THE STATE OF SOUTH CAROLINA

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S.C. Supreme Court

IN THE SUPREME COURT

APPEAL FROM ORANGEBURG COUNTY

James C. Williams, Jr., Circuit Court Judge

Opinion No. 27168

KAREEM J. GRAVES and TARA GRAVES,
Individually and as duly appointed personal
representatives of the
ESTATE OF INDIA IYANNA GRAVES,
..... Plaintiffs/Petitioners,

v.

CAS MEDICAL SYSTEMS, INC.,
..... Defendant/Respondent.

PETITION FOR REHEARING

INTRODUCTION AND SUMMARY OF ARGUMENT

Pursuant to S.C. R. App. P. 221(a), Kareem J. Graves and Tara Graves, individually and as duly appointed personal representatives of the Estate of India Iyanna Graves, Plaintiffs below and Appellants to this Court, respectfully petition this Honorable

Court for Rehearing on and Reconsideration of this Court's tentative decision and draft opinion in this case, which was filed on August 29, 2012.

As this Court expressly acknowledged in its August 29 decision, that decision broke new ground in two major areas of the law: the propriety of using circumstantial evidence in a products liability case and the standard of proof an expert must meet in assessing causation in any tort case.

Unfortunately, although the Court relied upon decisions from courts outside the State for guidance on both issues, the Court overlooked and misapprehended the overwhelming consensus of the law around the country, as well as the consensus views of learned scholars, regarding both topics. For the reasons detailed below, rehearing and remand are warranted on both counts.[1]

ARGUMENT

I. The Court Misapprehended the Law Regarding Circumstantial Evidence and Overlooked the Consensus Views that Plaintiffs May Use Circumstantial Evidence to Prove a Defendant is Strictly Liable for Their Injuries Under the Malfunction Doctrine Even If Such Evidence is Insufficient to Establish Strict Liability Under the Design Defect Doctrine

This Court began its review of the trial court's decision to grant summary judgment by observing:

> In any products liability action, a plaintiff must establish three things: (1) he was injured by the product; (2) the product was in essentially the same condition at the time of the accident as it was when it left the hands of the defendant, and (3) the injury occurred because the product "was in a defective condition unreasonably dangerous to the user." *Madden v. Cox*, 284 S.C. 574, 579, 328 S.E.2d

[1] The Court also ruled that the Plaintiffs acknowledged that they were not proceeding on Warranty and Negligence. When making these kinds of strategic decisions, Plaintiffs did not anticipate the Court's changing of the rules after the game was over. Clearly, this case would have been supportable under the Implied Warranty theory under the then applicable case law.

> 108, 112 (Ct. App. 1985). **If the plaintiff is pursuing a design defect claim, the only way to meet the third element is by "point[ing] to a design flaw in the product** and show[ing] how his alternative design would have prevented the product from being unreasonably dangerous." *Branham v. Ford Motor Co.*, 390 S.C. 203, 225, 701 S.E.2d 5, 16 (2010).

Graves v. CAS Med. Sys., 2012 S.C. LEXIS 179 at *22-23 (emphasis added; ellipses in the original).

Next, the Court "t[ook] this opportunity" to clarify the law regarding circumstantial evidence and "to correct the circuit court's erroneous holding that a plaintiff cannot use circumstantial evidence to prove a design defect claim." 2012 S.C. LEXIS 179, at *23-24. Explaining that "'[a]ny fact in issue may be proved by circumstantial evidence as well as direct evidence,'" the Court said "the general rule is any fact can be shown through circumstantial evidence, and it is up to the trier of fact to determine whether it alone is worth as much merit as direct evidence." *Id.* at *24 (citation omitted).

Nevertheless, despite the fact that the Court held that the "general rule" that "any fact can be shown through circumstantial evidence," the Court concluded that "general rule" did not apply to the case at bar. *Id.* Thus, the Court said "[i]n this case, . . . we need not determine what quantum of circumstantial evidence of a **design defect** is necessary to withstand summary judgment because the lack of expert testimony is nevertheless dispositive of the Graves' [design defect] claim." *Id.* (emphasis added). The Court thereupon Court affirmed summary judgment on the Plaintiffs' design defect claim and upheld the dismissal of the Plaintiffs' lawsuit in its entirety.

In so holding, the Court misapprehended the fact the Plaintiffs' strict liability cause of action was bottomed on two independent and alternative theories or claims—the

malfunction doctrine as well as the design defect theory—and therefore overlooked the direct and circumstantial evidence that defendant's product had malfunctioned in this case.

A. The Court Overlooked the Plaintiffs' Malfunction Claim

The Court's tentative opinion focused on the Plaintiffs' "design defect" strict liability claim but did not mention and apparently overlooked the fact that Plaintiffs had advanced an alternative theory of strict liability, the "malfunction" theory, a theory that does not require specification of the kind of defect that allegedly caused the product to malfunction, *i.e.*, design or manufacture, and does not require expert testimony to establish strict liability.[2] As the Plaintiffs explained in their "Final Brief to the Court of Appeals" (which was, in fact, their initial, opening brief to that court), "'Jurisdictions which model their decisional law along RESTATEMENT lines,'" as South Carolina does,

> "uniformly hold that a strict liability **claimant may demonstrate an unsafe defect through direct eyewitness observation of a product malfunction**, and **need not adduce expert testimony to overcome a motion for**

[2] It is well established that a malfunction claim is, like a design defect claim or a manufacturing defect claim, part of a strict liability cause of action. As one court explained earlier this year, "[a] case in which a plaintiff has only circumstantial evidence to support his strict liability claim may proceed under the 'malfunction theory.'" *Banks v. Coloplast Corp.*, 2012 U.S. Dist. LEXIS 26112 (E.D. Pa. Feb. 28, 2012). See *Metro. Prop. & Cas. Ins. Co. v. Deere & Co.*, 25 A.3d 571, 579 (Conn. 2011); *Canning v. Broan-Nutone, LLC*, 480 F. Supp. 2d 392, 393 (D. Me. 2007); *DeWitt v. Eveready Battery Co.*, 565 S.E.2d 140, 150 (N.C. 2002); *Schroeder v. Commonwealth*, 710 A.2d 23, 26 n.4 (Pa. 1998). The Reporter for the American Law Institute's (ALI) RESTATEMENT (THIRD) OF TORTS, Michael D. Green, agrees. See Michael D. Green, *Symposium: The Products Liability Restatement: Was It a Success?: The Unappreciated Congruity of the Second and Third Torts Restatements on Design Defects*, 74 Brook. L. Rev. 807, 834 (2009).

> **summary judgment**. ... Although it is helpful for a plaintiff to have direct evidence of the defective condition which caused the injury or expert testimony to point to that specific defect, such evidence is not essential in a strict liability case based on § 402A ... and **direct observation of '"[t]he malfunction itself is circumstantial evidence of a defective condition.**'" ...Thus, a manufacturer's own employee-expert does not necessarily trump a strict liability claimant's circumstantial non-'expert' evidence at the summary judgment stage. ...
>
> Indeed, strict liability claimants may resort to an array of circumstantial evidence. ...('Such circumstantial evidence includes (1) **the malfunction of the product**; (2) **expert testimony as to a variety of possible causes**; (3) **the timing of the malfunction in relation to when the plaintiff first obtained the product**; (4) **similar accidents involving the same product**; (5) elimination of other possible causes of the accident; and (6) proof tending to establish that the accident does not occur absent a manufacturing defect')."

Id. at 19 quoting *Perez-Trujillo v. Volvo Car Corp.*, 137 F.3d 50, 57 (1st Cir. 1998) (emphasis added).

The Court also overlooked the very considerable, and unrebutted legal consensus in support of the malfunction theory. As noted in the Law Professors Amicus Brief filed on the Plaintiffs' behalf, "'[h]aving spread across the nation . . . , the malfunction doctrine has become a well-established precept of modern products liability law." Law Professors Brief at 31, n.25 (quoting David G. Owen, PRODUCTS LIABILITY LAW, § 7.4 at 473 (2d ed., 2008) (footnote omitted)).

The Law Professors also quoted at length from Professor Owen's seminal law review article on the subject about the importance and dimensions of this ever more popular doctrine. (Owen, of course, not only is The Carolina Professor of Law at the University of South Carolina but also is widely regarded as one of the Nation's leading torts scholars and the Country's premier product liability scholar. Of perhaps greater

importance, Owen is universally esteemed as a neutral and disinterested scholar, "a thoughtful centrist; in some areas he calls for expansion, and in others he calls for restriction." Richard L. Cupp, Jr., *Believing in Products Liability: Reflections on Daubert, Doctrinal Evolution, and David Owen's Products Liability Law*, 40 U.C. DAVIS L. REV. 511, 511 (2006).[3]

> "Since normal products liability doctrine requires a plaintiff to establish that a product was defective and that the defect caused his harm, requiring a plaintiff to prove that a specific defect caused the accident might appear to make good sense. But **the very purpose of the malfunction doctrine is to allow a plaintiff to prove a case by circumstantial evidence when there simply is no direct evidence of precisely how or why the product failed.** Sometimes the specific cause of a malfunction disappears in the accident when the product blows up, burns up, is otherwise severely damaged, or is thereafter lost. Not infrequently, however, products simply malfunction, and mysteriously so, leaving no tangible trace of how or why they failed. In all such situations, where direct evidence is unavailable, the courts have properly refused to require the plaintiff to prove what specific defect caused the product to malfunction."

Law Professors Brief, at 34 n.29 (emphasis added; quoting David G. Owen, *Manufacturing Defects*, 53 S.C.L. REV. 851, 874 (2002) (emphasis added; footnotes omitted)).

Owen did not join the Law Professors Brief but he now has tendered an affidavit in support of the instant petition for rehearing. His affidavit, which is attached hereto and incorporated herein by reference, makes four critical points.

1. The malfunction doctrine is not only a legitimate alternative theory of strict product liability, it is, if anything, more popular than the Law Professors

[3] Cupp is the Associate Dean for Research & the John W. Wade Professor of Law, Pepperdine University School of Law.

modestly declaimed. Thus, his "research of malfunction cases (like this) over many years [has] revealed scores of cases across the nation—now a clear majority, and predicted to become universal[4]—that state and apply the following principles [of the malfunction doctrine] . . . ."

2. The "principles of the 'malfunction doctrine' **do** apply to the circumstances of this case, as those circumstances are discussed in this Court's opinion," Owen Aff. ¶ 16 (emphasis added), unlike the "[c]omplex-product rules" that govern design defect claims and which "do not apply to this case," at least regarding the Plaintiffs' malfunction doctrine theory of the case. Owen Aff. ¶ 18.

3. Under the malfunction theory, Plaintiffs were not and are not required to allege, much less prove a design defect. As a matter of South Carolina law, parties are permitted to plead, allege, and argue overlapping, inconsistent, and alternatives theories of liability and defense. The fact that the Plaintiffs in this case argued, in the alternative, that Defendant's product was defectively designed, does not mean that they are limited to that theory. Thus, as noted above, the malfunction doctrine provides an alternative means of establishing strict products liability and is equal to and independent of design defect or manufacturing defect claims. As such, as Professor Owen elucidates, "the complex-product rules" that apply to design defect claims—such as the need for plaintiffs to identify and prove specific design defects—while "important and sound, . . . apply [solely] to ordinary products liability cases involving disputed claims on

[4] See Owen Aff., ¶ 19 n.9: "'In a proper case, . . . it is difficult to see how any jurisdiction could reject some properly formulated version of such a well-established, fair, and logical principle of proof. In short, the manifest merits of this simple canon of circumstantial evidence suggest that its acceptance should soon be universal.'" (quoting Owen, PRODUCTS LIABILITY LAW § 7.4, at 475; citations omitted).

how a product should and should not have been designed in order to prevent the type of accident suffered by the plaintiff, the typical issues in most products liability design defect cases (like *Branham*)." Owen Aff. ¶ 18.

By contrast, pursuant to the malfunction doctrine that the Plaintiffs have pursued (in the alternative) in this case, "the question is *not* what the *specific* defect was (how the electrons might have gotten diverted in the monitor system, or how an alternative design might have prevented such a diversion), but whether the monitor's alarm malfunctioned and so failed to sound at all (and, if it did, why it failed to awake either parent). This is a simple yes/no question that a jury would seem competent to decide without the aid of an expert." Owen Aff. ¶ 18 (italics in the original; footnote omitted).

For these reasons, "Plaintiff[s], in such malfunction cases, *need not prove a specific defect* . . . , but may rely on the probability in such circumstances—based only on a preponderance of the evidence—that a product defect is the most likely cause of the harm." Owen Aff. ¶ 22 (italics in the original).

Professor Owen's analysis comports with that of the Law Professors, whose Amicus brief explains that the facts of this case and the theory of liability the Plaintiffs have espoused here fall squarely within the rubric of black letter law summarized in the American Law Institute's (ALI), RESTATEMENT (THIRD) OF TORTS: PRODUCT LIABILITY (1998) ("PRODUCTS LIABILITY RESTATEMENT"). Thus,

> The text of the first paragraph of the PRODUCTS RESTATEMENT § 3 explicitly states that the **existence of a product defect "may be inferred . . . without proof of a specific defect**." . . . Official Comment c to PRODUCTS RESTATEMENT § 3 elaborates on this rule:
>
> > **c. No requirement that plaintiff prove what aspect of the product was defective**—The inference of defect may be drawn under this Section

> without proof of the specific defect. Furthermore, quite apart from the question of what type of defect was involved, the plaintiff need not explain specifically what constituent part of the product failed. For example, if an inference of defect can be appropriately drawn in connection with the catastrophic failure of an airplane, the plaintiff need not establish whether the failure is attributable to fuel-tank explosion or engine malfunction.
>
> (Emphasis added). As detailed in both the following footnote and accompanying Appendix C, the views set forth in § 3, Comment (c) are completely consistent with case law from around the country, which hold that a plaintiff is not required to identify the alleged defect with particularity, or describe which individual "constituent part" or sub-component of a product was flawed, or explain precisely how and why a component was defectively designed, or how and why a sub-component was defectively manufactured, or how and why the entire product malfunctioned.

Law Professors Brief at 33 (emphasis added; footnote deleted). See Owen Aff ¶ 22.

4. **Under the malfunction theory, Plaintiffs were not and are not obliged to present expert testimony regarding how or why the product in question malfunctioned**, let alone how or why it was defectively designed or defectively manufactured. Just as the "[c]omplex-product rules" regarding the need to prove a design defect "do not apply to this case," so too "[t]he rules requiring expert testimony on complex product accidents" properly "are not required (and really do not apply) in the limited, special class of cases called 'product malfunction' cases." Owen Aff. ¶ 20 (footnote omitted).

Undoubtedly, "[e]xpert testimony . . . *may* supplement plaintiff's testimony" in "malfunction cases like this," but such testimony is not necessary in a malfunction case like this. Owen Aff. ¶ 21 (italics in the original). Instead, "plaintiff's testimony (a) that a product malfunctioned, and (b) that negates other plausible causes (such as the plaintiff's

own conduct), is direct proof of both facts, and circumstantially may," by itself, be sufficient to "prove that the product contained a defect that caused the harm." *Id.* Accordingly, "**[e]xpert testimony** of defect and/or causation may supplement such direct testimonial evidence, but it **is not required** if the circumstances of the product failure and injury, based on a plaintiff's testimony (including negation of other likely causes), suggest that it is more probable than not that the product in fact failed and that the failure was caused by a defect in the product." *Id.* The Law Professors agree completely. See Law Professors Brief at 35.

Simply put, under the malfunction doctrine, direct and circumstantial evidence may suffice to prove a defendant is strictly liable. As explained below, in this case, the Plaintiffs' direct and circumstantial evidence more than sufficed.

B. The Court Ignored and Misapprehended the Direct and Circumstantial Evidence the Plaintiffs Amassed in Support of the Malfunction Theory in this Case

Because the Court overlooked the Plaintiffs' malfunction theory argument, the Court ignored and misapprehended the Plaintiffs' compelling direct and circumstantial evidence that the Defendant's product had malfunctioned and had failed to sound in this case; indeed, the Court failed to take judicial notice of the most powerful type of circumstantial evidence, the fact that the FDA had issued a "Class I recall" (the most serious kind) of the exact same CAS Monitor – AMI 9700 Apnea Monitor – that allegedly malfunctioned in this case and for exact same reason: unexplained failure to sound.

The Plaintiffs' direct and circumstantial evidence took several forms:

> First, four eyewitnesses testified that the CAS monitor malfunctioned on the night of the accident in that it never made an audible alarm. Second, the parents also testified

> that the monitor had been properly set up and yet failed to sound when the infant stopped breathing. Third, the parents testified that the electric power had operated that night and, therefore, the alarm failure could not be blamed on a lack of power.

Plaintiffs' Final Brief at 31. The Plaintiffs previously characterized this evidence as "circumstantial;" The Law Professors and Professor Owen call it "direct." Law Professors Brief at 9-11; Owen Aff. ¶ 17.

Regardless of how denominated, that testimony was more than adequate to preclude summary judgment and to forestall this Court's affirmance of summary judgment. To be sure, the eyewitness testimony "might be disbelieved by the trier of fact . . . but it appears sufficient to lead a fact finder reasonably to find—even without expert testimony—that probably a defect in the monitor, and not one of the parents, caused the alarm to fail and the parents to stay asleep until it was too late to save their baby." Owen Aff. ¶ 16.[5]

In addition to the Plaintiffs' eyewitness testimony, one of the Plaintiffs' experts, Frank Painter, detailed that 50 alarm failures had been reported to the Defendant and the FDA, and that the complaints about these failures were "'very, very similar in nature to the ones we have . . . .'" we have in this case. Final Brief at 21 (citation omitted).

Lastly, and most significantly, the Law Professors Brief asked the Court to take judicial notice that the FDA had received many more such complaints and accordingly, had issued a Class I recall for five years worth of CAS – AMI 9700 Apnea Monitors, i.e.,

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[5] While the Court makes quick reference to the experts' reliance on the sworn testimony of the Graves, who were physically in the child's room while the alarm was supposed to be sounding but was not, it takes no notice of the fact that this direct evidence coupled with the internal log evidence that it was indeed supposed to be sounding is enough for a jury to find that the product did in fact malfunction.

monitors entirely identical to the one used by India Graves.[6] The Law Professors emphasized that Class I recalls are rare, that such recalls are reserved for only the most serious product malfunctions—those that pose the risk of death—and that the FDA issued a recall in this case despite the agency's inability to pinpoint a specific kind of design or manufacturing defect, i.e., the particular cause (or causes) of repeated product malfunctions. Law Professors' Brief at 12-13.

Thus, the FDA, employing the administrative equivalent of the malfunction, doctrine, ordered a Class I recall of "AMI 9700 Apnea Monitors" manufactured between 1997 ad 2001, because, as the FDA explained "**the infant apnea monitor might shut down and the audible alarm might fail to sound.**" FDA, *Recall of Infant Apnea Monitor: Possible Failure of Infant Monitoring Device Results in Class I Recall.* http://www.fda.gov/ICECI/EnforcementActions/EnforcementStory/EnforcementStoryArchive/ucm103360.htm ("Last Updated: 01/13/2010") (website last visited Sept. 25, 2012) (emphasis added)) (quoted in Law Professors Brief at 12).

[6] The FDA's recall was not disclosed by the Defendants at the time of the experts' depositions. This Court is empowered to take judicial notice of official reports of the federal and state governments. *See Meier v. Meier*, 208 S.C. 520, 528, 38 S.E.2d 762, 767 (1946) (judicial notice of orders published in the Federal Register); *State v. Life Ins. Co. of Ga.*, 254 S.C. 286, 297, 175 S.E.2d 203, 208 (1970) ("official reports of [the State] Comptroller General."). Furthermore, S.C. R. Evid. 201(f) provides "judicial notice may be taken at any stage of the proceeding." This Court, accordingly, has taken judicial notice of matters presented for the first on appeal. *See State v. Wright,* 349 S.C. 310, 314, 349 S.C. 310, 314 (2002); *Orr v. Clyburn*, 277 S.C. 536, 539, 290 S.E.2d 804, 806 (1982); *Rhode v. Ray Waits Motors, Inc.*, 223 S.C. 160, 170, 74 S.E.2d 823, 827 (1953). Although this Court has never addressed the question of whether courts are empowered to take judicial notice of facts raised in amicus briefs, other courts, including the U.S. Supreme Court, invariably have held that courts may do so. *See Roaden v. Kentucky*, 413 U.S. 496, 506 (1973); *N.Y. State Rest. Ass'n v. N.Y. City Bd. of Health*, 556 F.3d 114, 136 (2d Cir. 2009); *Aramark Facility Servs. v. SEIU, Local 1877*, 530 F.3d 817, 826 n.4 (9th Cir. 2008); *Quarry (Terry) v. Doe 1*, 2011 Cal. LEXIS 13280, 13280 (2011); *Washington Water Jet v. Yarbrough*, 90 P.3d 42, 45 n.4 (Wash. 2004); *In re Williamson*, 838 So. 2d 226, 235 (Miss. 2002).

Notably, the FDA did not specify whether "the **monitor might shut down and the audible alarm might fail to sound**" because of a design defect or a manufacturing defect and, if so, what, precisely, had been defectively designed or manufactured. The FDA either did not know or did not care what caused to Monitors to malfunction and to threaten or destroy lives. Instead, the FDA chose to act on abundant evidence of the plain fact that the CAS AMI 9700 Monitors repeatedly malfunctioned rather than wait to be certain why they malfunctioned. Although it might be better for agencies to know exactly "how" and "why" a product malfunctioned, it was sufficient to know "what," to know that something was dangerously amiss, and to act accordingly. The malfunction doctrine is premised on the same principle, that liability may attach even if plaintiffs and their experts cannot specify the precise nature and origins of a malfunction.

Defendant' counsel, in their briefs, summarily **asserted** that the 50 complaints identified by the Plaintiffs' expert and the Class I recall highlighted by the Plaintiffs' amici Law Professors, were irrelevant because all of those "failure to sound" incidents supposedly involved different, unrelated flaws, such as defectively manufactured "hardware" problems instead defectively designed software problems. Tellingly though, the Defendant never introduced any admissible evidence one way or the other and neither the trial court nor this Court should have credited the Defendant's *ipse dixit.* At most, Defendant's self-serving interpretation of the 50 similar incidents and the Class I recall simply creates a question of fact as to substantial similarity. Because the trial court decided these questions at the summary judgment stage, the evidence should have been viewed in the light most favorable to the Plaintiffs, the trial court should not have granted and this Court should not have affirmed summary judgment.

Of even greater importance, although the Defendant's assertion that the numerous complaints to the FDA and the recall by the FDA were caused by anything and everything but design flaws might convince a jury that their product was not defectively designed, that assertion might be—and should be—be regarded by a jury as an admission of multiple, idiopathic malfunctions, an admission that is of liability under the malfunction doctrine.

In this light, India Graves' death, which the Court portrayed as a tragic but unique and isolated event, was anything but idiosyncratic; rather, India's death was just one in a series of real or near tragedies and, more important, preventable tragedies. Because tort law, in general, and strict liability, in particular are intended to deter misconduct as much as to compensate the victims of misconduct, see Dan B. Dobbs, Robert E. Keeton & David G. Owen, PROSSER AND KEETON ON TORTS § 98, at 692-94 (5th ed. 1984), this Court, like the trial court, should have paid due attention both to the malfunction theory and to the abundant evidence, direct and circumstantial, of a malfunction in this case.

II. THE PLAINTIFFS ADDUCED ADMISSIBLE EXPERT TESTIMONY THAT DEFENDANT'S PRODUCT WAS DEFECTIVELY DESIGNED AND THIS COURT SHOULD NOT HAVE AFFIRMED THE TRIAL COURT'S DECISION TO THE CONTRARY

This Court's draft Opinion tentatively held the testimony of Plaintiffs' experts on causation was unreliable and inadmissible both under the well-established standards for scientific testimony set by *State v. Council,* 335 S.C. 1, 515 S.E.2d 508 (1999), and under the standard for non-scientific testimony set by the *Bitler v. A.O. Smith Corp.*, 400 F.3d 1227, 1237-38 (10th Cir. 2004), cert. denied sub nom., *White-Rodgers v. Bitler*, 546 U.S. 926 (2005), and adopted by this Court as a matter of first impression in this case.

Plaintiffs do not agree with the Court's holding under *Council* but that disagreement with the Court's routine application of a standard long settled in the State does not provide grounds for rehearing. On the other hand, this Court's tentative adoption of a novel and foreign standard not only provides colorable grounds for the Plaintiffs to present the instant petition but provides compelling reasons why this Court should grant the petition and remand this case for trial. There are compelling reasons why this Court should remand this case for further proceeding. This Court has historically cautioned lower courts that when addressing new, novel, and/or complicated cases, courts must be very careful in denying someone's right to trial by way of Summary Judgment and should rather allow the record to be more fully developed. It would seem also to trudge on basic fairness and historical values to change the rules during or after the game has been played.

This Court should reverse and remand because it erred in adopting *Bitler* in the first place, even tentatively, and because this tribunal should not be the first court, state or federal, trial or appellate outside the Tenth Circuit to embrace *Bitler*'s unprecedented, unsupported, orphaned, and constitutionally problematic "highly probable/highly improbable" test.

Plaintiffs candidly must begin with a confession of arguably excusable confusion. What Plaintiffs intended to represent to the Court was that their proof met the very rigorous dictates of *Bitler*, which exceeds any standard of proof across the land to include what was required to survive Summary Judgment in this case.

As a general matter, the Court's error is regrettable but hardly rises to earthshattering news because courts, being human, err. That is precisely why appellate

courts exists, why motions for rehearing are permitted by the Rules of Appellate Procedure, and, indeed, why this Court provides "notice" that its decisions are "not final until time expires to file [a] rehearing motion and, if filed, determined."

Lawyers often err, too. In this case, Plaintiffs' counsel recommended *Bitler*'s test for assessing the merits of an expert witness's use of the "best inference"/"differential diagnosis" methodology to the Court of Appeals. See Final Brief at 19-20.[7] As quoted in that brief, *Bitler*'s test posits: "an inference to the best explanation for the cause of an accident must **eliminate other possible sources as highly improbable**, and must **demonstrate that the cause identified is highly probable**." 400 F.3d at 1237-38 (emphasis added).

Professor Owen, usually the most modest and "centrist" of scholars is scathing in his criticism of *Bitler*.

> *Bitler*'s "highly probable/improbable" standard of proof is **highly dubious**. . . . [It] is **strange**, must be **idiosyncratic**, and is must be **wrong** (see the supposed authority in *Bitler*'s note 6) . . . perhaps from a simple error in a draft overlooked by that court . . . . I would hope that *this* Court might reconsider whether it makes sense for it to follow this **bizarre** shift in the standard of proof from the normal preponderance (probability) to *high* probability—a major (and ***highly*** **dubious**) alteration of the traditional standard of proof that appears **plainly wrong**, that, anyway, should be fully briefed and argued and not introduced willy-nilly into this State's jurisprudence.

Owen Aff. ¶ 17 (italics in the original; additional emphasis added).

There are six additional reasons why Plaintiffs' counsel should have known better than to recommended *Bitler*'s high probability standard, why this Court should not have

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[7] Professor Owen suspects he is at fault, "must take the blame for causing this problem . . . and hope[s]the Court will accept [his] apology" because "the decision here will control future litigation throughout the State." Owen Aff. ¶ 17 n.6.

accepted that recommendation, and why this Court should rescind its tentative Opinion adopting *Bitler* and remand this case for trial. Those reasons are set forth below.

1. ***Bitler*'s "high probability/improbability" requirement was an orphan at birth, as it was utterly without judicial precedent**

The question is not whether "differential diagnosis" or its engineering equivalent, the "best inference" methodology, is generally accepted by the courts as reliable, valid, useful and admissible. There is no doubt this is so.[8] The same holds true for engineers.[9] Rather, the question is what level of certainty is required to rule in or rule out a cause when using the differential diagnosis or best inference methodology. The Fourth Circuit framed the typical standard in the following fashion:

> Differential diagnosis, or differential etiology, is a standard scientific technique of identifying the cause of a medical problem by eliminating the likely causes until the **most probable** one is isolated. A reliable differential diagnosis typically, though not invariably, is performed after "physical examinations, the taking of medical histories, and the review of clinical tests, including laboratory tests," and generally is accomplished by determining the possible causes for the patient's symptoms and then eliminating each of these potential causes until reaching one that cannot be ruled out or determining which of those that cannot be excluded is the **most likely**.

[8] "The overwhelming majority of courts that have addressed the issue have held that a medical opinion on causation based upon a reliable differential diagnosis is sufficiently valid to satisfy the reliability prong of the Rule 702 inquiry." *San Francisco v. Wendy's Int'l, Inc.*, 221 W. Va. 734, 747 (W. Va. 2007) (citations omitted).

[9] "Engineers trying to understand a disaster often follow causal chains ('failure trees')," in which they "eliminat[e] the alternatives . . . . until they find one that can account for the calamity. Sherlock Holmes observed that 'when you have eliminated the impossible, whatever remains, however improbable, must be the truth'. A. Conan Doyle, *The Sign of Four* ch. 6. Courts need not disdain a method that both engineers and detectives find useful." *Bammerlin v. Navistar Int'l Transp. Corp.*, 30 F.3d 898, 902 (7th Cir. 1994) (per Easterbrook, J.).

Westberry v. Gislaved Gummi AB, 178 F.3d 257, 263 (4th Cir. 1999) (emphasis added; citation omitted).

Although innumerable courts had, before *Bitler*, accepted the reliability, validity, usefulness, and admissibility of the best inference/differential diagnosis method, and done so in the context of many different types of expert testimony, and although innumerable courts had, prior to *Bitler*, endorsed the "most probable" or "most likely" formulation, until *Bitler* was published no court in the country had adopted a "high probability" test like *Bitler*'s or anything like it.

To be sure, the novelty of a decision does not, by itself, provide a sufficient reason to spurn it. Still, the fact that a court purports to address a problem—assessing the reliability of an expert's reasoning—that has existed for decades but addresses that problem in an unprecedented way suggests it should viewed, and adopted, with considerable caution.

2. *Bitler*'s test is unsupported by any learned authority, including the sole treatise it quotes and relies upon

The only authority *Bitler* cites for its "high probability" test is found in a footnote of that decision, which says, in full:

> An expert must show that other causes are improbable when conducting differential diagnosis, but "this is not to say that an expert, in order to testify on causation, must be able to categorically exclude each and every possible alternative cause. . . ."—to require otherwise 'would mean that few experts would ever be able to testify." Stephen A. Saltzburg et al., FEDERAL RULES OF EVIDENCE MANUAL 702-33 (8th ed. 2002). Indeed, "the underlying premise of differential diagnosis is that there is an established connection between certain possible causes and a condition or symptom--then all of the established causes are ruled out but one." *Id.* at 702-35.

400 F.3d at 1238, n.6.

It is plain, though, that nothing in the quoted passages from the FEDERAL RULES OF EVIDENCE MANUAL says or suggests that an expert must rule in one cause as "highly probable" or rule out alternative causes as "highly improbable." Nothing elsewhere in the EVIDENCE MANUAL, or any other treatise, hints at that test, either.

Furthermore, *Bitler's* (and now this Court's) insistence that an expert must rule out all alternative causes, and rule out each one as "highly improbable", establishes a standard that has been rejected by the Advisory Committee to the Federal Rules of Evidence. As that authoritative Committee Notes explain, the Federal Rules of Evidence instruct the court to consider "whether the expert has adequately accounted for obvious alternate explanations." Fed. R. Evid. 702, Advisory Committee Notes (2000 Amendments). Nothing in the Rule or the official commentary equates "adequate" with "highly improbable." See *Ambrosini v. Labarraque,* 101 F.3d 129, 140-41 (D.C.Cir. 1996), writ of certiorari dismissed sub nom., *Upjohn Co. v. Ambrosini*, 520 U.S. 1205 (1997) (the possibility of some un-eliminated alternative causes presents a question of weight for the jury, not admissibility for the court, so long as the most obvious causes have been considered and "reasonably" ruled out by the expert).[10]

3. *Bitler*'s "high probability" test is much more "intellectual[ly] rigor[ous]" of scientists than any reliability test scientists and physicians use in the

[10] See *Nucor Corp. v. Bell*, 2008 U.S. Dist. LEXIS 86328, *8 (D.S.C. Jan. 11, 2008) ("whether the expert has reasonably accounted for alternative explanations."); *Jack Henry & Assocs. v. BSC, Inc.*, 2012 U.S. App. LEXIS 13079, 26-27 (6th Cir. 2012) (same); *Am. Honda Motor Co. v. Allen*, 600 F.3d 813, 817 (7th Cir. 2010) (same); *Triplett v. USX Corp.*, 893 N.E.2d 1107, 1119 (Ind. Ct. App. 2008) (same); *Eide v. Ctr. for Diagnostic Imaging Inc.,* 2010 Minn. App. Unpub. LEXIS 326 (Minn. Ct. App. Apr. 20, 2010) (same).

ordinary course of their professional lives and thus runs counter to the *Kumho Tire* standard

This Court has effectively embraced the third part of the U.S. Supreme Court's "*Daubert* trilogy" of cases on expert admissibility, *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999). *See Watson v. Ford Motor Co.*, 389 S.C. 434, 499, 699 S.E.2d 169, 177 (2010); *State v. White*, 382 S.C. 265, 270, 676 S.E.2d 684, 686 (2009); *Moriarty v. Garden Sanctuary Church of God*, 341 S.C. 320, 331, 534 S.E.2d 672, 678 (2000). This is important because *Kumho Tire* held that the overriding "objective" of the "gatekeeping role for the judge" set by *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597 (1993), "is to ensure the reliability and relevancy of expert testimony. It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the **same level of intellectual rigor** that characterizes the practice of an expert in the relevant field," and not to devise and insist upon higher, more demanding, and more "intellectual[ly] rigor[ous]" standards. 526 U.S. at 152 (emphasis supplied).

Courts have no warrant to impose a higher or more demanding "**level of intellectual rigor** that characterizes the practice of an expert in the relevant field." Neither *Daubert* nor its federal and state progeny authorize such. Nor does anything in the Federal Rules of Evidence or the state analogues to those Rules. But *Bitler* does just that. As explained in the two amicus briefs to be submitted in support of this petition by Professor Stephen G. Pauker, M.D.,[11] and Professor Francis M. Wells,[12] physicians and

[11] Dr. Pauker is a professor of medicine who practices, teaches, researches, and writes about how physicians do and should make medical decisions, including how to use "differential diagnosis." Currently, he is Professor of Medicine at the Tufts University

engineers do not use a "higher probability" standard or anything like it when employing a differential diagnosis or best inference methodology during the ordinary course of their professional lives, i.e., during their practices outside the courtroom.

As Professor Pauker cautions:

> In treating patients and teaching students, it would be extremely unusual for us to label anything as "highly probable" or "highly improbable." Further, even things of very low probability might not fall off *amicus'* differential diagnosis list, especially if the consequences of missing them (errors of omission) could be substantial. In fact, entire books have been written about the dangers of missing diagnoses that might be, quantitatively, of comparatively low likelihood. . . . The process of creating and maintaining a differential diagnosis list at all points, including "what else might it be" diseases that might be, quantitatively, in the single digit range, is central to sound medical practice.
>
> Differential diagnosis is the process of laying out or listing alternative possibilities. There is no minimum mathematical probability, no minimum quantitative threshold or trigger required to add something on the differential list. It depends on the benefits of taking an action or the risks of not taking an action if the diagnosis

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School of Medicine (where he has taught since 1972 and served as the Chief of the Division of Clinical Decision Making). He is an invited member of the prestigious Institute of Medicine (IOM) of the National Academies of Science (NAS), and is a Past President, founding Member, and current Member, of the Board of the Society for Medical Decision Making (SMDM).

[12] Professor Wells is Professor, Emeritus, of Electrical Engineering and Computer Science the Vanderbilt University School of Engineering, where he has taught and directed research in the field of electrical engineering for over forty years and where he and served as Director of Graduate Studies at Vanderbilt's School of Engineering. He is a Senior Member of the Institute of Electrical and Electronics Engineers; Past Chair of the Institute of Electrical and Electronics Engineers/Industry Applications Society (IEEE/IAS); Member of the American Society for Non-Destructive Testing; Member of the National Fire Protection Association, and the recipient of several professional (engineering) honors and awards, including Sigma XI; Tau Beta Pi; and Eta Kappa Nu.

> were in fact true. Again arbitrary probability cutoffs (quantitative or qualitative) make no sense here.
>
> In conclusion, it also is *amicus*' considered opinion that courts should not require an expert to do or say anything that he or she would not do in the ordinary course of their professional lives. Thus courts should not require experts to assert or testify to anything beyond a specific level of certainty; to insist otherwise is contrary to well-accepted medical and scientific practice and seems foolish and is disrespectful of the real world of medicine and science.

Pauker Amicus Br. at 10-11 (footnote and internal citations omitted). See Wells Amicus Br. at 3-6.

In fact, no professional medical, scientific, or engineering society or standard-setting organization ever has insisted or even has suggested that a expert must eliminate all of the alternatives or eliminate any as highly improbable, let alone mandate, as *Bitler* does, that every expert must "prove the alternate cause is at least highly improbable based on an objective analysis."

4. ***Bitler*'s "high probability" test not only was a parentless orphan at birth, it is sterile today, as no other court outside the Tenth Circuit has adopted it**

Given the fact that *Bitler*'s "high probability" test is unprecedented in case law, unsupported by any secondary legal authorities, unsupported in the sciences, and contrary to *Kumho Tire's* guidance and to that of the Advisory Committee to the Federal Rules, it is hardly surprising that not a single court outside the Tenth Circuit— trial or appellate, federal or state—has adopted that test or even cited it with approval. This is so despite the

fact that many courts outside the Tenth Circuit have been invited to do so.[13] To be sure, the fact that every court that has been urged to adopt *Bitler* has declined the invitation is not dispositive, but it should have given counsel and the Court pause.

5. *Bitler*'s "high probability" test causes experts to undertake investigations beyond their professional qualifications and to perform tasks outside the ordinary course of their professional lives

As discussed above, *Kumho Tire* requires testifying experts to use the same "intellectual rigor" inside the courtroom as they do outside. Implicit in *Kumho Tire's* teaching is that experts should be expected or required to do more inside the courtroom than they otherwise do in the course of their professional careers. *Bitler*, as construed, by the Court in this case, turns *Kumho Tire* on its head and requires experts who wish to pass muster under *Bitler* not only to investigate and rule out those alternative causes they ordinarily would consider in their non-testifying lives but also to consider and rule out—to a degree of "high improbability"—alternative causes they never ordinarily would pursue, including causes they are unqualified to investigate.

Thus, this Court, relying on *Bitler*, concluded that Plaintiffs' computer scientists failed to pass muster because they supposedly had done nothing but assumed their clients

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[13] *See, e.g.,* Brief of Defendant in *United States v. Fleet Management, Ltd,,* No. 08-2600 (3d Cir.); 2008 U.S. 3rd Cir. Briefs LEXIS 1521, *41-43; 2008 U.S. 3rd Cir. Briefs 2600; 1 Exp. Wit. 288198 (filed Nov. 13, 2008); Brief of Defendant in *Andrade v. Sinco Group, Inc.*, C.A. No.. 07-11516-RWZ (D.Mass.); 2010 U.S. Dist. Ct. Motions LEXIS 77933, *20; 2007 U.S. Dist. Ct. Motions 11516; 1 Exp. Wit. 3128; 1 Exp. Wit. 104272 (filed April 30, 2010); Brief of Defendant in *Crescent Towing & Salvage Co., Inc. v. M/V Chios Beauty*, C.A. No. 05-4207 Section K"(5) (E.D. La.); 2008 U.S. Dist. Ct. Motions LEXIS 42332, *31-32; 2005 U.S. Dist. Ct. Motions 42075 (filed July 29, 2008).

were being truthful and accurate in saying they did not hear they alarm sound and that they would have heard it had it sounded. As the Court explained:

> Turning first to Dr. Daugherity, his exclusion of complaint error as a cause was premised on the Graves' own testimony that the alarm did not sound. . . . Dr. Daugherity simply assumed the alarm did not sound and provided no reason for discounting the evidence to the contrary other than the assertion of the person alleging a failure. Thus, Dr. Daugherity did not objectively discount the evidence of complaint error as required by *Bitler*.

2012 S.C. LEXIS 179 at *17.[14]

At first blush, the Court's construction seems eminently reasonable. Upon closer scrutiny though, it appears that the Court may be indulging in its own unexamined assumptions, implicitly doing here what it elsewhere does explicitly, e.g., "assume arguendo only that reasoning to the best interference is a valid scientific method." 2012 S.C. LEXIS 179, *15 n.9. In reality, as Professor Owen points out, everyone relies on assumptions, often reasonably, sometimes not, often consciously, sometimes not. In this case, plaintiffs' experts clearly but not unusually or unreasonably treated "the truthfulness of the Graves' assertions that the alarm did not sound" as a "working hypothesis" for their investigation into matters they were retained to investigate and qualified to investigate "computer software defects and malfunctions"[15]. Owen Aff. ¶ 14. Hence, the

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[14] The evidence in this case belies the Court's assertion that the Plaintiffs' experts merely assumed, without reviewing any records, that the alarm simply did not sound. Thus, the experts testified that they had credited the parents' statements because those statements were consistent with the records they had reviewed about all the events that transpired on the night India died.

[15] Not only did the parents submit to exhaustive and detailed cross-examination of the events that occurred on the night in question, other eye witnesses who also observed these same events under the same circumstances were also deposed. The experts read and reviewed these depositions and used them as one of the basis of their opinions. Under these circumstances there is no case that has ever been reported that would call

plaintiffs' "assertion[s] about the alarm not sounding was not a naked assumption of their part (or on their experts' part) but an "assertion" which itself

> is an objective fact, and [a fact that] subsumes the other key objective facts relevant to a malfunction case like this: that the Graves did not themselves proximately cause the failure (as by turning off the alarm) or proximately cause their daughter's death (as by failing to turn on the alarm or by sleeping through its screeching noise). Although the Opinion faults Plaintiffs' experts—for assuming (rather than personally investigating) whether the Graves were accurate and truthful, all experts necessarily base their analyses on certain baseline hypotheses, including especially statements by principal (or only) witnesses to the scene of an accident.

Owen Aff. ¶ 14.

Professor Wells agrees, noting that experts typically regard and treat certain facts as true, especially ones that that are beyond their competence to investigate. For example, in this case one can only guess how difficult, time-consuming, and expensive it would be for a software engineer to investigate the accuracy of distraught parents' assertions about what they heard (or what they had not heard) when their infant died months earlier. How could Dr. Daugherty determine that they were telling the truth (or not?). Question the surviving sibling's pediatrician to see why those infants didn't wake up screaming when (or if) the alarm sounded? Engage in a "forensic interrogation," which itself is a specialized skill? Demand blood tests to see if the parents had been drunk or drugged, rather than merely sleeping, when India died? Check hospital, medical, and pharmaceuticals records (and police blotters) for any indication that the parents had a medical condition that impeded hearing or if they had been treated for alcohol or drug abuse? Check with employers, co-workers, family members, social workers, ministers,

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into question the Plaintiffs' experts methodology for evaluating this extremely relevant information.

teachers, neighbors, and friends to assay their reputation for intoxication or irresponsible behavior or habitual lying or a penchant for telling lies for profit, for telling tales about a relative's death to elicit sympathy and cash from acquaintances or to frighten "deep-pocket" defendants into settling false or exaggerated claims? Might there have non-human sources for the hypothetical Complaint Error? Should Dr. Daugherty have investigated atmospheric conditions on the night India died to see how wind or barometric pressure might have made it harder or easier for sound to travel? What about social conditions in the parents' neighborhood: could a loud party or the sirens from a passing fire truck have drowned out the alarm?[16]

Merely to list these questions is exhausting; actually seeking answers to them would be more daunting still.

And there are yet two more pertinent questions. Who would pay for such investigations, each of which have to be separately undertaken by each expert? And would any court have qualified computer software engineers to investigate into these areas, areas far beyond their training, education, and expertise and allowed them to testify thereon?

Viewed through this lens, *Bitler*'s implicit requirement that every expert track down every plausible alternative until they expert could "objective[ly]" rule in or rule out each potential cause as "highly probable" or "highly improbable" seems a recipe for

[16] The Court seems to have made a scientific leap of its own by focusing on the Plaintiffs' experts' alleged dismissal of the internal log's showing that the alarm SHOULD have gone off. The fact is that this is NOT evidence that it DID make the audible sound that was to be triggered, which the direct evidence of the parents proves never happened. It is also unrebutted in this case that there were many reported unexplained errors in the internal logs. The Court simply did not take the evidence in the light most favorable to the Plaintiffs.

disaster, not a roadmap to sound decision-making by and about experts. Professor Owen's approach seems far more sensible: allow experts to research, investigate, and testify in the same way and according to the same standards they employ in the course of their ordinary professional lives, and then allow apposing counsel to use the "traditional and appropriate means of attacking shaky but admissible evidence," i.e., "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof . . . ." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 596 (1993).

> The fact that the experts here assumed the truth of important (non-technical) facts asserted by the biased parents certainly weakens the probative value of the experts' opinions (particularly in view of the monitor's recording of its own alarm), but the fact that the experts relied on such assumptions does not render the experts' opinions illegitimate or inadmissible. Rather, the plausibility of the experts' opinions, like the credibility of biased fact witnesses such as the parents, seem to be basic questions for the trier of fact.

Owen Aff. ¶ 14.

6. *Bitler*'s "high probability" test is constitutionally problematic

The consequences of adopting *Bitler* and applying it to the facts of this case are considerable and, indeed, constitutional in dimension.

a. The obligation of experts to prove their theories to a high probability (and to prove that alternative theories are highly improbable), effectively raises the burden of proof in tort cases from the long-established "preponderance of the evidence" standard to the "clear and convincing" standard.[17] In so doing, the Court is

[17] As the U.S. Supreme Court has explained:

inadvertently encroaching on the province of the General Assembly (which traditionally has set burdens of proof by statute),[18] and thereby inadvertently compromising on the

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> The purpose of a standard of proof is "to instruct the factfinder concerning the degree of confidence our society thinks he should have in the correctness of factual conclusions for a particular type of adjudication." *In re Winship*, 397 U.S. 358, 370 (1970) (Harlan, J., concurring). Three standards of proof are generally recognized, ranging from the "preponderance of the evidence" standard employed in most civil cases, to the "**clear and convincing**" ***n6*** standard reserved to protect particularly important interests in a limited number of civil cases, to the requirement that guilt be proved "beyond a reasonable doubt" in a criminal prosecution.

California ex rel. Cooper v. Mitchell Bros' Santa Ana Theater, 454 U.S. 90, 92-93 (1981) (per curiam) (emphasis added). Footnote 6 in turn explains: "The precise verbal formulation of this standard varies, and phrases such as '**clear and convincing**,' 'clear, cogent, and convincing,' and 'clear, unequivocal, and convincing' have all been used to require a plaintiff to prove his case to a **higher probability** than is required by the preponderance-of-the-evidence standard. C. McCormick, EVIDENCE § 320, p. 679 (1954). *See also* Kaplan, *Decision Theory and the Factfinding Process*, 20 STAN. L. REV. 1065, 1072 (1968)." (Emphasis added).

[18] See, e.g., S.C. Code § 15-32-520(D) ("Punitive damages may be awarded only if the plaintiff proves by clear and convincing evidence that his harm was the result of the defendant's wilful, wanton, or reckless conduct."); S.C. Code § 15-33-135 (same); S.C. Code § 27-5-130(D) ("In the event of a discrepancy between a deed and any addendum or attachment thereto where the words of inheritance or succession are contained in one of the documents, but not in all documents, or where conflicting language exists as to whether or not the grantor intended to convey a fee simple or a life estate interest in the real property, it is presumed rebuttable by clear and convincing evidence that the grantor intended to convey a fee simple absolute interest in the real property if he owned such an interest or his entire interest in the property if he did not own it in fee simple."); S.C. Code § 19-11-100 ("The person, company, or other entity may not be compelled to disclose any information or document or produce any item obtained or prepared in the gathering or dissemination of news unless the party seeking to compel the production or testimony establishes by clear and convincing evidence that this privilege has been knowingly waived or that the testimony or production sought."); S.C. Code § 44-17-580(A) ("Hospitalization of person if court finds mental illness and other conditions . . . [i]f, upon completion of the hearing and consideration of the record, the court finds upon clear and convincing evidence that the person is mentally ill, needs involuntary treatment and because of his condition"); S.C. Code § 62-7-407 ("The creation of an oral trust and its terms may be established only by clear and convincing evidence.").

separation of powers guaranteed by S.C. Const., art. I, §8, which commands, "the legislative, executive and judicial powers shall be forever separate and distinct."

b. Inasmuch as this Court's construction of *Bitler* requires experts to account for the "real possibility" of "complaint error," and thus to consider and rule out the possibility that their clients' statements are not credible, *Bitler* takes credibility determinations away from the trier of fact and thereby deprives litigants of the right of trial by jury guaranteed by S.C. Const., art. I, §14, which provides "The right of trial by jury shall be preserved inviolate."[19]

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[19] Fifty years ago, this Court noted that "[w]e have held in numerous cases that the credibility of witnesses and the weight to be given to their testimony are questions for the jury." *Crocker v. Weathers*, 240 S.C. 412, 423, 126 S.E.2d 335, 340 (1962). Indeed, this rule dates back to the nineteenth century in this State, *see State v. Dodson*, 16 S.C. 453 (1882), and to the eighteenth century in this country. *Sherrard v. Olden*, 6 N.J.L. 344, 1796 N.J. Sup. Ct. LEXIS 1, *10 (N.J. 1796) ("the province of the jury is not to be invaded by weighing the effect and credibility of testimony."). This Court has followed this rule in modern times, and in civil cases as well as in criminal ones. *See Hoard v. Roper Hosp., Inc.*, 387 S.C. 539, 549 (2010) ("witness . . . credibility is a question for the jury."); *State v. Wilson*, 345 S.C. 1, 7, 545 S.E.2d 827, 830 (2001) (witness "credibility was an issue for the jury's consideration.").

Thus, the question of a whether a criminal defendant who claimed self-defense "actually believed he was in imminent danger of losing his life or sustaining serious bodily injury and whether an ordinary person would have entertained the same belief were questions for the jury." *State v. Long*, 325 S.C. 59, 63, 480 S.E.2d 62, 63-64 (1997). The same holds true regarding the credibility of a defendant driver in a civil case who was quoted as excitedly uttering that "'I just didn't see them (the minor plaintiff and his passenger).' While the defendant driver equivocated on this issue his credibility and that of the alleged admission was for the jury." *Mahaffey v. Ahl*, 264 S.C. 241, 248, 214 S.E.2d 119, 122 (1975) (transcript page references omitted).

The same holds regarding the question of whether a civil plaintiff slept through a shrieking alarm, or actually heard it, and whether an ordinary person would have done the same.

Although the credibility of some persons properly may be the subject of expert testimony in some cases, such as where the "expert" in a layperson's credibility qualifies as such by virtue of specialized training "in the field of forensic interviewing," *State v. Douglas*, 380 S.C. 499, 501, 671 S.E.2d 606, 607 (2009), "'[i]t is not the function of a court to search the record for conflicting circumstantial evidence in order to take the case

c. Because experts neither apply a high probability standard nor investigate the accuracy of their clients representations (or their clients' credibility) in their ordinary, non-courtroom professional activities, the retroactive imposition of *Bitler*'s requirement that the Plaintiffs' experts do so here in this case, without notice of that new standard prior to the preparation of expert reports and expert depositions—and without the opportunity to conform their work to that standard—vitiates their usefulness to the Plaintiffs and thereby violates the plaintiffs' rights to Due Process, as guaranteed by both S.C. Const., art. I, §3, and U.S. Const., amend. 14.[20]

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away from the jury on a theory that the proof gives equal support to inconsistent and uncertain inferences. . . . It is the jury, not the court, which is the fact-finding body. It weighs the contradictory evidence and inferences, judges the credibility of witnesses, receives expert instructions, and draws the ultimate conclusion as to the facts." *Jester v. Southern R. Co.*, 204 S.C. 395, 406, 29 S.E.2d 768, 772-73 (1944) (quoting *Tennant v. Peoria & P. U. R. Co.*, 321 U.S. 29, 35 (1944) (internal citations omitted)). Nor are "free to reweigh the evidence and set aside the jury verdict merely because the jury could have drawn different inferences or conclusions or because judges feel that other results are more reasonable." *Jester*, 204 S.C. at 407, 29 S.E.2d at 773.

[20] Because "[i]t is axiomatic that '[a] fair trial in a fair tribunal is a basic requirement of due process,'" *Caperton v. A.T. Massey Coal Co., Inc.*, --- U.S. ---, 129 S.Ct. 2252, 2259 (2009) (citations omitted), "**[t]he usual due process constraint is that courts cannot abandon settled principles.**" *Stop the Beach Renourishment, Inc. v. Florida Dept. of Env. Protection*, --- U.S. ---, 130 S.Ct. 2592, 2615-16 (2010) (Kennedy and Sotomayor, JJ., concurring) (emphasis added; citations omitted). In fact, "**limitations on *ex post facto* judicial decisionmaking are inherent in the notion of due process.**" in *Rogers v. Tennessee*, 532 U.S. 451, 456 (2001) (emphasis added). *Rogers* explained that *Bouie v. City of Columbia*, 378 U.S. 347 (1964), "held that the South Carolina court's retroactive application of its [new and unforeseeable] construction" of a criminal trespass statute violated the "'basic principle that a criminal statute must give fair warning of the conduct that it makes a crime.'" *Id.* at 457 (citation omitted). This Court has construed the S.C. Constitution in the same way. *See State v. Collins*, 329 S.C. 23, 28 n.4, 495 S.E.2d 202, 205 n.4 (1998) (recognizing that although the ex post facto clause itself does not apply to actions of the judicial branch, judicial decisions applied retroactively can violate the Due Process Clause and that an unforeseeable judicial enlargement of a criminal statute, applied retroactively, "operates precisely like an ex post facto law").

The same principle applies in civil cases. *See Mullane v. Cent. Hanover Bank & Trust Co.,* 339 U.S. 306, 313 (1950) (Although "[m]any controversies have raged about

In the final analysis, this Court has no obligation to correct counsel's mistakes. Nevertheless, although the Court owes no duty to the Plaintiffs or their counsel, it does need to be concerned with the effect of an untoward ruling on the Law itself and on the people of this State who, while not litigants in this case, have a stake, however inchoate, in the outcome of every case. See Owen Aff. ¶ 17 n.6. It would be well to recall the words of Justice Oliver Wendell Holmes, Jr., who, in referring to the U.S. Supreme Court, stated that "this is a court of law . . . not a court of justice." LAWYER'S WIT AND WISDOM 152 (Bruce Nash & Allan Zullo, eds., 1995). In short, the Court has a mission to ensure that the Law is not distorted for all litigants by the mistakes of some litigants or their lawyers. *See Evatte v. Cass,* 217 S.C. 62, 65, 59 S.E.2d 638, 639 (1950). Or as Chief Justice Blease, writing for a unanimous Court nearly a century ago, stated, "We conceive it to be the duty of this Court to interfere for the protection of the valuable

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the cryptic and abstract words of the Due Process Clause . . . there can be no doubt that at a minimum they require that deprivation of life, liberty or property by adjudication be preceded by notice and opportunity for hearing appropriate to the nature of the case."). Nor can there be any doubt that a plaintiff's right of action constitutes a form of "property" that Due Process protects. *See Logan v. Zimmerman Brush Co.*, 455 U.S. 422, 429 (1982) ("The Court traditionally has held that the Due Process Clauses protect civil litigants who seek recourse in the courts, either as defendants hoping to protect their property or as plaintiffs attempting to redress grievances."); *Philip Morris USA v. Williams,* 549 U.S. 346, 352 (2007) ("Unless a State insists upon proper standards that will cabin the jury's discretionary authority, its punitive damages system may deprive a defendant of 'fair notice . . . of the severity of the penalty that a State may impose.'" (citation omitted)); *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 416 (2003) (same). *See also Marcum v. Bowden*, 372 S.C. 452, 458 n.5, 643 S.E.2d 85, 88 n.5 (2007) (retroactive judicial decision making "would offend notions of fairness" and Due Process); *White v. S.C. Dep't of Health & Envtl. Control*, 392 S.C. 247, 254 (Ct. App. 2011) (retroactive judicial decision making in civil cases may violate Due Process). *Cf. Robert K. v. City of Camden Planning Comm'n*, 376 S.C. 165, 171-172, 656 S.E.2d 346, 350 (2008); *S.C. Dep't of Soc. Servs. v. Wilson*, 352 S.C. 445, 452, 574 S.E.2d 730, 733 (2002); *Stono River Envtl. Protection Ass'n v. S.C. Dep't of Health and Envtl. Control*, 305 S.C. 90, 94, 406 S.E.2d 340, 342 (1991). *See also Mathews v. Eldridge*, 424 U.S. 319, 332 (1976).

. . . rights of many of the citizens of the State." *Xepapas v. Richardson*, 149 S.C. 52, 68, 146 S.E. 686, 692 (1929).

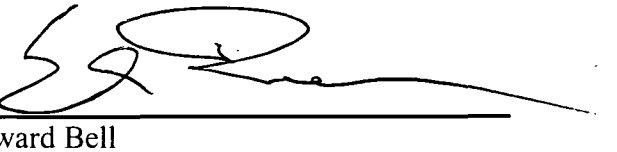
Allowing this Court's tentative adoption of *Bitler* to stand certainly would disserve the Plaintiffs. Equally if not much more important, it would disserve the Law and the citizens of the State.

CONCLUSION

For the reasons set forth above and for such other good and sundry reasons as the Court may find pertinent, Plaintiffs/Appellants urge this Honorable Court to grant their Petition, vacate the tentative decision and Opinion entered on August 29, 2012, and remand this case for trial.

Respectfully submitted,

BELL LEGAL GROUP, LLC

By: 

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September 28, 2012

THE STATE OF SOUTH CAROLINA

In the Supreme Court

Kareem J. Graves and Tara Graves,
individually and as duly appointed personal
representatives of the Estate of India Iyanna Graves.....Appellants,

v.

CAS Medical Systems, Inc .....Respondent.

APPEAL FROM ORANGEBURG COUNTY
Court of Common Pleas
James C. Williams, Jr., Circuit Court Judge

Appellate Case No.: 2010-161426

Opinion No.: 27168

Heard November 30, 2011 – Filed August 29, 2012

PROOF OF SERVICE

I certify that I have served one (1) copy of the Appellants Petition for Rehearing, by depositing a copy of it in the United States Postal Service, shipping prepaid, on September 28, 2012, addressed to their attorney of record Clarke W. Dubose, Esquire, Haynsworth Sinkler Boyd, P.A., Post Office Box 11889, Columbia, South Carolina 29211.

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THE STATE OF SOUTH CAROLINA

IN THE SUPREME COURT

APPEAL FROM ORANGEBURG COUNTY

Honorable James C. Williams, Jr., Circuit Court Judge

Supreme Court Opinion No. 27168 (filed August 29, 2012)

KAREEM J. GRAVES and **TARA GRAVES**,
both individually and as the duly appointed personal
representatives of the **ESTATE OF INDIA IYANNA GRAVES**,

Plaintiffs–Appellants,

v.

CAS MEDICAL SYSTEMS, INC.,

Defendant–Respondent.

AFFIDAVIT OF DAVID G. OWEN

Submitted *Pro Bono Publico*
IN SUPPORT OF
PLAINTIFFS–APPLELLANTS' PETITION FOR REHEARING

David G. Owen, being duly sworn, deposes and says:

I offer this Affidavit to the Court in the above-referenced case, *pro bono publico,* to address the Court's preliminary August 29, 2012 opinion regarding the use of circumstantial evidence and expert testimony in the special, limited category of products liability cases often called "malfunction cases."

I. IDENTITY OF AFFIANT

1. I am the Carolina Distinguished Professor of Law and Director of the Office of Tort Law Studies at the University of South Carolina, with specialties in products liability law and tort law (including products liability). I am a member of the South Carolina Bar.

2. Since 1973, I have been on the faculty of the University of South Carolina School of Law where I have regularly taught courses and seminars on Products Liability, Tort Law, and Tort Theory. Over the last forty years, I have also taught courses and lectured on these subjects as a visiting professor and lecturer at many other universities in America and abroad, including the University of Oxford.

3. For the last four decades, products liability law has been my particular area of expertise within the law of torts.[1] During that time, I have authored, co-authored, and edited numerous journal articles, chapters, and books on torts and products liability, including two editions of my hornbook/treatise, PRODUCTS LIABILITY LAW (West 2008, 2005); two editions of my PRODUCTS LIABILITY IN A NUTSHELL (West 2008, 2005); six editions of my casebook, PRODUCTS LIABILITY & SAFETY (Foundation Press 2010, 2007, 2004, 1996, 1989, 1980) (with Montgomery & Davis); a products liability treatise, MADDEN & OWEN ON PRODUCTS LIABILITY (3 vol., West 2000) (with Madden & Davis); a theoretical work, PHILOSOPHICAL FOUNDATIONS OF TORT LAW (Oxford Univ. Press: Clarendon, ed. 1995); and PROSSER & KEETON ON TORT LAW (West 1984) (with Prosser, W.P. Keeton, Dobbs, and R. Keeton). I also was the principal adviser in the preparation of England's leading treatise, MILLER & GOLDBERG, PRODUCT LIABILITY (Oxford Univ. Press, 2d ed. 2006) (see *id.* at vi).

4. I am an elected member of the American Law Institute (ALI), was Editorial Adviser for its RESTATEMENT (3D) OF TORTS: PRODUCTS LIABILITY (1998) (the "PRODUCTS LIABILITY RESTATEMENT"), and was one of eight appointed academic Advisers for the RESTATEMENT (3D) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM (2010, 2011).

5. From the late 1970s, I have been invited to testify on products liability and tort law reform matters before numerous committees of the legislatures of various American states, of the United States Senate, and of the United States House of Representatives; I have advised the British Ministry of Justice, the British Law Commission, the Justice Committee of the Scottish Parliament, and the European Union on various products liability and tort law matters; and I serve as a consultant from time to time with other attorneys handling products liability litigation, sometimes for plaintiffs, sometimes for defendants.

6. I am submitting this Affidavit to the Court without compensation as a products liability law scholar and academic lawyer who specializes in products liability law at the national level, who resides in this State, is a member of the South Carolina Bar, and who is employed by the University of South Carolina. I should stress that I am not making this submission as a private consulting attorney or as an evidentiary expert. The opinions stated in this Affidavit are mine alone, are not intended to represent the views of USC, and are not made in my formal capacity as a law professor at USC.

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[1] Since my research has focused on law at a national level, I have left the particular study of South Carolina tort law to my able colleagues, F. Patrick Hubbard and Robert Felix.

II. Reason for and Nature of This Submission

7. This case involves the relationship between expert testimonial evidence, circumstantial evidence, and the "malfunction doctrine" of products liability in a case where Plaintiffs allege that a defect in a baby monitoring device manufactured by Defendant caused an alarm on the device to fail, preventing Plaintiffs from administering aid to their baby who died. Several days ago, Ned Miltenberg, Esq., Counsel for an Amicus in this case, invited me to join in an Amicus brief in this matter. Because of time constraints from my academic responsibilities precluding the kind of substantial participation I consider appropriate, I declined his invitation.

8. Nevertheless, I did listen to Mr. Miltenberg's remarks about certain aspects of the Court's preliminary opinion (hereafter, "Opinion"), and so agreed to review that Opinion. Because the Opinion reveals that the case at bottom involves matters of proof in "malfunction cases," a topic of great interest to me, and because the Opinion struggles with certain complexities inherent in such cases (and does not appear to recognize the fundamental and special malfunction nature of this case), I realized that I should let the Court know about my concerns on how the Opinion misstates the standard of proof applicable to expert testimony, and explain how circumstantial evidence can fully and properly displace expert testimony in this special type of "product malfunction" case, comments that I hope the Court will find useful in preparing its final opinion.

9. My observations here are brief, abstract, and address legal issues that may assist the Court in clearly and accurately presenting and applying the law and applying it to the facts below. My interest is solely to assist the Court in its consideration of how best to state and apply products liability principles applicable to this narrow band of special cases of this type so that the final opinion may clearly and logically state the appropriate substantive and evidentiary standards applicable to liability for products that malfunction.

10. In no way do I have any pecuniary interest in the outcome of this case, other than my perceived academic responsibility to offer the Court my views, based on four decades of study (and limited, mostly appellate, practice), on how products liability principles are widely and best understood and described in the interests of justice.

III. Limited Materials Reviewed & Scope of Remarks

11. Because time constraints required me to focus narrowly on the clarity and correctness of certain general principles applicable to this case, rather than on its specific facts (other than those referenced in the Opinion), I have reviewed no briefs or affidavits, focus on the draft Opinion, and limit my remarks to legal principles related to two types of pertinent proof—expert testimony and circumstantial evidence in the special species of products liability cases called "malfunction" cases. Hence, my remarks are similarly limited to (a) critiquing the standard of proof announced and applied in the Opinion (borrowed from a Tenth Circuit opinion), and (b) explaining that circumstantial evidence may completely and adequately substitute for expert testimony in a limited category of "malfunction" cases like this, when a plaintiff claims injury because a product failed to operate properly, but where causation is mysterious and proof of a *specific* defect is simply unavailable. For this purpose, I reviewed certain products liability authorities (including my own works) and PRODUCTS LIABILITY RESTATEMENT § 3.

IV. DISCUSSION

12. This Court's extended foray into products liability law in recent years, most notably in *Branham v. Ford Motor Co.*, 390 S.C. 203, 701 S.E.2d 5 (2010) (including both its concurring and dissenting opinions),[2] reveals a nuanced, sophisticated understanding of many principles of products liability as they have evolved across the nation over time, and, accordingly, locates this Court at the forefront of the developing products liability jurisprudence of this nation.[3] Yet, many twists and turns in this field of law can entrap even the most astute lawyer or judge, and surely it is this Court's goal to state the basic principles of law and proof (even in limited contexts, like this) with utmost clarity and accuracy.

13. The Opinion's reliance on *Bitler v. A.O. Smith Corp.* is misplaced and problematic. In discussing expert testimony of Plaintiffs' expert witnesses, the Opinion applies a principle of "reasoning to the best inference," more commonly referred to as "differential diagnosis" or "differential etiology," principles of diagnostic proof more commonly used in medical cases.[4] The Opinion quotes *Bitler v. A.O. Smith Corp.*, 400 F.3d 1227, 1237 (10th Cir. 2004): "Experts must provide objective reasons for eliminating alternative causes" when reasoning to the best inference.

14. While this proposition is sound, Plaintiffs' experts *did* "provide objective reasons for eliminating" other causes, since they logically used as a working hypothesis the truthfulness of the Graves' assertions that the alarm did not sound. These assertions are objective facts that subsume other key objective facts relevant to a malfunction case like this: that the Graves did not themselves proximately cause the failure (as by turning *off* the alarm) or proximately cause their daughter's death (as by failing to turn *on* the alarm or by sleeping through its screeching noise). Although the Opinion faults Plaintiffs' experts—for assuming (rather than personally investigating whether) the Graves were truthful and accurate—*all* experts necessarily base their analyses on certain baseline hypotheses, especially statements by principal (or only) witnesses involved in an accident. The fact that the experts here assumed the truth of important (non-technical) facts asserted by the biased parents certainly weakens the probative value of the experts' opinions (particularly in view of the monitor's recording showing a supposed sounding of the alarm), but the experts' reliance on such assumptions does not render their opinions illegitimate or inadmissible. Rather, the plausibility of the experts' opinions, like the credibility of biased fact witnesses such as the parents, seem to be basic questions for the trier of fact.

15. *Bitler* does not apply to this case. I included *Bitler* in my casebook as a principal case on causation, not show the standard of proof for but-for causation, but to illustrate for students (a) how attorneys are responsible today for assuring that their experts methodically uncover and precisely demonstrate to courts and juries the causal link between product defects and accidents—*as much as is reasonably possible in the circumstances*, and (b) how *Daubert*'s

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[2] And, also, *Watson v. Ford Motor Co.*, 389 S.C. 434, 699 S.E.2d 169 (S.C. 2010), though that case follows a minority approach to the similar accident issue.

[3] Reflecting my respect for *Branham*, and recognition of its importance to products law as it is evolving at the national level, I included it as a principal case in my casebook, OWEN, MONTGOMERY, AND DAVIS, PRODUCTS LIABILITY AND SAFETY—CASES AND MATERIALS (Foundation Press, 6th ed. 2010), 2011 & 2012 Supplement, at 8.

[4] See OWEN, PRODUCTS LIABILITY LAW § 6.3, at 386 n.128.

expert requirements reward attorneys who demand such methodically sound proofs from their experts. Yet *Bitler* has little if any relevance to this *malfunction* case. Indeed, following *Bitler* in the casebook are several pointed Note comments that address *other* types of cases where *other* principles of proof apply—such as Note 6, on page 570, where I identify the special type of "malfunction" case, where product failures are mysterious and special proof principles apply: where plaintiffs need *not* prove *specific* defects (or directly prove causation), proofs that are inherently unavailable *except by circumstantial evidence* under the special malfunction principles, addressed below (and separately treated in the casebook at pp. 207 et seq.).[5]

16. In contrast to *Bitler,* principles of the "malfunction doctrine" *do* apply to the circumstances of this case, as those facts and circumstances are discussed in this Court's opinion. (Like expert witnesses who always necessarily assume certain matters to be true, and who never have unlimited time, resources, qualifications, or ability personally to investigate and prove every fact, I assume that the Court has accurately stated the factual circumstances of this case.) As seen in the general malfunction principles set forth below, the Graves' testimony on the monitor's failure appears to be *direct* (not circumstantial) evidence that: (1) the monitor *in fact* malfunctioned, and (2) that the malfunction was caused by some unknown (possibly software) defect, and (3) *not* by the Graves themselves. Their testimony might be disbelieved by the trier of fact, of course, but it appears sufficient to lead a fact finder reasonably to find—even without expert testimony—that probably a defect in the monitor, not the parents, caused the alarm to fail and the parents to stay asleep until it was too late to save their baby.

17. *Bitler*'s "highly probable/improbable" standard of proof is highly dubious and highly problematic. Since I use *Bitler* in class to illustrate other lessons, I frankly had never noticed that court's bizarre elevation of the normal standard of proof for causation in civil cases—from a preponderance of evidence (probable vs. possible or "more likely than not")—to a "*highly* probable/improbable" standard. This is strange, must be idiosyncratic, and must be wrong (see the supposed authority in *Bitler*'s n. 6)—perhaps from a simple error in a draft overlooked by that court (as I have overlooked it in many readings of the case). I suspect that the justices on this busy Court missed this odd change in the standard of proof (as I did) and included *Bitler*'s curious standard of proof without much deliberation on its correctness, logic, or consequences. In any event, I have already drafted a new Note to follow *Bitler* in the next (7th) casebook edition alerting students to how the *Bitler* opinion, without explanation, slipped this erroneous, heightened standard of proof into the decision. I would hope that *this* Court might reconsider whether it makes sense for it to follow *Bitler*'s bizarre shift in the standard of proof—from the normal preponderance (probability) to *high* probability—a major (and *highly* dubious) alteration of the traditional standard of proof that appears plainly wrong, that, anyway, should be fully briefed and argued and not introduced willy-nilly into this State's jurisprudence.[6]

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[5] In Note 3, following *Bitler*, at 569, I set out another case that strongly suggests that the proper standard of proof in any such causation cases is a preponderance of evidence—that a defect *probably* caused the harm—not some "highly probable" standard of proof.[5] The casebook (6th ed.) addresses malfunction cases at 205-210. See generally Owen, PRODUCTS LIABILITY LAW § 7.4, at 464 *et seq.* (West, 2d ed. 2008) (extensive discussion of malfunction doctrine).

[6] This is true even if plaintiff's counsel suggested *Bitler* as authority to the Court of Appeals, as I am told, since the decision here will control future litigation throughout the State. Since this aspect of *Bitler* is so bizarre, my assumption and concern is that someone lifted the opinion from my casebook chapter on causation. If this be true, then I must take the blame for causing this problem by failing to alert students in a Note following the case (that I now have drafted) that this peculiar aspect of *Bitler* is

18. Complex-product rules do *not* apply to this case. The rules requiring expert testimony on complex product accidents are important and sound, but they apply to ordinary products liability cases involving disputed claims on how a product should and should not have been designed to prevent the type of accident suffered by the plaintiff, the typical issues in most products liability design defect cases (like *Branham*). These "complex design" expert testimony requirements are not required (and really do not apply) in the limited, special class of cases called "product malfunction" cases.[7] Here, for example, the question is *not* what the *specific* defect was (how the electrons might have gotten diverted in the monitor system, or how an alternative design might have prevented such a diversion),[8] but whether the monitor's alarm in fact malfunctioned and so failed to sound at all (and, if it did, why it failed to awake either parent). As is true in malfunction cases generally, these are simple yes/no factual questions that a jury would seem competent to decide without the aid of experts.

V. GENERAL PRINCIPLES: MALFUNCTION CASES

19. My research of malfunction cases (like this) over many years revealed scores of cases across the nation—now a clear majority, and predicted to become universal[9]—that state and apply the following principles that appear applicable to this case, which I address in detail elsewhere[10] and summarize here:

20. Use of circumstantial evidence in "product malfunction" cases. In a "product malfunction" case like this, as the Opinion suggests, a plaintiff may use circumstantial evidence to prove both that a product was defective and that the defect caused the plaintiff's harm. Further, such proof, whether called merely "circumstantial evidence," or, more elegantly in specialized medical cases, "reasoning to the best inference," or "differential diagnosis" or "etiology," requires simply that a plaintiff prove—by a preponderance of the evidence (direct and/or circumstantial)—that an alleged malfunction probably caused the plaintiff's harm.[11]

21. In malfunction cases, a plaintiff's testimony (a) that a product malfunctioned, and (b) that negates other plausible causes (such as the plaintiff's own conduct), constitutes direct proof of both (a) the product's failure and (b) the plaintiff's noninvolvement in that failure, which circumstantially may further prove that the product contained a defect that caused the

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simply wrong and should be ignored. If this omission in my casebook leads the Court to hold a rehearing, I hope the Court will accept my apology for missing this fault in *Bitler*.

[7] Malfunction cases are addressed generally in OWEN, PRODUCTS LIABILITY LAW § 7.4, at 464 *et seq.* (West, 2d ed. 2008), which cites scores of cases, A.L.R. Annotations, and many other authorities.

[8] Though specific-defect and alternative-design testimony along these lines would be relevant, of course, in a malfunction case as an alternative form of proof.

[9] See Owen, PRODUCTS LIABILITY LAW § 7.4, at 475: "In a proper case, . . . it is difficult to see how any jurisdiction could reject some properly formulated version of such a well-established, fair, and logical principle of proof. In short, the manifest merits of this simple canon of circumstantial evidence suggest that its acceptance should soon be universal." (citations omitted).

[10] See *id.*

[11] See PRODUCTS LIABILITY LAW § 6.3, at 386 n.128.

harm. Expert testimony of defect and/or causation *may* supplement such testimonial evidence, but it is not required if the circumstances of the product failure and injury, based on a plaintiff's testimony (including negation of other likely causes), suggest that the product in fact probably failed and that the failure probably was caused by a defect in the product.

22. A plaintiff *need not prove a specific defect in malfunction cases* but may rely on the probability in such circumstances—based only on a preponderance of the evidence[12]—that a product defect is the most likely cause of the harm. Reflecting the widespread acceptance of these malfunction principles, the PRODUCTS LIABILITY RESTATEMENT adopts the doctrine in § 3, which in black letter allows proof of defect and causation (by circumstantial inference) "without proof of a specific defect . . . ." See generally OWEN, PRODUCTS LIABILITY LAW, § 7.4 at 472.

23. In malfunction cases, plaintiffs often must offer proof that tends to negate alternative causes. Where a plaintiff (or third party) may personally have caused a product to fail, so that the circumstances do not automatically point to a product defect as the probable cause of the harm, then the plaintiff must offer proof that a trier of fact reasonably might find excludes such alternative causes of the failure and harm. A plaintiff's testimony that he or she did not cause the failure is direct evidence that a trier of fact ordinarily may find renders it more likely than not[13] that a product defect (even if its specifics are entirely unknown), rather than the plaintiff's conduct, caused the harm. In such malfunction cases, the plaintiff has no obligation to allege or prove how, specifically, the product was defective, since the product failure itself (if such products do not ordinarily fail unless they are defective) provides sufficient circumstantial evidence for a trier of fact to find for the plaintiff. This is why some courts and commentators refer to this use of circumstantial evidence in products liability cases as the "*general* defect" basis of recovery (or "malfunction doctrine"), although many courts simply apply these principles of circumstantial evidence in product failure cases without attaching a formal name to this narrow category of case.

VI. CONCLUSION

It is not for me to suggest a particular ruling in this case, but my hope is that the Court will see fit to consider my observations on the malfunction doctrine in its preparation of a final opinion in the case.[14] Be that as it may, I appreciate the opportunity to address the Court and trust that it will continue to examine products liability issues with the sensitivity and distinction.

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[12] "[A] plaintiff must negate only the most likely alternative causes of malfunction, and only by a preponderance of the evidence . . . ." OWEN, PRODUCTS LIABILITY LAW § 7.4, at 471 (2d ed. 2008).

[13] See *id.*

[14] In passing, I might also note my concern with the Opinion's rejection of the experts' reliance on reports of other failures (very possibly inadmissible for their truth), without acknowledging S.C. R. Evid. 703 (that allows experts reasonably to rely on inadmissible evidence in forming opinions). I am also troubled by the Opinion's crediting the pediatrician's guess that the parents slept through the alarm.

Respectfully submitted,

David G. Owen

DATED this 27th day of September, 2012.

Richland County, State of South Carolina

SUBSCRIBED AND SWORN TO before me
this 28th day of September, 2012.

NOTARY PUBLIC

My Commission Expires: July 23, 2018