IN THE SUPREME COURT OF THE STATE OF DELAWARE

MARLA R. ESKIN, Administratrix of the Estate of Robert P. Chickadel,	)	No. 322, 2002
Defendant Below, Appellant.	)	Court Below: Superior Court of the State of Delaware in and for New Castle County
v.	)	
	)	C.A. No. 00C-11-039
BARBARA A. CARDEN,	)	
Plaintiff Below, Appellee.	)	

Submitted: August 5, 2003
Decided: February 13, 2004

Before **VEASEY**, Chief Justice, **HOLLAND, BERGER, STEELE** and **JACOBS**, Justices, constituting the court *en banc*.

Upon appeal from the Superior Court. **AFFIRMED**.

Daniel L. McKenty (argued) and Steven F. Mones of McCullough & McKenty, P.A., Wilmington, Delaware for appellant.

Frederick S. Freibott of The Freibott Law Firm P.A., Wilmington, Delaware for appellee.

STEELE, Justice:

In this appeal we address for the first time whether biomechanical expert testimony may be admitted in Delaware courts to address the relationship between the physical forces involved in an automobile accident and the cause and severity of an occupant's alleged injuries. In doing so, we take the opportunity to address and clarify *Davis v. Maute*,[1] in an attempt to provide guidance to Delaware trial judges who are frequently called upon to consider the admissibility of proffered biomechanical expert testimony.

We hold that trial judges may admit qualified biomechanical expert testimony regarding the physical forces involved in automobile accidents and the effect on the human body those forces may produce where the relevance, reliability and trustworthiness of that testimony is established by the proffer and is not outweighed by the danger of confusion of the issues or misleading the jury. We caution that even competent, qualified biomechanical testimony may not be admissible when that testimony purports to bridge the analytical gap between an engineer's application of constants to, and a physician's artful evaluation of, a specific individual. Competent biomechanical expert testimony may be admissible, however, to impeach factual assumptions made in expert medical testimony, where the medical opinion relies on an injured party's subjective statements about the facts of an accident. Biomechanical evidence may contradict

[1] 770 A.2d 36 (Del. 2002).

expert medical testimony under some circumstances – e.g., where, it purports to quantify the forces exerted on an individual's body during an accident, describe an individual's reaction to the forces involved in the accident, or relies upon principles of physics to rationalize causation, diagnoses, course of treatment or an opinion on permanency. We reaffirm that the long-standing standard of review of abuse of discretion applies to trial judges' rulings on the admissibility of this testimony.

We follow the holding in *Davis* that, absent facts that are supported by competent expert testimony, counsel may not directly argue to the finder of fact that there is a correlation between the extent of the damage to the vehicles involved in an accident and the cause or severity of personal injuries alleged from that accident.

We conclude, in the case *sub judice,* that the trial judge exercised reasonable discretion by granting a Motion *in Limine* to exclude the proffered testimony of a biomechanical expert. Under the particular circumstances of this case, a trial judge could reasonably conclude that the proffered biomechanical evidence, although superficially relevant, was neither reliable nor validated sufficiently to be deemed trustworthy. What relevance it may have had was, accordingly, outweighed by the danger of misleading or confusing the jury.

Finally, the trial judge did not abuse her discretion by denying Defendant/Appellant's Motion for a Mistrial based upon a single inadmissible statement by the Plaintiff that could have permitted the finder of fact to imply that the Defendant was suspected of driving under the influence of alcohol. The trial judge provided a curative instruction sufficient to mitigate the effects of the Plaintiff's improper comments.

Accordingly, we AFFIRM the decision of the Superior Court.

I.

On December 3, 1998, Robert Chickadel[2], and Appellee, Barbara Carden, were involved in a motor vehicle collision. Chickadel struck the rear-end of Carden's vehicle. After the first collision, Chickadel backed his vehicle up, stopped, moved forward, and struck Carden's vehicle again. The accident caused physical damage to both vehicles.

Carden went to the emergency room later that day complaining of a burning sensation in her lower back and tingling in her legs. She was treated and released with prescriptions for pain medication, a steroid and a muscle relaxer. On September 14, 1999, after conservative treatment and therapy had failed, Carden had back surgery. After the lawsuit was filed, the Defendant (through Eskin, his

[2] Chickadel died during the course of litigation from causes unrelated to this accident. Marla R. Eskin, the administratrix of Chickadel's estate, was substituted as defendant.

estate's administratrix) admitted liability. Consequently, the nature and extent of Carden's alleged injuries were the only issues at trial.

Before trial, Carden moved *in limine* to exclude the testimony of Lawrence Thibault, D.Sc., a biomechanical expert, whose report proffered the following expert opinions:

> 1) The forces, or "loading," of this rear-end collision were insufficient under the principles of physics and engineering to have caused the acute lumbar spine disc herniation to this individual plaintiff;
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> 2) The loading associated with this collision was less than the loadings associated with everyday activities such as walking, bending, and lifting; and
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> 3) The loading associated with this collision placed this incident in category AIS-1 (minor transient injuries) of the "Abbreviated Injury Scale" ("AIS") developed in a cooperative effort by the American Medical Association, the Association for the Advancement of automotive Medicine, and the Society of Automotive Engineers.

After a hearing, the trial judge granted Carden's motion to exclude the testimony. The trial judge ruled that Thibault could not testify consistently with the proffer because his opinions had no probative value and were not "tied in" with the admissible medical evidence. The trial judge further ruled that *Davis v. Maute* barred introduction of photographs of Carden's vehicle, because they were not supported by expert testimony that was related to an issue at trial.

Because Chickadel died before the trial, Carden was the only eyewitness to testify. On direct examination, Carden was asked whether she requested the police officer to do anything after he had talked to Chickadel. Carden responded:

> I told [the police officer] I had enough. I can't take it any more. I looked at like from behind in my mirror and I could see he was talking to Mr. Chickadel and he made him blow into something.

Defense counsel objected to Carden's statement about Chickadel "blow[ing] into something" because it raised the highly inflammatory issue of alcohol, despite the fact that neither fault nor punitive damages were issues in the case. Counsel then moved for a mistrial. The trial judge denied the Motion for a Mistrial, and gave the jury an instruction directly designed to eliminate any risk of prejudice. The jury returned a $580,000 verdict for Carden.

II.

Eskin first claims the trial judge abused her discretion by excluding Thibault's proffered testimony. We review the trial judge's ruling under an abuse of discretion standard.[3]

A witness may testify as an expert when qualified as an expert and the trial judge determines that the witness has scientific, technical or other specialized knowledge that will assist the trier of fact in understanding evidence or in

[3] *Price v. Blood Bank of Delaware, Inc*., 790 A.2d 1203, 1209 (Del. 2002).

determining a fact at issue. This Court has adopted a five-step test to determine the admissibility of scientific or technical expert testimony:

> The trial court must decide that: (i) the witness is 'qualified as an expert by knowledge, skill experience, training or education'…; (ii) the evidence is relevant and reliable; (iii) the expert's opinion is based upon information 'reasonably relied upon by experts in the particular field'…; (iv) the expert testimony will 'assist the trier of fact to understand the evidence or to determine a fact in issue'…; and (v) the expert testimony will not create unfair prejudice or confuse or mislead the jury.[4]

We recently held, in *Davis v. Maute*, that "a party in a personal injury case may not directly argue that the seriousness of personal injuries from a car accident correlates to the extent of the damage to the cars, unless the party can produce competent expert testimony on the issue."[5]

Eskin proffered Thibault's testimony to link "the contention of slight damage to a contention tending to minimize the plaintiff's physical injuries."[6] For that type of proffered testimony to be admitted, the proponent must first present reliable, competent expert testimony relevant to the circumstances of the particular case. *Admissible* biomechanical testimony bridges the gap between the general forces at work in an accident determined by physical forces analysis (whether it be "physics" or "engineering") and the specific injuries suffered by the particular person who was affected by those forces. The testimony must provide definitive

[4] *Cunningham v. McDonald*, 689 A.2d 1190, 1193 (Del. 1997) (internal citations omitted).
[5] *Davis*, 770 A.2d at 40.
[6] *Id.* at 38.

evidence that the physics of a particular accident did (or did not) cause a particular injury to a particular individual. A trial judge must closely scrutinize this testimony to be confident that it is trustworthy, i.e., relevant, reliable and validated. Neither here, nor, we suspect, in most cases, will the issue be the competency of an expert or whether the field of "biomechanics" is a recognized scientific or technical field. The words of an expert qualified to opine within a recognized "field" do not automatically guarantee reliable, and therefore admissible, testimony, however. The inquiry will be whether the expert and the "field of expertise" itself can produce an opinion that is sufficiently informed, testable and in fact verifiable on an issue to be determined at trial. The trial judge must be satisfied that the generalized conclusions of the biomechanical expert are applicable to a particular individual. [7] For example, did the expert consider the effect of pre-existing medical conditions and the unique susceptibility of a particular plaintiff to the injuries claimed? Does the "field" of biomechanical engineering adequately test for these highly individualized characteristics and document verifiable statistical results about which an expert within the field can render a trustworthy opinion in a particular case?

[7] "An additional consideration under Rule 702 – and another aspect of relevancy – is whether expert testimony proffered in the case is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *United States v. Downing*, 753 F.2d 1224, 1242 (3d Cir. 1985).

Biomechanics is defined as "the mechanical bases of biological, especially muscular, activity; also: the study of the principles and relations involved."[8] For purposes of simplicity, we define biomechanics as the study of the effects of forces and motion on the human body.[9] Accordingly, we recognize that an individual demonstrating knowledge, skill, experience, training or education in the field of biomechanics may be qualified to testify *generally* about how the human body will react to the impact of forces exerted upon it during an automobile accident. The use of applied physics by trained engineers aided by computer simulations, control groups and crash test dummies, does create indicia of reliability and may be relevant and ultimately trustworthy in the circumstances of a given case. We must, however, caution that it is the very predictability and consistency of applied physics that makes biomechanical evidence reliable in some circumstances but not necessarily in others. For example, if the crash test dummy or a member of the control group is replaced with an uniquely susceptible driver, those indicia of

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[8] WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 218 (2002).

[9] This definition is distilled from various sources, including, but not limited to the following: "1. *(used with a sing. verb)* The study of the mechanics of a living body, especially of the forces exerted by muscles and gravity on the skeletal structure; 2. *(used with a pl. verb)* the mechanics of a part or function of a living body, such as of the heart or of locomotion." THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE, (4TH ED. 2000) *(at* http://www.dictionary.com). The American Society of Biomechanics use the term biomechanics to mean the study of the structure and function of biological systems using the methods of mechanics. *at* http://www.jbiomech.com; The European Society of Biomechanics define it as "The study of forces acting on and generated within a body and of the effects of these forces on the tissues, fluids or materials used for diagnosis, treatment or research purposes" (*at* http://www.utc.fr/esb/esb/default.htm). "Biomechanics is the study of how living organisms move, grow, etc. in relation to mechanical principles" (*at* http//:www.hyperdictionary.com).

reliability become a facade.[10] In different circumstances, this Court has held that unless a "special nexus" i.e., a logical connection, is shown between the evidence of common behavior and the facts of the case, the use of such common behavior evidence can be highly prejudicial.[11] Here, the engineering constants that anchor biomechanical principles are analogous to the "common behavior" that requires a special nexus to the facts. Extrapolating from general biomechanical principles to demonstrative evidence that supports or disproves injury to an individual may not be reliable in every case.[12] We, therefore, hold that a trial judge may admit

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[10] Support for this assertion is found, ironically, in a case also involving Dr. Thibault's biomechanical testimony. *Suanez v. Egelund,* 801 A.2d 1186, 1193 (*citing Suanez v. Egelund,* 330 N.J. Super. at 194 (App. Div. 2000)) (*"*These lengthy excerpts from Thibault's testimony show that he did not identify any scholarly literature which shows the reliability of his purported expert opinion that the subject automobile accident could not possibly have caused plaintiff to suffer a herniated lumbar disc. The only specific scientific tests to which Thibault referred were performed either upon cadavers or upon military personnel under controlled conditions quite dissimilar from an automobile accident. Moreover, there is no indication that the persons who performed the tests or others in the scientific community have concluded that they provide a reliable foundation for drawing any conclusions concerning the physiological effects of a low-impact automobile accident upon a middle-aged woman.") *See also* Bruce H. Stern, *Diffusing the Defendant's Biomechanical Engineer Testimony in a Low-Impact Collision Case***,** TRIAL DIPLOMACY JOURNAL, VOL. 21, 1-7 (1998) *at* http://www.stark-stark.com/news/articles/ "The majority of low speed accident investigations and studies have used young healthy volunteers with no preexisting spinal deficiencies. West and colleagues used males aged 25-43 who were of normal physical condition for their ages and none of whom had any preexisting spinal deficiencies. Allen used eight healthy subjects, four men and four women, between the ages of 19 and 50 years." (*citing* Szabo T.J., Welcher J.B., Anderson, R.D., Rice M.M., Ward J.A., Paulo L.R. and Carpenter N.J., *Human Occupant Kinematic Response To Low Speed Rear-End Impacts*, SAE Paper 940532 (1994); West D.H., Dough J.P. and Harper G.T.K., *Low Speed Rear-End Collision Testing Used In Human Subjects,* Accident Reconstruction Journal May/June, 1993, 12-28, 22; Allen M.E., Weir-Jones I., Eng P., Motiuk D.R., Flewin K.R., Goring R.D., Kobetitch R. and Broadhurst A., *Acceleration Perturbations of Daily Living - A Comparison to Whiplash*, Spine Vol. 19, No. 11, pp 1285-1290, 1297 (1994).

[11] *Wheat v. State,* 527 A.2d 269,275 n.5 (Del. 1987).

[12] "Qualified experts in the field of biomedical engineering or biomechanics are a rare breed. This discipline requires expertise in both mechanical engineering and in medical sciences."

biomechanical expert opinion that a particular injury did (or did not) result from the forces of an accident only where the trial judge determines that the testimony reliably creates a connection between the reaction of the human body generally to the forces generated by the accident and the specific individual allegedly injured or another determinative fact in issue. We now turn to the circumstances of the case *sub judice*.

When she granted the Motion *in Limine,* the trial judge ruled: "under the circumstances [Dr. Thibault] is out there giving an opinion that doesn't mean anything, doesn't have any probative value one way or the other. It is not tied in with the medical people." Eskin argues that the trial judge misapplied *Davis*. She insists that neither D.R.E. 702 nor *Davis* requires that biomechanical and medical expert testimony be "tied" together. Essentially, Eskin maintains that the trial judge should have allowed Thibault to testify because he was a qualified biomechanical expert and all that *Davis* requires is "competent expert testimony" consistent with D.R.E 702. Eskin gives the trial judge's understandably brief analysis too little credit. The Court's "tie in with the medical people" reflects far more insight into the issue than the suggested requirement that there be medical

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Martin A. Conn, *Admissible and Effective Uses of Accident Reconstruction and Biomechanical Evidence*, JOURNAL OF CIVIL LITIGATION Vol. XIV, NO. 4 (Winter 2002-2003) *at* http://www.morankikerbrown.com/CM/Articles/

opinion confirming or at least consistent with Thibault's view before it can be admitted.

Thibault's proffered opinion was that the physical forces involved in *this* car accident *could not have caused Carden's particular injury*. Thibault sought to counter the evidence that the slight forces involved in the automobile accident did in fact cause Carden's injury. His proffered view did attempt to particularize Carden's individual response to the forces at work, by suggesting that *no human* would have suffered the injury about which she complained (acute lumbar spine disc herniation) given that the minimum "loading" forces at work were consistent with ordinary daily activities such as walking, bending and lifting. Thibault's view, however apparently consistent with others in his "field," made no attempt to take into account the specific personal history of any injured person.

Carden had lower back surgery in April, 1997. In December 1998 she was involved in this automobile accident. She sought medical attention at an emergency room for a burning sensation in her lower back and tingling in her legs. After a regimen of rehabilitation with at least two medical doctors, she sought relief through another back surgery. The physician who performed the surgery opined that the auto accident caused Carden's injury and the course of treatment she had to undergo after December 1998. Carden's physician testified that the

accident was 75% responsible for her current condition.[13] Further, the record reveals that Eskin's medical expert *agreed* that this accident aggravated Carden's pre-existing back injury. Neither physician testified about the forces involved in the accident, nor about how Carden's body may have specifically reacted to those forces. Neither physician relied upon any impeachable assumption about those forces or their effect on Carden's body in forming their opinions that the accident aggravated Carden's pre-existing back injury.

The April 1997 surgery both resulted from, and created, a pre-existing medical condition. That highly individualized fact calls into question the reliability of using general biomechanical principles to prove directly that the forces in the accident could not have caused Carden's specific injury. That question is particularly telling here, since both parties' medical experts agreed that this accident aggravated Carden's pre-existing back injury. That fact highlighted the need to examine carefully Thibault's proffer for reliability and to balance its relevance against the danger of confusing or misleading the jury.

Thibault is not a physician and, not surprisingly, he neither reviewed Carden's medical records nor examined her. Thibault did not review any deposition testimony of Carden. He did not question her about the accident itself, or her body position at the time of the collision. His conclusion that her lower

[13] Carden's doctor explained that the remaining 25% was the result of her pre-existing back problems, including the April 1997 surgery.

back injury could not have been caused by the minor forces involved in the accident plainly did not take into account her particular pre-existing condition and proclivity to further injury. On this record, it is fair to say that Thibault had neither the competency nor the opportunity to consider these idiosyncratic circumstances. No evidence of record suggests that *any* expert in his field would be competent, or would have taken the opportunity, to do so. Nothing in the record suggests that Thibault or anyone else in the field of biomechanics has performed reliable testing to validate such an opinion if proffered by any expert in this field.[14] As one author has noted:

> Sometimes there is a zone of genuine scientific knowledge possessed by a field, but some or many of its members step outside of that zone and make assertions that exceed their field's empirically tested knowledge.[15]

The proponent of the expert scientific or technical testimony must establish its admissibility consistent with the *Cunningham* five step test. Indeed, this is what *Daubert* scrutiny is ultimately all about – to determine whether the testimony is trustworthy. That is, can its reliability be tested to validate it?[16] "Expert testimony" can not be admitted with confidence that it is trustworthy solely because there exists a recognized scientific or technical field in which certain

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[14] *Supra*, footnote 9.
[15] Faigman et al., *Scientific Method: The Logic of Drawing Inferences From Empirical Evidence, in* 1 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 4-1.1 at 118.
[16] *Daubert v. Merrell Dow*, 509 U.S. 579 (1993).

experts are appropriately credentialed. In this particular case, Thibault's testimony, while relevant to the human body generally, could not, without more, shed trustworthy light on the issue of whether the forces of this accident caused Carden's back injury. That is because the proffer did not establish that either Thibault or his "field" had performed tests that would validate the applicability of the general conclusion reached here to a particular "abnormal" human body. His testimony did not identify any percentage deviation from the "norm" or a recurring error rate to compensate for the out-of-the-ordinary person like Carden. Accordingly, there could be no assurance that Thibault's conclusion was not more than marginally in error.

For these reasons, the trial judge could properly conclude that there was a danger that the jury would be confused or misled into believing that Carden fell within the "field's" "one-size-fits-all" statistical range.

This risk plainly outweighed the relevance of Thibault's proffered testimony, because his proffered testimony did not create the special connection we require between evidence of common behavior and the facts of a specific case. If admitted, Thibault's testimony, focused on the norm, would have unfairly prejudiced Carden who, all the medical evidence established, did not have a normal, average human body, at the time of the accident. Thibault's testimony did not connect the general biomechanical analysis of the physical forces involved in

the accident to the unique medical history that provided the necessary, reliable link to Carden. As one writer has observed:

> Scientists draw a sharp distinction between reliability and validity. In *Daubert*, Justice Blackmun took pains to reject that distinction for the law of evidence, and to combine both reliability and validity into what he and many lawyers and judges before him referred to as the reliability of evidence.
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> *Validity* . . . is the extent to which something measures what it purports to measure."[17]

The jury could fairly rely upon Thibault's testimony to describe the "norm." But that testimony would not validate the norm's applicability to Carden. As a result, Thibault's opinion was not a trustworthy measure of the critical fact at issue: could *she* have been injured in the collision? Here, we think the trial judge was well within her discretion to acknowledge that Thibault's testimony may have been relevant *if* what generally happens to the average person were in issue and *if* Carden fairly represented the average human body. But here, that proffered opinion lacked reliability because there was no evidence that either the expert witness or the "field" had measured the validity of the opinion as it may apply to Carden, given her individual pre-existing deficiencies, or any other potentially "abnormal" human body. The trial judge recognized that:

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[17] Faigman et al., *Scientific Method: The Logic of Drawing Inferences From Empirical Evidence, in* 1 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 4-2.3 at 125-126.

> [w]hile science attempts to discover the universals hiding among the particulars, trial courts attempt to discover the particulars hiding among the universals.[18]

The trial judge correctly granted the Motion *in Limine*.

III.

Although the trial judge refused to admit photographs of the vehicles involved in the accident, that ruling is not challenged on appeal. Nevertheless, because the ruling purported to rely upon *Davis*, we take this opportunity to discuss our holding in *Davis* for guidance in future cases.

In *Davis*, defense counsel sought to argue that properly admitted photographs of slightly damaged cars supported a contention that the accident was a "fender bender," in order to persuade the jury that the forces causing damage to the vehicles in the accident could not have impacted the plaintiff sufficiently to have caused the injuries about which she complained. Before the "fender bender" comment was made, the trial judge had specifically ruled that counsel could not present that very contention, based upon the photographs alone. The inference suggested by the too-clever-by-half phrase, "fender bender," inartfully attempted to circumvent the trial judge's ruling. That was impermissible, because unsupported by expert testimony, that phrase left the *Davis* jury in a position to make "unguided empirical assumptions on issues that are outside the common knowledge of

[18] David Faigman, *Legal Alchemy: The Use and Misuse of Science in the Law* 69 (1999).

laymen."[19] Although the common knowledge of "laymen" may well include the common sense notion that the lesser the force in an accident, the less likely the average human body will suffer serious injury, that speculation does not account for other circumstances, such as pre-existing injuries or the particularly susceptible individual.

Davis does not hold that photographs of the vehicles involved in an accident may never be admitted without expert testimony about the significance of the damage to the vehicles shown in the accident and how that damage may relate to an issue in the case. *Davis* has been misinterpreted as a bar to the admission of photographs without expert testimony. It was only the disingenuous reference to a "fender bender" – after a trial judge's express ruling forbidding what that phrase implied – that prompted our holding. *Davis* should not be construed broadly to require expert testimony in every case in order for jurors to be permitted to view photographs of vehicles involved in an accident.

In short, *Davis* should be limited to its facts, recognizing that there may be many helpful purposes for admitting photographs of the vehicles involved in an accident where the case does not require supporting expert opinion.

[19] *Id.* at 41 n.9 ("Although jurors may generally use their common sense in reaching a verdict, they may not make unguided empirical assumptions on issues that are outside the common knowledge of laymen." *citing Mazda Motor Corp. v. Lindahl,* Del. Supr., 706 A.2d 526, 533 (1998).)

IV.

We next review whether Carden's comment about Chickadel being required to "blow into something" caused sufficient prejudice to Eskin to warrant reversal despite the trial judge's jury instruction.[20] As we stated in *Chavin v. Cope,* "Ordinarily, an appropriate instruction to disregard the statement is sufficient to avoid prejudice to the defendant, but an incident may be so flagrant as to require a mistrial. The question is always one for the sound discretion of the trial judge."[21] "In the absence of evidence of bad faith on the part of the questioner, the sustaining of a prompt objection followed by a curative instruction, if warranted, will usually suffice to remedy the impropriety."[22]

The inference that could be drawn from Carden's statement, while potentially harmful, did not warrant a new trial. The utterance was made only once, and there is no evidence in the record to suggest that it was the product of bad faith on the part of either the questioner or the witness. Although Carden's statement might, in the absence of a prompt curative instruction, have impacted to some extent on the amount of damages by arousing animosity toward "drunk

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[20] *Joseph v. Monroe*, Del. Supr., 419 A.2d 927, 930 (1980); see also *University of Delaware v. Munson*, Del.Supr., 316 A.2d 206 (1974) (holding that "the effect of any such allegedly prejudicial remark varies according to 'the atmosphere of the trial.'" (quoting *Stephens v. Sulkin*, 280 Pa. 211, 124 A. 476 (1924)).

[21] 243 A.2d 694, 696 (Del. 1968).

[22] *Koutoufaris v. Dick*, 604 A.2d at 400 (1992).

drivers," it had no logical relationship to the actual contested issues of proximate cause and the existence of her claimed injury.

Although Carden's statement created the potential for jury prejudice by suggesting that alcohol was involved in the accident, the trial judge promptly reminded the jury that alcohol "*played no role in this accident, whatsoever."* The trial judge's prompt and thorough curative instruction made it clear to the jury that they were to give "*no weight, whatsoever"* to Carden's statement. In *Hamill v. Miller*, we found that there was no reason to believe that a jury would "disregard the court's curative instruction and decide the case on a vague inference which the jury had been told to disregard as improperly admitted and irrelevant."[23] We perceive no reason why the jury in this case would have disregarded this plain and explicit instruction either. Accordingly, the trial judge did not abuse her discretion by denying Eskin's Motion for a New Trial.

Conclusion

Based on the foregoing, we AFFIRM the judgment of the Superior Court.

[23] 476 A.2d 161,163 (Del. 1984)

BERGER, concurring:

Although I agree that the trial court acted within its discretion in excluding the biomechanical expert's testimony under the unusual facts of this case, I do not agree with the majority's articulation of the scope and usefulness of such testimony in general. Here, the expert would have testified that the forces involved in this accident could not have caused plaintiff's injuries. But even defendant's doctor agreed that the accident aggravated plaintiff's pre-existing back condition. Thus, defendant's biomechanical expert would have contradicted defendant's medical expert – a situation that surely would have confused the jury. For this reason, I agree that the testimony was properly excluded. I also agree with the majority that a biomechanical expert should not be allowed to opine on how the physical forces of a particular accident affected the injured party without taking into account the special weaknesses or susceptibilities, if any, of the injured party.

Even where a plaintiff is not "average," however, the biomechanical expert can provide probative evidence to help the jury decide on the extent of plaintiff's injuries. In this case, for example, Dr. Lawrence Thibault was prepared to testify that the forces involved in the accident were less than the forces involved in everyday activities such as walking, bending and lifting. While such testimony does not answer the question, "Did this accident cause this plaintiff's injuries?" it does provide a frame of reference for the jury in its evaluation of the physicians'

conclusions. It also provides the basis for cross-examination of the physicians. Thus, I would allow a biomechanical expert to provide general statements comparing the force of a particular accident to the forces that are part of our common experience (walking, bending, sneezing, etc.). No medical "tie in" would be necessary because the biomechanical expert would not be opining on the cause of the plaintiff's injuries. Rather, the biomechanical expert would be explaining the severity of the collision in terms that jurors can readily understand. The fact that a particular accident involved minimal physical impact would be but one of many factors for the jury to consider. A medical expert might satisfy the jury that, notwithstanding the minimal forces involved, plaintiff suffered serious injuries because of his or her age, size, pre-existing medical conditions, etc. In sum, because the biomechanical expert's testimony would assist the jury in evaluating the nature of the accident and the credibility of the medical expert, I conclude that it would be appropriate to allow such testimony routinely.