THE "DAUBERTIZATION" OF PRODUCTS LIABILITY EXPERTS UNDER FEDERAL RULE OF EVIDENCE 702

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I. INTRODUCTION

Over the past two years, defendants in products liability cases have achieved a significant degree of success in excluding plaintiff's expert testimony as to product defects. In the view of this writer, the main reason for this has been the promulgation of revised Federal Rule of Evidence 702, effective December 1, 2000. Rule 702 provides that:

> "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Rule 702 essentially codified the United States Supreme Court opinions in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed.2d 469 (1993) and Kumho Tire Co. v. Carmichael, 526 U.S. 137, 119 S. Ct. 1167, 143 L. Ed.2d 238 (1999). Before an expert can offer his or her opinion to the jury, the trial judge has to first ensure that the testimony is based on a reliable foundation and is relevant to the case at hand. Moreover, the expert must be qualified to speak with authority on the subject. The burden of demonstrating that the testimony is competent, reliable, and relevant is on the party seeking to introduce such testimony, and the burden is that of a preponderance of the evidence. See Daubert, 509 U.S. at 592 n.10, Kumho, 526 U.S. 137.

As will be illustrated herein, the main reason why expert testimony is excluded in products liability cases is its failure to meet the "reliability" test. Usually the expert is

found to be qualified. If the reliability test is not met, there is no reason for the court to address whether the opinion relates to the facts of the case, since the expert will not be permitted to testify in any event.

The reliability test is a "flexible" one according to Kumho Tire. Although no single factor is necessarily dispositive of the reliability of an expert's testimony, Daubert does address four specific factors. These are:

(1) Whether the expert's hypothesis can be or has been tested;

(2) Whether the expert's methodology has been subjected to peer review;

(3) The known or potential rate of error associated with the expert's methodology, and

(4) Whether the methodology is generally accepted within the scientific community. Daubert, 509 U.S. at 593-94.

In serving as the "gatekeeper" for expert testimony, the trial court's role is not to determine whether the expert's opinion is correct, but rather to ensure the reliability and relevancy of expert testimony before it is heard by the jury. Kumho Tire, 526 U.S. at 152. The proponent of expert testimony does not have to demonstrate that the expert opinion is correct, only that it is reliable. The trial judge's role in screening expert testimony is not supposed to substitute for the adversary system, for cross-examination or for the presentation of contrary evidence. Daubert, 509 U.S. at 595. Nevertheless, despite these disclaimers by the United States Supreme Court, when these idyllic principles are put into practice, there is often no discernible difference between an

opinion that the trial court deems unreliable and one which it would deem to be incorrect. When a court finds a proffered expert opinion to be unreliable, it is the functional equivalent of the court having rejected the expert's credibility as if the "gatekeeper" were the trier of fact.

II. RECENT ILLUSTRATIVE CASES

American Family Insurance Group v. JVC Americas Corp.,
2001 U.S. Dist. LEXIS 8001 (D. Minn. 2001)

In this homeowners' loss, plaintiff-subrogee claimed that a JVC compact disc player caused a fire. American Family relied solely on the testimony of its electrical engineer, Daniel Choudek. Choudek claimed that there was a defect in the attachment pins to the printed circuit board of the CD player, resulting in mechanical stresses which could cause the fire.

The court granted JVC's Motion in Limine to exclude Choudek's testimony, resulting in summary judgment for JVC. Choudek failed to apply the six-step scientific method contained in NFPA 921.[1] He did nothing to test his hypothesis as to the cause of the fire. Although he had an exemplar unit, he failed to test it to determine if his "mechanical stress" theory could occur, or whether such stress could generate sufficient energy to cause a fire. Choudek relied solely on his observations of attachment pins on other electronic devices.

For the same reasons, the court found that Choudek's theory did not satisfy Daubert. He failed to conduct laboratory experiments which could be replicated in order to validate his observations of the burn patterns and of the other appliances located in the area of origin. He based his conclusions on experiments with different small appliances,

[1] National Fire Protection Association Guide for Fire and Explosion Investigations.

even though such experiments had not been subject to peer review. His theory as to the attachment pins was "pure speculation" since it had never been tested.

Since Choudek did not test his hypothesis as required by NFPA 921 and did not refer to generally accepted scientific principles under Daubert, his opinion was deemed unreliable and inadmissible. As noted by the court, his case demonstrates "that the day of the expert, who merely opines, and does so on the basis of vague notions of experience, is over." (Quoting Kemp v. Tyson Seafood Group, Inc., 2000 U.S. Dist. LEXIS 10258 (D. Minn. 2000)).

Chester Valley Coach Works, et al. v. Fisher-Price, Inc.,
2001 U.S. Dist. LEXIS 15902 (E.D. Pa. 2001)

In this products liability case, plaintiffs claimed that a Bigfoot Power Wheels caught fire due to a design defect in its electrical system. The fire destroyed plaintiff's automobile restoration business. The Bigfoot is a battery-powered toy vehicle for children. Although the State Police Fire Marshal and the local fire marshal believed that the fire originated on the other side of a dividing wall, plaintiffs' expert, Paul M. Kaczmarczik, alleged otherwise.

After an extensive analysis of Kaczmarczik's report, deposition testimony, and Daubert hearing testimony, the court excluded his testimony and granted summary judgment for Fisher-Price. In doing so, the court relied heavily on Kaczmarczik's failure to follow NFPA 921. Among the significant factors the court noted were the following:

1. Kaczmarczik indicated that his conclusions were primarily based upon his "experience and education" rather than testing, experimentation, or generally accepted scientific treatises. In fact, he did not even mention NFPA 921 as authority for his opinions until after his report was submitted and his deposition taken.

2. Kaczmarczik investigated the Bigfoot as a cause of the fire before he even investigated the origin of the fire. In the words of the Court, he "put the cart before the horse" contrary to NFPA 921.

3. Kaczmarczik never inspected the fire scene, because plaintiffs would not pay him to do so .

4. Kaczmarczik did not review the available deposition transcripts of the first eyewitnesses to the fire.

5. Kaczmarczik never examined detailed photographs of the evidence in order to eliminate all other reasonable origins and causes for the fire.

6. Kaczmarczik never tested his hypothesis that the Bigfoot started the fire by obtaining an exemplar and attempting to ignite it in the manner in which he believed the fire started.

7. Kaczmarczik based his conclusion that a design defect existed in the Bigfoot electrical system based upon a report from the United States Consumer Product Safety Commission involving 700 reports of electrical components failing and overheating in Bigfoot Model Power Wheels. However, the CPSC report never mentioned one instance of a fire occurring while a Bigfoot was parked rather than being ridden or charged. Kaczmarczik did not test to see if a Bigfoot could ignite when turned off and parked nor was he aware of any such testing.

8. Although he admitted that a lawn tractor, a hanging lamp, and five automobiles undergoing repair were located in the same area as the Bigfoot, Kaczmarczik did not investigate any of these as potential causes in order to eliminate them. Moreover, he was unaware that a motorized mini-bike and lawnmower were also in the same area until after he wrote his report and gave his deposition.

The court concluded that Kaczmarczik's testimony was simply "*ipse dixit*". Without testing of his theory or reference to "generally accepted" principles or methodologies, the expert opinion failed the Rule 702/Daubert test.

Garlinger v. Hardee's Foodsystems, Inc., et al.,
2001 U.S. App. LEXIS 18559 (4th Cir. 2001)

Brenda Garlinger ordered coffee from a Hardee's drive-through restaurant in West Virginia. She dropped the coffee into her lap, resulting in second degree burns on her thigh and permanent scarring. Plaintiffs brought a strict products liability claim on the basis that Hardee's serving temperature for coffee in the range of 180°F to 190°F was unacceptable, since it would cause a nearly instantaneous severe burn if spilled onto bare skin at that temperature. Plaintiffs relied on the testimony of Professor Kenneth Diller, a thermodynamics expert.

The court excluded Diller's testimony under Daubert. The court found that Diller had no knowledge or experience in the food or beverage industry, and therefore was unqualified to address whether Hardee's policy of serving coffee at that temperature was unreasonable. In order to successfully assert a products liability claim, the coffee at that temperature would have to be "unreasonably dangerous". Since Diller failed to weigh the risks inherent in hot coffee against the cost or feasibility of lowering the serving temperature, his testimony could not assist the trier of fact. Thus there was no relevant connection between the opinion and the issue before the court as required under Rule 702.

Milanowicz v. Raymond Corp.,
148 F. Supp. 2d 525 (D.N.J. 2001)

Plaintiff was injured in a forklift accident when attempting to manually adjust the width of the forks on a lift truck manufactured by defendant. Plaintiff's expert opined that Raymond should have designed and manufactured its lift trucks with power-operated fork-positioning mechanisms, which would have obviated the need for manual manipulation of the forks. He alleged that such power mechanisms were available in 1991 when the subject lift truck was manufactured. However, he could not identify one other manufacturer who used such a device at that time. Nor did he test either the defective design of the subject truck or his proposed alternative design. His testimony was barred under Rule 702 and Daubert as it was not "the product of reliable principles and methods".

Of greater overall significance was the court's review of cases throughout the country applying Daubert to identify "indicia of reliability" for expert testimony in products liability cases. These indicia were as follows:

1. Federal design and performance standards such as those promulgated by OSHA (Occupational Safety and Health Administration) or the National Highway Traffic Safety Administration.

2. Standards promulgated by independent organizations such as ANSI (American National Standards Institute), UL (Underwriters' Laboratories), ASME (American Society of Mechanical Engineers), and ASTM (American Society for Testing and Materials).

3. Relevant literature such as industry trade publications or design manuals.

4. Industry practice – An expert who claims that an alternative design is necessary in order to make a product safe must corroborate his proposed alternative by identifying those products and manufacturers which implemented such a design. This information can be gathered through a patent search or through the expert's industry experience.

5. Design history and/or accident history of the subject product.

6. Drawings, charts and diagrams which illustrate the expert's proposed alternative design – The expert must show that his or her alternative design would have prevented the accident without sacrificing the utility of the product.

7. Scientific testing of the proposed alternative design – The courts will reject a mere conceptualization of an alternative design by the expert without testing which demonstrates that such a design is workable in practice.

8. Feasibility of the suggested modification - Calculations or testing which demonstrates that the proposed safety device could make the machine safe without interfering with its operation.

9. Risk-utility analysis of the suggested modification – Is the proposed alternative design compatible with existing systems? Can the purchaser service and maintain the product with the proposed alternative design? How much would the proposed alternative design increase the cost of the product? How efficient would the machine be with the proposed alternative design?

In this particular case, plaintiffs' expert was unable to meet any of these nine indicia of reliability. He cited no industry standards nor performed any testing. Moreover, he conceded that the subject lift truck conformed to the relevant ANSI standard, which was in turn incorporated by OSHA, the federal regulation. This was another situation where the expert's opinion was connected to the facts only by his *ipse dixit*.

Travelers Casualty and Property Corp. v. General Electric Co., 150 F. Supp.2d 360 (D. Conn. 2001)

Travelers, as subrogee of 23 different insureds, brought this action alleging a common design defect in certain GE clothes dryers. Specifically, Travelers' in-house expert, John Machnicki, claimed that the design of the dryers allowed lint to accumulate behind the dryer drum from which point it could be ignited by the dryer's heating elements. In support of this, Travelers submitted a three-page expert report, which the court deemed "woefully inadequate", especially because the case had been brought by a "sophisticated insurer". The report did not describe the data collected nor did it contain a specific origin and cause analysis of all 23 fires.

Machnicki was then deposed by GE's attorneys for 12 days. In the course of this deposition Machnicki could not point to any specific methodology which he employed, and he specifically disavowed use of the scientific method. The court found that his report and deposition testimony did not satisfy Daubert.

However, at a Daubert hearing before the court following the deposition, Macknicki described how he analyzed the burn patterns in each dryer and for the first time acknowledged the authoritativeness of NFPA 921, which the court referred to as "a peer reviewed and generally accepted standard" in the fire investigation community,

citing Daubert. The court found that although Macknicki did not test his theory as to how these fires started, it was at least capable of being tested. Since it was not the court's role to determine whether Macknicki's theory was correct, and since GE's experts could do their own testing to impugn Macknicki's theory, the court permitted Macknicki to testify at trial based upon what he said at the Daubert hearing.

However, this was not the end of the story. The court found that because Macknicki first stated the basis and methodology for his opinion at the Daubert hearing, Travelers' expert disclosures had been made in bad faith. Because Travelers only submitted a cursory expert report, it became necessary for GE to depose Macknicki for 12 days to learn his opinion. The court ordered Travelers to reimburse GE for one-third of the costs and expenses which it incurred in taking the 12 days of testimony. The court also permitted GE to take two more days of deposition testimony from Macknicki if it wished to do so.

Booth v. Black & Decker, Inc.,
2001 U.S. Dist. LEXIS 4495, 2001 WL 366631 (E.D. Pa., April 12, 2001)

This subrogation case involved a house fire allegedly caused by a Black & Decker toaster oven. Plaintiffs' expert, Richard B. Thomas, claimed that the fire was caused by a spontaneous welding of the main power contacts which caused the toaster oven to overheat. Because the toaster oven lacked a high temperature limit switch or thermal cut-off, it was defectively designed according to Thomas.

Applying Rule 702, the court conceded Thomas' qualifications, so it then turned to his methodology. Thomas failed to state that he applied any methodology contained in NFPA 921. He could never explain why his observations of the contacts meant that welding of the contacts had occurred, nor could he point to anyone else who applied the

methodology he did. Since Thomas' methodology was not subject to peer review, had no known rate of error, and was not generally accepted in the relevant scientific community, it failed under Daubert. Thus, Thomas could not testify about the cause of the fire. Without the cause, any testimony about the design defect would become irrelevant.

Nevertheless, the court did not hesitate to note that Thomas' methodology concerning the design defect was also deficient. Since he did not proffer the type of thermal cut-off he would have used, nor test his hypothesis that a thermal cut-off would have prevented the fire, Thomas' design defect theory also failed to meet Rule 702, Daubert, and Kumho Tire.

III. THE EXCEPTIONS TO THE TREND

Since December 1, 2000, the number of opinions coming out of the federal courts in which experts passed muster under Daubert in products liability cases appears to be a distinct minority. One example is Rudd v. General Motors Corp., 127 F. Supp. 2d 1330 (M.D. Ala. 2001). This personal injury action involved a fan blade on a 1970 GM pickup truck which broke loose and struck plaintiff in the head, neck and arm. Plaintiff's mechanical engineer, Harry Edmondson, opined that a manufacturing defect resulted in a fatigue failure of the fan blade leading to its separation. He claimed that the fan metal contained a microscopic defect which occurred in manufacturing, but he could not point to any particular microscopic grind mark or inclusion near the fracture origin. However, he was able to eliminate the existence of any microscopic defects, occurring after manufacture and during the operation of the truck.

The court concluded that his proposed testimony met the reliability requirement of Rule 702. Edmonson was able to rely upon various publications, including a case study of an automobile fan fatigue fracture, as well as his own inspection and

measurements of the subject fan. The court noted that the fact that much of his data was circumstantial did not detract from its value. The court found that his methodology of eliminating alternative possible causes for the fatigue fracture was reliable and was in fact used in a case history in a failure analysis publication.

Instead of merely relying on his own authority as an expert ("*ipse dixit"*), Edmonson's testimony was found to be reliable since he provided a step-by-step account of the explanations he considered for the failure, the physical evidence associated with each, and his reasons for excluding alternative causes other than a manufacturing defect. Direct evidence of the defect was therefore not required. See also, Allstate Insurance Company v. Hugh Cole Builder, Inc., 201 WL 407048 (M..D. Ala. 2001), involving expert origin and cause testimony by a fire investigator concerning ignition of wood framing around a fireplace by conduction of heat through a gas fire log starter pipe.

IV. FRYE – THE ALTERNATIVE

The recent trend of decisions in the federal courts since the promulgation of Rule 702 on December 1, 2000 may make it more advantageous for plaintiffs in products liability suits to prosecute their actions in the state courts. Although some states have applied the Daubert standard to determine the admissibility of expert testimony, many have not. Pennsylvania, for instance, still applies the traditional standard articulated in Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), which only requires scientific evidence to have "general acceptance" in the relevant scientific community. See Blum v. Merrill Dow Pharmaceuticals, Inc., 705 A.2d 1314 (Pa. Super., 1997). New Jersey continues to apply the Frye test in most types of cases where scientific evidence is to be introduced. See State v. Harvey, 151 N. J. 117, 169-170 (1997). California, Colorado, the District of Columbia, Florida, Illinois, Kansas, Maryland, Minnesota, Nebraska, New York, and Washington continue to apply the Frye standard.

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