was admitted in violation of Rule 702. (SEE Exh. #17, Missouri court order banning SBS under Frye).

### C. Verdict Founded on False Evidence Violated House/Jackson

Our Supreme Court has twice assumed that a Freestanding Claim of Actual Innocence would be cognizable under the Constitution; i.e. *Herrera v. Collins*, 506 U.S. 390, 417, 113 S. Ct. 853, 869 (1993), *House v. Bell*, 126 S. Ct. 2064, 2082 (2006), if the petitioner made a truly persuasive demonstration of Actual Innocence, House, 126 S. Ct. at 2086. In the Ninth Circuit, this test is defined as requiring the Petitioner to “affirmatively prove that he is probably innocent,” *Carringer v. Stewart*, 132 F. 3d 463, 476 (9th Cir.)(En Banc)(1997). Some states such as Arizona have codified *Herrera* as requiring “clear and convincing” evidence that would change the guilty verdict, Rule 32.1(h), Ariz. R. Cr. Proc. (eff. 2000). While different definitions exist, Petitioner asserts that Justice White has found the most appropriate one, accord:

“I assume that a persuasive showing of Actual Innocence...would...be entitled to relief...would...be required to show that, based on proffered newly discovered evidence and the entire record before the Jury, no rational trier of fact could [find] proof of guilt beyond a reasonable doubt.” *Jackson v. Virginia*, 443 U.S. 307, 324, 99 S. Ct. 2781, 2792, 61 L. Ed. 2d 560 (1979), *Herrera*, 113 S. Ct. at 875 (Justice White Conc.)

Normally, a *Jackson*, supra, claim cannot be founded upon newly discovered evidence as the claim is based on the existing record. However, if this Court finds the 702 trial testimony in violation of *Daubert*, then the trial record would be ripe for *Jackson* adjudication as the trial record would no longer contain sufficient levels of inculpatory evidence. In essence the moment this Court ruled in favor of Petitioner on the *Daubert* issue, then the remaining record would trigger a *Jackson* claim, which would then be procedurally ripe.

Moreover, while the *Jackson* claim test is a more difficult burden than the *Schulp* test, (SEE: *Schulp*, 115, S. Ct. at 868 contrasting “could” v. “would” distinction). Petitioner asserts that he must meet the Justice White standard to obtain relief on his *House* Freestanding Innocence claim. Therefore, since the claim of innocence must comply with *Jackson*, and since a separate *Jackson* claim may be cognizable, both are argued here in the same breath. Since the Ninth Circuit has mandated that all its lower Courts decide properly submitted “innocence” claims, SEE: *Smith v. Baldwin*, 466 F. 3d 805, Fn.4, Fn. 37(9th Cir.)(2006), this claim is properly before this Court, and should be decided in Petitioner’s favor for the reasons that follow.

Petitioner’s experts, consistent with Exh. #1-14, would explain to the jury that after 30 years of SBS allegations, there has never been a single reported case of fatal shaking that was ever witnessed or video taped—unlike every other form of child abuse. Nor has there ever been a single biomechanical test that validated this wild hypothesis that was created by a medical doctor with no biomechanical training, who misunderstood and misrepresented biomechanical data.

Consistent with Exh. #1-14, Petitioner’s experts will also cite and discuss the numerous controlled experiments from 1987-2008 that tested the SBS biomechanical hypothesis and proved it to be a human impossibility. While validating the LMF biomechanical theory that was even filmed on video tape; i.e. the video taped LMF death discussed in Exh. # 3 and #7.

It will further be proven that the biomechanical findings (Exh. #14) on the rejected SBS hypothetical and endorsed LMF theory are universally accepted within the biomechanical community of scientists. This community is responsible for determining the precise level of force needed to cause a specific mechanical injury, and no test has ever generated data that would support SBS or reject LMF. Since no conflicting data exists that was produced by a legitimate experiment, the biomechanical community as a whole or as a single voice rejects the impossible SBS mechanism and endorses LMF.

Accordingly, the jury would not be faced with deciding how much weight to give the scientists’ testimony versus the medical testimony if this Court did allow the hypothesis to go before the jury, as this is not a battle of qualified experts. Rather it is

the qualified versus the unqualified. If biomechanicians were recommending some form of cancer treatment in which they have no qualification, and the entire medical community rejected this hypothesis, no rational juror who followed court instructions “could” give any weight to this untested biomechanical testimony. By the same token, when the entire biomechanical field rejects the SBS theory, while endorsing another validated biomechanical hypothesis (LMF), no rational juror could believe contrary testimony from an unqualified witness. Indeed, as the 9th Cir. Court in *Mitchell* observed:

“There simply was no evidence to permit an expert conclusion one way or the other...An expert’s testimony as to a theoretical conclusion or inference does not rescue a case that suffers from an underlying insufficiency of evidence to convict beyond a reasonable doubt.” SEE: *United States v. Biossoneault*, 926 F.2d 230, 235 (2d C.R. 1991)...absence of evidence cannot constitute proof beyond a reasonable doubt,” *Smith v. Mitchell*, 437 F.3d 884, 890 (CA.9) (2006), supra.”

Furthermore, while this is the first time any court has been fully briefed on all the relevant 1987-2008 biomechanical science, bringing out the distinction of which discipline is qualified and which is not, some of this evidence has been coming to light in the Court System and exposing the fallacy of SBS.

In 2005 England rejected the SBS theory and began releasing the innocent. (Exh. #15) In 2007 the state of Missouri banned SBS under *Frye*. (Exh. #16) Also in 2007 the state of Texas halted an execution due to affidavits from a pathologist and biomechanician, who exposed SBS as a fallacy, *Ex Parte Henderson*, 246 S.W. 3d. 690 (Tex. Crim. App.) (2007), and the Arizona Federal Courts ordered more briefing on the issue, *Stern v. Schriro*, supra. Then in 2008 the State of Wisconsin, applying their “clear and convincing” evidence test, reversed an old SBS conviction due to the strength of the newly exposed science, *Wisconsin v. Edmunds*, 746 N.W. 2d 590 (Wis. App.), rvw dnd.(2008). Finally in 2008, the Ontario, Canada, medical examiner’s office moved the Court to grant funds so that office could sua sponte review all former SBS cases, as newly exposed science had falsified the diagnosis (Exh. #17). The government agreed to review all 220 cases.

This Tsunami is now sweeping the country with only half the evidence which is now before this Court. Whether assessed with or without the state’s flawed 702 testimony, this Court should join the state of Wisconsin by finding the newly developed records “clear and convincing” evidence of Petitioner’s innocence in that the verdict would have been different had this new evidence been presented.

#### IV. CONCLUSION

When a circumstantial evidence conviction is founded solely upon 702 “opinion” that put forth a hypothetical and intentional injury-causation-mechanism scenario as accepted fact, and the hypothetical is later proven to be a human impossibility, then a manifest injustice has taken place, and the Court should grant

speedy relief. Moreover, Petitioner would posit for the Court that the prosecutors or the 702 witnesses “state of mind” is not relevant to its due process inquiry.

A conviction founded upon false evidence offends the due process clause because the evidence is false and harms the integrity of the process, not because of some one’s state of mind, *Kyle*, supra.

Therefore, whether bespoken of in terms of *Schulp*, *Daubert*, *Medina*, *Brecht*, or *Jackson*, supra, Petitioner would move the Court to grant relief.

#### SCIENTIFIC STUDIES/EXHIBITS

- Exh. #1 --- 1987. Duhaime, A.C., Gennarelli, T.A., Thibault, L.E., Bruce, D.A., Margulies, S.S., and R. Wisner, The Shaken Baby Syndrome: A clinical, pathological, and biomechanical study, *Journal of Neurosurgery*, 1987; 66:409-415.
- Exh. #2 --- AMA EBM Evidentiary Standards: *Guvatt, G.H. and D Rennie, Users’ Guides to the medical literature*, (Editorial) *Journal of the American Medical Association*, 1993; 270(17):2096-2097.
- Guyatt, G.H., Haynes, R. B., Jaeschke, R.Z., Cook, D. J., Green, L., Naylor, C.D. et al. Users’ guides to the medical literature XXV, Evidence-based medicine: principles for applying the users’ guides to patient care. *JAMA*. 2000; 284(10):1290-1296.
- Kassirer, J.P., Cecil, J.S. Inconsistency in Evidentiary Standards for Medical Testimony: Disorder in the Courts. *JAMA*, 2002; 288(11):1382-1387.
- Exh. #3 --- 2001. Plunkett, J., Fatal pediatric head injuries caused by short distance falls, *American Journal of Forensic Medicine and Pathology*, 2001; 22:1-12.
- Exh. #4 --- 2002. Uscinski, R. Shaken Baby Syndrome: Fundamental questions, *British Journal of Neurosurgery*, 2002; 16(3):217-219.
- Exh. #5 --- 2003. Chancey, V.C., Nightingale, R.W., Van Ee, C.A., Knaub, K.E. and B.S. Myers. Improved estimation of human neck tensile tolerance: reducing the range of reported tolerance using anthropometrically correct muscles and optimized physiologic initial conditions. *Stapp Car Crash Journal*, 2003; 47:135-153.
- Exh. #6 --- 2003. Donohoe, M. Evidence-based medicine and Shaken Baby Syndrome. Part 1: Literature Review, 1966-1998. *American Journal of Forensic Medicine and Pathology*, 2003; 24:239-242.
- Exh. #6A --- 2003. Prange, M.T., Coats, B., Duhaime, A.C., and S. S. Margulies. Anthropomorphic simulations of falls, shakes, and inflicted impacts in infants, 2003; *Journal of Neurosurgery*, 2003; 99:143-150.
- Exh. #7 --- 2004. Goldsmith, W. and J. Plunkett, A biomechanical analysis of the causes of traumatic brain injury in infants and children, *American Journal of Forensic Medicine and Pathology*, 2004; 25:89-100.
- Exh. #8 --- 2004. Geddes, J.F. and J. Plunkett, The evidence base for shaken baby syndrome. We need to question the diagnostic criteria. *British Medical Journal*, 2004; 328-329. (Editorial)
- Exh. #9 --- 2005. Leestma, J.E., Case analysis of brain-injured admittedly shaken infants. *American Journal of Forensic Medicine and Pathology*, 2005; 26:199-212.
- Exh. #10 --- 2005. Bandak, F.A., Shaken baby syndrome: A biomechanics analysis of injury mechanisms. *Forensic Science International*. 2005; 151:71-79.
- Exh. #11 --- 2006. Uscinski, R. Shaken Baby Syndrome, an odyssey. *Neurological Medicine Chirurgica*. 2006; (Tokyo) 46:57-61.
- Exh. #12 --- 2007, with Email attachment: Prange, M., Newberry, W., Moore, T., Peterson, D., Smyth, B., and C. Corrigan, Inertial neck injuries in children involved in frontal collisions, SAE 2007 World Congress, Society of Automotive Engineers, Warrendale, PA, SAE paper #2007011170.
- Exh. #13 --- 2007. Monson, K., Sparrey, C., Cheng, L., Van Ee, C. and G. Manley. Head exposure levels in pediatric falls (P48), Brain and Spinal Injury Center, University of California, San Francisco. 2007
- Exh. #14A --- 2008. Van Ee C.V., Testimonial Offer and Findings.
- Exh. #14B --- 2008. Monson C.V., Testimonial Offer and Findings.
- Exh. #14C --- 2008. Thibault C.V., Testimonial Offer and Findings.

## COURT REVERSALS

- Exh. #15 --- 2005. England Sus Sponte SBS Rejection: News Release from the Attorney General's Office, United Kingdom, 9 Buckingham Gate, London SW1E 6JP, 14 Feb., 2006.
- Exh. #16 --- 2007. Missouri Frye Rejection: Circuit Court of Shelby County, Missouri, *State of Missouri v. Kathy Hyatt*, No. 06M7-CR00016-02, Filed Nov, 6, 2007: In the Court decision that the state had failed to meet the burden of proof in its charges against the defendant, it made the following ruling: "In the absence of some other evidence or indicia of abuse besides subdural hematoma, retinal bleeding, and absence of cranial trauma, neither party may call a witness to give an expert opinion that the child was the victim of violent shaking; the Court further finds that an expert may not opine that a (small) subdural hematoma and retinal bleeding in an infant can only be caused by manual shaking." Signed by Hadley E. Grimm, Circuit Judge
- Exh. #17 --- 2008. Ontario M.E. Sua Sponte Request: Inquiry into Pediatric Forensic Pathology in Ontario - Report Oct. 1, 2008...180 Dundas St West, 22nd Floor, Toronto, Ontario M5G 1Z8, Fax 416-212-6879 ([www.goudgeinquiry.ca/report/index.html](http://www.goudgeinquiry.ca/report/index.html)): According to this report, a senior official with the Office of the Chief Coroner of Ontario, Canada informed a commission headed by the Honorable Stephen Goudge that the Ontario government had a moral duty to re-examine the deaths of Ontario children diagnosed with Shaken Baby Syndrome (SBS) since 1986. This statement was based on growing evidence in recent years indicating the "frailty" of the Shaken Baby Syndrome diagnosis. An "inquiry into pediatric forensic pathology in Ontario" was subsequently ordered by the Honorable Stephen T. Goudge, and the government agreed to review all 200 cases.

## MEDICAL STUDIES

- Exh. #18 --- 1999. Plunkett, J. Shaken Baby Syndrome and the death of Matthew Eappen: A forensic pathologist's response, *American Journal of Forensic Medicine and Pathology*, 1999; 20(1):17-21.
- Exh. #19 ---2002. Barnes, P.D., Ethical issues in imaging nonaccidental injury: child abuse. *Topics in Magnetic Resonance Imaging*, 2002; 13(2):85-94.
- Exh. #20 --- 2003. Denton, S. and D. Mileusnic, Delayed sudden death in an infant following an accidental fall: A case report with review of the literature. *American Journal of Forensic Medicine and Pathology*, 2003; 24(4):371-376.
- Exh. #21 --- 2005. Orient, J. Reflections on "Shaken Baby Syndrome:" A case report. *Journal of the American Physicians and Surgeons*, 2005; 10(2):45-50.
- Exh. #22 --- 2006. Plunkett, J., Resuscitation injuries complicating the interpretation of premortem trauma and natural disease in children, *Journal of Forensic Science*, 2006; 51(1):127-130.
- Exh. #23 --- 2006. Jenny, C., Committee on Child Abuse and Neglect, Evaluating infants and young children with multiple fractures, *Pediatrics*, 2006; 118(3):1299-1303.
- Exh. #24 --- 2007. Barnes, P.D. and M. Krasnokutsky, Imaging of the central nervous system in suspected or alleged nonaccidental injury, including the mimics. *Topics in Magnetic Resonance Imaging*, 2007; 18(1):53-74.

## Purpose and Invitation

This sample petition was prepared to educate victims of SBS/SIS charges, lawyers, doctors, and the public. The author invites all comments and asks all who read this article to send their endorsements which the author will cite to the public at large in an effort to aid the thousands of persecuted families who fell prey to SBS/SIS.

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