

IN THE COURT OF CRIMINAL APPEALS OF TEXAS

NO. AP-76,464

EX PARTE NEAL HAMPTON ROBBINS, Applicant

ON APPLICATION FOR A WRIT OF HABEAS CORPUS IN CAUSE NO. 98-06-00750-CR FROM THE 410TH JUDICIAL DISTRICT COURT OF MONTGOMERY COUNTY

COCHRAN, J., filed a dissenting opinion in which WOMACK and JOHNSON, JJ., joined.

This case raises a novel and difficult issue for the criminal-justice system.

At trial, Dr. Moore, the assistant medical examiner who performed the autopsy, testified unequivocally that the cause of seventeen-month-old Tristen's death was asphyxiation by compression. It was a homicide. She was the State's star witness on the child's cause of death. Her testimony was critical to the State's case. By finding applicant guilty of capital murder, the jury obviously believed Dr. Moore's testimony and rejected the contrary testimony of the defense expert, Dr. Bux, who stated that the cause of Tristen's death was "undetermined." But Dr. Moore has now changed her mind and states that she

does not know how Tristen died. She now agrees with the defense expert and believes that the cause of death is "undetermined." Several other experienced and expert medical examiners agree with her current opinion–the cause of Tristen's death cannot be determined by medical science. It could have been accidental asphyxiation, *i.e.*, natural suffocation because Tristen was found cold and blue in her bed with her face, including her mouth, covered by a pillowcase.¹ It could have been homicidal asphyxiation by suffocation, but it probably was not homicidal asphyxiation by compression. They just do not know. These five pathologists² admit that they cannot scientifically determine the cause of Tristen's death. One recently retained expert, Dr. Linda Norton, a Dallas pathologist, is confident that Tristen's death was asphyxiation by suffocation and the result of a homicidal act.³

¹ Tristen had a cold and a stuffy nose on the morning of her death.

² They are

³ Until Dr. Norton expressed her opinion, the State was willing to join applicant in his proposed findings of fact and conclusions of law recommending a new trial on the ground that applicant was denied a "fundamentally fair trial and an accurate result."

As the facts set out in the majority opinion show, everyone in this habeas proceeding has acted with the utmost good faith and perseverance in attempting to resolve this difficult scientific dilemma. Applicant's counsel was most diligent in investigating the autopsy findings and bringing the issue to light. The trial judge was extremely helpful in appointing experts and designating issues for them to resolve, as well as conducting several hearings and allowing ample time for the parties to argue their respective positions. The State was accommodating to all of

^{1.} Dr. Patricia Moore, the former assistant medical examiner for Harris County who conducted the original autopsy;

^{2.} Dr. Robert Bux, the deputy chief medical examine of Bexar County;

^{3.} Dr. Joye Carter, the former Medical Examiner of Harris County and Dr. Moore's supervisor;

^{4.} Dr. Dwayne Wolf, the deputy chief medical examiner for Harris County;

^{5.} Dr. Thomas Wheeler, Chairman of the Department of Pathology at Baylor College of Medicine.

In my view, this scientific uncertainty about Tristen's cause of death raises an extremely serious concern about the accuracy of the original jury verdict. It is somewhat akin to a case in which the experts at an arson-murder trial expressed complete confidence that the fire that killed the victim was set intentionally and was the result of arson. But later, numerous other experts agree that, based on their review of the evidence and the science, no one can determine whether the fire was the result of arson or not. The cause of the fire was, in their current view, not capable of being scientifically determined as arson or accidental. It was a fire of "undetermined" and "undeterminable" origin. At trial, the experts may have been acting in perfect good faith and in accord with their current knowledge and level of expertise, but it turns out that they may have been entirely wrong. Or maybe not. Maybe it was homicide, maybe it was arson, but we do not know for certain. When scientific experts honestly and sincerely thought "X" was true at the time they testified, but the science has changed or the experts' understanding of the science has changed and their opinions have changed, what cognizance of that change should the criminal justice system take long after

applicant's requests and was obviously concerned and open-minded about these issues as well. At first the State was willing to join in applicant's request for a new trial, but when Dr. Norton expressed her opinion that Tristen's death was homicide, the prosecution proposed findings of fact and conclusions of law recommending a denial of relief, arguing that this Court "has not yet held–and it seems unlikely that it will ever hold–that the Due Process Clause is violated when a witness provides, in good faith, an opinion that is believed to be *true* by both the witness and the prosecution at the time of trial, even if that opinion is subsequently challenged by other experts or reconsidered by the witness who offered it." The State is right. We have never made such a holding. The question currently before us, however, is whether we should consider such an issue when the State's star expert witness's original scientific opinion was on a crucial element of the offense and that expert has changed her opinion.

a person has been convicted?

Part of the problem is that there is a fundamental disconnect between the worlds of science and of law. Science is constantly evolving by testing and modifying its prior theories, knowledge, and "truths."⁴ It is a hallmark of the scientific method to challenge the status quo and to operate in an unbiased environment that encourages healthy skepticism, guards against unconscious bias, and acknowledges uncertainty and error.⁵ The legal system, on the other hand, "embraces the adversary process to achieve 'truth,' for the ultimate purpose of attaining an authoritative, final, just, and socially acceptable resolution of disputes."⁶ The judicial system normally accepts that "opinions grounded in science carry their own tests for reliability and usefulness, thus inspiring special confidence in judgments

⁵ *Id.* at 112-25.

⁴ See NATIONAL ACADEMY OF SCIENCES, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 112 (2009) ("NAS Report") (discussing the fundamental principles of the scientific method).

⁶ Developments in the Law–Confronting the New Challenges of Scientific Evidence, 108 HARV. L. REV. 1481, 1484 (1995) ("Since as far back as the fourteenth century, scientific evidence has posed profound challenges for the law. At bottom, many of these challenges arise from fundamental differences between the legal and scientific processes. Although the specific contours of each domain remain unclear, most commentators agree that the cultures and purposes of law and science differ in important ways. The legal system embraces the adversary process to achieve 'truth,'for the ultimate purpose of attaining an authoritative, final, just, and socially acceptable resolution of disputes. Thus law is a normative pursuit that seeks to define how public and private relations should function. The scientific community also engages in a quest for 'truth.' In contrast to law's vision of truth, however, science embraces empirical analysis to discover truth as found in verifiable facts. Science is thus a descriptive pursuit, which does not define how the universe should be but rather describes how it actually is.") (footnotes omitted).

based on them."⁷ This disconnect between changing science and reliable verdicts that can stand the test of time has grown in recent years as the speed with which new science and revised scientific methodologies debunk what had formerly been thought of as reliable forensic science has increased. The potential problem of relying on today's science in a criminal trial (especially to determine an essential element such as criminal causation or the identity of the perpetrator) is that tomorrow's science sometimes changes and, based upon that changed science, the former verdict may look inaccurate, if not downright ludicrous. But the convicted person is still imprisoned. Given the facts viewed in the fullness of time, today's public may reasonably perceive that the criminal justice system is sometimes unjust and inaccurate. Finality of judgment is essential in criminal cases, but so is accuracy of the result–an accurate result that will stand the test of time and changes in scientific knowledge.

Our criminal justice system does not currently have any legal doctrine, much less a constitutional doctrine, into which this situation falls comfortably. I agree with Judge Price's concurrence that neither of our two recognized categories of "actual innocence" or "false testimony" is exactly appropriate. Dr. Moore's change in opinion from "certain of homicide" to "undetermined cause of death" does not mean applicant is actually innocent of homicide. Nor does it mean that Dr. Moore's trial testimony was actually "false," at least not to the extent that she is now certain that Tristen's death was *not* the result of homicide. As the

⁷ Margaret A. Berger & Lawrence M. Solan, *Symposium: A Cross-Disciplinary Look at Scientific Truth: What's the Law To Do?: The Uneasy Relationship Between Science and Law: An Essay and Introduction*, 73 BROOK. L. REV. 847, 847 (2008).

State appropriately argued to the habeas judge, "It's hard to believe that a violation of due process is established by evidence that an expert opinion may have been correct or it may have been incorrect. We're just not sure." Due process was not violated at the time of trial, but nevertheless, the scientific testimony that supported a finding of "homicide" in the original trial has been retracted. Dr. Moore's current scientific uncertainty, as well as the uncertainty of four other expert pathologists, casts a pall upon the basis for the jury's verdict and upon its accuracy.

I reiterate what I have stated before concerning the importance of ensuring accurate results in the criminal justice system.

I believe that if the criminal justice system—even when its procedures were fairly followed—reaches a patently inaccurate result which has caused an innocent person to be wrongly imprisoned for a crime he did not commit, the judicial system has an obligation to set things straight. Our criminal justice system makes two promises to its citizens: a fundamentally fair trial and an accurate result. If either of those two promises are not met, the criminal justice system itself falls into disrepute and will eventually be disregarded.⁸

The result in this case is not "patently inaccurate." Yet its accuracy is clearly open to dispute. How should the habeas case be resolved when the prior verdict might have seemed accurate at the time, but everyone later recognizes that it might not have been accurate because it was based upon scientific expertise that has been rejected–either by the scientific community or the original scientist herself?

Given the current legitimate concerns about the scientific reliability of forensic

⁸ Ex parte Thompson, 153 S.W.3d 416, 421 (Tex. Crim. App. 2005) (Cochran. J, concurring).

science used in American courtrooms, I think that the criminal justice system needs some jurisprudential mechanism to deal with cases in which a prior conviction was based upon scientific evidence that has subsequently been found to be unreliable, in whole or in a specific case.⁹ I suspect that the Supreme Court will one day hold that a conviction later found to be based upon unreliable scientific evidence deprives the defendant of a fundamentally fair trial and violates the Due Process Clause of the Fourteenth Amendment because it raises an intolerable risk of an inaccurate verdict and undermines the integrity of our criminal justice system.

Should that rule apply in this case? Has the accuracy of the jury's verdict been thrown into such disrepute that the courts should find a due process violation? We must not forget that, until Dr. Norton came along, the State–for good reason–joined the defense in requesting a new trial on this basis. The single most hotly contested issue in applicant's original trial was Tristen's cause of death:¹⁰ Did she die as the result of applicant beating her to death?

¹⁰ In our opinion on direct appeal, we stated,

Appellant suggested through vigorous cross-examination of prosecution witnesses that the victim's death was not the result of an intentional act by appellant.

⁹ See generally The NAS Report, *supra* note 4; Daniel G. Orenstein, *Comment: Shaken to the Core: Emerging Scientific Opinion and Post-Conviction Relief in Cases of Shaken Baby Syndrome*, 42 ARIZ. ST. L.J. 1305 (2010) (arguing that the criminal justice system must be prepared to reexamine cases in which the conviction was based entirely or principally on unsettled science when the science evolves substantially enough to undermine confidence in a verdict); *see also State v. Edmunds*, 746 N.W.2d 590 (Wis. Ct. App. 2008) (granting habeas corpus relief and ordering a new trial when defendant had been convicted a decade earlier based upon scientific evidence of "shaken baby syndrome" but more recent mainstream medical knowledge called into question that expert testimony and the main issue at trial was the cause of child's injuries), *rev. denied*, 749 N.W.2d 663 (Wis. 2008).

Or in an asphyxiation accident (applicant suggested natural suffocation or Sudden Infant Death Syndrome), or accidental asphyxiation by compression when Tristen's mother and a neighbor performed aggressive CPR on her? On direct appeal, the court of appeals relied upon Dr. Moore's autopsy report and testimony to conclude that the State proved that "someone pressed the life out of Tristen."¹¹ No expert now can conclude that Tristen died as a result of being "pressed" or "beaten" to death.

Robbins v. State, 88 S.W.3d 256, 258 (Tex. Crim. App. 2002).

¹¹ *Robbins v. State*, 27 S.W.3d 245, 248 (Tex. App.—Beaumont 2000), *aff'd* 88 S.W.3d 256 (Tex. Crim. App. 2002.). The court set out Dr. Moore's scientific conclusions:

The medical examiner who performed the autopsy made the following findings: 1) asphyxia due to compression of chest and abdomen; 2) terminal aspiration; 3) multifocal hemorrhages of the cortex and interlobular septae of thymus; 4) focal recent hemorrhages of tonsils; 5) multiple recent hemorrhages within subcutaneous tissues of back and neck; 6) small subcapsular recent hemorrhage of left kidney; and 7) recent hemorrhage between intercostal muscles of 11th and 12th ribs, bilaterally, greater on left than right. Dr. Moore testified the child died from lack of oxygen. She ruled out sudden infant death syndrome as a possible cause of death. From the bruises on the back of the body and the damage to the kidney, Dr. Moore determined death was brought about by compression of the chest and abdomen. The bruising could not have occurred by CPR performed after death.

Through his cross-examination of one prosecution witness, appellant presented the defensive theory that the victim could have died from Sudden Infant Death Syndrome (SIDS) and not from an intentional act by appellant. Through his crossexamination of his parole officer who saw appellant and the victim on the day of the victim's death, appellant presented the defensive theory that he was treating the victim "kindly" with the obvious inference being that appellant would not have intentionally harmed the victim. And through his cross-examination of another prosecution witness, appellant presented the defensive theory that bruises on the victim's body could have been caused by incorrectly performed CPR efforts to save her life rather than from an intentional act by appellant.

But even if one totally discounts Dr. Moore's testimony and ignores the opinion of Dr. Norton,¹² the evidence might well be sufficient to support applicant's conviction for murder. At worst, the result of a finding that five out of six pathologists cannot determine the cause of Tristen's death is only an admission that science cannot resolve the issue of whether Tristen's death was the result of a homicidal act. The jurors would have to decide that crucial question based upon the rest of the evidence. In this case, the jury might have resolved the question of Tristen's cause of death, beyond a reasonable doubt, based upon the other evidence, especially the evidence of other instances in which Tristen suffered physical injuries while in applicant's care. As noted in my concurrence on direct appeal, the evidence showing that "Tristen repeatedly suffered various physical injuries when left in appellant's care was admissible to prove the *corpus delicti* of murder."¹³ The problem, however, is that

¹² I agree with the trial judge that it is hard to accept Dr. Norton's scientific opinion at face value because she repeatedly found reasons for declining to be deposed by an attorney experienced in medical science.

¹³ *Id.* at 265 (Cochran, J., concurring). That evidence was that

[[]b]eginning in November of 1997, Tristen suffered several physical injuries while she was in appellant's sole care. One evening in late November, appellant babysat for Tristen. The next morning she had a black eye. Appellant explained that injury by saying that he had been bathing Tristen when the child fell in the bathtub and hit her nose. Another time, Tristen's mother took a nap, leaving appellant to watch the child. When she awoke, she discovered that Tristen couldn't walk. In fact, Tristen was so badly injured that she could not stand up or walk for several days. Appellant explained that he had accidentally stepped on Tristen's heel, causing the injury. In early February, three months before Tristen's death, appellant was babysitting the child when Tristen's ear was injured and she suffered bruises on her face and neck. Appellant explained that he had been taking a shower with Tristen and the child slipped and fell in the shower. Appellant maintained that these incidents were simply the result of his

we do not know whether the jury actually would have found that applicant caused Tristen's death absent Dr. Moore's expert scientific opinion. Who should decide whether the newly discovered unreliability of the expert scientific testimony was so crucial to the original jury's verdict that the accuracy of that verdict can no longer be relied upon?

I fall back upon the wisdom and experience of the habeas judge-the "Johnny-on-the-Spot" factfinder to whom we will defer whenever the record supports his essential factual findings. This judge, who presided over both the original trial and the habeas proceeding, spent an enormous amount of time, resources, and thought in his gathering of the evidence, his review of that evidence, and his factual findings. The trial judge made twenty-two pages of findings on the following issues:

(1) Dr. Moore's educational background and experience and her testimony at trial;

(2) Dr. Robert Bux's educational background and experience and his testimony at trial (Applicant called Dr. Bux as a witness at trial. Dr. Bux had been the deputy chief medical examiner for Bexar County, and he testified that the cause of Tristen's death could not be determined);

(3) the State's reliance on Dr. Moore's testimony at trial;

(4) Dr. Wolf's reevaluation of Dr. Moore's conclusions;

"carelessness."

Id. at 265-66. These prior instances were offered to prove, under "the doctrine of chances," that it was logically improbable that Tristen would accidentally suffer so many unusual physical injuries while under applicant's care. The logic behind the "doctrine of chances" is that one injury is an accident, two are suspicious, and three are murder. *Id.* at 267-69. Of course the jury is free to reject any such inference, but "because Tristen suffered four such injuries within a single six month period, each of them while under appellant's care, the probability that sheer accident caused each injury decreases significantly." *Id.* at 269.

(5) Dr. Carter's reevaluation of Dr. Moore's conclusions;

(6) Dr. Moore's own reevaluation;

(7) Dr. Norton's educational background and experience, her conclusion that Tristen died from asphyxia by suffocation and that her death was a homicide, and the fee she received from Montgomery County (\$22,907.50);

(8) A piece of paper resembling United States currency with no identifiable markings found in Tristen's casket;

(9) Dr. Wheeler's educational background and experience and his conclusion that Tristen's death was undetermined;

(10) The appointment of Mr. Milutin, an attorney who specialized in medical experts, to depose the expert witnesses;

(11) Dr. Moore's deposition testimony that she believed the cause of Tristen's death was undetermined and that there were other explanations for her death;

(12) Dr. Moore's inexperience (when she performed the autopsy on Tristen she had been an associate medical examiner for just 18 months) and citations for defective and improper work;

(13) Dr. Wheeler's deposition testimony that "he could not rule out suffocation or asphyxiation as the cause of death, but did not see any physical findings that would support any particular conclusion as to the cause of death";

(14) Dr. Wheeler's opinion that "the cause and/or manner of [Tristen's] death is undetermined because the facts from the scene, from the autopsy and gross microscopic do not permit anyone to determine homicide within a reasonable degree of medical certainty";

(15) Dr. Wolf's deposition testimony and review of the case with Dr. Luis Sanchez, the chief medical examiner for Harris County;

(16) Dr. Wolf's opinion that "he could not rule out suffocation as the cause of death, but that it was generally impossible to determine that a child's death resulted from suffocation in the absence of a confession by the perpetrator, because of the absence of autopsy findings specific to a death by suffocation";

(17) Dr. Wolf's testimony that the "death of a 17-month-old infant without any ascertainable cause was a rare occurrence and the death could therefore be viewed as suspicious and warranting investigation, but he could not say that it was more likely than not that foul play was involved";

(18) Dr. Norton's cancellation of a scheduled deposition and her leave of absence from her medical practice for six months;

(19) Dr. Norton's inability to participate in a deposition;

(20) The inability of investigators to locate Dr. Norton, after a subpoena was issued ordering her to appear for a deposition;

(21) A subsequent order that the parties take Dr. Norton's deposition at the location of her choosing; and

(22) Norton's phone call to counsel in which she said she was under a doctor's care, she was not physically capable of preparing for or participating in a deposition, and she did not expect to be able to participate in a deposition until January 2010, at the earliest.

The following findings are especially important to the trial judge's ultimate conclusion:

(1) Dr. Moore's testimony at trial was "critical" to the State's case and "her opinions were the sole bases of the State's case as to cause and manner of death, without which the State would not have obtained a conviction."

(2) Dr. Moore was an agent of the State, and when she testified, she "acted in the name and for the State, was clothed with the State's power, and her acts were those of the State."

(3) The State did not knowingly sponsor or fail to correct false testimony.

(4) Dr. Moore "was not competent at the time of trial to offer objective and pathologically sound opinions as to cause and manner of death in this case. Her level of inexperience at the time of trial and her bias at that time toward the state are now evident. Moore's admissions that near the time of trial she was cited for defective and improper work and was evaluated as being biased in favor of the prosecution, as well as Dr. Carter's statements concerning the turbulence in the ME office in 1998, the

concern about Moore being perceived as a witness for one particular side, and that (at that time) Moore was making the transition to the neutral position of a forensic pathologist cast grave doubt on Moore's opinions at trial and the reasons she gave them. This is newly discovered evidence that could not have been previously discovered by applicant."

(5) Dr. Moore's "trial opinions as to cause and manner of death were not true. They were based on false pretenses of competence, objectivity and underlying pathological reasoning, and were not given in good faith. They were admittedly not justified by the objective facts and pathological findings in this case. Her trial opinions in this case were expert fiction calculated to attain a criminal conviction.¹⁴ This is newly discovered evidence that could not have been previously discovered by applicant."

(6) Dr. Moore's "giving scientifically unsupported testimony at a time when she was biased toward the State and unqualified to render opinions on the issues involved in this case equates to her giving false testimony or at least giving a false impression that was of such a nature as to contrive a conviction through the pretense of a trial which in truth was a deception of the court and jury.¹⁵ This is newly discovered evidence that could not have been previously discovered by applicant."

(7) "While the State could not have known at trial of the falsity of Moore's testimony, due to Moore's public position and agency relationship with the state, her knowingly giving false testimony equates to the giving or allowing of false testimony by the state."

(8) Dr. Moore's deposition testimony is not credible. Her "recantation or reevaluation are not consistent with the facts. Moore's claim that she did not have certain delineated facts at trial is not accurate. In addition, while she also states that her increase in training and experience give her a stronger ability to now give opinions in this case, she does not provide any specific or sound pathological reasoning to support her changed opinions."

(9) Dr. Wolf's testimony is "especially credible and persuasive."

(10) Dr. Carter's original opinions were "not true," and her new opinions lack credibility. "They are not stated with or grounded in any scientific or pathological

¹⁴ This finding may go a bit too far and is not entirely supported by the record.

¹⁵ The same is true with this finding.

reasoning. Her statement that she would now defer to a hypothetical 're-rule' made by the HCMEO, while at the same time not giving any medical or other bases to support her opinions, is disturbing."

(11) Although Dr. Wheeler is highly qualified, his testimony adds "very little to this case. . . . His evasive responses to direct questions reflected a lack of understanding of the very specific pathological issues before this Court."

(12) Dr. Norton's opinions are "credible and believable," and her "extensive background and experience" are "indicative of trustworthiness." "On the other hand, her inability to present herself for a deposition and to be subjected to cross examination lends support to the argument that her credibility and opinions as to cause and manner should be viewed as lacking the test of direct challenge. As a result, Dr. Norton's opinions must be kept at arm's length when being reviewed under the standards imposed on this Court in habeas proceedings."

(13) No expert rules out asphyxia as the cause of death and they all agree that the "pathological evidence alone is not conclusive in this case, as it could support asphyxia or other causes of death."

(14) "No expert can exclude Applicant as the perpetrator if it is a homicide, and no expert has excluded homicide as the manner of death."

(15) "There is credible evidence and there are credible opinions that the cause of Tristen's death is either undetermined or asphyxia by suffocation," but no expert supports the original theory of asphyxia by compression.

(16) There is expert testimony and non-medical evidence in the trial and habeas record from which a reasonable jury could find beyond a reasonable doubt that the death of Tristen was or was not a homicide.

The habeas judge's conclusions of law are as follows:

(1) Applicant failed to establish that he is actually innocent.

(2) Applicant "has satisfied the *Schlup* type standard to enter the gateway to present error that allegedly tainted the verdict at trial."

(3) Applicant has "shown by a preponderance of the evidence, or more likely than not, that constitutional error in his trial probably caused a verdict in which there can be

little confidence and which is fundamentally unfair."

(4) Applicant established by a preponderance of the evidence that his due process and due course of law rights were violated.

(5) Applicant also established that he did not receive a fair trial before an impartial jury as guaranteed by the Sixth Amendment of the U.S. Constitution and Article 1, § 10 of the Texas Constitution.

I certainly agree with the first legal conclusion: applicant has not established his actual innocence–not even close. But, given the experienced trial and habeas judge's legitimate and serious concerns about the impact of Dr. Moore's expert testimony at trial on the critical and hotly disputed issue of Tristen's cause of death, I agree that applicant did not receive a fundamentally fair trial based upon reliable scientific evidence (or the honest admission that science cannot resolve that critical issue). Despite every participant's honesty and good faith,¹⁶ this is a case that should be retried to ensure the accuracy of our verdicts and the integrity of our system.

I therefore most respectfully dissent to this Court's rejection of the trial and habeas judge's factual findings and recommendation that we grant applicant relief and remand this case for a new trial.

Filed: June 29, 2011 Publish

¹⁶ I find that the record supports a finding that Dr. Moore testified honestly and truthfully at trial, but I accept the habeas judge's factual finding that she "was not competent at the time of trial to offer objective and pathologically sound opinions as to cause and manner of death in this case." And, as the habeas judge noted, this was not the only case in which Dr. Moore was subsequently cited for defective work because of the perception that she was professionally biased in favor of the prosecution, rather than acting as a purely objective scientist. As the NAS Report warned, forensic scientists must carefully guard against cognitive bias and natural, but scientifically inappropriate, overconfidence in their scientific opinions. NAS Report, *supra* note 4, at 122-24.